

Eyewitness memory in late bilinguals: Evidence for discursive relativity*

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Abstract

Loftus and Palmer's (1974) ingenious experiments convincingly demonstrated that linguistic changes in the verbal framing of questions result in changes in eyewitness testimonies. Their findings have inspired a new line of research investigating the relationship between language and eyewitness memory. The present study expands the focus of inquiry to bilingual individuals and examines ways in which cross-linguistic differences—and second language learning in adulthood—may influence the participants' performance on memory tasks involving visual recall. The results demonstrate that in instances where availability—or lack—of certain lexically encoded concepts led to differences in narratives elicited from monolingual speakers of Russian and American English, there were also differences between the two bilingual groups. Russians who learned English as a foreign language patterned with monolingual Russians in their recall, while Russians who learned English as a second language used additional interpretive frames, privacy and personal space, available in English but not in Russian. The discussion examines these results from the perspective of discursive relativity, suggesting directions for further study of the relationship between bilingualism, memory, and cognition.

Key words

*eyewitness
memory*

*linguistic
relativity*

*Russian-English
bilingualism*

1 Introduction

In a series of ground-breaking studies, Loftus and Palmer (1974) showed participants several films portraying car accidents and then elicited recalls through differentially worded questionnaires. They found that the form of a question, in their case a change of a single word, can markedly and consistently affect a witness' answer to that question. In particular, the question "About how fast were the cars going when they smashed into each other?" elicited higher estimates of speed than questions that used the verbs *collided*,

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bumped, contacted, or hit. Moreover, during a retest a week later, the subjects previously exposed to the verb *smashed*, were more likely to respond positively to the question whether they saw any broken glass. In explaining their results, the researchers pointed to the fact that the two verbs, *hit* and *smashed*, specify different rates of movement, different type of impact, and different likely consequences of the events to which they are referring. Based on the results of the second experiment, involving retest, they also suggested that the verbal label offered subsequently to the event may cause a shift in the mental representation of that event making it more similar to a representation suggested by the verbal label. Their findings and arguments have signaled the start of a new era in memory research, an era which recognized the interaction between language and eyewitness memory (cf. Loftus, 1979; Thompson, Herrmann, Read, Bruce, Payne, & Tolia, 1998).

Given how many bi- and multilinguals regularly come into contact with the justice system, it is all the more surprising to see that almost all of the studies of eyewitness memory to date have been conducted with monolingual participants. The studies of bilingualism in court commonly focus on court interpreting (cf. Berk-Seligson, 1990) and only one study known to this researcher directly addresses bilinguals' eyewitness memory. In this study, Shaw, Garcia, and Robles (1997) asked English speakers and Spanish-English bilinguals to watch a videotaped simulation of a robbery. Then, the participants read a narrative that contained misleading information about the robbery and answered questions about the videotape. The study employed four language combinations for the narrative presentation / memory test: English-English, Spanish-Spanish, English-Spanish, and Spanish-English. It was found that the effects of misleading postevent information were as robust in the cross-language condition as in the same-language condition.

The present study also aims to address eyewitness memory in bilingual individuals—yet from a different perspective. Instead of investigating the effects of postevent misinformation, as is common in research on eyewitness memory, I will examine how cross-linguistic differences may influence bilinguals' initial recalls. In other words, I will consider whether the language of the recall itself has any influence on the contents of the narratives produced by the participants. I will start out by defining the terms used throughout the paper, outlining its conceptual premises, and discussing some studies which offer evidence of the impact of cross-linguistic differences on eyewitness memory. Subsequently, I will present my own study with Russian-English bilinguals where the language of the recall and the context in which the event took place were subject to manipulation. I will end by examining the implications of the findings and outlining directions for future study of the relationship between bilingualism, eyewitness memory, and cognition.

2 Cross-linguistic differences and eyewitness memory: Theoretical framework

Since the focus of the study is on bilingualism, eyewitness memory, and cognition, I begin by defining the three terms as they will be used in the present paper. The term *bilingual*, in accordance with the scholarly conventions in the field of bilingualism, will refer to speakers of two or more languages, and thus connote both bi- and multilingual

individuals. The term *cognition* will refer to a variety of phenomena which include but are not limited to perception, attention, categorization, inference, reasoning, and socio-cultural belief systems (Lucy, 1997). The terms *visual* and *eyewitness memory* will be used interchangeably to discuss participants' recalls of events they either witnessed personally or observed through visual images (pictures, photographs, films, and videotapes). Hunt and Agnoli (1991, p. 381) point out that memory can be based on two different records: "a direct record of the sensory information at the time that we perceive an event and an indirect, linguistically based record of our description of the event to ourselves." In the present paper, I focus on the latter record. In what follows, I discuss three of its linguistic components that may be affected by cross-linguistic differences: (1) lexico-semantically and structurally encoded concepts, (2) scripts, and (3) interpretive frames.

2.1

Lexico-semantically and structurally encoded concepts

Drawing on my previous proposals (Pavlenko, 1999, 2000, in press), I see *concepts* as mental representations which affect individuals' immediate perception, attention, and recall, and allow members of specific language and culture groups to conduct identification, comprehension, inferencing, and categorization along similar lines. This view acknowledges that concepts are based on both linguistic and perceptual bases and distinguishes between language-based (or language-related) concepts and concepts not immediately linked to language for which speakers of language X may have a mental representation but no specific linguistic means of encoding. Language-based concepts can, in turn, be subdivided into two categories: *lexicalized* concepts which refer to lexically encoded items, such as natural objects, artifacts, substances, events, or actions, and *grammaticalized* concepts which refer to notions encoded morphosyntactically, such as number, directionality, tense, or aspect (cf. Slobin, 2001).

Recent investigations with monolingual speakers of a variety of languages suggest that cross-linguistic differences in lexically and structurally encoded concepts may impact memory for and thus recall of spatial arrangements (Levinson, 1997; Pederson, Danziger, Wilkins, Levinson, Kita, & Senft, 1998), number of objects (Lucy, 1992b), rate and quality of motion (Slobin, 2000), and body language and emotions (Pavlenko, 2002a). Pederson (1995) also demonstrated that within one linguistic community, different populations may draw on distinct frames for linguistic spatial reference and, consequently, differ systematically in performance on memory tasks. In turn, Arnold and Mills (2001) showed that deaf and hearing signers were superior to nonsigners in memory for such complex and difficult to describe objects as faces and shoes, yet performed the same as hearing nonsigners in memory for easily verbalizable objects (e.g., an apple or a flower).

Together, these studies show that in some cases speakers of different languages may exhibit systematic differences in recall of the same visual stimuli. Notably, however, with the exception of Arnold and Mills (2001), these studies do not suggest that speakers of different languages differ in their ability to remember particular aspects of reality. Rather, they indicate that the presence of certain lexical or structural categories may make certain aspects of reality more salient and verbalizable, and thus easily available for spontaneous recall. In turn, speakers of languages where these categories are absent

or concepts are not encoded, may not necessarily pay spontaneous attention to corresponding aspects of reality.

2.2

Scripts

Loftus and Palmer's (1974) work also points to the fact that most, if not all, concepts are linked to scripts, whereby *bumped*, *hit*, and *smashed* involve different rates of movement, distinct types of impact, and different likely consequences of the collision. In the present paper, I will use the terms *scripts* and *schemas* interchangeably to refer to hierarchically structured scenarios involving roles and actions, which in turn can be decomposed into further schemas (Fillmore, 1977; Rumelhart, 1980). The field of cognitive psychology accumulated significant evidence that "schematic material dominates other material in accurate recall, in intruded recall, in recognition confidence, in recall clustering, and in resistance to disconfirmation ... Schemata also facilitate inaccurate recall when the information is schema consistent" (Fiske & Linville, 1980, p. 545). In other words, this means that people are much more likely to perceive and internalize information that is relevant to the scripts they possess, to recall schematically-embedded information more quickly and accurately, and to produce distorted accounts where their schematic representations do not correspond to the events perceived (either leaving out important details, or recalling schema-consistent details falsely) (Di Maggio, 1997). Clearly, schemas are culture- rather than language-specific (see also van Hell's paper in this issue). At the same time, linguists argue that the presence of particular lexicalized or grammaticized categorical distinctions, such as *hit* versus *smash*, or *fall* versus *flop* versus *tumble*, forces speakers to learn to differentiate among them (Slobin, 2000).

