BILINGUALISM AND ADVERTISING

25 Advertising to the buy-lingual consumer

David Luna

The consensus seems to be that there are more bilingual individuals than monolinguals in the world (Tucker, 1999). However, perhaps because the field of consumer research developed largely in the US, where most adult individuals are monolingual (US Census, 2000), much of the research investigating people as consumers has not acknowledged the role of bilingualism in decision making, advertising, or in any other process within the consumption context. This chapter describes some recent advances in the area, most of which have been published in the last decade or so. The research outlined here shows a multiplicity of research traditions, which is a trait of the study of consumers. Consumer researchers often use a variety of theoretical paradigms to explain how individuals operate as consumers in the real world.

This chapter considers several factors that influence bilingual consumers’ response to advertisements. Many of the studies described here utilize models from psycholinguistics and sociolinguistics, applying them to a consumer context. First, psycholinguistic factors will be discussed. The second part of the chapter examines the interaction of language and culture.

Ad content memory: The role of L2 proficiency, motivation, and pictures

In a series of studies (Bauman, Luna, & Peracchio, 2005; Luna & Peracchio, 2001, 2002) we found that, even for proficient bilinguals, first language (L1) texts, such as ads, lead to greater comprehension and memory than second language (L2) texts. Our research was based on the revised hierarchical model, or RHM (Kroll & De Groot, 1997). This model suggests that there exist two levels of representation in the bilingual’s mind: the lexical (word) level and the conceptual (meaning) level. At the lexical level each language is stored separately. However, at the conceptual level there is a unitary system in which words in each language access a common
semantic representation or meaning. The connections between words in different languages made at the lexical level are referred to as word associations or 'lexical links', while the connections in memory between lexical representations in either language and the meanings they represent are referred to as 'conceptual links'. The model specifies a stronger lexical link from individuals' L2 to their L1 than from individuals' L1 to their L2. Hence, words in L2 are closely associated with words in L1.

According to the RHM, bilinguals also have stronger conceptual links between the lexical representations in an individual's L1 and semantic representations in memory (concepts). Conceptual links to the individual's L2 are weaker than L1 links because it is only after individuals have achieved a high level of proficiency in their L2 that they rely less on their L1 to gain access to meaning. Thus, the strength of both lexical and conceptual links is a function of the L2 proficiency of the individual in question. However, even after the individual has become fluent in both languages there is a residual asymmetry in both lexical and conceptual links (Kroll & De Groot, 1997).

In summary, the RHM suggests that processing an L2 message at the conceptual level is less likely than processing an L1 message conceptually. Empirical testing of the RHM supports the proposition that semantic processing of L2 stimuli is less likely than processing equivalent L1 stimuli (e.g., Sholl, Sankaranarayanan, & Kroll, 1995). Therefore we argued and showed empirically that L1 ads result in greater memory and comprehension of the meaning conveyed in ad text. However, this finding was moderated by the use of pictures that supported the text and by whether the audience was motivated to process the ad.

As suggested by La Heij, Hooglander, Kerling, and Van Der Velden (1996), pictures could help make up for the weaker L2-conceptual store links. In our studies we found that if pictures that were highly supportive of the ad text were used in L2 ads, the ads did not have to be translated to result in relatively high memory of the ad claims, when targeting relatively fluent bilinguals. However, if the ads' pictures were not as congruent with the text, the ads would result in poor memory, even with relatively fluent bilinguals.

We also found that processing motivation is a factor that offsets some of the conceptual processing asymmetries between L1 and L2 in advertising text comprehension and memory. Luna and Peracchio (2002) again applied the revised hierarchical model to advertising and found that when consumers are extrinsically motivated to process the ad, those who have an intrinsic need to process information comprehensively (i.e., individuals with high need for cognition, see Cacioppo & Petty, 1982) tend to remember the text equally well regardless of whether it is in L1 or L2 (provided consumers are relatively proficient in both languages). Additional elaboration due to the increase in attentional focus can offset the L1-L2 conceptual processing asymmetry.

