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Calculating speakers: Codeswitching in a rational choice model

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ABSTRACT

Although the methodologies for describing many types of linguistic variation have been well developed, satisfactory theoretical links between data and explanation – especially links that include causal mechanisms – remain lacking. This article argues, somewhat paradoxically, that even though most choices reflect some societal pattern, speakers make linguistic choices as individuals. That is, choices ultimately lie with the individual and are rationally based. Rational Choice Models (e.g. Elster 1979, 1989, 1997) provide explanatory mechanisms for the ways actors in society select from alternative structures and available options. The Rational Choice approach taken here is enhanced by diverse theories of human action (e.g. Damasio 1996, Klein 1998, Lessig 1995). Analysis of codeswitching examples within a recasting of the Markedness Model (Myers-Scotton, e.g. 1993, 1998) suggests how a rationally based model offers better explanations for linguistic variation than do other approaches. (Codeswitching, cognitive calculations, linguistic variation, Markedness Model, Rational Choice)*

INTRODUCTION

What is the engine that drives speakers to select one linguistic variety over another? Why speak English rather than Spanish while discussing a deadline with a fellow worker if you're both Chicanas in Los Angeles? Why switch to an approximation of a "good ole boy" Carolina accent when asking your car mechanic for advice in urban South Carolina? That speakers also choose one lexico-syntactic permutation of a routine, such as a directive or an apology, over another is less obvious, but this selection is equally in need of an answer.

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We first acknowledge that the judicious answer to these questions is that an engine has many parts. Further, we acknowledge that factors not emphasized here, but cited by many as affecting linguistic choices, also have a place in the process. However, explicating all contributing factors in detail is not our goal; rather, we will seek to demonstrate the primacy of a specific cluster of factors at the point when linguistic choices are actually made. The argument is this: by analogy to the switch that engages any engine, what ultimately sets linguistic choices in motion is speaker intentions and calculations to optimize rewards. Therefore, in this article we support a Rational Choice Model to explain why speakers select one linguistic form over another, and we specifically consider codeswitching data to support that point.

Choosing one's words is seen here as purposive behavior, in much the same way that Grice 1975[1] and Sperber & Wilson 1995 see it. However, while of course their subject is just as much language use in social relations as is the subject in this paper, they are more concerned with the ways in which inferential processes, following principles or maxims, enrich the referential message of a linguistically encoded logical form. We are occupied more with the ways in which similar inferential processes enrich the SOCIAL MESSAGE – that is, how utterances convey inferences about the speaker's negotiation of persona or other interpersonal relationships (cf. Brown & Levinson 1987 for a related approach). To this end, we argue that talk follows principles of rational behavior. These principles hold that choices in specific interactions are best explained as cognitively based calculations that depend on the actor's estimation of what actions offer him/her the greatest utility (Elster 1979, 1989). On this view, not the speech community nor even the social network, but rather individuals, necessarily "own" the linguistic choice of one way of speaking over another.

Probably the most widely held view of the forces behind linguistic choices is the approach articulated in the 1960s by such figures as Labov 1966 and Fishman 1965, and still generally embraced today.[2] We refer to this as the "social factors" approach. Such an approach locates the crucial impetus for linguistic choices within the larger community (or, in some cases, within one social group that is in conflict with another). For example, Labov (1989:52, cited in Hudson 1996:30) writes, "Individual behavior can be understood only as a reflection of the grammar of the speech community. Language is not the property of the individual, but of the community." Labov recently has distanced himself somewhat from this view, specifically in recognizing that certain individual women, but not women as a group, are innovators in a given community (Labov 1998). Nevertheless, the research of Labov and his associates – research that is synonymous with sociolinguistics for many, especially those outside the field – has stressed the correlation of individual choices with factors that delineate social group memberships and/or other features of the community-based social context. These factors include socio-economic class in particular, as well as many other ingredients that define speakers "externally," such as gender and ethnic group.

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Research within this paradigm emphasizes the quantitative description of observable behavior. Even though this typically includes pointing out patterns in that behavior, the emphasis is still on describing, not explaining, choices. However, correlation implies causation, and no description is theory-free (cf. Popper 1959). Thus, the implicit claim in the Labovian approach has been that if you have information about speakers in relation to specified variables (aspects of their social identities and/or the situation) from a sample of subjects across a community, you are essentially explaining what drives their choices. That is, linguistic choices primarily reflect the speaker's place in a social group defined by the variable(s) studied.[3] At the same time, many researchers within a variationist framework now seem to realize that explanations for individual variation may not lie exclusively with demographic variables. For example, in studying speakers as sometime "performers," Schilling-Estes (1998:68–9) interprets style-shifting as "primarily a means whereby speakers alter the images of self which they project for others," not necessarily as a product of the context. In seeking to explain variation in the speech of members of the same rural community, Wolfram and Beckett (1999:24) conclude, "Our data suggest that some variation for the regional accommodation structures may be a function more of personal history, interactional relations, and attitudes and values than conventional social divisions, or even constructed social identities." In addition, after years of sociolinguists' viewing gender as a unitary category, most of today's researchers on language and gender recognize that gender on its own does not account for the choices that women make (cf. Eckert 1989, 1999; Bergvall, Bing & Freed 1996).

Although we agree that aspects of the larger societal background certainly affect choices, we argue that the variation in such factors DOES NOT DIRECTLY DETERMINE actual choices, for two reasons. First, it is hard to see how such factors – social group, for example – can be construed as a mechanism for making choices, because a variable-centered analysis does not explain decisions; it simply summarizes them. Further, even if a statistically significant number of members of a group make the same choice in a given context, no studies show that ALL members do this. Thus, variable-based analysis rarely can even delineate variables affecting all choices.

In contrast to a variable-based analysis whose main achievement is linking one independent variable to another, dependent variable (such as linguistic variation), we propose an approach which proceeds from first constructing an analytical model, with a social mechanism at its center. In their introduction to a collection of essays on social mechanisms, Hedström & Swedberg (1998:23) write, "This type of mechanism [an action-formation mechanism] shows how a specific combination of individual desires, beliefs and action opportunities generate a specific action." To the actor, a social mechanism is an abstract device useful for guiding decisions; to the analyst, it is an unobserved construct useful for narrowing the gap between cause and effect. "A mechanism-based explanation seeks to provide a fine-grained as well as tight coupling between EXPLANS

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and EXPLANANDUM" (Hedström & Swedberg 1998:25). We employ input from social theories such as that of social mechanisms to enhance the base of sociolinguistic theory.

A second problem with the idea that linguistic variation is explained through variation in social factors is that it implies that OTHER factors, especially those "internal" to the speaker, are static or irrelevant. In arguing against such a position, Elster (1979:115) makes the point that for "opportunities" (derived from situational factors) to explain choices, one would have to posit that situational incentives and speakers' motivations must be the same at all times and places. Of course, they are not.

No one is arguing, of course, that social factors (or specific ethnographic milieux) do not impinge on choices; the point is that they do not ordain the actual choices that individual speakers make. Rather, in Elster's terms, social factors and other institutional constraints determine the speaker's "opportunity set." In our terms, the opportunity set is a speaker's linguistic repertoire. This point is developed below.