2.3

Interpretive frames

Yet eyewitness testimony is not simply a more or less faithful recall of particular objects and settings. Both psychologists and legal scholars agree that eyewitness recalls are above all narratives and thus subject to narrative conventions (cf. Gewirtz, 1996; Thompson et al., 1998). *Narrative conventions* refer here to "conventionalized ways of choosing particular elements of the action and setting experienced or seen for inclusion in verbalization (and indeed in memory), and of organizing those events into narratives" (Tannen, 1980, p. 53). Research on cross-linguistic differences in narrative construction shows that speakers of different languages may exhibit systematic differences in what they see as tellable events and in ways they reconstruct these events in stories (Berman & Slobin, 1994; Chafe, 1980; Holmes, 1997; Liebes & Katz, 1990; McCabe & Bliss, 2003; Mistry, 1993; Sherzer, 1987; Slobin, 2000). For instance, while most European languages favor temporal sequencing, narratives told in the American Indian language Kuna focus much more on aspectual manners, location, direction, and ways in which actions are performed so that Western listeners have difficulty following these narratives in translation (Sherzer, 1987).

An intrinsic component of storytelling in many cultures are speaker's inferences, attitudes, and judgments about the events in question. In the present paper, these structures of expectation about aspects of the situation and content of talk, often exhibited

as inference or evaluation, will be termed *interpretive frames* (Tannen, 1980, 1993), and framing devices will be seen as “rhetorical/discursive practices that define or assign interpretation to the social event” (Clair, 1993, p. 196). Tannen’s (1980, 1982, 1993) research and that of others suggest that speakers of different languages may draw on different, language- and culture-specific interpretive frames in recalling the same visual stimuli, typically films, shows, or videotapes. One example comes from a study by Liebes and Katz (1990) who investigated how middle-class Americans and Israelis, as well as Arabs, Russians, and Moroccan Jews settled in Israel, recall the popular soap opera *Dallas*. They found that their stories differed from each other in narrative structure and interpretive stances, and thus in what events were considered tellable and in how they were interpreted. Arabs and Moroccan Jews favored linear retellings of episodes attributing closedness and inevitability to the story; their main concerns were with power and individuals’ positions within family and society. Israelis and Americans offered segmented narratives and focused on intentions of individual characters offering psychoanalytic explanations for various happenings. In contrast, Russians opted for more abstract and generalized, or paradigmatic, narratives offering critical readings of particular story lines and of the manipulative nature of soap opera as a genre; their main focus was on themes and messages rather than on individuals.

Once again, these results do not indicate that speakers of different languages will always diverge in their narrative accounts, nor do they mean that speakers of the same language would always assign the same interpretation to a particular event. Rather, studies of cross-linguistic differences in narrative construction suggest that each speech community offers its members a range of narrative conventions and interpretive frames and that these frames may differ across speech communities and lead their members to describe visually presented stimuli and eyewitnessed events in somewhat different ways. In particular, as already pointed out with regard to schemas in general, aspects of situations and events that support particular interpretations may be better remembered than those that contradict one’s expectations.

2.4

Discursive relativity

Many of the studies above have been conducted to address the theory of linguistic relativity, otherwise known as the Sapir-Whorf hypothesis (Sapir, 1949; Whorf, 1956), which proposes that “the particular language we speak influences the way we think about reality” (Lucy, 1997, p. 291). The distinguishing feature of recent research on linguistic relativity is recognition of the fact that language structure is not the only locus of influence and that thought and memory can be shaped by language on a variety of levels, from the semiotic to the structural and discursive (Bowerman & Levinson, 2001; Gumperz & Levinson, 1996; Lucy, 1992a, 1997; Niemeier & Dirven, 2000; Nuyts & Pederson, 1997; Pütz & Verspoor, 2000). Of particular interest to the present study is the latter level, best reflected in an approach aptly named by Lucy (1996, 1997) *discursive relativity*, which posits that discourses as social practices play a key part in constituting speakers’ worlds. In this view, two different languages are no longer alternative ways of describing the “same reality”: not only do they differ from each other, but, in addition, they also consist of multiple discourses associated with various contexts and, thus, embody a heterogeneity of interpretive frames and repertoires.

The discursive relativity perspective, sensitive to differences in interpretation existing within — as well as between — speech communities, is well-equipped to capture the links between the three linguistic components of eyewitness memory discussed above: grammaticized or lexicalized concepts (e.g., *smash* vs. *hit*), the scripts they may entail (e.g., collision with or without broken glass), and interpretive frames involved (e.g., major vs. minor accident). Bi- and multilingual speakers, in this view, may possess two or more sets of linguistic repertoires (which entail multiple concepts, scripts, and interpretive frames); in some cases, these repertoires may lead them to encode and narrate memories in somewhat different ways. Below I will argue that the precise distribution of these repertoires would depend on the speakers' language learning histories, and their use on the context, topic, and interlocutors.

2.5

Bilingualism and discursive relativity

What would count as evidence for discursive relativity in bilingual speakers' performance? According to Lucy (1997), evidence of influence of language on memory is seen in instances where "the particular language interpretation guides or supports cognitive activity and hence the beliefs and behaviors dependent on it" (p. 295). Consequently, to offer evidence for discursive relativity we need to show that monolingual members of particular speech communities differ systematically in their recalls of particular visual stimuli and that bilingual speakers, exposed to the same stimuli, produce different narratives in their respective languages. Undoubtedly, even monolingual narrators tell different versions of the same story at different times. However, these differences stem mainly from distinct audiences, contexts, and narration purposes (Chafe, 1998). In turn, when bilingual speakers are involved, differences may also stem from linguistic and narrative constraints. Currently, two types of studies offer evidence of such differences.

The first type of studies involves examinations of bilingual autobiographic memory and personal narratives. Koven (1998, 2001, in press) asked several Portuguese-French bilinguals to tell the same stories in their two languages to two different interlocutors. Her analysis of the narratives uncovered systematic differences in the narrative stances taken by the storytellers, forms used to present characters and events, terms of self-presentation, amount of reported speech, level of emotional engagement and expression of affect, and in "linguistically invocable cultural frames" (p. 436), seen here as interpretive frames. These studies suggest that verbal recalls of the same events may vary with the languages in which they are told, depending on the linguistic repertoires and registers available to bilingual speakers in each of their languages. In turn, Javier, Barroso, and Muñoz (1993), investigating autobiographical memory of Spanish-English bilinguals, suggested that verbal recalls are more vivid, detailed, and elaborate in the language in which the experience took place (see also Schrauf, 2000).

The second type of studies involves bilinguals' recalls of visual stimuli. Pavlenko's (2002b) analysis of narratives elicited by two short films from Russian second language (L2) users of English demonstrated that for the most part these bicultural bilinguals identify and describe emotions in language- and culture-appropriate ways. Some English narratives, however, contained instances of first language (L1) transfer, and some Russian narratives exhibited traces of L2 influence, evident in the use of Anglo concepts

of privacy and personal space and in description of emotions as states rather than processes (as would have been appropriate in Russian).

Intriguing evidence of L1 transfer comes from studies conducted by Jarvis (1994, 1998, 2000). Jarvis (1994) used a 5 min segment of the silent film *Modern Times* to elicit narratives from Arabic, Korean, Japanese, Chinese, Spanish, and Portuguese learners of English. He found systematic differences in lexical references to the female protagonist and to a human collision involving this woman and Charlie Chaplin. For instance, while the Korean learners of English preferred the word *meet* to describe the collision, Spanish speakers favored the word *crash*, Arabic speakers favored the word *accident*, Chinese speakers *bump*, and speakers of Portuguese avoided referring to the collision at all (50% made no mention of it). Similar results were found in a subsequent study (Jarvis, 1998, 2000) which compared retellings of an 8 min segment of *Modern Times* by Finnish and Swedish learners of English. The speakers of Finnish favored the verbs *hit* and *crash* to refer to the collision, while Swedish speakers opted for a hybrid phrasal verb *run on*. The researcher links the distinct preferences to differences in underlying Finnish and Swedish concepts related to collisions, rather than to vocabulary knowledge since results of receptive vocabulary tests revealed no differences between these learners in terms of the knowledge of the words involved. These results are especially interesting in the light of the Loftus and Palmer (1974) study which connects the verbs used in the description of a collision to subsequent recollection of the details of an accident. They definitely call for further investigation of ways in which differences in conceptualization of motion may lead to differences in verbal framing in L2 users' narratives. Even more importantly, they point to the need of investigating how L2 users' narratives are understood by native speakers of the target language.

