Structural Constraints in Code-Switched Advertising

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Code switching, the use of mixed-language expressions, is gaining prominence in advertising targeting linguistic minorities. Two studies investigate the existence of linguistic rules governing the use of code switching and identify situations in which those rules have a greater impact on persuasion. The studies extend Myers-Scotton's 1995 model of code switching by revealing an interaction between linguistic correctness and type of processing. More specifically, breaking the linguistic rules of code switching results in less persuasive messages but only when consumers process the ads in a highly data-driven mode. When consumers do not engage in highly data-driven processing, breaking linguistic rules does not influence persuasion.

Bilingual individuals often use code switching, or mixing two or more languages within a single utterance, in their everyday lives. For instance, Hispanic children in the United States may utter sentences such as "Quiero una bike" (I want a bike) to communicate certain meanings that a single-language sentence may not fully convey. Even individuals who are fluent in both the minority and the majority languages and whose families have been in a country for multiple generations often use code switching (de Bot 2003; Grosjean 1997; Jordan 2004). Because of the ubiquitous nature of code switching among certain populations, such as Hispanics in the United States or French speakers in Switzerland, advertisers targeting those populations have also adopted this practice. Yet despite the use of code switching in marketing, there is little research on its effectiveness and, more importantly, there is no theoretical framework to evaluate the impact of psycholinguistic factors on the persuasiveness of code-switched messages.

This article examines the rules that make a particular code-switched marketing message linguistically correct or incorrect. Our research is based on the Matrix Language Frame (MLF) model (Myers-Scotton 1995), which specifies that certain structural rules govern the production of code-switched speech, in a sense laying out a grammar of code switching. We contribute to consumer research in that we provide a theoretical model based on psycholinguistics that helps to explain the persuasion process for code-switched ad messages. The model outlines a series of structural constraints that moderate the impact of code switching on persuasion and complements recent consumer research investigating the sociolinguistic influences on code-switched ad persuasiveness (Luna and Peracchio 2005). Our research enriches theorizing regarding code switching by introducing a psycholinguistic analysis of this phenomenon, augmenting the previous sociolinguistic treatment of code switching. At a time when bilingual markets in the United States continue to grow in number and importance (U.S. Census 2000, http://www/census.gov), theoretical perspectives on the effectiveness of different linguistic practices are essential.

In addition to offering a theoretical model, we underscore the importance of linguistic analysis in advertising by showing how structural constraints, or grammar, influence the cognitive processing of advertising text. With some exceptions (e.g., Bradley and Meeds 2002; Zhang and Schmitt 1998), there is a dearth of empirical research investigating the role of grammar in advertising. We also contribute to the extant research in psycholinguistics by extending the MLF model from speech production to speech perception, as language perception is crucial for ad processing. We identify type of processing as a moderator of the MLF model's rules. Finally, we validate and extend Myers-Scotton's research by testing the MLF model's rules in an experimental setting, complementing Myers-Scotton's use of discourse analysis to uncover structural rules.

The article begins with a brief description of the MLF model and relevant theory. It then reports two studies de-

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signed to investigate the circumstances in which structural constraints may influence the processing of code-switched ads. The studies demonstrate that structural constraints can influence ad persuasiveness but only under highly data-driven processing conditions.

THE MATRIX LANGUAGE FRAME MODEL

Given the intimate relationship between language production and perception (MacKay et al. 1987), exploring the manner in which individuals construct code-switched language should be useful for understanding perception of code-switched messages. Both processes make use of similar building blocks (Porter 1987). Consequently, the rules that govern language production—for example, the grammar for code switching laid out in the MLF model—may also play a role in language perception.