Another approach to dealing with linguistic choices that has many adherents today is Conversation Analysis (e.g. Duranti & Goodwin 1992, Drew & Heritage 1992). As an explanation of choices, Conversation Analysis (CA) offers the systematic properties of structural organization (e.g. turn-taking, adjacency pairs) as what speakers orient to in making conversational contributions. Within structure, the major focus is on sequencing. Just as important is the dual role of the speaker and immediate addressee in shaping the dialogue, as well as the interaction-as-context and its dynamic quality. Generally, CA practitioners have a very different view of context from that taken by sociolinguists within the social factors framework. For example, Drew & Heritage (1992:19) explicitly reject "what may be termed the 'bucket' theory of context in which some preestablished social framework is viewed as 'containing' the participants' actions." They go on, "Instead, the CA perspective embodies a dynamic approach in which 'context' is treated as both the project and product of the participants' own actions and therefore as inherently locally produced and transformable at any moment."[4]

Although CA was originally developed to analyze monolingual conversation, recently it has been employed to interpret the structure of bilingual interactions, especially codeswitching (e.g. Auer 1998). Although the model that we will employ to analyze data in this article is centered on how actors make choices, as is Rational Choice Theory in general, our model also explicitly recognizes that a current speaker's choice depends on the addressee's response (on many different levels) for its "success." Further, we heartily agree that structural features of any conversation, especially the nature of certain adjacency pairs, can be considered devices that constrain speakers to view certain potential choices as preferred and others as not.[5] However, the structural features studied by CA offer an exceedingly "flat" explanation of choice. That is, reliance on surface structure as an explanation for an individual's contribution to a conversation ignores two sources of

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choice. First, it ignores the "texture" that aspects of the wider social context provide to conversational partners. Who participants "are" – in demographic, social network, and even ethnographic terms – receives little attention. Further, it is ironic that CA neglects key aspects of the tacit knowledge that speakers have developed through their very conversations (cf. Goffman 1974 on "frames"). This knowledge includes not just HOW certain interactions proceed (which CA does study), but ALSO the socio-psychological associations and, therefore, the social messages carried by one linguistic choice rather than another. For example, in addition to knowing the "institutionalized ways of speaking by which specific actions get accomplished" (what CA is concerned with, according to Hutchby & Wooffitt 1998:45), speakers "know" the interpersonal associations that one form of a conversational sequence, (e.g. different renditions of an apology) vs. another, calls up. Second, like the social factors model, CA also downgrades – or even ignores – speaker motivations; to the extent that motivations are considered, they are discussed as a feature of certain individuals at certain times, but not as universally present. However, in CA's favor, when its adherents talk about the "local production" of identities/meaning, one could argue that the speaker's "orientation to" what the hearer does is itself a rational act. As we will show, rational behavior involves paying attention to available evidence, including the content and form of the interlocutor's turn. Moreover, analyses in some recent CA-based studies leave more room for individual participants themselves to produce or render consequential the salient social categories or conversational elements (e.g. Briggs 1998).

In summary, we recognize that both social factors approaches (cf. Labov 1990, Milroy & Milroy 1995) and CA have offered useful descriptions of linguistic choices (cf. Duranti & Goodwin 1992 and Auer 1998, specifically on codeswitching). The major contribution of Labovian-style variationist sociolinguistics – studying the language use patterns of speakers as members of groups – has been to demonstrate that there are indeed predictable macro-patterns and a hierarchy among the social identity factors associated with variation in the patterns. However, though a social factors model can provide general outlines to account for the majority of choices, it cannot explain all the choices. As for CA, certainly it has been crucial in making us aware of the intricate organization of everyday conversation. When all is said and done, however, neither approach offers adequate explanations for individual variation in linguistic choices oriented to the behavior of others.[6] There is too much of a gap between the macro-level entities of social factors models and the sequential organization of CA and individual choices.

In contrast to such models, we argue here for a model based on assumptions of preferences and intentions, operating on perceived opportunities. The claim developed here is that the engine driving linguistic code choices is rationality, a mechanism universally available to humans. Speakers are rational in the sense that their choices depend largely on assessments of possible options in terms of a cost-benefit analysis that takes account of their own subjective motivations and their objective opportunities. That is, rationality means cognitively based calculations.

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We emphasize what Rational Choice (RC) Theory does not do. It does not attempt to account for the character of social groups and their relations, or for the nature of conversation. It attempts to explain what people do, GIVEN the fabric of society and social interaction. Yet RC theory does not neglect large-scale factors, as will become clear; instead, it places choice at a point after these factors have had their effects. Given its premises and goals, RC Theory does not seek a correlation between language choice and activity type, or between language choice and the sequential nature of the conversation. The correlation in RC Theory is always between language choice and the agent's intent to act rationally, based on available evidence.[7]

The organization of this article is as follows. In the next section, we state the research question and illustrate the type of data to be considered. A sketch of our theoretical approach follows. Next, we analyze some examples of codeswitching between languages, showing how an RC approach produces a more principled analysis than do other possible approaches. The final section offers some conclusions.

DATA TO BE STUDIED

To illustrate the types of interpretations of linguistic choices that follow from a model based on RC theory, we will analyze a number of examples of codeswitching (CS) between two languages. All data come from naturally occurring conversations. Three examples involving Hungarian/English CS were audio-recorded in the family of Agnes Bolonyai, the second author; she is the "mother" in all three examples. The other examples come from the published CS literature. The research question addressed for all examples is this: What motivates speakers to switch languages within a single conversation? The argument to be supported, specifically for these data but generally applicable, is this: Linguistic choices – and specifically, variation in choices – are best explained by an analysis assuming that choices depend on the speaker's estimation of what choices offer him or her the greatest benefit. That is, choices reflect a goal to enhance interpersonal relations and/or material or psychological rewards, and to minimize costs. Ex. 1 illustrates the nature of the data to be considered.

This example consists of dinner-table conversation between Kristóf (K), a boy eight and a half years old, and his mother (M). The family of mother, father, son, and daughter lives in the United States, and all are bilingual in Hungarian (their first language) and in English. All are very fluent in English (the father perhaps less so). Between themselves, the parents speak Hungarian almost exclusively, and they wish to maintain their children's Hungarian. To this end, Hungarian is the preferred language of family interactions; certainly, it is the parents' unmarked choice for dinner-table conversations. Although Kristóf accepts – and contributes to – the dominant use of Hungarian at the dinner table, English is the main language of his interactions with everyone except his parents. That is, he

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speaks only English at school and with his friends; even with his younger sister, English prevails with some switching to Hungarian.

(1) Making a salad at the dinner table (Hungarian/English).

1 M: *Kristóf, mi volt az iskolában? Irtatok tesztet?*
'Kristóf, how was school? Did you write any tests?'
2 K: *Tessék?*
'Pardon?'
3 M: *Volt teszt? Milyen volt az* AGP?
'Were there any tests? How was AGP?'
4 K: *Most nem voltam. Nem volt még*.
'I wasn't [in AGP] today. It hasn't started yet.'
5 M: *Kedden van?*
'Is it on Tuesday?'
6 K: Thursday-*n van*.
'It's on Thursday.'
7 M: *Kértek salátát, úgy-e?*
'Would you like some salad, wouldn't you?'
8 K: I'll make my own salad.
9 M: *Mi?*
'What?'
10 K: I'll make my own salad. (1.0) *Ilyen kicsi tányérokban*
11 *csinálják a* restaurant-*okban*.
'They make it in such small plates at the restaurants.'
(K making the salad)
12 K: I need some salad, please.
13 M: *Odaadtam az egészet. Tegyél hozzá mást is*.
'I've given you all. Add something else to it, too.'

In ex. 1, why does Kristóf use Hungarian to speak with his mother about school matters, but then produce two turns in English and one in English/Hungarian when he talks about food? His choices cannot be explained by situational factors (e.g. topic) or sequential organization. The example is analyzed in a following section.

THEORETICAL APPROACHES

In this article, we recast the Markedness Model of Myers-Scotton (1983, 1993, 1998) as more explicitly an RC model. RC theorists come from a variety of disciplines; our framing of the markedness model as an RC model largely follows the ideas of Elster, a social scientist who has written extensively about rationality. Elster's views can be summarized by this statement: "When faced with several courses of action, people usually do what they believe is likely to have the best overall outcome. This deceptively simple sentence summarizes the theory of rational choice" (Elster 1989:22). More specifically, we use a modified version of Elster's filter model of how RC theory conceptualizes decision-making. The amended Markedness Model is illustrated explicitly as part of the analysis of ex. 1 in this section, but it is also applied to other examples in a later section.