In sum, findings to date suggest that memory for—and therefore verbal recalls of—visually presented stimuli or eyewitnessed events may be affected by lexico-semantic and structural distinctions encoded in a particular language, as well as by differences in narrative structure, scripts, and interpretive frames. In turn, eyewitness accounts produced by bi- and multilingual speakers may be affected—in addition to language proficiency—by cross-linguistic differences (Jarvis, 1994, 1998, 2000; Pavlenko, 2002b), by linguistic repertoires available to the speakers (Koven, 1998; Pavlenko, 2002b) and by the correspondence—or lack of thereof—between the language of recall and the context in which the events recalled had taken place (Javier, Barroso, & Muñoz, 1993). Furthermore, the studies by Jarvis (1994, 1998, 2000) and Pavlenko (2002b) also point to crosslinguistic influence at work in bilinguals' narratives whereby stories told in the second language may exhibit signs of first language transfer and vice versa.

The present study will examine bilinguals' eyewitness memory, building on the previous research in three ways: (1) by focusing on and manipulating specific conceptual differences which may influence subsequent recall of visual stimuli; (2) by manipulating the interaction between the context of the event and the language of recall; and (3) by comparing the performance of two groups of bilingual speakers to that of monolingual speakers of the two languages.

3 Research design

3.1

Objective

The purpose of the present study is to examine whether availability or lack of specific language-based concepts and related scripts and interpretive frames affect the eye-witness memory of bilingual individuals. The scope of the study is limited to two related lexicalized concepts, *privacy* and *personal space*. Two reasons make these concepts particularly suitable for this inquiry: (a) they are lexicalized in English but not in Russian; (b) they involve conventionalized scripts and interpretive frames which present certain situations as invasions of privacy or personal space (Pavlenko, 1997). The focus of the investigation is on consecutive or late bilingualism, whereby the second language is learned in late childhood, or early adulthood, that is, at the time by which conceptual distinctions made in the first language have been firmly internalized.

3.2

Participants

Fifty late Russian-English bilinguals (24 males, 26 females) participated in the study. These bilinguals were divided into two groups, based on the context in which they had acquired English: in the foreign-language classroom (FL users) or in the target language environment (L2 users).

The first group consisted of 18 FL users of English (10 males, 8 females), interviewed in Russia. All were middle-class urban adults, students at the University of St. Petersburg, Russia, between the ages of 18 and 26 (mean age = 22.7). All had learned English as a foreign language, in middle and high school (for up to 6 years) and/or in the university classes (for up to 4 years). At the time of the study all were enrolled in advanced English classes at the University of St. Petersburg, where they were recruited. None of the participants ever visited an English-speaking country or had any long-term contact with native speakers of English.

The second group consisted of 32 L2 users of English (14 males, 18 females), students at Cornell University, interviewed in the United States. All were middle-class urban adults, students at Cornell University, between the ages of 18 and 31 (mean age = 21.6). All arrived in the U.S. between the ages of 10 and 26.5 (mean age of arrival (AOA) = 16), and 14 of them had arrived between the ages of 13 and 16. Twenty-eight participants arrived as immigrants with their families, and four as international students. They had limited exposure to English prior to arrival and had learned English in the U.S. through ESL classes, public or private school attendance, and naturalistic exposure. By the time of the study the participants had spent between 1 and 17 years in the U.S. (mean length of exposure (LE) = 6); 21 of them spent between three and seven years in the U.S.

Even though there was some variation within this group with regard to age of arrival and length of exposure, a study with an overlapping population of Russian-English bilinguals demonstrated that AOA and LE do not significantly influence amount or directionality of transfer in the data (Pavlenko & Jarvis, 2002). For the purposes of the present study, this means that L2 effects may show up in narratives of participants

who have been exposed to English only for a year as well as in narratives of participants who have arrived in the U.S. as adults rather than teenagers. According to background questionnaires they filled out, the participants used Russian with their families, relatives, and Russian-speaking friends, and English with English-speaking friends, and for educational and everyday interactional purposes. All were literate in both languages and considered themselves to be native speakers of Russian and fluent but not native-like speakers of English. At the time of the study, all participants but one were fluent enough to be enrolled in regular undergraduate and graduate classes; one was still attending an ESL class.

3.3

Stimuli

Two 3 min long films with a sound track but no dialog were used for narrative elicitation purposes, similarly to the approach used by Chafe (1980), Loftus and Palmer (1974), Jarvis (1994, 1998, 2000), and Pavlenko (2002a,b). While one may see this approach to the study of eyewitness memory somewhat artificial, the advantage of films is that they allow researchers to keep the data more or less homogeneous by holding the semantic referents constant, in contrast to elicited personal narratives, which exhibit significantly more variation.

The two films, *The Ithaca Story* and *Kiev Story*, used as stimuli in the present study were specifically made by the researcher in order to create a corpus of narratives which would lend itself to the examination of conceptual representations and language use of Russian-English bilinguals (Dewaele & Pavlenko, 2002, 2003; Pavlenko, 2002a,b; Pavlenko & Jarvis, 2002). Both films portray a woman who is walking around in a lively downtown, meets briefly with a man and a woman, and then continues her walk until she sits down on an unoccupied bench and starts writing something down. A man comes over and sits down on the same bench; soon after, the woman gets up and leaves. The script is based on a prototypical scenario of violation of privacy/personal space elicited from American informants: a stranger sitting down within four feet of someone in a noncrowded public area (Pavlenko, 1997).

The decision to portray a male-female interaction was based on two factors. To begin with, previous research on violations of privacy and personal space in North American contexts demonstrated that men invade women's spaces much more frequently than women invade men's spaces and more than men invade other men's spaces (Wood, 1994). At the same time, invasions of women's spaces by men can have a range of alternative interpretations, from an innocent flirtation to pick-up to sexual harassment. Thus, a male-female interaction offered all study participants several possible interpretations of the encounter (for a study of films which involved female-female encounters, see Pavlenko, 2002a,b).

In order to examine context effects, the first film based on this script was made in the U.S., and the second in the Ukraine. Ukraine, rather than Russia, was chosen for production cost reasons. However, even though the film was actually made on the streets of Kiev, special care was taken to avoid well-known landmarks, and the study participants inferred that the action was taking place somewhere in Russia, or in the former Soviet Union.

3.4
Procedure

The participants were randomly assigned into language and film conditions and interviewed individually by a female researcher fluent in both Russian and English. All were initially greeted and interacted with in the language of the subsequent recall in order to induce the appropriate language mode or at least to activate the respective language. Three variables considered in the study included: *context of language acquisition* (second vs. foreign language learning), *visual context*, that is, the context in which action took place (Russia vs. US), and *linguistic context*, that is, the language of the interaction with the interviewer and subsequent recall (English vs. Russian). Consequently, the following four conditions were used in the study (see also Table 1):

- (1) Ten FL users (5 males, 5 females) and 10 L2 users (5 males, 5 females) watched *The Ithaca Story* and recalled it in English;
- (2) Eight FL users (5 males, 3 females) and eight L2 users (3 males, 5 females) watched *Kiev Story* and recalled it in English;
- (3) Ten L2 users (5 males, 5 females) watched *The Ithaca Story* and recalled it in Russian;
- (4) Four L2 users (1 male, 3 females) watched *Kiev Story* and recalled it in Russian.

Table 1
Experimental conditions and sample sizes*

Context of acquisition	Language of recall	
	English	Russian
L2 users	The Ithaca Story (10) Kiev Story (8)	The Ithaca Story (10) Kiev Story (4)
FL users	The Ithaca Story (10) Kiev Story (8)	

* Numbers in parentheses represent numbers of participants.