According to the MLF model, when bilingual individuals communicate with other bilinguals, they may choose to code switch. Whether or not they do depends on a variety of sociolinguistic factors, such as the meanings they wish to communicate or their attitudes toward the different languages they can use and toward code switching itself. A similar process applies to advertisers seeking to communicate with bilingual consumers. The advertiser begins by determining whether the audience might be receptive to a code-switched ad and would be able to understand it. To help make the decision of whether to code switch or not, a number of sociolinguistic factors should be considered. For example, the audience's attitude toward code switching could be assessed. Previous research has examined the effect of sociolinguistic factors on code-switching persuasiveness (Luna and Peracchio 2005). This article differs from that research in that it focuses on the linguistic constraints governing code switching after the decision to code switch has been made.

Consider an advertiser who targets U.S. Hispanics by placing an ad in *Latina* magazine, a publication that is printed primarily in English but that includes some Spanish features and a great deal of code switching. The advertiser, to be consistent with the medium's language, chooses to use English for most of the ad but decides to insert certain elements in Spanish. Because, in that case, most of the text is in English, we can say that the matrix language (ML) of the message is English and that the embedded language (EL) is Spanish. The structure, or frame, of this message will be that of the matrix language (English), so the advertiser will draw from the matrix language to form the syntactic structure of the message. That is, the rules of English syntax will determine the organization and order of words in this ad.

The choice of which words to code switch is governed by the morphemes contained in the text. A morpheme is the smallest unit of language that carries information about meaning or function. English morphemes range from full words such as "compute" to small parts of words that cannot stand alone such as "-er." These morphemes can be combined (e.g., "computer") to form new words or different parts of speech. Morphemes and syllables are not synonymous. The word "computer," for example, contains three syllables but only two morphemes.

According to the MLF model, the frame for an utterance is formed by a particular type of morpheme called a system morpheme. System morphemes (e.g., quantifiers and determiners) are elements of speech that serve as the glue between the different elements of an utterance and indicate the relationships among them. Once this frame has been formed, content morphemes (e.g., nouns and verbs), the elements that convey the central meaning of the utterance, are inserted into appropriate slots to communicate the meanings intended by the speaker. For example, consider the following sentence: "John lives in a house." The morphemes "-s," "in" and "a" are system morphemes. "John," "live-," and "house" are content morphemes. Because the matrix language sets the frame for constructing a code-switched sentence, the MLF model specifies that system morphemes must come from the matrix language, in this case English, and not from the embedded language.

In addition to the general rule that system morphemes must come from the matrix language, the MLF model describes other, more specific rules in code-switched speech. These rules have been derived from observation and analysis of large corpora of speech (e.g., Myers-Scotton 1993; 1995; Myers-Scotton and Jake 2000). The rules, or structural constraints, provide specific predictions that operationalize the MLF model's general rubric regarding the dominant role of the matrix language in code-switched speech. Our use of the term structural constraints refers to their grammatical, or syntactic (i.e., structural), nature. We investigate two of those rules, the Morpheme Order Principle and the Embedded Language Island Hypothesis.

The Morpheme Order Principle. According to the MLF model, the sequential order of the morphemes within a code-switched utterance must follow the order of the matrix language, not the order of the embedded language. This principle becomes critical when the ordering of morphemes in the matrix and embedded languages conflicts, or is inconsistent. For example, in English, nouns ("lamp") generally come after adjectives ("green") as in "green lamp." However, in Spanish, the opposite is generally true, so the same phrase would be uttered "lamp green." Therefore, this principle specifies that when the matrix language is English (i.e., the conversation is mostly in English) and speakers want to code switch between the two words, they must do it as "green lámpara," not as "lámpara green."

The Embedded Language Island Hypothesis. Sometimes, a system morpheme may be formulated in the embedded language, thus breaking the general rule of the MLF model. Consider the sentence "John lives in a house." Suppose that the speaker code switches and says "John lives *en*. . ." (ML: English; EL: Spanish). According to the MLF model's general rule, this is an incorrect switch. The word "in" cannot be code switched in this manner because it is

a system morpheme and system morphemes must be in the matrix language. However, such speaker "mistakes" do occur, particularly when the words sound similar in both languages (Clyne 1967) or when the speaker may have a pragmatic purpose in code switching a system morpheme—in this case perhaps to emphasize where John lives (Myers-Scotton 2002). In such cases, an *EL island* must be formed. An EL island is a full phrase in the embedded language that follows the EL grammatical rules. In other words, it is a phrase that functions as a self-contained EL island formed within the ML utterance. Thus, the speaker who says "John lives *en* . . ." must complete the sentence as "John lives en una casa." Here, an EL island, "en una casa," is formed around the system morpheme that had been worded in the EL. The MLF model posits that the speaker would not say "John lives en a house" because the system morpheme "en" can never be left on its own in the EL.