In addition, ideas and data from three other – perhaps more unlikely – sources inform the analyses. We were drawn to the arguments of another social scientist, Gary Klein (1998), who has studied successful split-second decision-making when

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physical wellbeing is on the line – for example, decisions by firefighters and military personnel. Klein's approach differs from that of Elster and other Rational Choice proponents (in fact, he discounts RC models), but its value for us is its emphasis on what Klein calls INTUITION, and his claim that intuition grows out of experience (1998:33). We also make indirect use of the ideas of Lawrence Lessig (1995:951), a law professor, who refers to what we might call the consequences of social norms as SOCIAL MEANINGS: "the semiotic content attached to various actions, or inactions, or statuses, within a particular context." He goes on to say (1995:956) that social meanings not only exist, "they are also used," so that "[social meanings] not only constitute, or guide, or constrain; they are also tools – means to a chosen end, whether an individually or collectively chosen end . . . One selects certain words over other acts in some contexts, one chooses a certain language to signal one meaning rather than another." Finally, the ideas of a neurobiologist (Damasio 1994, 1996, 1998) also figure in our analyses. Damasio provides empirical evidence about how organisms (including humans) develop "somatic markers" that help limit the "space" necessary for decision-making and also allow the organism to call on previous experience to enable it to shortcut comparisons in decision-making for survival.

Earlier formulations of the Markedness Model (e.g. Myers-Scotton 1993) argued for the central role of cognitively based calculations, but they did not develop precisely how linguistic choices translate into social meanings, nor did they emphasize the link with rationality. For example, although it was said that marked choices are negotiations to change the social distance, the model offered no principled basis to argue for one interpretation involving a change in the social distance that is not gained by another. The Markedness Model (MM) has been employed by many, but also criticized and misunderstood. An abbreviated sketch of its premises follows (cf. Myers-Scotton 1983, 1993, 1998).

(a) The MM presupposes that as part of their general cognitive architecture all speakers have a MARKEDNESS EVALUATOR. This abstract component underlies the capacity to conceptualize markedness. Specifically as a sociolinguistic construct, markedness refers to the capacity to develop the following three abilities. (i) Most important is the perception that relevant linguistic choices for a specific interaction type fall along a multidimensional continuum from more socially unmarked to more marked. (ii) In addition, speakers learn to recognize that the markedness ordering of choices is dynamic; it depends on the specific interaction type, as well as on how the individual interaction develops. (iii) Finally, speakers develop the ability to provide relevant INTERPRETATIONS for all choices, marked as well as unmarked, given the interaction type.

(b) To develop these abilities requires exposure to the use of both unmarked and marked choices in actual community discourse. Input from experience empowers the markedness evaluator to set up readings of markedness as a guide for speakers to prune multiple options. That is, the evaluator indicates which choices are relatively more or less marked for the interaction type.

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(c) In sum, then, the markedness evaluator is a DEDUCTIVE device (it makes predictions about relative markedness) that operates on inductively assembled data. What the markedness evaluator offers is NOT a set of rules, but rather a PROCESS for evaluating potential choices.

(d) The interpretations that speakers attach to linguistic choices have to do with the speaker's projection of his/her own persona and relations with other participants. Thus, any choice a speaker makes is perceived as indexing a desired Rights and Obligations (RO) set between participants. All participants interpret a choice against the backdrop of those choices that index the more unmarked RO sets for a specific interaction type. As a corollary, this means that they also recognize some choices as indexing more marked RO sets.

For example, the choice of Kristóf, a Hungarian-and-English speaking boy living in the United States, to speak only Hungarian at the dinner table would be an index of what his parents might prefer as the unmarked RO set for family interactions in his home. Under this RO set, children are compliant with their parents' wishes to keep their ethnicity salient through linguistic means rather than assimilating fully to the dominant culture. If Kristóf switches between Hungarian and English, this might index a somewhat less preferred RO set, from the parents' point of view. Still, no matter what is preferred by parents, the RO set that code-switching indexes may be the more unmarked one in many immigrant families, just because it represents a compromise. That is, the children maintain their first language and therefore keep their ethnicity salient, but at the same time, they can index their identity in the wider American community. However, if Kristóf should insist on speaking only English at the family dinner table, this move would index a marked RO set from the point of view of family norms. Under such an RO set, Kristóf would be asserting his independence from familial control and possibly even his "defection" to the dominant (American) culture. Unmarked/marked matches between choices, RO sets, and interaction types will vary according to the speech community.

(e) The markedness of an RO set for a specific interaction is open to change (based on change in situational components or participants' negotiation); and if it does change, the markedness of the current linguistic choice for the interaction changes, too. For example, the tone of a job interview may move from relatively formal to decidedly informal if the participants discover they are both from the same distant small town.

(f) RO sets are the elements in this model that are directly derived from whatever societal factors are salient in the community and in the interaction type. Although they depend on hierarchies of salience of features that preexist the interaction (i.e. norms or social meanings), they also depend on how the salience of these features evolves as the interaction unfolds.

(g) Unmarked choices (indexing an unmarked RO set) are those that are more expected, given the salience of who the participants are and of other relevant situational factors.

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(h) For a variety of reasons, speakers most frequently select the linguistic choice that indexes what they perceive to be the more unmarked RO set. By doing so, in effect, speakers are "agreeing" to "business as usual"; that is, they accept the prevailing community views for an appropriate RO set, given who the participants are, as well as other situational factors. Consider, for example, the embedded imperative with or without mitigators (e.g. *Would you please do x, can you do x*, etc.). As Ervin-Tripp 1976 pointed out, this is a frequent (unmarked) directive form when participants are unfamiliar or differ in rank, when the task is outside the addressee's role, or when territoriality is at issue. As such, the embedded imperative indexes a host of unmarked RO sets, such as that between a salesperson and customer in many establishments, or that between non-familiar supervisors and subordinates.

(i) Recall, however, that the unmarked RO set varies across settings; thus, there is no universally unmarked directive, just as there is no universally unmarked RO set, even for work settings in the same community. For example, for interactions in the auto factory studied by Bernsten 1998, the bald imperative indexes the unmarked RO set between foreman and worker, whether familiars or not. Because bald imperatives are very unmarked in this work setting, other directives are marked and evoke negative or perverse reactions from workers. Bernsten (1998:185–86) shows how one question directive from a foreman (*Do you think you can do Helen's job?*) is taken as an insult, and how another one, also from a foreman (*Are you going to be here tomorrow?*), is taken as an information question.

(j) In most public interactions that are potentially status-raising (e.g. many types of interactions in institutional settings), the unmarked choice is often the one that meets the beliefs and desires of persons in the community who have sufficient power to set norms. For example, in job interviews, most candidates who expect to be successful observe and follow not only the employer's demeanor but also his/her linguistic variety. On a recent National Public Radio interview bemoaning the behavior of job candidates from today's twenty-something generation, one forty or fifty-something employer recalled a candidate who greeted him as *dude*. The candidate didn't get the job.

(k) Not all speakers may view the more unmarked choice for a given interaction type as "fair," but most find it COMPELLING, given the potential cost of not acknowledging its power. Thus, although speakers make choices as individuals, they typically behave as group members in that most make the same or similar linguistic choices. They make the more unmarked choices, which are operationally defined by their frequency (cf. Myers-Scotton 1998:31 for a fuller discussion of why unmarked choices prevail).

(l) Nevertheless, speakers DO make marked choices at times. They do so knowing that a marked linguistic choice will be viewed as a negotiation of some RO set OTHER than the unmarked one. Speakers make marked choices as negotiations to change the CURRENT RO set to a NEW RO set – the one for which the CURRENT

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MARKED choice would be the unmarked index. In the codeswitching examples illustrated here, we will see how speakers employ switching as a marked choice.