**Code switching in advertising**

Code switching, or using multiple languages in an utterance, is practiced every day in the lives of bilingual individuals. It also appears in advertising, which tries to mimic how bilinguals speak in order to create a bond with those consumers. The hope is that being able to relate to consumers in the language varieties that they use will lead to the purchase of the advertised brand. For instance, a California winery recently mixed Spanish and English in their slogan: 'Una latina con good taste', or 'Kick up your tacones', where una means 'a' and tacones means 'heels'. In a different example, the US Army, in an effort to recruit Hispanic individuals, used the slogan 'Yo soy el Army' (I am the Army). In a series of studies we investigated two aspects of code switching: The linguistic structural constraints of code-switched slogans, and the sociolinguistic implications of code switching for consumers' responses to code-switched slogans.

**Structural constraints**

Following up on Myers-Scotton's matrix language frame model, or MLF (Myers-Scotton, 1993), Luna, Lerman, and Peracchio (2005) examined whether breaking, versus following, some of the grammatical rules of code switching would have a negative impact on consumers' evaluations of advertising slogans. 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. If bilinguals choose to code switch, their utterances follow certain grammatical rules.

Consider an advertiser who targets US Hispanics by placing an ad in *Latina* magazine, a publication that is printed primarily in English. 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' of the message is English and that the 'embedded language' 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. 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. 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 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). 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. In our studies we investigated two of those rules, the morpheme order principle and the embedded language island hypothesis.

We expected that the constraints that the MLF model describes for code-switched language production would also influence language perception and, in particular, would influence 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. In several studies we indeed found that individuals evaluated slogans more favorably if they followed the rules set forth by Myers-Scotton. The effects were stronger if individuals processed the slogans in a data-driven mode, paying particular attention to the language of the slogans. This, in conjunction with the Luna and Peracchio (2002) finding regarding the effect of motivation mentioned earlier, suggests that at least some of the effects of language take place when particular attention is devoted to which language a message is written in.

**Activating language schemas**

Stimuli that stand out from their context become perceptually salient and therefore attract attention (Fiske & Taylor, 1984). Accordingly, Luna and Peracchio (2005a, 2005b) argued that the embedded language element in a code-switched utterance, for example, a word in Spanish in an otherwise English utterance, tends to direct an individual's attention to that element. By noticing the word in Spanish, individuals then tend to activate the associations that specific language has built over time. For instance, bilingual Hispanics in the US have developed a sense that the English language is used more often than Spanish to discuss technical, sophisticated matters. Instead, Spanish is connected to a sense of inferiority and prejudice. These associations, what we called the 'language schema', emerge when code-switched advertisements are encountered, and subsequently influence slogan evaluations. For instance, our studies found that, generally, English ad slogans in which a short phrase or word was switched to Spanish, thus attracting attention to that embedded term (e.g., 'In my cocina I would never make coffee with any other coffee maker'), resulted in lower slogan evaluations than slogans mostly in Spanish that switched a small component to English (e.g., 'En mi cocina nunca haría cafe con ninguna otra cafetera'). An analysis of the thoughts written down by respondents confirmed our theorizing: When Spanish was made salient by the code switch, respondents activated more thoughts about their minority culture (e.g., 'Hispanics would not like this product') and negative language-related thoughts (e.g., 'Spanish shouldn't be mixed with English'). Notice that in this research, when we switched to Spanish, we did not switch words or expressions traditionally associated with the 'maternal' culture of our respondents (Spanish-speaking, Hispanic cultures). For instance, we did not switch expressions of endearment, or culturally specific, or particularly emotional language. The switched terms were always common nouns that did not have a strong emotional content and were relatively culturally neutral. One could argue that if we had switched to Spanish more emotional or culturally bound terms, the reactions would not have been negative. This is an area ripe for further research.

The results of our code-switching research suggest that advertisers intending to use code switching in their ads need to ensure that their ads do not seem forced, but rather they should be the result of an organic process in which true speakers of the code-switching variety of interest generate the text of the message. If switching from English to Spanish in the US, advertisers must ensure that the switch seems natural and is done in the appropriate context—for example in an emotional, or family situation where Hispanics might use the language in their daily lives. Otherwise, advertisers run the risk of activating a negative language schema—as in our studies, where slogans switched to Spanish without considering such situational use of the language.