In conclusion, the constraints that the MLF model describes for code-switched language production are expected to also influence language perception and, in particular, bilinguals' evaluative responses to code-switched ads. That is, ads that follow the MLF model's rules should be preferred over ads that do not follow them. However, for language perception, type of processing may be a moderator of the effect of linguistic constraints on evaluative responses.

The Influence of Type of Processing. Roediger (1990) distinguishes between data-driven and conceptually driven tasks. Data-driven processes (e.g., reading a list of words out loud or evaluating the aesthetic qualities of an ad) involve processing of perceptual cues. These processes are triggered directly by external stimuli and engage individuals in mostly bottom-up processing. In contrast, conceptually driven processes (e.g., generating associates or imagining the actions involved in an ad's narrative) involve semantic elaboration and are initiated by the respondent. This type of approach generally leads to top-down processing. Durgunoglu and Roediger (1987; see also Dijkstra, van Jaarsveld, and Ten Brinke 1998) used the data-driven versus conceptually driven paradigm in a bilingual setting and found that type of processing interacted with language in memory tests.

From a linguistic standpoint, a major question to be addressed in our research is whether individuals will overlook ungrammatical code switching when they process a slogan conceptually versus in a data-driven manner. Previous research has examined the possibility that individuals may not notice a code-switched element. For example, Altarriba et al. (1996) show that high semantic constraint sentences, sentences in which the context helps define a code-switched word, lead people to "skip" the word. That is, if the code-switched word is primed through the use of a semantically relevant context, individuals may not notice it is in another language. This is a very similar task to conceptual or schema-based processing in that it directs attention to semantic features and away from the surface characteristics of the language.

Our research examines how structural constraints influence the persuasiveness of code-switched ads. We anticipate that the role of structural constraints depends on type of processing.

STUDY 1

Type of processing can vary in such a manner that individuals could process a stimulus in a highly data-driven mode or under more conceptually driven conditions. In this study, highly data-driven processing is elicited by manipulating two factors, processing instructions and rhyme within slogans. When respondents are instructed to vocalize the slogans, they will be more likely to process them in a data-driven manner versus when they are instructed to imagine the scenario described in the slogan, a conceptually driven instruction. When individuals vocalize, they pay attention to the phonological features of the stimuli (their surface representation), so they are more likely to notice language-related variables. Also, when the slogan contains rhyme, individuals are more likely to pay attention to the surface features of the slogan (i.e., its wording) and engage in data-driven processing than if the slogan does not include rhyme (McQuarrie and Mick 1996, 2003). In particular, rhyme seems to prompt phonological-level processing (Rapp and Samuel 2002).

We hypothesize that if individuals are in a highly data-driven mode after exposure to both data driven (vocalization) instructions and rhyming slogans, they will pay more attention to the language of the ads, taking greater notice of the code-switched elements. Consequently, ad evaluations will be affected by linguistic structural constraints. That is, when individuals view ads in a highly data-driven mode, grammatical ads will result in higher evaluations than ungrammatical ads. However, if individuals are in any other processing mode, their processing is likely to include some degree of conceptually driven processing. They will not pay as much attention to the language of the ad, and they may not be affected by structural constraints. Therefore, the effect of structural constraints on ad evaluations should only be manifested in the highly data-driven condition (Chaffin 1997; Elias and Perfetti 1973). In other words, breaking the MLF model's rules will only be noticed and will negatively affect ad evaluations in the highly data-driven condition.