The view that exposure to language in use sets up a sense of "readings of markedness" in the markedness evaluator corresponds to some of the ideas of Klein and also of Damasio. Klein (1998) proposes a RECOGNITION-PRIMED DECISION model for explaining decisions in the life-threatening situations he studied. Klein may emphasize the primacy of experience more than Damasio does, but both models clearly depend on (largely) unconscious cognitive calculations. The two primary sources of power in Klein's model are PATTERN RECOGNITION and MENTAL SIMULATION. This model fuses two processes: sizing up the situation to recognize which course of action makes sense, and evaluating that course of action by imagining it. Klein (1998:31) stresses the role of what he calls "intuition": "Intuition depends on the use of experience to recognize key patterns that indicate the dynamics of the situation." Recognition includes realizing what types of goals make sense, which cues are important, what to expect next, and what course of action is likely to succeed. In summarizing his interviews with fire department ground commanders, Klein writes:

> Our results turned out to be fairly clear. It was not that the commanders were REFUSING to compare options; rather, they did not HAVE to compare options. I had been so fixated on what they were not doing that I had missed the real finding: that the commanders could come up with a good course of action from the start. This is what the stories were telling us. Even when faced with a complex situation, the commanders could see it as familiar and know how to react. (1998:17)

We see Klein's "intuition" as not very different from the MM's "markedness evaluator." Both are cognitively based components which help aid actors make judgments by utilizing experience.

Initially, the basis for action in Klein's "war stories" (some in the literal sense) seems very different from the "bioregulatory processes" of Damasio (1996, 1998).[8] However, actual physical experience is the input to these processes as well. In turn, the processes permit organisms to set up SOMATIC MARKERS. The exact nature of these markers is somewhat elusive, but Damasio states that they are "the brain's representation of the body" (1996:1413). Elsewhere, he writes that "*somatic markers are a special instance of feelings generated from secondary emotions*. Those emotions and feelings *have been connected, by learning, to predicted future outcomes of certain scenarios*. When a negative somatic marker is juxtaposed to a particular future outcome the combination functions as an alarm bell. When a positive somatic marker is juxtaposed instead, it becomes a beacon of incentive" (1994:173; italics in original).

In short, Damasio's (1996:1413) hypothesis is that somatic markers enable the organism to take shortcuts in decision-making that have to do with "survival" at a number of levels. It seems clear that Damasio's hypothesis that somatic markers

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exist and his hypothesis about how they work are not very different from the MM's hypothesis that speakers take account of a markedness evaluator in making linguistic choices. For example, Damasio writes, "Somatic markers do not deliberate for us. They assist the deliberation by highlighting some options (either dangerous or favorable), and eliminating them rapidly from subsequent consideration. . . . Think of it as a biasing device" (1994:174). One can even argue that having successful interpersonal interactions is a form of "survival," something that Damasio himself suggests.[9]

Lessig's (1995) contribution to this analysis is the emphasis he places on what he calls SOCIAL MEANINGS (which we interpret as derived from norms) – not only on their compelling nature, but also on their dynamic quality. Lessig says of social meanings that "not all meanings are easily recognized . . . Nor of course are these meanings fixed, or stable, or uncontested, or uniform across any collection of people" (1995:954). Yet he goes on to say, "But we can speak of social meaning, and meaning management, I suggest, without believing that there is a single, agreed upon point for any social act." As for their effect, Lessig crucially notes that the effects of social meanings are "in an important sense nonoptional. They empower or constrain individuals, whether or not the individual chooses the power or constraints" (1995:955).[10]

The MM echoes such views in two ways. First, the MM recognizes the very existence of norms and social meanings; at the very least, they are a backdrop for interpreting the choices of others. Second, the MM recognizes the constraining and compelling nature of norms, as well as their dynamic quality. Under the filter model presented below, norms figure as part of the available evidence that a speaker considers in making choices. As such, they promote unmarked choices. As Lessig states, "Social meanings act to induce actions in accordance with social norms, and THEREBY impose costs on efforts to transform social norms" (1995:998). However, lest we be misinterpreted, remember that speakers are always free to make marked choices, and, as the examples will show, they do.

All these models, including the MM, rely on the notion of INTENTIONALITY in human actions; actors intend their actions to reflect goals or attitudes, and observers attribute intentions to actions. They also give at least a nod toward the notion that innate architectures coordinate readings of cost-benefit analyses of competing choices. In interpersonal contexts, such architectures can also be seen to coordinate readings of intentionality.[11]

Finally, Elster's view of rationality figures prominently in our recasting of the MM. In the recasting process, the two filters in Elster's model of decision-making become three. Following is an analysis of ex. 1 in terms of the MM's new filter model.

The institutions of society figure in Elster's first filter as "structural constraints." He refers to structural constraints as "all the physical, economic, legal and psychological constraints that an individual faces" (1989:14). Recast in linguistic terms, Elster's structural constraints are the social context and situational

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factors. To these, we add constraints that are more linguistic – e.g., unmarked ways in which certain parts of conversation are realized, such as openings and closings. All these constraints are external to the speaker. This filter produces what Elster calls an "opportunity set." We equate this with the speaker's linguistic repertoire. In ex. 1, Kristóf's linguistic repertoire includes English and Hungarian. Note that RC theories do not address how particular repertoires happen to be available to certain individuals; this does not mean that such information is unimportant – only that it is outside the scope of the model.

Ex. 1 offers strong support for the notion that such structural constraints as topic do not determine code choices but only contribute to the speaker's repertoire. Models of CS based on situational factors would predict that Kristóf would speak English about school matters; instead, he speaks Hungarian on this topic.

Elster moves directly from the filter consisting of structural constraints to rationality as a mechanism. In our recasting of the filter model, however, we add a new second filter at this point. This filter includes two innately available architectures which are filled in largely by experience. Again, these elements are not under the speaker's direct control, but they are internal to the speaker. They are (i) the somatic markers of Damasio's 1996 model that influence the types of responses an organism has to stimuli, and (ii) the MM's markedness evaluator. What these two elements do is bias the selection of alternatives from the initial, structurally determined opportunity set. The biasing is in terms of previous experience, and therefore in terms of previous "successes" and "failures."

In assessing how this filter is relevant to ex. 1, we have the advantage that one of the speakers, the mother, is an analyst. She can provide details about Kristóf's experience with linguistic choices in and outside the family. Kristóf's prior experience with language use in the family gives him evidence that his mother prefers him to speak Hungarian to her. Thus, when he switches to English in lines 8 and 10 (*I'll make my own salad*), he knows that his choice is marked from his mother's point of view. Indeed, it is marked at a number of interrelated levels: (i) it goes against the unmarked RO set that holds in his interactions with his mother; (ii) sequentially, it contrasts with his mother's code choice; and (iii) in its content, it is an indirect refusal of her attempt to serve him salad. Based on this second filter, the message the markedness evaluator gives him is that switching to English is a vulnerable move. Moreover, after he has switched to English in line 10, the subsequent switches seem to create confusion. (He switches first back to Hungarian in lines 10–11, *Ilyen kicsi tányérokban csinálják a* restaurant-*okban* 'They make it in such small plates at the restaurants', and then back to English again in line 12, *I need some salad, please*). The third and final filter provides a rationale for his strategic use of switching.

The heart of Elster's RA model (his second filter, now the third filter for the extended MM) is where choice is located. We emphasize again that choice comes AFTER structural constraints have had their effects. In an RC model, macro-

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societal features determine the opportunity set, but not how selections are made from the set.

This third filter includes the mechanisms responsible for the actual choice of an alternative. The main element in this filter is rationality. Rationality functions both as a mechanism and as an explanation. As a mechanism, it directs actors to perform these three operations to find the best action: (i) actors consider their desires and values as well as prior beliefs; (ii) they confirm that these three elements are internally consistent; and (iii) finally, they make sure that their final desires, values, and beliefs take account of available evidence. As an explanation, rationality tells us WHY choices are made.

The third filter also includes social norms, because one aspect of "available evidence" is the norms that apply and their social meanings. In addition, when speakers scrutinize (generally unconsciously) their values, they take account of how these values jibe with the dictates of social norms. This does not mean they must forsake their own values – just that they should be aware of any discrepancies and their consequences (cf. Myers-Scotton 1998, 1999 for more details on how norms affect linguistic choices and how choices, in turn, figure in promoting new norms).