Only L2 users were interviewed in both English and Russian as it was assumed that FL users’ recalls in Russian would pattern with those by Russian monolinguals but L2 users’ Russian narratives may be affected by their L2 and thus need to be closely examined. Each participant was shown one film, then given a portable tape-recorder and the following instructions, either in English or in Russian: “Please, tell what you just saw in the film”/ “Пожалуйста, расскажите, что вы видели в фильме”. All spoke directly into the taperecorder so that no social interaction with the interviewer would influence their recall. In other words, while the narratives were still produced with the researcher as the intended audience in mind, they were not co-constructed by the two parties. Furthermore, the framing of the task as a recall aimed to preserve only the basic implicit inferencing, so that the participants would tell the stories as “what they think they saw.” At the end, those who did not describe the end of the film were asked: “Why do you think the girl left?” While the narratives elicited with this approach are clearly

constructed within a particular research context, it is theorized that in any context the participants draw on language and culture-specific narrative resources available to them.

3.5

Data analysis

The procedure described above allowed me to collect 50 narratives, with a mean length of approximately 35 clauses per narrative in both languages. The mean length in words was as follows: (a) *The Ithaca Story* (English): 198 for FL users; 225 for L2 users; (b) *Kiev Story* (English): 143 for FL users; 173 for L2 users; (c) *The Ithaca Story* (Russian): 155 for L2 users (no FL users interviewed); (d) *Kiev Story* (Russian): 153 for L2 users (no FL users interviewed) (for a detailed discussion of lexical richness in bilinguals' narratives, see Dewaele & Pavlenko, 2003). All of the narratives were transcribed in the language of the original by the researcher, with transcriptions doublechecked by native speakers of the two languages.

Earlier, I pointed out that the concepts of privacy and personal space are intrinsically linked to particular scripts and interpretive frames. These links allowed me to focus my data analysis on interpretive frames used by the study participants to describe the situation in the two films. This focus still captures the use of particular language-specific concepts — yet it also illuminates larger meaning-making practices and their possible links to eyewitness memory. All interpretive frames were identified and categorized by the researcher and corroborated by native speakers of each language; ambiguities were further discussed with the study participants. The interpretive frames identified in this fashion were then analyzed for the potential effects of three independent variables: (1) context of acquisition, (2) language of recall, and (3) context in which the event took place (referred to from now on as visual context). The outcomes were compared with the results of the study where narratives were elicited by the same visual stimuli from 40 monolingual speakers of American English and 40 monolingual speakers of Russian, all of whom were of similar age and socioeconomic background (Pavlenko, 1997).

4 Results

4.1

The Ithaca Story and Kiev Story narratives

As indicated above, 50 narratives were collected in the present study, 36 in English and 14 in Russian; 30 were elicited by *The Ithaca Story* and 20 by *Kiev Story*. To demonstrate what the transcribed narratives looked like I will offer three examples. The first narrative below was elicited in English by *The Ithaca Story* from an 18-year-old Russian female who arrived in the U.S. at the age of 14. The narrative transcript preserves the original morphosyntax, an interpretive frame is underlined (for transcription conventions, see Appendix A).

- (1) I remember a street, a lot of people walking back and forth, there is a girl dancing, and a couple of elderly women in wheelchairs, I think, watching her, they also show somebody undressing, trying on something, behind a stand, then they show a young woman in a long dress, sleeveless, walking... she meets two people, a young man and a woman, and she says hello to them, and hugs the woman, and,

I think, kisses the man, and they have a short conversation, she keeps walking past, then ... she sits down, it's not a bench, it's like by, somewhere near flower ... flowers are growing ... and she seems to be waiting for somebody and is really impatient, but that somebody is not coming, so she takes out a piece of paper and a pen, writes something down, keeps waiting, and then a man sits near her, she is really uncomfortable, she keeps moving away from him, he moves a little closer, and then she just gets up and leaves.

The second narrative was elicited in Russian by *The Ithaca Story* from a 26-year-old Russian female who arrived in the U.S. at the age of 24.5, with limited knowledge of English. By the time of the study, she had been living in the U.S. for 1.5 years and attending an ESL class. The narrative is presented in the original version and in translation, an interpretive frame is underlined.

- (2) Больше всего запомнилась эта девушка, которая ходила, сидела, и именно потому что она была единственная, пожалуй, кого выделили из общей массы народа, то есть, общая масса народа так и осталась массой народа, хотя там мелькали картинки отдельных там людей и пар, но все равно на них внимание не заострялось... а выделенная девушка уже наделена какими-то переживаниями и какими-то эмоциями... что она кого-то ждет, что она что-то пишет, что она что-то думает... и тот молодой человек, который вторгся в её... ЭМОЦИИ, ЧУВСТВА И ПОМЕШАЛ ЕЙ, и которого она в конце концов так... покинула тем, что просто ушла от него в какую-то сторону...

[I remember best that young woman who was walking, sitting down, and that is because she was the only one, perhaps, who was singled out of the general crowd, in other words, the general crowd remained a crowd, even though there were shots of single individuals and couples, but the attention wasn't focused on them ... but the girl that was singled out was given some feelings and some emotions ... that she is waiting for somebody, that she is writing something, that she is thinking something ... and that young man who invaded her ... emotions, feelings and bothered her, and whom she finally, at the end ... left, just leaving him and going away ...]

The third narrative was elicited in English by *Kiev Story* from an FL user, a 24-year old Russian male. The narrative transcript preserves the original morphosyntax, the interpretive frame is underlined.

- (3) I saw the film, first of all, I saw a girl in white coat ... she ... was walking along the street ... she was ... waiting for somebody and she could not, she could ... or she/she was looking for, looking for somebody, and she couldn't find it ... she ... uhm ... she came/she asked/she tried to ask... uhm ... (*long pause, sigh*) ... she ... met some ... uhm ... young people, who were drinking beer, and she asked them something, but she did not ... get the answer she wanted, then she walked along the street, she went to the square, and she sat ... she sat ... uhm ... in the garden, and opened a book ... then a young man came and sat in a place near her, and I noticed that he ... he wanted to ... so, he expressed his interest to her and she expressed that she is not interested in ... uhm ... she is not interested with ... to speak with him, so two minutes, one minute later she closed the book, stand, stood up and ... went away ... so, that's all.

As seen in the three narratives above, the narrators constructed stories rather than simply “objective recalls” or reports (Polanyi, 1995), incorporating their interpretations and evaluations of the events portrayed in the two films. The interpretations of events were conveyed through interpretive frames available in the narrators’ respective languages. At times, participants drew on more than one frame—for instance, in the second example the narrator refers to both invasion of feelings and emotions and her perception that the man bothered the woman. In such cases, the two or more frames were counted separately and thus the number of frames in each condition will be higher than the number of participants. In what follows, I will first describe the interpretive frames used by bilingual participants in the study and then examine whether the use of these frames was affected by the independent variables.

4.2

Interpretive frames

The analysis of the interpretations of the woman’s departure distinguished nine interpretive frames. These frames grouped together interpretations which were logically similar and involved closely related lexico-semantic choices. Based on the fact that all but one of the interpretive frames were brought up by two or more study participants independent of each other, as well as on the fact that all of these interpretive frames also appeared in the monolinguals’ recalls, I see these frames as discursive means which allowed the participants to interpret the two films in ways comprehensible to other members of their interpretive communities. The following nine frames were identified in the study:

- Frame 1: “unsuccessful pick-up” entailed statements about the woman’s and the man’s intentions, for example, “what she expected happened anyways, some guy liked her probably and sat down next to her,” “she didn’t want to be picked up” (see also Example (3)).
- Frame 2: “loss of comfort” involved suggestions that the woman felt uncomfortable, for example, “it was not so comfortable for that girl” (see also Example (1)).
- Frame 3: “fear” contained statements that the woman left because “she was afraid of a man who ... who sit right near her,” “maybe he wasn’t shaved, that made her be scared of him” or “she probably felt threatened somehow.”
- Frame 4: “invasion of privacy and/or personal space” included suggestions that the man was sitting too close to the woman and references to intrusion on his part, e.g., “мне показалось, что... ну, такая интрузивность с его стороны” (it seemed to me that ... well, [there was] some intrusiveness on his part).
- Frame 5: “interrupted activity” included statements that the woman was busy, as well as suggestions that the man was interfering with her activities and bothered her, for example, “really, yes, he bothered her” or “он помешал ей” (he interrupted / bothered her) (see also Example (2)).
- Frame 6: “previous appointment” involved statements that the woman had to leave because she “needed to get something,” “she had no much time, probably” or “she just had a couple of minutes before she had to be someplace else.”

