

Research Report

Living in History

How War, Terrorism, and Natural Disaster Affect the Organization of Autobiographical Memory

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ABSTRACT—Memories of war, terrorism, and natural disaster play a critical role in the construction of group identity and the persistence of group conflict. Here, we argue that personal memory and knowledge of the collective past become entwined only when public events have a direct, forceful, and prolonged impact on a population. Support for this position comes from a cross-national study in which participants thought aloud as they dated mundane autobiographical events. We found that Bosnians often mentioned their civil war and that Izmit Turks made frequent reference to the 1999 earthquake in their country. In contrast, public events were rarely mentioned by Serbs, Montenegrins, Ankara Turks, Canadians, Danes, or Israelis. Surprisingly, historical references were absent from (post-September 11) protocols collected in New York City and elsewhere in the United States. Taken together, these findings indicate that it is personal significance, not historical importance, that determines whether public events play a role in organizing autobiographical memory.

History doesn't happen everywhere at once.

—Evelyn Waugh (1938, p. 85)

It is important to understand the relation between history and memory. This is true, in part, because memories of historical events are critical to the construction and maintenance of group identity and to the persistence of group conflict (Bar-Tal, 2007; Cairns & Roe, 2003; Halbwachs, 1992; Pennebaker, Paez, &

Rimé, 1997; Tessler, Konold, & Reif, 2004). In addition, wars, natural disasters, terrorist attacks, and other forms of collective upheaval can leave their mark on the individuals who experience them directly and those who learn about them through the media. Support for this latter claim comes from research indicating that important historical events are remembered for many years (Schuman & Scott, 1989), that surprising or consequential public events sometimes trigger *flashbulb memories* (R. Brown & Kulik, 1977), and that memory for events and event contexts is influenced by group membership and nationality (Schuman & Rogers, 2004).

This study examines the relation between history and memory from a new and different angle. Whereas prior research has focused on identity issues and event memory per se, the current project concerns memory organization. Here, we provide evidence for the existence of *historically defined autobiographical periods* (H-DAPs; e.g., “during the war,” “after the earthquake”) and demonstrate that H-DAP formation is related to the intensity, duration, and novelty of the precipitating public events and to their proximity to a given population.

H-DAPs are a form of *lifetime period* (Conway, 2005). A lifetime period is a high-level structure that subsumes personal memories laid down during some block of time and coordinates period-specific generic knowledge. Lifetime periods are often bounded by *landmark events* (Shum, 1998). Landmark events can be positive (e.g., a wedding) or negative (e.g., a divorce); predictable (e.g., retirement) or unpredictable (e.g., job loss); socially normative (e.g., high-school graduation) or aberrant (e.g., expulsion). Regardless, what these events have in common is that they signal or cause numerous life changes. In other words, personal landmarks indicate important transitions in the fabric of daily life—in what people do, where they do it, and with whom.

Like personal landmarks, public events sometimes have a dramatic effect on the fabric of daily life, producing economic

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hardship, social disruption, and psychological distress (Blaikie, Cannon, Davis, & Wisner, 1994; Levy, 1997; McNally, 2003). It follows that these events might also define lifetime periods, and hence spawn H-DAPs. If so, the presence or absence of H-DAPs can be seen to index the entwinement of the historical with the personal. In this view, the frequent appearance of H-DAPs indicates that the sampled population includes many people whose lives have been directly affected by the events of the day—people who have been “living in history.” In contrast, an absence of H-DAPs indicates that public events, even very important ones, have had at most a limited impact on the day-to-day lives of the people in the sample.

We used a two-phase procedure to test for the presence of H-DAPs and identify conditions that foster their formation. During Phase 1, participants were presented 20 cue words; their task was to respond to each by recalling (in writing) the memory of a specific cue-related autobiographical event. We used this task because it produces a representative sample of the contents of autobiographical memory (Rubin & Schulkind, 1997). During Phase 2, participants were required to think aloud as they dated each of their Phase 1 memories. When dating autobiographical events, individuals often mention lifetime periods and landmark events to support temporal inferences (N.R. Brown, 1990; Friedman, 1993; Thompson, Skowronski, Larsen, & Betz, 1993). By extension, dating protocols collected from people whose lives have been shaped by history should often mention H-DAPs (e.g., “during the civil war”), period-defining news events (e.g., “after September 11”), or both.

In brief, dating protocols should measure the impact of public events on private lives and produce explicable cross-national differences. Following up on this idea, protocols were collected in 10 cities located in eight countries. The cities were New York

City, New York, United States; Ann Arbor, Michigan, United States; Izmit, Turkey; Ankara, Turkey; Sarajevo, Bosnia-Herzegovina; Belgrade, Serbia; Podgorica, Montenegro; Jerusalem, Israel; Ålborg, Denmark; Edmonton, Alberta, Canada. Each sample’s contribution to this study is detailed below.

METHOD

Participants

Participants had at least 1 year of postsecondary education, ranged in age from 20 to 30 years at test, and were long-time residents in the area where the data were collected (Table 1). In general, they were paid the local equivalent of \$10 (Canadian) for their cooperation. Sessions lasted no more than 45 min.

Materials

For each participant, we constructed 20 cards, on each of which a cue word was printed (*automobile, bag, ball, book, box, bread, chair, coat, dog, pencil, piano, pill, radio, river, snow, spoon, stone, street, tree, window*). The words *automobile* and *chair* were used for practice trials and were always presented first and second. Verbal reports were recorded using a portable cassette recorder or computer with sound-recording software.