Let us look at ex. 1 in terms of the three operations of rational choice. How does a marked switch to English bring about optimal effects for Kristóf? When he says *I'll make my own salad* (line 8 and again in line 10), he accomplishes two things through the choice of English. First, he disidentifies himself with the RO set that ascribes to him the role of a dependent, compliant little boy. Of course, the relationship among (i) the choice of Hungarian, the ingroup, family code, (ii) the power relations between the children and the parent, and (iii) the child's own view of his identity features is neither static nor exclusive; yet failing to observe the interactional norms (i.e. switching to the less preferred language) is certainly one way in which Kristóf can fight a battle over power. As he switches to English, he can display that he is about to pull out of a situation that renders him a passive, subordinate recipient of his mother's actions (i.e., being served the salad). Second, he calls for a competing RO set. In this new set, English becomes a tool to exploit social meanings to his own ends. English is the language of the larger community, and the language associated with his social identity as a maturing boy who interacts with peers outside the home. His desires and beliefs, as well as the values he attaches to each language and potential RO sets, lead him to this estimate: If he speaks English, HIS preferred language, he can conjure up in his mother's view a new and "right" persona (a persona of the power and prestige associated with English). If he succeeds in negotiating an RO set based on these images, he will have a chance at successfully negotiating more independence in his actions.

In view of the payoffs of speaking English, we might ask what good it does Kristóf to switch immediately back to Hungarian (lines 10–11). This switch cannot possibly be attributed to contextual/situational factors, since nothing has changed in the context. Similarly, a CA explanation based on preference organi-

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zation also falls short, because a sequential approach provides no mechanism for the co-occurrence of a dispreferred (English?) and a preferred (Hungarian?) language choice within one turn.

Within a rationality-based framework, however, we can claim that Kristóf's switches are internally consistent and motivated by the goal to optimize his returns. Speaking Hungarian, even though he returns to English in line 12, is a message of deference toward his mother. It mitigates the weight of the face threat of his noncompliant behavior. And making optimal use of the resources in his linguistic repertoire has its rewards: He gets to make his own salad, AND his mother even gives him more vegetables.

In summary, this sub-model of three filters, with rationality at its heart, is posited in order to explain code choices. Clearly, the model presumes that much of what "happens" is below the surface: Speakers' intentions surface as code choices. Interpretations about intentions offered for ex. 1 and the following examples are not held up for verification; they have no empirical basis. However, we claim that these interpretations are not simply one analyst's readings of the data. The test that they have some measure of independence from the analyst is the extent to which they are consistent with the rational mechanism that RC theory claims actors use (i.e. check the internal consistency of desires, values, and beliefs and take account of available evidence). At the same time, note that, as an explanation, rationality is not to be confused with objectivity or truth. A rational belief does not have to be objective or true. As Elster puts it, "It must only be well grounded in the available information" (1994:23).

ANALYSIS OF OTHER EXAMPLES

Two more examples of exchanges between Kristóf and his mother will now be analyzed, followed by three examples from other settings and other language pairs. Ex. 2 is similar to ex. 1, but it has a different ending. The family is at the dinner table again, and, against his mother's wishes, Kristóf sets out to make his own lemonade:

(2) Making lemonade.

1 M: *Várj csak, ne kelj fel.*
'Wait, don't get up.'
2 K: *Limonádet csinálok.*
'I'll make a lemonade.'
3 M: *Tudom, hogy inni akarsz, majd én adok.*
'I know that you want to have a drink, I'll get you one.'
4 K: *Csinálj limonádét.*
'Make a lemonade.'
5 K: (Switch to English) I'm gonna get the ingredients. I know how much
6 sugar I want in the lemonade.
7 K: (Lifting a bottle of water) Oh, my God. Let me just do it by myself.
8 K: (Spilling the water on the kitchen cabinet counter) Ah! Sorry, sorry!
9 K: *Nagyon nehéz volt ez. Bocsánat.*
'It was too heavy. I'm sorry.'

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When Kristóf spills the water (lines 7–8), his apologies show a reverse pattern. Within a single turn, he apologizes first in English and then in Hungarian. ('*Ah, sorry, sorry!'* in English is followed by *Nagyon nehéez volt ez. Bocsánat*. 'It was too heavy. I'm sorry'). Again, this switch back into the unmarked code for family dinner-table talk comes as a result of unconscious but rational calculation. His understanding of the norms and values of language use in relation to his mother enter into this equation. Based on experience, he knows he can reinstate himself within the RO set preferred by his mother if he speaks Hungarian. Of course, switching back to Hungarian has its costs: He cannot maintain the image of an independent person. But the switch also has its rewards: Kristóf makes sure his mother understands this second apology as a "pledge of allegiance" to reinstate himself within the confines of the RO set that his mother prefers. In this respect, his switch NOW to Hungarian is a MARKED choice, governed by the deference maxim of the MM, "Switch to a code that expresses deference to others when special respect is called for by circumstances" (Myers-Scotton 1993:147). In addition, switching FINALLY to Hungarian has some fringe benefits other than just restoring harmony with his mother. Like any other actor, Kristóf has multiple identities. Recall that the accident happens when he is speaking English, the language associated with his outgroup identity. English symbolizes independence from parental control for him. The accident causes him to lose face, and his self-image as an autonomous boy is damaged. By "returning to the fold" of Hungarian, he can at least gain face by refurbishing his image as a compliant son.

In ex. 3, Kristóf is looking for his hat in the hallway closet so that he can go outside and play. His mother and his five-year-old sister Hanna (H) are at the dinner table in the dining room.

(3) Where's the hat?

1 K: *Hol van a sapkám? Azt mondta a papa, hogy te megkeresed*.
'Where's my hat? Dad said that you would look for it.'
2 M: *Majd megkeresem. Edd meg előbb a vacsorádat*.
'I'll look for it later. First eat your dinner.'
3 K: *Ah, de* mean *vagy*.
'Ah, you're so mean.'
4 M: *Kristóf, át kell öltöznöd*.
'Kristóf, you need to change clothes.'
(Conversation continues between mother and Hanna.)
12 K: (looking for the hat in the closet) *Papa azt mondta, hogy itt van*.
'Dad said that it was here.'
13 M: *Egy zacskòban*.
'In a bag.'
14 K: *Fent vagy lent*?
'Top or bottom?'
15 H: *Fent*.
'Top.'
16 M: *Nem tudom. Meg kell nézni ott is*.
'I don't know. You need to look there, too.'
(conv. continues between mother and Hanna)
32 K: (to himself) Oh, god.

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33 H: *Mi van*?
'What is it?'
34 K: It fell. (0.8) It's not here. *A zacskóban van*! *A zacskóban van*! *Nincs*
35 *a zacskóban*.
'It's in the bag! It's in the bag! It's not in the bag.'
36 M: *Mi*?
'What?'
37 K: *Nincs a zacskóban*.
'It's not in the bag.'
38 M: *Kristóf, ott lehet, máshol nem*.
'Kristóf, it can only be there, nowhere else.'
39 K: *Akkor meg hol van*? I'm asking you very-very kindly.
'Then where is it?'
40 M: *Tessék*?
'Pardon?'
41 K: Where is it? Please tell me.
42 M: *Abban a szekrényben*.
'In that closet.'
43 K: *Mama*? *Nem lehet, hogy a kocsiban van*?
'Mama? Isn't it possible that it's in the car?'
44 M: *Hát lehet, látod, igaz*.
'Well, it is possible, you see, that's true.'