In fact, some advertisers who have not followed such advice have seen their efforts backfire, like the notorious case of the Volkswagen billboard targeting bilingual Hispanics in South Florida, whose text read 'Turbo-Cojones'. The billboard resulted in a public relations nightmare for VW and had to be withdrawn because of the inappropriateness of the word cojones in Spanish. The term does not have such negative connotations when borrowed in English, so it is likely that an English-speaking copywriter thought it might be a good idea to include it in the billboard to connote strength and power. Another awkward example of code-switching use was a Toyota Hybrid TV ad aired during the 2006 Superbowl. The ad included code switching from English to Spanish but seemed like a forced, gratuitous use of the practice. In that ad, a father and son traveling by car speak in English. As they converse, the father points at the car navigation system and, in a noticeably different voice, probably inserted from a

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546 Language and Bilingual Cognition

Advertising to the buy-lingual consumer 547
Price-oriented advertising

In a recently published paper, Luna and Kim (2009) followed up on numerical cognition and educational psychology research that found that mental arithmetic is intrinsically more difficult in some languages (e.g., Ellis & Hennelly, 1980). This increased difficulty occurs because the names of numbers in some languages (e.g., the word five in English) tend to be shorter than in others (cinco in Spanish). As a result, the phonological loop in working memory (Baddeley, 1986) is overtaxed when performing mental arithmetic in 'long' languages, relative to 'short' languages, so mental calculations have a greater chance of being wrong in long languages.

In a series of studies we found that when bilinguals were presented with texts that included a list of prices for several items, they were able to calculate and later recall the total price of the items in the text more accurately if the text was written in a language with shorter number names than if the numbers were written in a long language. Several of our studies were performed with bilingual participants, speakers of Korean (a short language) and English (a longer language). The results suggest that bilinguals are subject to certain cognitive limitations in one language but not the other, so it is possible that they could be 'better consumers' in one language than in the other—they could calculate running totals of how much their shopping cart is worth in one language but not in the other.

Biscriptal bilinguals

Many bilinguals are not just bilingual: They can use multiple writing systems. From a theoretical perspective, one of the most interesting cases of biscriptals are those individuals who can write in both an alphabetic and a character-based system such as Chinese. A number of consumer researchers have examined how such biscriptal bilinguals process information. For instance, Tavassoli and Han (2002) found that visual cues that support the verbal information in an ad, such as color logos, are most effective when the marketer uses the character-based Chinese style of writing, whereas auditory cues such as jingles or other sounds supporting the verbal information work better with the English alphabet. The authors theorize that the processing of words written in alphabetic scripts relies more heavily on the phonological loop of working memory. In contrast, the processing of words written in character-based scripts relies more on visual working memory. Therefore, a caveat emerges from another of the authors’ articles (Tavassoli & Han, 2001): Auditory contextual interference (stimuli that are not related to the target verbal information) is higher for alphabetic words than for character-based words, and vice versa for visual distracters. This suggests, for example, that ads containing alphabetic words should be designed to minimize the use of distracting auditory information, which may potentially compete for the cognitive resources required in order to learn printed alphabetic information. In contrast, ads containing character-based words should be designed to minimize the use of distracting graphics or complex visual displays. Hence, different stimuli could interfere with bilingual/biscriptal individuals’ ability to process an ad (or any other verbal stimulus), depending on the language/script in which it is written.

Ahn and La Ferle (2008) also investigated the case of biscriptals, but from a different perspective. They examined an extended practice in some Asian countries, where alphabetic writing is included in local-language print ads. They found that mixing scripts within one ad leads to greater memory, due to the deeper processing prompted by the inclusion of both scripts.

Linguistic relativity

The notion of linguistic relativity, typically embodied in the Whorfian hypothesis (Whorf, 1956), has been explored to some extent in consumer research. For instance, Schmitt and Zhang (1998), investigated how the use of classifiers influences cognitive processes like categorization. Classifiers are lexical items that depict perceptual and conceptual properties of objects in some languages. The authors found that the use of classifiers by speakers of a language that uses classifiers such as Chinese affects the perceived similarity of objects and the accessibility of classifier-related features, compared to speakers of languages that do not use classifiers such as English. In addition, they showed that classifiers are organized schematically and consumers use the conceptual knowledge associated with classifiers when they draw inferences about brands. Consumers also seem to use the conceptual knowledge represented in classifiers in judgments and choices. The authors argued that their results support the notion that language structure influences cognition, particularly in a cross-cultural context. This is of course the core of the Whorfian hypothesis of linguistic relativity (Whorf, 1956). In the last two decades the Whorfian hypothesis has been reconceptualized in terms of how linguistic forms are represented, how they operate in the mind, and how they affect
the concepts and categories that denote objects and relations in the world (Hunt & Agnoli, 1991). Schmitt and Zhang's research is in line with this reformulation of the Whorfian hypothesis by demonstrating the influence of grammar-related differences on the fundamental process of categorization, judgment, and choice.