Design. We conducted a 2 (processing instructions: data-driven or conceptually driven) × 2 (grammaticality: grammatical or ungrammatical) × 2 (rhyme: rhyme slogans or nonrhyme slogans) × 2 (MLF model rule: Morpheme Order Principle or EL Island Hypothesis) mixed-design ANOVA. Processing instructions, grammaticality, and rhyme were between-subjects factors. MLF model rule was a within-subjects factor. Every respondent was presented with eight advertising slogans: four slogans testing each of the two structural constraints, the Morpheme Order Principle and the EL Island Hypothesis. The order of the slogans in the questionnaire was varied, and respondents were never

TABLE 1

STUDY 1: SLOGANS (RHYME CONDITION)

Grammatical	Ungrammatical
Morpheme Order Principle	
1. Bureva Real Estate will help you find a *nueva* house. We have six locations in town.	1. Bureva Real Estate will help you find a house *nueva*. We have six locations in town.[a]
2. You'll find all kinds of shoes at Dancos shoe store, including *blancos* shoes.	2. You'll find all kinds of shoes at Dancos shoe store, including shoes *blancos*.[b]
3. Don't wait to have a drink of our *maravillosa* water. Fasosa water comes from the tallest mountains.	3. Don't wait to have a drink of our water *maravillosa*. Fasosa water comes from the tallest mountains.[c]
4. We have the records of all *disponibles* lawyers. Mibles attorney referral service is now in your area.	4. We have the records of all lawyers *disponibles*. Mibles attorney referral service is now in your area.[d]
EL Island Hypothesis	
5. We have the freshest meat. Come to Oriunas Butcher Shop, buy *algunas alas de pollo*.	5. We have the freshest meat. Come to Oriunas Butcher Shop, buy *algunas* chicken wings.[e]
6. Customers who take our vitamins *pronto ven la diferencia*. Sonto dietary supplements are the healthiest.	6. Customers who take our vitamins *pronto* see the difference. Sonto dietary supplements are the healthiest.[f]
7. I love Dero cookies *pero el supermercado* where I shop doesn't have them. I go to their Web site.	7. I love Dero cookies *pero* the supermarket where I shop doesn't have them. I go to their Web site.[g]
8. I prefer clothes that look and feel good. I always buy *esta marca*: Garesta jeans.	8. I prefer clothes that look and feel good. I always buy *esta* brand: Garesta jeans.[h]

[a]*Nueva* = new.
[b]*Blancos* = white.
[c]*Maravillosa* = marvelous.
[d]*Disponibles* = available.
[e]*Algunas* = some.
[f]*Pronto* = soon.
[g]*Pero* = but.
[h]*Esta* = this.

exposed to more than two consecutive slogans testing each of the two structural constraints.

Stimuli. The slogans were constructed so that there was one grammatical version of each slogan that used acceptable code-switching practices according to the MLF model and one ungrammatical version that contradicted the rules of the MLF model. The slogans were previewed by focus groups to ensure that they were realistic and understandable and that the Spanish words were common to the different variants of Spanish that our respondents spoke. All slogans were written in English and switched a small component (a word or phrase) to Spanish. Therefore, the ML of the slogans was English and the EL was Spanish. In the case of the slogans testing the Morpheme Order Principle (MOP), the correct order included an adjective in the EL and a noun in the ML. Hence, the grammatical version of the slogans followed the ML word order (adjective, then noun), and the ungrammatical version followed the EL order (noun, then adjective). For slogans testing the EL Island Hypothesis (ELIH), the grammatical versions code switched system morphemes (e.g., "algun-a-s," which translates as "some" in English) and formed EL islands (in Spanish) around them, resulting in well-formed, self-contained phrases in the EL. The ungrammatical versions of the slogans code switched the same system morphemes but immediately switched back to the ML.

The rhyme manipulation was obtained by changing the brand names of the slogans to rhyme with the code-switched element of the slogan. Table 1 includes the slogans used in this study, and table 2 includes the brand names. Brand names were pretested to ensure that they were equally likeable and memorable across rhyme conditions (F's < 1). Both rhyming and nonrhyming brand names were constructed using Dorfman's (1994) list of word components, so that they would be phonotactically feasible in both English and Spanish but would not have any specific meaning.