Following his mother's instruction, Kristóf is anxiously going through the bags in the closet in search of his cap. The language of the conversation between Kristóf and his mother is Hungarian, the unmarked code. He switches to English when talking to himself (*Oh, God*, line 32) and when answering his sister (*It fell. It's not here*, line 34). However, as his frustration grows, Kristóf switches to English (line 39) for a remark targeted at his mother, *I'm asking you very-very kindly*. Constrained by the norms of politeness as well as the need for his mother's help, he resorts to sarcasm. The utterance is obviously ambiguous; its double meaning arises from the fact that he uses the marked language to convey a literally innocent and polite request in order to slip in his real feelings. Speaking English may grant him less accountability for his remark. Since English is not associated with the unmarked RO set for this interaction, he can always hide behind the "outlaw" mask it provides ("It's not really me who's speaking"). Kristóf's use of English (i.e., switching to the marked code for his saucy remark in line 39, followed by his more confrontational remark in line 41, *Where is it? Please tell me*) seems to "succeed" in the sense that his mother does not censure him. This success may give him a sense of enough "interactional parity" with his mother that, in line 43, he can suggest (albeit in Hungarian) that his mother is wrong about where the cap must be.

CS examples from other settings and other language pairs provide further insights into how speakers' choices are driven by rationality rather than derived directly from social group membership, ethnographic milieu, or sequential structure. In a conversation in Berlin between an American-German couple, the speakers use non-converging discourse in the unmarked RO set (i.e., each speaker

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speaks his/her native language). The young woman Sarah (S), the American, is quite fluent in German, while the young man Hans (H), the German, speaks only passable English. Fuller 1997 discusses the example in terms of calculations of accommodation.

(4) Money for glasses (Fuller 1997:74–76).

1 S: Oh, you know what I had, what I did, I got my eyes checked–
2 H: Oh, where?
3 S: –and my eyes are worse, now, in the last few years,
4 they've gotten worse, especially the right eye.
5 So my right eye has gotten much worse.
6 And um, I need a new, new *Gläser*. Right?
'lenses'
7 H: M-hmm
8 S: And it's the same man that I know from 1990, 1989.
9 H: *Wo warst Du, Du warst bei der-*
'Where were you, were you at the–'
10 S: *Brillenwerkstatt, wo ich meine Brille,*
11 *wo ich die habe, eigentlich*.
12 And um, *ja, er sagte, ja,*
13 *das kostet 300 Mark mit Krankenversicherung*.
14 *Und ich muß 300 Mark bezahlen*.
'The *Brillenwerkstatt*, where I got them, where I got these, actually. And um, yeah, he said, yeah, that costs 300 marks with health insurance. And I have to pay 300 marks.'
(Discussion continues in German)
39 S: *Aber das Problem ist,*
40 *ich brauche 300 Mark nächtsten Montag*.
41 *Kannst du mir ausleihen?*
'But the problem is, I need 300 marks next Monday. Can you lend it to me?'
42 H: *Du kriegst eine neue Brille jetzt, oder was?*
'You're getting a new pair of glasses, or what?'
43 S: *Ja*.
'Yes.'
44 H: Uh-huh.
45 S: *Ich habe die bestellt*.
'I ordered them.'
46 H: *Tatsächlich*?
'Really?'
47 S: *Ja, Hans, meine Augen sind schlecter,*
48 *was soll ich tun,*
49 *ich renne blind durch die Gegend!*
'Yeah, Hans, my eyes have gotten worse, what should I do, I'm running around blind.'
50 H: *Aber Du siehst,*
51 *Du sagst Du siehst immer so viel mit der Brille*.
'But you see, you say you see so much with those glasses.'
52 S: No, can you loan me 300 marks? Do you have it?
53 H: *Natürlich, klar*.
'Of course, certainly.'
54 S: Do you have that?
55 I thought you had nothing in, on your *Konto*.
'account'
56 H: *Ja, ich nehme das von meinem Sparkonto*.
'Yeah, I'll take it from my savings account.'

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57 S: *Geht das? Ist das kein Problem?*
'Will that work? Is that a problem?'
58 H: *Kein Problem.*
'No problem.'
59 S: Okay. That's what I wanna know.
60 All your other comments are unnecessary.

Fuller points out how Sarah uses a marked choice, which in this case is to converge to monolingual German discourse with Hans, as she asks for money. Note that her first switch to German comes in the turn in which she first mentions the issue of money (lines 10–14). This and subsequent switches show how she makes a series of choices to optimize her own outcome. For Sarah, the whole point of the conversation is to get Hans to help her pay for the pair of glasses that she needs.

Sarah begins in her native language, English, her unmarked choice in their conversations. She tells Hans about having had her eyes checked, but then she switches to Hans's unmarked choice, German, to introduce the main topic: a needed sum of money. How does this switch negotiate maximum utility for her? Her willingness to speak German shows deference to Hans, and at the same time she can make sure that he clearly understands why she needs money, and how much. Hans's English is only passable; she cannot rely on it. She maintains German through what must have been an annoyingly involved explanation of what she was doing (ordering glasses) and why. Finally, in line 52, she switches back to English to confront Hans directly about the needed money. Earlier (line 41) Sarah had asked for a loan as part of her deferential switch to German. Now – eleven lines later – when it has become clear to her that accommodating to Hans by speaking German did not "help," she returns to her own native language. In terms of an RC model, based on available evidence, Sarah sees that being compliant and justificatory in German has not helped. She switches to English and at the same time escalates her request in the form of two questions (*Can you loan me 300 marks? Do you have it?*). Hans replies immediately in the affirmative, but Sarah still persists in English in her next turn, to find out where the money will come from. Not quite satisfied with his reply, she probes further (*Geht das? Ist das kein Problem?* 'Will that work? Is that a problem?'), but she has now switched to German, perhaps as a mitigation. Finally, she is assured by Hans (*Kein Problem* 'No problem') that he will lend her the money. Having reached her goal, Sarah switches back to English. Her words (*That's what I wanna know. All your other comments are unnecessary*) make it clear that this switch to English means that the accommodation is over.

It would be difficult to explain Sarah's many switches as motivated by either a change in anything that could be called situational features or structural organization, or even in whatever might count as "contextual effects." Furthermore, although some of her choices can be explained in an accommodation framework (cf. Giles and associates, e.g. Giles & Coupland 1991), or by means of Bell's

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1999 recasting of his audience design model to highlight speakers' choices as initiatives as well as responses to audience, these approaches do not work for all of Sarah's choices. These approaches can explain SOME of every speaker's considerations, but it is hard to see how they can continuously orient to a speaker's changing calculations–just what seems to be going on with Sarah. Her switches that are very "scattered" at the surface level are easily explained within an RC framework as not "scattered" at all, but as parts of a consistent, goal-directed strategy that ends up requiring much switching. Thus, Sarah's switches are prime examples of language use based on cognitive calculations to optimize outcomes.

Next, consider an example from the Tyneside Chinese community in Britain. In many conversations in this community, language preferences differ across generations. British-born children normally prefer to speak English, whereas parents normally use Chinese in intra-generational interactions (Li 1995). Either generation may switch to the other's preferred language "for certain communicative effect" (Li & Milroy 1995:296). Li & Milroy provide an excellent analysis of "what is going on" at the local level of turns; however, they seem to pay less attention to why and how speakers make choices that represent exceptions to the unmarked preference structure.

In ex. 5, mother (A) and son (B) have different preferences for unmarked languages in mother-son interactions. The mother prefers to speak Cantonese, and her son prefers English. The 12-year-old boy is playing with a computer in the living room as his mother is trying to find out if her son did his homework. First, the mother asks the son in English if he has finished his homework. His answer is a "noticeable silence," which prompts the mother to reformulate her question in Cantonese. After a brief delay, he responds in English, *I've finished*. Li 1995 explains the boy's contrastive language use as a "dispreferred second part" to his mother's indirect request to study. However, he rightly points out that the boy's answer can also be seen as a tying back to the mother's first question in English.

Viewed in terms of an RC framework, this exchange opens up to a slightly different interpretation. The mother's initial choice of English is unexpected. Her motive seems to be to suspend the unmarked RO set in order to bring about a desired effect. As a marked choice, the mother's speaking of English is loaded with ambiguity. On the one hand, this choice evokes associations of English as "the language of authority" in the Tyneside community (Li 1995); thus, it may be construed as a means to project a powerful and distanced persona for the mother. On the other hand, the mother's use of English can be considered deferential, because English is her son's preferred language but not hers. It is particularly the production of indeterminacy of readings by these ambiguous choices that most clearly defies a single-minded or inductive form-to-function utterance interpretation in sequential analyses. One characteristic feature of language use on which an RC model can shed light is speakers' ability to employ marked choices to pursue a complex set of goals and maintain multiple role relationships.