- Frame 7: “desire to be alone” contained statements such as “she would like to sit alone” or “she wanted to go sit by herself.”
- Frame 8: “embarrassment” involved suggestions that the woman may have been embarrassed by the presence of the man, expressed through the term “смущение” (confusion, embarrassment), e.g., “наверное, присутствие другого мужчины её смущало” (probably, she was intimidated (embarrassed) by the presence of the man).
- Frame 9: “[sexual] harassment” contained a statement that the woman “is being harassed by a guy” (the harassment is interpreted as sexual based on the follow-up interview with the participant).

The analysis of the narratives elicited by *The Ithaca Story* and *Kiev Story* from monolingual participants demonstrated that the same nine frames appeared in monolinguals’ stories (Pavlenko, 1997). Six out of nine frames were invoked by both groups, while frame 8, “embarrassment,” showed up only in the narratives of Russian monolinguals, and frames 4, “invasion of privacy and/or personal space,” and 9, “sexual harassment,” only in the narratives of American monolinguals. A quantitative analysis of interpretation preferences suggested that young middle-class monolingual speakers of Russian favored gender-based interpretations, most visibly an interpretive frame which portrayed the interaction as an “unsuccessful pick-up.” None mentioned the distance between the two participants, even though it is possible to say in Russian that one person is sitting too close to another. In turn, some young middle-class Americans drew on additional interpretive frames which portrayed the interaction as an invasion of privacy or personal space—as a result they offered more details with regard to the seating arrangements of the two protagonists (Pavlenko, 1997).

4.3

Context of acquisition

Now I will consider the influence of the three independent variables—context of acquisition, language of recall, and visual context—on the use of interpretive frames. The first question asked in the study is whether verbal recall of visual stimuli is affected by the context in which the language was acquired. A comparison of the frames used by FL and L2 users, seen in Tables 2 and 3, demonstrates that the L2 users have two additional interpretive frames at their disposal, “invasion of privacy and/or personal space” and “sexual harassment.” Moreover, several L2 users commented on the body language of the participants and on the distance between them, at times simply indicating that the man was sitting “too close” to the woman. In contrast, FL users made no references to the distance between the two protagonists and did not mention the concepts of *privacy* and *personal space*. The debriefing session confirmed that this avoidance was not motivated purely by proficiency—five FL users were able to define and exemplify the terms *privacy* and *personal space*, none of them however used the terms in their narratives.

Table 2

Interpretive frames in FL users' narratives

	The Ithaca Story	Kiev Story	Total
1. Unsuccessful pick-up	4	4	8
2. Fear	4	2	6
3. Loss of comfort	2	2	4
4. Interrupted activity	3	0	3
5. Previous appointment	1	2	3
6. Desire to be alone	0	2	2
7. Embarrassment	0	1	1
Total:	14	13	27

Table 3

Interpretive frames in L2 users' narratives

	The Ithaca Story		Kiev Story		Total
	English	Russian	English	Russian	
1. Unsuccessful pick-up	5	5	6	3	19
2. Loss of comfort	8	6	2	1	17
3. Invasion of privacy and/or personal space	1	4	0	0	5
4. Interrupted activity	0	5	0	0	5
5. Desire to be alone	0	1	2	0	3
6. Fear	1	0	1	0	2
7. Embarrassment	0	2	0	0	2
8. Sexual harassment	1	0	0	0	1
9. Previous appointment	0	0	1	0	1
Total:	16	23	12	4	55

These results are not entirely surprising since the three terms, *privacy*, *personal space*, and *sexual harassment* do not exist in Russian. In English, *privacy* refers to seclusion, concealment, and intimacy (Oxford English Dictionary, 1984). According to Wierzbicka (1991), "to have privacy" means roughly "to be able to do certain things unobserved by other people, as everyone would want to and need to" (p. 47). This definition emphasizes a positive connotation of the concept, or, as Wierzbicka suggests, the assumption that every individual would want, so to speak, to have a little wall around him/her at least part of the time, and that this is perfectly natural and very important. This assumption, which is at the core of the concept of privacy, is culturally based and, according to Wierzbicka (1991), represents one of the central values of Anglo-Saxon culture, linking it to American democratic values of individual freedom and liberty. Russian has no lexical counterparts to the notion of privacy. The three translation equivalents offered in the New English-Russian Dictionary (1979) include *удинение*, *удинённость* (seclusion), *тайна*, *секретность* (secrecy), and *интимность* (intimacy). While each of these translations reflects some aspect of *privacy*, none of them refers to

it as a whole nor renders its essence, the idea that privacy is a natural state of affairs and one has a right to be alone when necessary, to do certain things unobserved by other people. As a result, most often *privacy* and a related concept *personal space* are simply omitted in Russian translations of American and British fiction (Pavlenko, 1997). The fact that the distance of about four feet between strangers sitting on the same bench is more acceptable in Russian culture was also confirmed by an amusing incident that took place during the filming of *Kiev Story*. While the cameraman was conversing with the researcher and the male actor, a male stranger plopped on the bench where the actress was resting — within three feet of her! — and proceeded to look over some notes.

The notion of *sexual harassment* has no Russian translation equivalent either, its closest counterpart приставать (to try to pick up someone) refers to an annoying but harmless behavior, it does not have the negative connotation of its English counterpart which designates an action that may be prosecuted legally. The only related actions prosecuted legally in Russia involve physical abuse and rape.

To sum up, the analysis of interpretive frames used in narratives by FL and L2 users suggests that in their English stories FL users use the same interpretive frames as monolingual Russians and similarly favor the “unsuccessful pick up” frame. In turn, L2 users appeal to additional interpretive frames available exclusively in English. This, in turn, suggests that learning a language in a foreign language classroom is not sufficient to internalize the concepts, scripts, and interpretive frames used by the members of the target language community — they may become fully available only in the process of second language socialization.

4.4

Language of recall

The second question asked in the study dealt with the language in which the recall was performed. A previous study identified two interpretive frames, “invasion of privacy and/or personal space” and “sexual harassment”, unique to narratives told by American monolinguals, and one, “смущение” (embarrassment), which was brought up exclusively by monolingual Russian participants (Pavlenko, 1997). The latter frame draws on a traditional Russian gender discourse which prescribes modesty and reserve for women in the presence of male strangers.

In the present study, as indicated above, the L2 users of English, just like American monolinguals, had two additional interpretive frames available to them for articulating their understanding of the films. We might ask if there were any statistically significant differences between their use of frames in English versus Russian when narrating either film. Since the data are essentially frequency counts for each of the interpretive frames, since the number of frames is small, and since for each pair of scores one can discern both the direction and magnitude of difference, the nonparametric Wilcoxon Signed Rank test was chosen to test for differences. There is no significant difference in narrators’ use of strategies when narrating *The Ithaca Story* in English versus Russian, but a significant difference does emerge in the use of interpretive frames between the two recalls of *Kiev Story* ($Z = 2.060, p < .05$). We can also see that the two frames which differed in frequency in monolingual narratives — “loss of comfort” (most popular in English) and “unsuccessful pick-up” (most popular in Russian) — were equally

distributed in the L2 users' narratives, independent of the language in which specific narratives were told.

These results are quite intriguing because they do not conform to the traditional understanding of linguistic relativity, namely, that in each language bilinguals would perform in a language- and culture-specific way. We can see that in the present study the frame of "invasion of privacy and/or personal space" appeared in the L2 users' narratives both in English and in Russian (similar to the narratives examined in Pavlenko, 2002b). Since there are no exact counterparts to privacy in Russian, the participants' attempted to render the notion through lexical borrowings (e.g., интрузивность/intrusiveness) and loan translations incorporating Russian translation equivalents (e.g., "ОН... ММ... вторгается в её одиночество" (he ... mm ... is invading her solitude) or "ТОТ МОЛОДОЙ ЧЕЛОВЕК, КОТОРЫЙ ВТОРГСЯ В ЕЁ... ЭМОЦИИ, ЧУВСТВА" (that young man who invaded her ... emotions, feelings)). Similarly, in an English narrative an FL user appealed to the interpretive frame of "embarrassment" resorting to codeswitching: "a girl was a ... amused ... застенялась? ... amused ..." (the participant seemed clearly aware that "amused" was not an appropriate translation of застенялась (got embarrassed, shy)).