One possible extension of Schmitt and Zhang (1998) would involve the use of bilingual individuals, exposing them either to a language with classifiers or to a language without classifiers, to see if the linguistic relativity hypothesis also holds within-individual. Such a study would be related to the notions explored in the next section.

BICULTURALISM AND ADVERTISING

A growing number of consumer researchers have dedicated a great deal of effort in the last few years to studying biculturalism, in order to clarify some processes that involve both language and culture. Before further discussion, the notions of culture, biculturalism, and bilingualism should be defined. Culture can be seen as the beliefs, values, and norms of a specific sociocultural group (Brumbaugh, 2002). Bicultural individuals are those who have internalized two cultures (Lau-Gesk, 2003). Therefore, those cultures guide biculturals' thoughts, feelings, and behavior (Hong, Morris, Chiu, & Benet-Martinez, 2000; LaFromboise, Coleman, & Gerton, 1993; Ramirez-Esparza, Gosling, Benet-Martinez, Potter, & Pennebaker, 2006). Bilingualism, as used here, is the ability to communicate relatively well in two different languages, including the ability to speak, understand, read, and write in both languages (Luna & Peracchio, 2001). In the research described below, bilingualism is an essential property of being bicultural, so what is referred to as a bicultural is really a bicultural-bilingual.

Based on those definitions, several categories of individuals can be distinguished in addition to biculturals. Monocultural bilinguals are those individuals who never internalized the culture attached to their second language. They typically learned their second language in a classroom environment without significant exposure to the corresponding culture. Biculturals and monoculturals differ from one another in several respects. Two key differences are important in our chapter: (1) compared to biculturals (e.g., Mexican American biculturals), the knowledge that monoculturals (e.g., Anglo Americans who have never lived immersed in a Mexican environment) have of the other culture (e.g., the Mexican culture) is not linked to self-relevant identity constructs. That is, their knowledge of the other culture, even if it stems from their temporary exposure to that culture, does not affect how they view themselves (Brumbaugh, 2002). Also, (2) biculturals and monoculturals differ regarding the complexity of their knowledge about the two cultures in question—biculturals have richer, more complex knowledge about what it means to be a member of each of the two cultures (Benet-Martinez, Lee, & Leu, 2006; Brumbaugh, 2002). That is, biculturals have two distinct and complete sets of knowledge structures for each culture. Monoculturals only have one set of structures for their own culture, and possess a collection of second-hand knowledge about the other culture.

Language, culture, and thoughts

In a recent article, Noriega and Blair (2008) examine how bilinguals' thoughts about an ad are influenced by the language of the ad. When the ad is in their native language, they tend to think more thoughts about the brand in relation to their family, home, friends, and/or homeland than if the ad is in a non-native language. In his dissertation work, Carroll (2008) takes this finding a step further, showing that when advertisers use a language other than the language typically used by consumers to discuss a particular topic (e.g., work or friendship), consumers' attitudes toward the message tend to be less positive than if the topic and the language match. Carroll found evidence to suggest that this effect was due to the increased accessibility of words in a given language when the topic at hand is typically discussed in that language. Such an increase in accessibility then leads to a fluency effect (Schwarz, 2004), which leads to more positive evaluations than if language and topic do not match.

Cultural frames: Switching in and out of ways of being

Recently, Arthur Laurents, the director of a new version of the Broadway musical West Side Story, in which Anglo and Latino characters speak in their respective languages, asserted that 'the scenes with the Spanish are wildly exciting because they are much less inhibited. I don't think many eyes are going to stray to the translation', referring to the English subtitles that appear whenever the characters speak Spanish (Bosman, 2008). Is it possible that Spanish leads to a less-inhibited behavior than English, as suggested by Laurents? How does such a switch in attitudes happen and does it have an influence on advertising perceptions? A great deal of research in cross-cultural psychology has investigated language-triggered switches in ways of being, calling them instances of 'frame switching'.