Procedure. Respondents were asked to view the slo-

TABLE 2

STUDY 1: BRAND NAMES

Word to rhyme with	Rhyme brand name	No-rhyme brand name
1. Nueva	Bureva	Burova
2. Blancos	Dancos	Dancas
3. Maravillosa	Fasosa	Fasisa
4. Disponibles	Mibles	Mebles
5. Algunas	Oriunas	Oriunos
6. Pronto	Sonto	Sinto
7. Pero	Dero	Dera
8. Esta	Garesta	Garesto

gans one at a time on a computer monitor. Prior to viewing each slogan, respondents read a brief statement that included the type of processing instruction manipulation. Data-driven processing was induced by asking respondents to read the upcoming slogans out loud. Following Durgunoglu and Roediger (1987), conceptually driven processing was induced by instructing respondents to imagine the action or situation described in the slogans as they read them. They were instructed to press the enter key when they were ready to view each slogan. After viewing each slogan, respondents also had to press the enter key, which erased the slogan from the screen. Then, they were asked to provide their slogan evaluations on a series of scales. Ad evaluations were collected on six seven-point scales (very bad/very good, dislike very much/like very much, very uninteresting/very interesting, very unpleasant/very pleasant, very negative/very positive, very poor quality/excellent quality), where higher scores meant more favorable evaluations. A slogan evaluation index was formed for each slogan by averaging responses to the six evaluation scales (mean $\alpha = .98$). The set of slogans included one practice slogan to familiarize respondents with the procedure. After viewing all of the slogans, respondents filled out demographic, personality, and language scales. Finally, respondents completed manipulation checks and were paid a small fee and dismissed.

Respondents. A total of 116 English-Spanish bilinguals of Latino origin participated in the study. All respondents were highly proficient in both languages, scoring above 2.5 on a five-point multi-item language proficiency scale adapted from Luna and Peracchio (2001). Respondents were recruited by a marketing research firm and held diverse occupations in the community. Their average age was 33.

Manipulation Checks. To confirm that respondents under data-driven instructions vocalized the slogans to a greater extent than respondents under conceptually driven instructions, we asked respondents whether they had pronounced most words out loud (1–7 completely disagree/completely agree scale). Respondents under data-driven instructions reported pronouncing the slogans to a greater degree than respondents under conceptually driven instructions ($M = 4.36$ vs. $M = 3.73$; $F(1, 115) = 3.97$, $p < .05$). In addition, a second check asked respondents what percentage of the slogans included a rhyme within the slogan. They were provided an 11-point scale anchored at 0% and 100%, where each point in the scale represented an increment of 10%. The results showed that respondents in the rhyme condition reported detecting more rhyming slogans than respondents in the no-rhyme condition ($M = 6.20$ vs. $M = 5.14$; $F(1, 115) = 4.51$, $p < .05$).

Type of Processing and Attention to Code Switching. Our theorizing suggests that respondents in the highly data-driven condition would pay more attention to the language of the slogans, noticing the code switch to a greater extent than respondents in the other conditions. To examine this process, we asked respondents what percentage of the slogans they viewed made use of code switching (on an 11-point, 10% increment scale from 0% to 100%). Note that in reality all slogans included code switching. Confirming our expectations, we found a two-way interaction between processing instructions and rhyme ($F(1, 115) = 4.55$, $p < .05$). Respondents in the highly data-driven condition ($M_{\text{d-d/rh}} = 9.80$) reported being exposed to a higher number of code-switched slogans than all the other respondents ($M_{\text{c/nrh}} = 7.34$ vs. $M_{\text{con/rh}} = 6.53$, $M_{\text{d-d/nrh}} = 8.31$; $F(1, 115) = 7.92$, $p < .01$). The higher reported rates of code switching in the highly data-driven condition are therefore closer to the real rate (100%, or a score of 11), so we can conclude that the highly data-driven condition drew respondents' attention to the slogans' language to a greater degree than the other conditions.