These results indicate that while certain concepts encoded in one language but not the other may be easier to verbalize in the original language, bicultural bilinguals do not necessarily confine themselves to the concepts and interpretive frames of the language in which the story is told. The L1 concepts and frames may surface in the L2 narratives and vice versa, in particular in interaction with other bilingual interlocutors.

4.5

Visual context

Previous studies with monolingual participants indicate that when it comes to interpreting human behavior, more unanimity is expressed by narrators in discussion of familiar cultural contexts (Pavlenko, 1997, 2002a). In the present study, *Kiev Story* was filmed in the context more familiar to FL users than that of *The Ithaca Story*, and should have elicited more agreement. Again, since the data are frequency counts for each of the interpretive frames, since the number of frames is small, and since one can discern for each pair of scores both the direction and magnitude of difference, the nonparametric Wilcoxon Signed Rank test was chosen to compare narrators' use of frames for the two stories. That test is not significant ($Z = 0.27$, *ns*) suggesting that there is little difference in these FL users' use of interpretive frames when responding to *The Ithaca Story* versus *Kiev Story*. In other words, they did not exhibit more unanimity in interpreting events taking place in a more familiar context. On the other hand, we can see that L2 users appealed to the "invasion of privacy/personal space" frame only in discussions of *The Ithaca Story*, filmed in a North American context. However, since the numbers in the present study are small, more studies are needed to reach decisive conclusions about the relationship between the context in which events take place and their recall by bilingual eyewitnesses.

5 Discussion

What do these results mean for research on bilingual memory and linguistic relativity? As indicated earlier, a traditional approach to linguistic relativity would suggest that

narratives in the two languages of bilingual storytellers should either pattern with those produced in the L1 (whereby the first language would influence cognition once and forever) or with the respective monolingual sets (whereby each language influences cognition) (for an in-depth discussion of neo-Whorfian approaches to research on bilingualism and thought, see Pavlenko, in press). While the FL users' narratives do support the first hypothesis, the L2 users' stories in both English and Russian are clearly affected by their L2 and thus lead me to reject both possibilities. Instead, the present study demonstrates that in consecutive bilingualism, language influence on narrative performance is mediated by the context of acquisition.

It was found that the L2 users had internalized the concepts of privacy and personal space and the interpretive frame linked to them and drew on this frame both in their English and Russian narratives. In contrast, FL users adhered strictly to interpretive frames available to them in Russian. The fact that at least five FL users were familiar with the definitions of *privacy* and *personal space* but did not draw on them in their narratives suggests that these speakers were either unfamiliar with the actual scripts involved, or did not place high value on the concepts per se. In fact, several L2 users mentioned in the follow-up interviews that Russian speakers may find the two notions ridiculous and/or unacceptable.

The difference between the narratives told by FL and L2 users illuminates the link between lexically encoded concepts and corresponding scripts and leads me to argue that familiarity with word definitions is not sufficient for FL users to interpret events and actions in terms of frames accepted in the target language community. The ability to use language-specific concepts in perception, inferencing, and interpretation may be predicated on familiarity with the scripts entailed by the concepts and the discourses which underlie their use. Consequently, if linguistic relativity is indeed related to language use and not just language structure, as specified by the discursive relativity hypothesis (Lucy, 1996, 1997), in contexts where specific concepts, scripts, and interpretive frames differ between two speech communities, differences in interpretive frames used in verbal recalls will be found not only between monolingual speakers of the two languages, but also between L2 users and FL users. In other words, L2 users who had an opportunity to interact with members of the target community and internalize the L2 discourses may draw on both sets of interpretive repertoires, while FL users would use interpretive repertoires of the L1.

The debriefing follow-up interviews, conducted in Russian with the study participants, demonstrated that these L2 users are very conscious of cross-linguistic and conceptual differences between their two speech communities, which may lead to difficulties in lexical choice. For instance, the female participant who produced the loan translation in Example (2) stated:

- (4) ... английское слово 'privacy' для меня существовало, но оно никогда у меня не ассоциировалось с жизнью российской, никогда оно у меня не переводилось... оно существовало совершенно отдельно, мм, особым privacy миром, каким оно вот и является таковым. То есть, для того, чтобы подумать об этом на русском языке, мне нужно было бы найти очень много специальных отдельных слов, и когда мне хотелось что-то такое вот утвердить свою privacy, я именно

употребляла слово *privacy* даже по отношению к своему мужу... русскому.

[... the English word '*privacy*' has existed for me but for me it was never associated with Russian life, it was never translated ... it existed completely separately, in its own *privacy* world, just as it is. So, in order to think about it in Russian, I would need to find many many special separate words, so when I wanted to somehow establish my *privacy*, I would use the word *privacy* even when talking to my husband ... a Russian.]

This example shows that the new frame encoded in English has been internalized by the participant and used in interactions with her Russian husband, also an L2 user of English. Her feelings are echoed by another female participant who also resorts to codeswitching when spontaneously bringing up the notion of *privacy* in a discussion of differences between her two languages and worlds:

- (5) Или, например, *privacy*... какая *privacy*?... по-русски этого нету, я не могу сказать по-русски, знаешь, ну я могу сказать "Я хочу побыть одна," но это звучит слишком драматично, да?... когда ты говоришь по-английски "I need my *privacy*" это более как ежедневная вещь и никто, никого это не волнует...

[Or take, for instance, *privacy*. ... what *privacy*? ... in Russian this doesn't exist, I cannot say in Russian, you know, well, I can say "I want to be alone," but this sounds too dramatic, yes? ... when you say in English "I need my *privacy*" this is more like an everyday thing and no one, it doesn't bother anyone ...]

While these two bilingual women are positive about the new notion, a bilingual man who also resorted to loan translation in his Russian narrative and to codeswitching in his interview, is critical of the concept:

- (6) Я бы сказал ... здесь такое ударение на личное/частное, такое большое... каждый, так, скажем... я бы сказал, американцы, так, они... так... они очень большое внимание уделяют своей личности, *privacy*, даже когда люди знакомятся, они, я бы сравнил бы, здесь они легко знакомятся и дальше дело идёт хорошо, а потом уже достигаешь такого барьера, стены, уже эта стена, стена *privacy* то есть, через неё ты уже не пройдёшь, то есть, вы даже друзья там, все нормально, но эта *privacy*, они/они эту стену все время ставят и даже... а в Москве, я бы сказал, даже в бывшем Советском Союзе, там люди, они обычно начинают э... нелегко отношения, но уже как-то вот этот test period прошёл, они уже, у них какие-то отношения начались, уже такой стены уже нет, то есть там можно приходить без звонка, без appointment' а, там если чего-то случилось, прийти там... там сказать, давай кофе попьём, или там... и рассказать, что у тебя на душе там... а здесь это, если там, ну, там расскажешь чего у тебя на душе, так, они скажут yes, yes, да... и они здесь уважают свою *privacy*, и я не знаю, это... это... для меня это чуждо...

[I would say ... there is such an emphasis here on personal/private, such big... everyone, so to say ... I would say, Americans, so, they ... so ... they pay a lot of attention to their personality, *privacy*, even when people meet, they, I would compare, here they meet easily and all goes well for a long time, and then you

reach some barrier, a wall, already this wall, the wall of *privacy*, that is, you can't get through it, so, even if you are friends and all is fine, but this *privacy*, they / they put up this wall and even ... while in Moscow, I would say, even in the former Soviet Union, there people typically start relationships eh ... with difficulty, but then somehow the *test period* has passed, they already, they have some relationship, and there is no such wall, so that you can come over without a phone call, without an *appointment*, so if something happened, to come ... to say, let's have coffee, or ... to tell what is happening with you (literally: what is in your soul) ... and here, even if you, well, tell what's in your soul, they will say, *yes, yes, yes* ... and here they respect their *privacy*, and I don't know, for me it's foreign ...]