Mental frames

A mental frame is understood as 'an interpretation which is frequent, well organized, memorable, which can be made from minimal cues, contains one or more prototypic instantiations, and is resistant to change' (D'Andrade, 1992, p. 29). These mental frames, largely transparent and
tacit to the individual, become mediating devices that organize and manage the comprehension of abstract processes (Holland & Quinn, 1993; Holland & Valsiner, 1988). The content of culture can be seen as a collection of mental frames that are internalized through individuals' socialization and participation in a cultural group (Brumbaugh, 2002). The notion of mental frames is very similar to that of schemas. Both are cognitive structures based on associations between mental representations. Therefore, even though one may refer to cognitive structures as either schemas (from a psycholinguistic perspective) or mental frames (from a sociolinguistic perspective), the term 'mental frames' is used here to be consistent with the literature on the topic.

It follows that biculturals, who by definition are exposed to two cultural value systems (often during upbringing), are likely to have identity constructs related to both cultures, whereas monoculturals only have identity constructs related to one culture. When two languages are linked to two different cultures (the case of biculturals), the languages are likely to tap into culture-specific identity frames.

Frame switching

Research in psycholinguistics has examined the possibility that words in two different languages activate different concepts from a cognitive perspective. For example, the conceptual feature model, or CFM (Kroll & De Groot, 1997), suggests that a word's translation is likely to have a different interpretation from the original. According to the CFM, words in each language known by a bilingual activate a series of conceptual features. Words are connected to a number of these features that represent the subjective interpretation of the word for each individual. Those conceptual features, if unified under a theme or category, could be considered distinct frames. Hence, bilinguals may possess two different culture-specific mental frames connected to what appears to be the same word translated to different languages (translation-equivalent words).

Figure 25.1, from Luna, Ringberg, and Peracchio (2008), depicts a hypothetical scenario derived from the CFM, and applied to both bicultural-bilinguals, and monocultural-bilinguals. The left side represents bicultural individuals and the right side represents monoculturals. The upper panels for both biculturals and monoculturals show the mappings between two words, 'masculine' and 'self-sufficient,' and the identity-related concepts they represent. The two words are contained in a language-specific memory store—the English lexicon. Their respective translation-equivalent words, 'masculino' and 'auto-suficiente,' are stored in the Spanish lexicon. The four words are linked to conceptual features which determine their meaning and are stored in a single conceptual store, which is common to both languages. Each translation-equivalent word is linked to different concepts. The lower panels of Figure 25.1 depict the conceptual mappings between 'feminine' and 'self-sufficient' (and their translation-equivalents, 'femenino' and 'auto-suficiente') for biculturals and monoculturals. In a sense, then, Figure 25.1 represents different language- and culture-specific mental frames: the Spanish and the English frames, which differ in the associations to certain identity-related words (feminine and masculine).

Frame switching refers to the bicultural's act of switching from one mental frame to the other in response to certain cues. Researchers have found evidence of frame switching in several domains (e.g., Cheng, Lee, & Benet-Martinez, 2006; Ervin, 1964; Hong et al., 2000; Zou, Morris, & Benet-Martinez, 2008). Language-triggered frame switching has been found by several of these studies. For instance, differences in personality traits, like Extraversion, Agreeableness, and Conscientiousness, were found when bilingual-biculturals were shown the same questionnaire in different languages (Ramirez-Esparza et al., 2006).

Luna et al. (2008) attempted to shed some light on the frame-switching process by advancing a cognitive explanation, as implied in Figure 25.1. Our research provided some preliminary evidence of our framework. In a qualitative study we interviewed the same bicultural US Hispanic participants fluent in both Spanish and English first in one language...
(Spanish or English) and then, 6 months later, in the other language. Their biculturalism was established by a series of scales and questionnaire items. During the interviews we showed them the same set of ads, with the text either in Spanish or English, depending on the language of the interview. We found that ad interpretations varied systematically between languages. One of the frames that consistently surfaced in the Spanish version of the ads was the 'self-sufficiency' frame. In English the frame did not emerge as readily. For instance, one of the ads portrayed a woman sitting alone atop a hill overlooking a lagoon (see Figure 25.2 for the English version). The advertisement was for a resort hotel and the major headline stated: ‘For those who rarely find themselves at a loss for words, prepare to be left speechless.’ The ad stated that the scenery was ‘too unbelievable to describe’, with pristine beaches, towering mountains and peaceful deserts. During the Spanish sessions, for example, informant Sara expressed: ‘I think she is a positive person who takes risks, she can express herself, she is independent’, but in the English session the same informant reported ‘She feels, she looks, hopeless... She looks lonely too and she looks very disturbed, confused like she’s got something on her mind.’ Similar comments were observed across the informants. We can only speculate as to the reason for the counterintuitive direction of this shift. Perhaps the Spanish language is associated with the culture of the immigrant, where self-sufficiency is a commonplace trait, or perhaps the language is associated with the trend in Hispanic women toward more assertiveness and activism (see Luna et al., 2008).