Main Results. Slogan replication did not interact with any of the factors (F's < 1), so we formed evaluation indices for each of the MLF model rules by averaging the evaluations across the four slogans within each rule ($\alpha_{\text{MOP}} = .84$, $\alpha_{\text{ELIH}} = .84$). The ad evaluation index yielded a three-way interaction (see fig. 1) between grammaticality, processing instructions, and rhyme ($F(1, 108) = 4.06$, $p < .05$). This interaction did not vary across MLF model rules ($F(1, 108) < 1$).

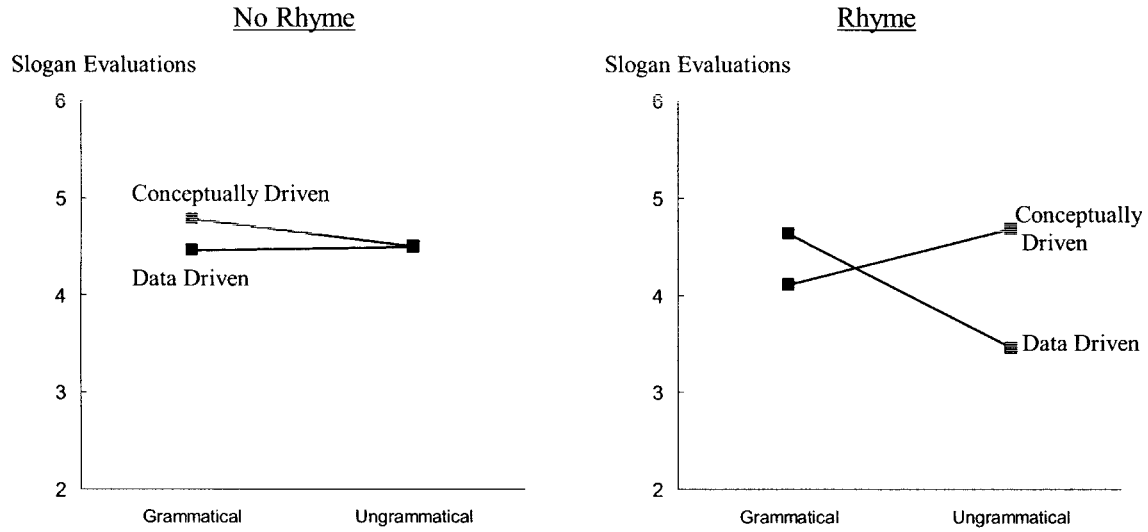
Confirming our expectation, grammaticality only influenced evaluations in the highly data-driven condition (rhyme plus data-driven instructions). In that condition, grammatical slogans resulted in higher evaluations than ungrammatical slogans (MOP: $M = 4.68$ vs. $M = 3.47$; ELIH: $M = 4.60$ vs. $M = 3.45$; $F(1, 108) = 5.20$, $p < .05$). In the rhyme, conceptually driven instructions condition, grammatical and ungrammatical slogans resulted in similar evaluations (MOP: $M = 3.91$ vs. $M = 4.54$; ELIH: $M = 4.30$ vs. $M = 4.84$; $F(1, 108) = 1.35$, $p > .25$). Also, grammaticality did not influence no-rhyme slogans under conceptually driven instructions (MOP: $M = 4.54$ vs. $M = 4.36$; ELIH: $M = 5.02$ vs. $M = 4.67$; $F(1, 108) < 1$) or under data-driven instructions (MOP: $M = 4.34$ vs. $M = 4.43$; ELIH: $M = 4.59$ vs. $M = 4.54$; $F(1, 108) < 1$). Hence, we can conclude that code switching grammaticality influences the persuasiveness of an ad but only under highly data-driven conditions when respondents pay particular attention to the language of the slogans. To ensure that other operationalizations of type of processing can provide similar results, study 2 sought to elicit highly data-driven processing through a different means, the design of the study itself.