Ironically, while this bilingual states that the notion is “foreign” to him, his performance both on the narrative task and in this interview demonstrates that he has internalized the notion and learned to interpret events from the perspective of privacy, regardless of the fact that he does not identify with Americans and is critical of the culture in general. This in turn suggests that the desire to assimilate may not be as critical in the process of internalization of L2 discourses as the opportunity — and at times the necessity — to participate in L2 discursive practices and speech events. It appears that some notions may be internalized to a certain degree, regardless of the values the speakers assign to them. It is possible however that these notions will be considered applicable only in the target language environment but not in the native language context, as indicated in the interviews above and seen in the exclusive use of the privacy frames to describe *The Ithaca Story*.

6 Conclusion and implications

The present study represents but a first step on the road towards investigating the relationship between bilingualism and eyewitness memory. Three findings are of particular importance for future studies in this area. To begin with, several studies discussed here, including Pavlenko (1997), demonstrated that lexical encoding of particular concepts, in the present case *privacy* and *personal space*, and related interpretive frames, may focus attention of speakers of a particular language on certain categories, not attended to spontaneously by speakers of another language. In future work on eyewitness memory, it would be advisable to include follow-up procedures to examine if monolingual speakers of two or more languages would differ not only in the initial retelling but in the actual recall of specific information (such as the distance between the 2 protagonists in the present study). Then, if consistent differences are established in monolingual performance, we will need to consider the interaction between the language of encoding and the language of recall for bilingual participants. In other words, if speakers of language A turn out to be more exact with regard to particular colors, spatial arrangements, or motion characteristics, would bilinguals who both witnessed the situation and recalled it in language A, perform better on cued recall than bilinguals who witnessed and recalled it in language B (which does not encode the distinctions in question)? In view of previously established cross-linguistic differences in verbal encoding and visual recall of motion and spatial arrangements, it would be particularly interesting to see how incidents involving collisions are recalled by bilingual individuals.

The findings of the present study suggest that bicultural bilinguals do not always produce language- and culture-specific narratives. Some Russian L2 users of English, at least when interviewed in Russian in an English-speaking context, attended to and drew on the notions of privacy and personal space. This means that even though certain concepts may be easier to verbalize in language A, they may still guide bilinguals' encoding and recall in language B. At the same time, the L2 users' interviews suggest that they are more willing to invoke language-specific concepts, such as privacy, and assign culture-specific interpretations, such as invasion of personal space, in appropriate cultural contexts. This means that regardless of the language in which they are interviewed, bicultural bilinguals may attempt to draw on interpretive frames congruent with the context in which the event has occurred, even though such an attempt may result in codeswitching and loan translation if the frame is borrowed from one language into another. Future studies need to pay close attention to the interaction between the context and the language of recall, in particular considering whether more detailed information is produced when the language of recall is congruent with the context in which events took place (cf. Javier et al., 1993; Schrauf, 2000). It is also important to consider whether there is any loss or modification of information when initial recalls take place in language A and subsequent ones in language B. In addition, the fact that bilinguals' narratives may exhibit crosslinguistic influence, suggests that more attention needs to be paid to ways in which speakers of target languages interpret bilinguals' narratives.

Finally and most importantly, the present study clearly established differences in performance by two groups of participants, L2 and FL users. L2 users attended to and discussed the distance between the two protagonists in the film, while FL users did not mention it spontaneously. The latter group's lack of familiarity with the concepts of privacy and personal space resulted in a lack of attention paid by FL users to the spatial aspect of the interaction between the two protagonists. Even though they could simply state that the man was sitting too close to the woman, none of them said so. The findings of the study suggest then that eyewitness accounts by different categories of bilinguals may be significantly different, depending on the context of acquisition and degree of exposure to the second culture. These contexts may lead bilinguals to pay attention to—or ignore—certain conceptual distinctions, which in the present study involved partitioning of space in a public area. These findings suggest that researchers—as well as legal professionals—need to pay close attention not only to the language proficiency of eyewitnesses or study participants but also to their language learning histories. Once again, however, future studies need to include elicited recall procedures which ensure that different categories of bilinguals differ not only in the retelling but in fact in the recall of particular events.

Considering the increasing linguistic diversity of our society, understanding of language use by bi- and multilingual speakers is of primary importance in numerous contexts, in particular in the legal system which often relies on eyewitness testimonies. It is possible that a difference in interpretive frames between legal professionals and bilingual witnesses may result in the misinterpretation of events or miscommunication involving temporality, motion, or, as seen in the present study, personal space and intentionality. Clearly, to reach conclusive results such investigations will need to be carried out in a number of different languages, with different combinations of languages, and

using a range of methodological approaches that will include elicited recall and examinations of naturalistic discourse.

The emphasis on discourse is particularly important, since, as argued earlier, a discursive perspective expands our view of language influence on thought from language structure, which embodies a particular world view, to language use in multiple discourses, which embody multiple world views. From this perspective, structural factors may facilitate the persistence of certain ways of speaking but would not inhibit the appearance and/or internalization of new discourses. This flexibility is explanatory of both the perpetual evolution of new ways of speaking in various speech communities and of the internalization of these ways of speaking by L1 and L2 speakers alike through language socialization in meaningful interactions. In this way, then, the study offers evidence of discursive relativity effects, demonstrating that L2 linguistic repertoires emerged only in the narratives of L2 users who took part in discursive practices in the target language community — but not in the narratives of FL users who learned the language as a code. In emphasizing the role of discursive practices, the study suggests that when language is seen as a place where meanings are not fixed but continually altered, sought after, and struggled for, second language learning is no longer “doomed to failure” wherein “inter-language” speakers strive but never achieve the “native speaker” competence. Instead, the process of learning and using of any language other than the first becomes simply yet another space where discourses are internalized and produced and where a process of change, personal, social, and cognitive, may occur.

References

- ARNOLD, P., & MILLS, M. (2001). Memory for faces, shoes, and objects by deaf and hearing signers and hearing nonsigners. *Journal of Psycholinguistic Research*, **30**(2), 185–195.
- BERK-SELIGSON, S. (1990). *The bilingual courtroom: Court interpreters in the judicial process*. Chicago, IL: The University of Chicago Press.
- BERMAN, R., & SLOBIN, D. (1994). *Relating events in narrative: A crosslinguistic developmental study*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- BOWERMAN, M., & LEVINSON, S. (Eds.). (2001). *Language acquisition and conceptual development*. Cambridge, MA: Cambridge University Press.
- CHAFE, W. (Ed.). (1980). *The Pear Stories. Cognitive, cultural, and linguistic aspects of narrative production*. Norwood, NJ: Ablex.
- CHAFE, W. (1998). Things we can learn from repeated tellings of the same experience. *Narrative Inquiry*, **8**(2), 269–285.
- CLAIR, R. (1993). The use of framing devices to sequester organizational narratives: Hegemony and harassment. *Communication Monographs*, **60**, 113–136.
- DEWAELE, J.-M., & PAVLENKO, A. (2002). Emotion vocabulary in interlanguage. *Language Learning*, **52**(2), 265–324.
- DEWAELE, J.-M., & PAVLENKO, A. (2003). Productivity and lexical richness in native and non-native speech: A study of cross-cultural effects. In V. Cook (Ed.), *L2 influence on L1* (pp. 120–141). Clevedon, U.K.: Multilingual Matters.
- DiMAGGIO, P. (1997). Culture and cognition. *Annual Review of Sociology*, **23**, 263–287.
- FILLMORE, CH. (1977). Topics in lexical semantics. In R. Cole (Ed.), *Current issues in linguistic theory* (pp. 76–138). Bloomington, IN: Indiana University Press.
- FISKE, S., & LINVILLE, P. (1980). What does the schema concept buy us? *Personality and Social Psychology Bulletin*, **6**, 543–557.