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Note that when the mother does not get an adequate response to her question (*Finished homework?*), she has the choice of continuing in English or switching to Cantonese. A cost-benefit analysis tells her to switch to Cantonese. The switch displays how the mother weighs and prioritizes her goals differently at this point: Taking account of the available evidence (lack of response to English), she makes her goal and her preferred RO set (i.e. her desires and values) unambiguous for her son. The focus is now on HER desires and goals and not on accommodating to her son in any way. Presumably, her main goal is to have her son pay attention and respond. The switch is from the marked (and, in this case, ineffective) choice of English to her unmarked choice of Cantonese. When she does not succeed in establishing her authority about school matters through speaking some English, she satisfies her ultimate goal by switching to Cantonese. Recall that under an RC approach assessing available evidence is one of the mechanisms that guide choices. Thus, this approach leads to quite a different interpretation than just that the mother turns to Cantonese for a contrastive effect. Under an RC interpretation, the mother's choice to switch to Cantonese is motivated by the evidence that both mother and son know that she has some measure of authority in the RO set that her use of Cantonese indexes. Her authority is recognized, and the son replies, albeit in English.

(5) Getting a response from a 12-year-old boy playing with the computer (Li & Milroy 1995:288; Li 1995:205).

1 A: Finished homework?
2 B: (2.0)
3 A: Steven, *yiu mo wan sue?*
'Want to review (your) lessons?'
4 B: (1.5) I've finished.

The final example (6) comes from two Finnish/English bilingual sisters living in the United States (Halmari 1993). Although Halmari examines how the children (aged 8 and 9) use CS as an evaluative device, the data also provide further insights into how speakers' choices are driven by rationality rather than by sequential structure.

(6) Daughter and cakes (Halmari 1993:17). Setting: The mother (M) offers two different types of cake to the younger child (S2). Halmari points out that it is important to note that while S2 is still a fluent bilingual, she shows a preference for English.

1 M: *Irene, otaksää tätä kakkua?*
'Irene, do you want this cake?'
2 S2: *Emmää tykkää* cheesecakes*tä*
'I don't like cheesecake.'
3 M: *Ota sitten tosta toi – eilinen leivos*.
'Take then that – yesterday's pie.'
4 S2: Yes. It's better.

In lines 1 and 3, the mother uses Finnish for each offer of cake. In line 2, the girl uses Finnish for the refusal, whereas in line 4, she uses English for the acceptance. Note that this pattern is just the opposite of what a CA-based analysis

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would predict, since the language of refusal – a dispreferred second, in CA parlance – shows code-alignment, not a new code. Also at odds with a CA analysis is the fact that acceptance of the offer, a preferred second part, is done with no code alignment.

Within an RC model, the child's respective language choices show how she finds the "golden mean" of accomplishing two interactional goals and conveying two types of social messages simultaneously. In line 2, as a consequence of the use of Finnish for the refusal, the rejection is mitigated. In addition, the child presents herself as deferential toward her mother. As a "reward," she is offered the cake that she likes. However, her language of acceptance does not show deference any longer. Indeed, the girl's self-assertive comment, in both its content (*It's better*) and its form (language choice contrasting with that of the addressee, but her own preferred choice), aims at restoring interactional parity. The focus from the other shifts to the self as the girl projects a more powerful self-image grounded in her own desires and value system.

CONCLUSION

In summary, choices in a rationally based model of linguistic variation pass through several filters. They begin with the external constraints on speakers: their linguistic repertoires, which in turn are constrained by large-scale societal factors and the discourse structure of their communities. They are also filtered through internal constraints, the innately available architectures (a markedness evaluator, somatic markers) that bias choices based on experience. Finally, choices pass through a third filter in which a social mechanism, rationality, is the centerpiece. To act rationally means that speakers take account of their own beliefs, values, and goals, and that they assess these in regard to internal consistency and available evidence.

Perhaps taking account of available evidence is the most fundamental feature of rational action. Evidence is what can be seen or heard. It may be more or less transparent and thus may require different degrees and types of inferential work. In addition, evidence is STORED – as intuitions, frames, RO sets, certainly as norms, and even as somatic markers. Evidence is often inextricably linked to the beliefs and values that also guide actors: the stuff of beliefs and values is recycled evidence. In addition, speakers operate with the expectation that what they say will be available evidence for others; although speakers do not necessarily have "cooperation" as their primary interpersonal objective, they always are acutely aware of their listeners, and so they communicate with the assumption that their conversational contribution will be available to others for interpretation. Simply stated, they speak to be heard. And, as rational actors, speakers collect, pay attention to, and take account of all these sources of available evidence in calculating the possible outcomes of their decisions regarding HOW to speak.

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The speaker's beliefs and values merit more comment. Note that an RC theory says that an action is rational if it appears to optimize outcomes, given the actor's beliefs and values. Some might claim that rationality is a culturally biased, Western notion. We disagree. Rationality has to do with what goes on in the mind of the individual (how an individual makes choices) and not with individualism (a value). Furthermore, cultural differences in beliefs and values (the impetus for optimizing outcomes) are what makes rational acts appear different cross-culturally – not the presence or lack of rationality per se in a culture. The reason why individual preferences and desires – rationality "at work" – are more conspicuously manifest in Western interactions is that, generally speaking, the gap between individualistic and group values is wider there than in collectivist cultures.

RC theory is based on the assumption about human cognition that actors are oriented to seek optimality of an interpersonal nature in their actions, including their linguistic choices. The overall assumption is that the way speakers choose to speak reflects their cognitive calculations to present a specific persona that will give them the best "return" in their interactions with others, in whatever ways are important to them and are rationally grounded.[12] RC theory is based on these deductive premises, leading to a set of plausible hypotheses about how courses of action, including linguistic choices, can be explained. In effect, such a theory assumes that the way to explain social phenomena is in terms of rationality as the social mechanism employed by individuals in their decisions and manifested in their behavior.

One goal of this article has been to show how, with some recasting, the Markedness Model (MM) is an RC model. We have analyzed six conversations that include switches of languages to what can be considered marked choices within the terms of the interaction at hand, and we have employed the basic premises of the MM, along with rationality as an explanatory mechanism.

A specific goal of this essay has been to show how the MM, as a rationally based model, explains these conversations with a better fit between the model's premises and the data than do two other major approaches to linguistic variation, which we have called a social factors model and Conversation Analysis (CA). Although speakers are certainly aware of salient social factors in their communities that result in associations of social meanings with particular linguistic varieties (whether these factors are dominant ideologies, inequality in socio-economic opportunities, or other large-scale societal factors), speakers see these social meanings AS A RESOURCE for making choices, not as a determinant of choices. The same can be said for the tacit knowledge that speakers have about preferred organizational patterns in conversation. Therefore, social information that is external to the speaker impinges on and/or shapes the speaker's set of opportunities, but speakers – not opportunities – make decisions.

Three limitations of this framework as a model of linguistic choices (and limitations of RC theory in general) are worth emphasizing. First, social mechanisms

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such as rationality allow us to explain, but do not necessarily predict, future choices individuals will make.[13] Second, an RC model does not necessarily produce quantitative evidence. Third, such models do not claim that actors always make what others (e.g. analysts) might consider to be rationally based choices, nor do they claim that actors always make the best choices from an objective standpoint. As Elster puts it, "Rational choice models are subjective through and through . . .To be rational does not mean that one is invariably successful in realizing one's aims: *it means only that one has no reason to think that one should have acted differently, given what one knew (and could have known) at the time"* (1997:761; italics in original).

Nonetheless, a rationality-based model of linguistic choices still has a special potency. Its strength lies IN THE FIT between two deductive premises – that speakers seek optimality when making choices, and that these choices are rationally based – and data-based analyses relying on these premises. The closeness of the fit between the premises and the data makes such a model attractive. A further source of attractiveness of the fit is that the explanations it offers are more general in a universal sense than are the social and structural profiles of the individual phenomena to be explained.