Two follow-up experiments confirmed that the self-sufficiency frame was more accessible than the other-dependence frame for bilingual-biculturals, but not for bilingual monoculturals. That is, bilinguals who were not true biculturals and thus had not incorporated ‘Hispanic’ frames into their repertoire of values and behaviors did not experience frame switching of the kind found in biculturals. However, we should emphasize that we did not seek to explore or experimentally test whether monoculturals can experience a change in their identity across situational contexts (e.g., coach, spouse, manager). Our research explored the activation of ‘culture-specific’ identity-related frames among biculturals and monoculturals; future research could explore whether identity-related frame switching might be triggered when different roles or situational contexts are made salient. Another direction for future research would be to examine biculturals who are not bilingual (e.g., individuals who have internalized both the South African and North American cultures but speak only one language—English).

CONCLUSION

Consumer research is characterized by a multidisciplinary approach to study topics that influence individuals in the marketplace. For instance, psycholinguistic theories could be the basis of a particular project, but often researchers need to inform their studies with principles from visual cognition, sociolinguistics, or even cultural studies, as profiled in this chapter. The result of inquiries in the domain of consumer research is therefore a rich exploration of the human experience. Bilingualism is no exception. In this chapter, we have seen how bilinguals—especially bilinguals who are bicultural, present an interesting case study in that they live in a world characterized by the interaction of a multitude of factors. Languages, writing systems, mental models, and imagery can present challenges that require the interaction of a variety of frameworks. The complexity of the marketplace can only be matched by the complexity of the multilingual mind. Understanding both requires a melding of paradigms and research traditions. The research presented here takes a step in the right direction, but much work is still needed to fill a multitude of gaps. For instance, regarding the notion of frame switching, studies could take a look at whether bicultural monoculturals are also able to switch cultural frames when cued by different accents or expressions. Similarly, bicultural-bilinguals may exhibit unique traits that distinguish them from monocultural monolinguals, such as enhanced creativity (e.g., Leung & Chiu, 2008). Many of these traits are important in a consumer-related context, or even in the business side—illuminating, for example, the question of whether ad agencies should employ more multicultural copywriters and art directors.
REFERENCES


Epilogue: Bilinguals save the world

Keith Brooke

As the cover copy for Sheila Finch’s *The Guild of the Xenolinguists* points out (Finch, 2007), human history shows that communicating with our own kind is hard enough, so just how much more challenging might it be to get across concepts such as peace, war, trade, territory, and so on to not only another species, but a species that has evolved in a completely different environment on some far-flung planet?

Science fiction (SF) is a genre of literature full of possibilities for thought experiments to explore and illustrate linguistic theory and speculation: The evolution of language into the far future, the challenges of communicating with artificial intelligences and alien species. Even where linguistic theory does not provide the principle novum in an SF tale, it must surely inform the extrapolations upon which these stories are based: How could it be possible to write a story about an encounter with an alien species without establishing how we might communicate with these fictional beings?

Much has been written about the scientific underpinnings of SF, but as Walter E. Meyers (1980) points out in his seminal study of linguistics in the genre, *Aliens and Linguists*, while attention has been devoted to physics, biology, economics, and political science in SF, the area of linguistics has been conspicuously neglected. Communication issues are far too frequently glossed over or tackled in haste, and only rarely feature prominently. One common method of dismissing the challenges of communicating with an alien species is to employ some kind of device as a universal translator, or ‘magic decoder’ as Meyers puts it—usually a form of mobile computer-translator, perhaps worn around the neck or as a jewel of some sort; or, as Douglas Adams memorably parodied, the ‘Babel Fish’, a small creature that, when inserted into the ear, converts sound waves into brain waves, neatly crossing the language divide between species (Adams, 1979).

The magic decoder might at first appear to create the kind of implausibility that would undermine a story entirely—with the best will in the world it can be hard to believe in an alien who communicates in word-perfect American English—but Meyers takes a more generous perspective, pointing out that SF is full of conventions that, when viewed critically, would destroy the reader’s necessary suspension of disbelief, but which