STUDY 2

Study 1 used a between-subjects design to show that the grammaticality of a code switch influences ad persuasiveness in highly data-driven conditions (rhyme plus data-driven instructions). Study 2 utilizes a within-subjects study and data-driven instructions to achieve a highly data-driven condition. Grammaticality is varied within subjects so that each respondent is exposed to several grammatical code-switched slogans and several ungrammatical code-switched

FIGURE 1

STUDY 1: EVALUATIONS (AVERAGE OF MOP AND ELIH)



slogans. The within-subjects design plus data-driven instructions should direct respondents' attention to the surface features of the slogans (their specific wording) and make grammaticality more salient. Previous research has also used within-subjects designs to bring attention to surface cues and encourage piecemeal, rather than holistic, processing through the contrast in conditions (Ransdell and Fischler 1989; Slamecka and Katsaiti 1987).

Study 2 also included thoughts protocols. We expected respondents' thought valence to follow a similar pattern to the ad evaluations, highlighting the salience of ungrammaticality in the highly data-driven condition, which leads to negative elaboration and lower evaluations.

Design and Procedure. We conducted a 2 (processing instructions: data-driven or conceptually driven) × 2 (grammaticality: grammatical or ungrammatical) × 2 (MLF model rule: MOP or ELIH) mixed-design experiment. Processing instructions were a between-subjects factor. Grammaticality and MLF model rule were within-subjects factors. Respondents were exposed to the same slogans as in study 1. Each respondent saw four grammatical slogans and four ungrammatical slogans, and grammaticality of each slogan was counterbalanced within each MLF model rule using a digram-balanced Latin square design (Wagenaar 1969) such that each slogan was shown to half the respondents in its grammatical form and to the other half in its ungrammatical form. Our Latin-square counterbalancing ensured that the groupings of grammatical and ungrammatical slogans were varied across respondents. The order of the slogans in the questionnaire was also counterbalanced. Other than the within-subjects design of the study, the procedure was the same as in study 1, including the processing instructions manipulation. None of the slogans in this study included a rhyming brand name.

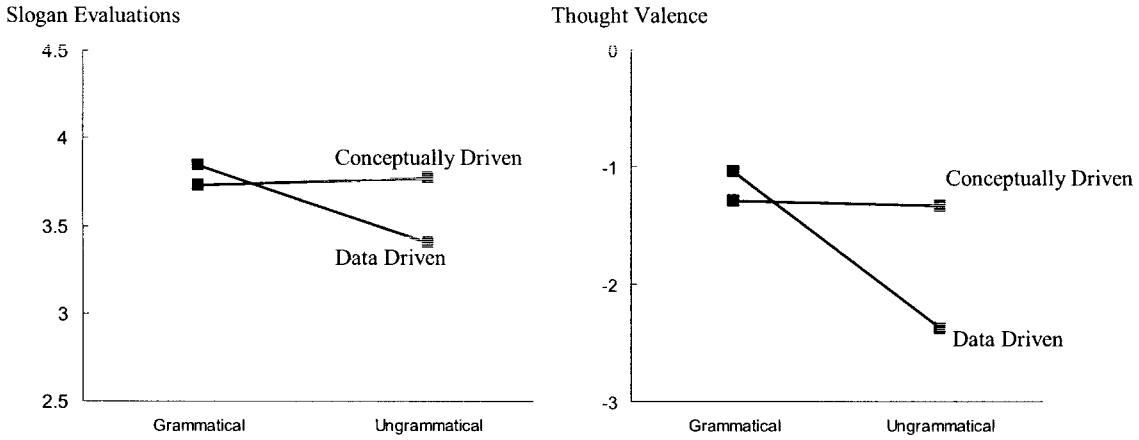
Respondents. Forty-eight fluent English-Spanish bilingual individuals of Latino origin participated in the study. All respondents were highly proficient in both languages, scoring above 2.5 on the five-point multi-item language proficiency scale used in study 1. Respondents held diverse staff positions at an urban university.