NOTES

*This is a much revised version of a paper given in July 1998 at the International Pragmatics Conference, Reims, France. We thank Roberta Chase-Borgatti, Janet Fuller, and Steven Gross for comments on an earlier version.

[1] For example, Grice introduces his well-known exposition of the Cooperative Principle and its maxims with this comment: "As one of my avowed aims is to see talking as a special case or variety of purposive, indeed rational, behavior, it may be worth noting that the specific expectations or presumptions connected with at least some of the foregoing maxims have their analogues in the sphere of transactions that are not talk exchanges" (1975:47).

[2] Witness, for example, the many papers on social dialects in American English at NWAV (New Ways of Analyzing Variation) conferences every year – papers whose goals are to correlate linguistic data with demographic features, such as socio-economic status, education, and gender.

[3] In its more extreme form, this approach insists that it is the place of the individual's social group vis-à-vis other social groups that crucially affects choices. For example, some would argue that the individual's motivations for even micro-level interactions – such as codeswitching, our subject here – cannot be explained "without explaining what society does to speakers and vice versa" (cf. Meeuwis & Blommaert 1994:418, in a negative review of Myers-Scotton 1993). Note that even the title of this review ("The 'Markedness Model' and the absence of society") reflects the authors' attitude that not giving primary attention to large-scale societal factors is a fatal flaw in any attempt to explain codeswitching.

[4] In their introduction to the volume *Rethinking Context*, Duranti & Goodwin (1992:28–9) offer this characterization of CONTEXT, quoting from Heritage (1984:242):

> A speaker's action is context-shaped in that its contribution to an on-going sequence of actions cannot adequately be understood except by reference to the context – including, especially, the immediately preceding configuration of actions in which it participates. This contextualization of utterances is a major and unavoidable procedure which hearers use and rely on to interpret conversational contributions and it is also something which speakers pervasively attend to in the design of what they say.

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In a more recent exposition of Conversation Analysis, Hutchby & Wooffitt (1998:15) discuss context in this way: "Speakers display in their sequentially 'next' turns an understanding of what the 'prior' turn was about. That understanding may turn out to be what the prior speaker intended, or not; whichever it is, that itself is something which gets displayed in the next turn in the sequence."

[5] CA refers to "preferred" and "dispreferred" parts of adjacency pairs, something to which a speaker attends before making a contribution. However, it would seem that positing knowledge of what is preferred implies that speakers take account of "something" in addition to the immediate context.

Operating in a cognitively based framework, and therefore from a very different point of view, Wilson & Sperber 1993 and Blakemore 1992 discuss what might be called a form of "preference" in how discourse is organized. They argue that language users employ discourse connectives (because they convey procedural knowledge rather than conceptual knowledge) to constrain the interpretation of what follows, in effect setting up "preferred" readings.

[6] The "acts of identity" approach of LePage & Tabouret-Keller 1985 seems to be a type of Rational Choice Model because speakers are viewed as pursuing their own goals in the ways they choose to speak. This approach is popular; for example, Hudson endorses it in the second edition of his text, *Sociolinguistics* (1996). We can agree with Hudson's rationale "that each individual is unique [and that] individuals use language so as to locate themselves in a multi-dimensional social space" (1996:29). However, though these ideas are attractive, they are hard to apply. That is, a speaker's choice may indeed be "an act of identity," but it is not clear whether there is any principled deliberation impelling a speaker to make one choice rather than another. Furthermore, no constraints – external or internal – on the speaker's choice are evident.

[7] Collins (1994:121–180) gives an excellent critical overview of the history and present state of Rational Choice theory (within sociology, at least) in his second chapter, "The rational/utilitarian tradition." He points out several immediately obvious problems with RC approaches. First, on the individual level, Collins notes, "There are limits on the ability to process information and make rational decisions" (1994:153), giving rise to the idea that "pure" rationality cannot exist, only "bounded" rationality. A related problem "is that most things people make decisions about are not measured in money, and hence are not strictly comparable" (1994:155). On the group level, the problem of how social solidarity is created requires better solutions: "There is the question of how rational individuals can form groups: indeed, how collective action is possible at all" (1994:153). Since Collins is a sociologist, his discussion of efforts to overcome these problems focuses on social policies; still, sociolinguists can gain insights from the proposed rational solutions to create group solidarity. He concludes: "The modern rational/utilitarians, for all their faults, nevertheless are on the forefront in attempting to apply sociological insights to propose policies that have a realistic chance of succeeding" (1994:178). For the view of a sociologist of language on theories of rationality, see Ben-Rafael 1993.

[8] Damasio makes very clear the connection between mind and body:

> When this process [decision-making] is overt, the somatic state operates as an alarm signal or an incentive signal. The somatic state is alerting you to the goodness or badness of a certain option-outcome pair. The device produces its result at the openly cognitive level. When the process is covert the somatic state constitutes a biasing signal. Using an indirect and non-conscious influence, for instance through a non-specific neurotransmitter system such as dopamine, the device influences cognitive processing. (1998:40)

[9] Although such a system as that proposed under the somatic marker hypothesis would have evolved to maximize basic survival, Damasio goes on to say:

> A very large range of other problems including those which pertain to the social realm, are indirectly linked to precisely the same framework of survival versus danger, of advantage versus disadvantage, of gain and balance versus loss and disequilibrium. It is plausible that a system geared to produce markers and signposts to guide basic survival, would have been pre-adapted to assist with "intellectual" decision making. (1996:1417)

Damasio points out that the somatic marker hypothesis "developed as a response to a number of intriguing observations made in neurological patients with focal damage in the frontal lobe" (1998:36).

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These patients largely retain their intellectual abilities, but they show problems in their personal life. "The choices these patients made are no longer personally advantageous, [are] socially inadequate and are demonstrably different from the choices they were known to have made in the premorbid period" (1998:36). In reference to the specific structures involved, Damasio goes on: "I propose that the ventromedial prefrontal cortex establishes a simple linkage, a memory in fact, between the disposition for a certain aspect of a situation (for instance, the long-term outcome for a type of response option), and the disposition for the type of emotion that in past experience has been associated with the situation" (1998:39).

[10] Elster offers us this gem about norms: "To paraphrase Weber, a social norm is not like a taxi from which one can disembark at will" (1994:31).

[11] That speakers are predisposed to make readings of intentionality is one of the main points of Levinson 1995. He writes, "Human interaction, and thus communication, depends on intention-ascription," adding, "The inferences seem determinate, though we are happy to revise them when forced to do so. The extraordinary thing is that it seems, for all practical purposes, to work most of the time" (1995:241). Levinson refers to one of the kinds of human intelligence as INTERACTIONAL INTELLIGENCE (1995:222) and to "the astounding speed of conversation inferences [as] something that should be noted" (1995:239).

We are well aware that not all researchers accept the idea that intentionality is a universal feature of language use. Cf. Meeuwis & Blommaert 1994, who cite arguments by a number of anthropological linguists that this idea about intentionality is only a Western notion. However, see Nuyts 1993 for an argument against the claims made by these authors.

[12] That human choices are rationally based is a view not only of academics but also of crucially placed governmental officials. In a feature story on Lawrence Summers, a newly appointed Secretary of the Treasury, Jacob Weisberg writes, "Summers is always weighing probabilities" (1998: 38). He goes on to quote Summers as saying, "It's really trying to maximize an expected value keeping in mind the multiplicity of possibilities." Weisberg quotes Summers further: "That basically is the canonical model for making rational decisions. People who make job choices well in their lives, people who make personal choices well, are all people who have implicitly made sensible calculations based on the fact that there are a multiplicity of possibilities."

[13] However, Myers-Scotton (1993:153–4) gives some indication of the predictions one might make about the social profiles of the types of persons who will make more marked choices than others and those persons who will maintain the status quo through unmarked choices.

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