- GEWIRTZ, P. (1996). Narrative and rhetoric in the law. In P. Brooks & P. Gewirtz (Eds.), *Law's stories: Narrative and rhetoric in the law* (pp. 2–13). New Haven, CT: Yale University Press.
- GUMPERZ, J., & LEVINSON, S. (Eds.). (1996). *Rethinking linguistic relativity*. Cambridge, U.K.: Cambridge University Press.
- HOLMES, J. (1997). Struggling beyond Labov and Waletzky. *Journal of Narrative and Life History*, 7, 91–96.
- HUNT, E., & AGNOLI, F. (1991). The Whorfian hypothesis: A cognitive psychology perspective. *Psychological Review*, 98(3), 377–389.
- JARVIS, S. (1994). *L1 influence on interlanguage lexical reference*. Unpublished manuscript, Indiana University, Bloomington, U.S.
- JARVIS, S. (1998). *Conceptual transfer in the interlingual lexicon*. Bloomington, IN: Indiana University Linguistics Club Publications.
- JARVIS, S. (2000). Methodological rigor in the study of transfer: Identifying L1 influence in the interlanguage lexicon. *Language Learning*, 50(2), 245–309.
- JAVIER, R., BARROSO, F., & MUÑOZ, M. (1993). Autobiographical memory in bilinguals. *Journal of Psycholinguistic Research*, 22(3), 319–338.
- KOVEN, M. (1998). Two languages in the self/the self in two languages: French-Portuguese bilinguals' verbal enactments and experiences of self in narrative discourse. *Ethos*, 26(4), 410–455.
- KOVEN, M. (2001). Comparing bilinguals' quoted performances of self and others in tellings of the same experience in two languages. *Language in Society*, 30(4), 513–558.
- KOVEN, M. (in press). Getting “emotional” in two languages: Bilinguals' semiotic resources for the verbal performance of affect. *Text*.
- LEVINSON, S. (1997). From outer to inner space: Categories and nonlinguistic thinking. In J. Nuyts & E. Pederson (Eds.), *Language and conceptualization* (pp. 13–45). Cambridge, U.K.: Cambridge University Press.
- LIEBES, T., & KATZ, E. (1990). *The export of meaning. Cross-cultural readings of Dallas*. New York/Oxford: Oxford University Press.
- LOFTUS, E. (1979). *Eyewitness testimony*. Cambridge, MA: Harvard University Press.
- LOFTUS, E., & PALMER, J. (1974). Reconstruction of automobile destruction: An example of the interaction between language and memory. *Journal of Verbal Learning and Verbal Behavior*, 13, 585–589.
- LUCY, J. (1992a). *Language diversity and thought. A reformulation of the linguistic relativity hypothesis*. Cambridge, U.K.: Cambridge University Press.
- LUCY, J. (1992b). *Grammatical categories and cognition: A case study of the linguistic relativity hypothesis*. Cambridge, U.K.: Cambridge University Press.
- LUCY, J. (1996). The scope of linguistic relativity: An analysis and review of empirical research. In J. Gumperz & S. Levinson (Eds.), *Rethinking linguistic relativity* (pp. 37–69). Cambridge, U.K.: Cambridge University Press.
- LUCY, J. (1997). Linguistic relativity. *Annual Review of Anthropology*, 26, 291–312.
- MCCABE, A., & BLISS, L. (2003). *Patterns of narrative discourse: A multicultural, life span approach*. Boston, MA: Allyn and Bacon.
- MISTRY, J. (1993). Cultural context in the development of children's narratives. In J. Altarriba (Ed), *Cognition and culture: A cross-cultural approach to psychology* (pp. 207–228). Elsevier Science Publishers.
- NEW ENGLISH-RUSSIAN DICTIONARY (1979). Moscow: Russian Language.
- NIEMEIER, S., & DIRVEN, R. (Eds.). (2000). *Evidence for linguistic relativity*. Amsterdam/Philadelphia: John Benjamins.
- NUYTS, J., & PEDERSON, E. (Eds.). (1997). *Language and conceptualization*. Cambridge, U.K.: Cambridge University Press.
- OXFORD ENGLISH DICTIONARY (1984). Second ed. Oxford: Oxford University Press.
- PAVLENKO, A. (1997). *Bilingualism and cognition*. Unpublished doctoral dissertation, Cornell University.

- PAVLENKO, A. (1999). New approaches to concepts in bilingual memory. *Bilingualism: Language and Cognition*, **2**(3), 209–230.
- PAVLENKO, A. (2000). What's in a concept? *Bilingualism: Language and Cognition*, **3**(1), 31–36.
- PAVLENKO, A. (2002a). Emotions and the body in Russian and English. *Pragmatics and Cognition*, **10**(1–2), 201–236.
- PAVLENKO, A. (2002b). Bilingualism and emotions. *Multilingua*, **21**(1), 45–78.
- PAVLENKO, A. (in press). Bilingualism and thought. In A. de Groot & J. Kroll (Eds.), *Handbook of psycholinguistics of bilingualism*. Oxford: Oxford University Press.
- PAVLENKO, A., & JARVIS, S. (2002). Bidirectional transfer. *Applied Linguistics*, **23**(2), 190–214.
- PEDERSON, E. (1995). Language as context, language as means: Spatial cognition and habitual language use. *Cognitive Linguistics*, **6**(1), 33–62.
- PEDERSON, E., DANZIGER, E., WILKINS, D., LEVINSON, S., KITA, S., & SENFT, G. (1998). Semantic typology and spatial conceptualization. *Language*, **74**(3), 557–589.
- POLANYI, L. (1995). Language learning and living abroad: Stories from the field. In B. Freed (Ed.), *Second language acquisition in a study abroad context* (pp. 271–291) Amsterdam/Philadelphia: John Benjamins.
- PUTZ, M., & VERSPOOR, M. (2000). *Explorations in linguistic relativity*. Amsterdam/Philadelphia: John Benjamins.
- RUMELHART, D. (1980). Schemata: The building blocks of cognition. In R. Spiro, B. Bruce & W. Brewer (Eds.), *Theoretical issues in reading comprehension: Perspectives from cognitive psychology, linguistics, artificial intelligence, and education* (pp. 33–58). Hillsdale, NJ: Lawrence Erlbaum Associates.
- SAPIR, E. (1949). *Selected writings of Edward Sapir*. Berkeley, CA: University of California Press.
- SCHRAUF, R. W. (2000). Bilingual autobiographical memory: Experimental studies and clinical cases. *Culture and Psychology*, **6**(4), 387–417.
- SHAW, J., GARCIA, L., & ROBLES, B. (1997). Cross-language postevent misinformation effects in Spanish-English bilingual witnesses. *Journal of Applied Psychology*, **82**(6), 889–899.
- SHERZER, J. (1987). A discourse-centered approach to language and culture. *American Anthropologist*, **89**(2), 295–309.
- SLOBIN, D. (2000). Verbalized events: A dynamic approach to linguistic relativity and determinism. In S. Niemeier & R. Dirven (Eds.), *Evidence for linguistic relativity* (pp. 107–137). Amsterdam/Philadelphia: John Benjamins.
- SLOBIN, D. (2001). Form-function relations: How do children find out what they are? In M. Bowerman & S. Levinson (Eds.), *Language acquisition and conceptual development* (pp. 406–449). Cambridge, U.K.: Cambridge University Press.
- TANNEN, D. (1980). A comparative analysis of oral narrative strategies: Greek and American English. In W. Chafe (Ed.), *The Pear Stories: Cognitive, cultural, and linguistic aspects of narrative production* (pp. 51–87). Norwood, NJ: Ablex.
- TANNEN, D. (1982). Spoken and written narrative in English and Greek. In D. Tannen (Ed.), *Coherence in spoken and written discourse* (pp. 21–41). Norwood, NJ: Ablex.
- TANNEN, D. (Ed.). (1993). *Framing in discourse*. New York/Oxford: Oxford University Press.
- THOMPSON, Ch., HERRMANN, D., READ, D., BRUCE, D., PAYNE, D., & TOGLIA, M. (1998). *Eyewitness memory: Theoretical and applied perspectives*. Mahwah, NJ: Lawrence Erlbaum.
- WHORF, B. (1956). *Language, thought, and reality: Selected writings of Benjamin Lee Whorf*. Cambridge, MA: MIT Press.
- WIERZBICKA, A. (1991). *Cross-cultural pragmatics. The semantics of human interaction*. Berlin/New York: Mouton De Gruyter.
- WOOD, J. (1994). *Gendered Lives. Communication, gender, and culture*. Belmont, CA: Wadsworth Publishing Company.

Appendix A

Transcription conventions

.	sentence-final falling intonation
?	sentence-final rising intonation
,	clause-final intonation (“more to come”)
!	sentence-final falling intonation, with animated voice quality
...	noticeable pause, less than 0.5 s
.....	a pause longer than 0.5 s
[3.5]	numbers in brackets represent pauses, in seconds
[]	empty parentheses indicate transcription impossible
(laughs)	nonverbal utterances such as laughter