Results. Our theorizing stated that grammaticality would only influence slogan evaluations in the highly data-driven processing condition, in this study operationalized as data-driven instructions plus a within-subjects design. Supporting our expectation, we found a significant two-way interaction (see fig. 2) of grammaticality by processing instructions ($F(1, 46) = 4.16$, $p < .05$). This interaction did not vary across MLF model rules ($F(1, 46) < 1$). The difference in evaluations between ungrammatical slogans and grammatical slogans under data-driven instructions was significant (MOP: $M_{ungr} = 3.31$ vs. $M_{gr} = 3.80$; ELIH: $M_{ungr} = 3.50$ vs. $M_{gr} = 3.91$; $F(1, 46) = 6.99$, $p < .01$). However, the difference in evaluations was not significant under conceptually driven instructions (MOP: $M_{ungr} = 3.64$ vs. $M_{gr} = 3.74$; ELIH: $M_{ungr} = 3.90$ vs. $M_{gr} = 3.72$; $F(1, 46) < 1$).

Thought protocols were scored by two bilingual judges, who were blind to the hypotheses, with an interrater agreement rate of 82%. We examined the valence of the thoughts written by respondents. We formed a valence index by subtracting the number of negative thoughts from the number of positive thoughts. The results support our expectations, revealing a significant interaction between processing instructions and grammaticality ($F(1, 46) = 4.34$, $p < .05$). This in-

FIGURE 2

STUDY 2: EVALUATIONS AND THOUGHT VALENCE (AVERAGE OF MOP AND ELIH)



teraction did not vary across MLF model rules ($F(1, 46) < 1$). Under data-driven instructions, we found a significant effect of grammaticality such that ungrammatical slogans resulted in more negative elaboration (MOP: $M_{ungr} = -1.38$ vs. $M_{gr} = -.58$; ELIH: $M_{ungr} = -1.00$ vs. $M_{gr} = -.46$; $F(1, 46) = 9.25$, $p < .01$). However, under conceptually driven instructions, grammaticality did not have an effect on thought valence (MOP: $M_{ungr} = -.75$ vs. $M_{gr} = -.58$; ELIH: $M_{ungr} = -.58$ vs. $M_{gr} = -.71$; $F(1, 46) < 1$).

GENERAL DISCUSSION

This article contributes to both consumer research and psycholinguistics. For consumer researchers, the article presents a new perspective in the study of language processing on two fronts. First, the importance of structural, or grammatical, constraints in language is manifest. Consumer researchers need to consider the implications of poorly worded ads or even ads that may seem correct to some but not to other target groups. Our studies shed light on an area of investigation that has not been fully explored to date in consumer research, namely, the role of grammar in language. Second, the findings of this research highlight the importance of ensuring that efforts designed to target linguistic minorities are well conceived, including the seemingly smallest details. Our studies demonstrate how merely changing the order of words can have a significant impact on persuasion.

Our contribution to psycholinguistics is also substantial. The studies described here provide evidence that the Matrix Language Frame model (Myers-Scotton 1993, 1995) can be extended from language production to language perception. In the language perception context, we identify a moderator of the rules stated by the MLF model: type of processing. The model was originally derived from the analysis of a corpus of spoken language that included numerous instances of code switching. The present studies validate the model in an experimental setting, thus providing evidence that some of the structural constraints indicated by the model, the Morpheme Order Principle and the EL Island Hypothesis, indeed influence language processing and, in particular, attitudinal reactions to code-switched stimuli.

Our research complements other studies of code switching. For example, Luna and Peracchio (2005) investigated the social constraints of code switching described by Myers-Scotton's (1995) Markedness Model in an advertising context. The present studies investigate a different aspect of code switching—its linguistic (structural) constraints. The social and structural constraints of code switching are not only important for advertising processing but also apply in other areas of marketing, such as service encounters. The meanings communicated through code switching and the contexts in which the use of code switching is acceptable, effective, and efficient as a communication medium must be fully understood as bilingual markets continue to grow not only in the United States but also around the world.

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