Procedure

During Phase 1, participants were randomly presented with the 20 cue words; they were instructed to respond to each word by recalling a specific autobiographical memory and to write a one-sentence description of that memory under the cue word. The instructions also indicated that the retrieved memory had to be

TABLE 1
Sample Characteristics and Percentage of Justified Responses Assigned to Each Content Category

Sample and location	<i>n</i>	No. of women	No. of men	Mean age (years)	Data collection (month/year)	No. of justified estimates	Content category (% of justified estimates)		
							Personal	Historical	P/S/W
Balkans									
Sarajevo, Bosnia-Herzegovina	27	11	16	24.0	7/2004, 10/2004	330	73.6	23.9	2.7
Belgrade, Serbia	25	18	7	25.4	2/2005	398	93.0	5.3	1.8
Podgorica, Montenegro	25	12	13	23.3	7/2004, 10/2004	382	95.4	4.3	0.3
Turkey									
Izmit	27	21	6	21.3	3/2006	419	84.5	13.9	2.6
Ankara	24	14	10	22.8	3/2006, 10/2006	365	98.4	0.3	1.4
United States									
New York City, NY	23	10	13	25.4	2/2005	302	98.7	0.3	1.0
Ann Arbor, MI	24	18	6	23.6	6/2005, 9/2005	414	97.3	1.0	1.7
Other									
Jerusalem, Israel ^a	28	18	10	24.3	5/2005 to 6/2005	380	89.2	0.8	0.0
Edmonton, Canada	27	14	13	23.9	9/2004 to 1/2005	424	98.2	0.9	0.9
Ålborg, Denmark	26	13	13	23.7	3/2005 to 4/2005	371	97.6	0.0	2.4

Note. P/S/W = popular culture/sports/weather.

^aFor this sample, 10.0% of the justified date estimates included a reference to the participant’s military experience.

directly related to the cue word and that it had to be at least 1 week old. Finally, participants were informed that they were to leave a card blank and proceed to the next card if they failed to remember an event that met the task requirements.

During Phase 2, participants were presented with their memory descriptions from Phase 1 and asked to estimate each event's date (month and year). During this procedure, participants were required to verbalize their thoughts as they were thinking them, irrespective of how important or unimportant those thoughts might be. Having reached a decision, the participant stated their date estimate aloud and wrote the date on the cue card. After Phase 2, participants were debriefed and allowed to go.

RESULTS AND DISCUSSION

Each verbal protocol was assigned to one of four main categories (Table 2). A protocol was considered to be *unjustified* when participants gave an estimate but provided no information about why the date was chosen. The remaining categories were used to classify *justified* responses. *Personal/generic* responses included information about events, periods, people, places, and activities specific to the participant's life, general temporally relevant information, or both. Protocols that mentioned historical periods or unique news events of a political, military, or economic nature were classified as *historical*. Note that responses that included references to the Izmit earthquake were also classified as historical. The *pop/sports/weather* category was evoked when a response included a reference to a unique popular-cultural event, a specific sports event, or an extreme or unusual weather occurrence. A few protocols included both historical and personal/generic information; these were treated as historical responses in the analysis. Likewise, protocols that included both personal/generic information and pop/sports/weather references were treated as pop/sports/weather responses. It was necessary to create a unique category for the Israeli sample, *military service*. We distinguish these responses from historical ones because they reflect an important aspect of the Israeli life script (which involves near-universal conscription) rather than the public events of the day.

The coding scheme, developed by two of the authors, was taught to a team of naive coders. They coded 10% of the North American, Israeli, and (the translated) Balkan protocols and achieved a high degree of consistence (Cohen's $\kappa = .86$). The main coder and the team agreed on the presence or absence of historical information in all cases but one.

As in prior research (N.R. Brown & Schopflocher, 1998; Rubin, 1982), recent personal memories were more common than older ones, and this was true for all 10 samples (Fig. 1). Also, participants typically reconstructed dates for older events, whereas recent events were often unjustified. Overall, 64% of unjustified responses were elicited by personal memories that were dated

within 12 months of the test date, and 53% of the memories dated as having happened within the past 12 months were unjustified.

More important, protocol analysis indicated the existence of marked between-group differences in the use of historical information. As expected, protocols collected from Canadians and Danes, people who live in relatively conflict-free countries, almost never contained information about public events or historical periods (Table 1 and Fig. 2). In contrast, 24% of the justified date estimates collected in Bosnia included H-DAP references. The frequent use of H-DAPs to date personal events appears to reflect the intensity and duration of the civil war in Bosnia rather than a general propensity of people living in the Balkans to understand their lives in historical terms. Two lines of evidence support this contention. First, in the Bosnian sample, public-period references were not evenly distributed across time. Rather, 97% of these are concentrated in the decade (1989–1998) that bracketed the Bosnian civil war (1992–1995). Moreover, 53% of the justified protocols from this decade included H-DAP references; this figure reaches 83% for protocols elicited by events that happened during the war years. Second, Serbians and Montenegrins referred to historical information far less often than Bosnians, $\chi^2(2, N = 1,110) = 89.55, p < .0001$; public events and historical periods were mentioned in 6% of the Serbian protocols and 4% of the Montenegrin protocols. These differences parallel the historical record; although it is true that Serbia and Montenegro experienced conflict and upheaval following the breakup of Yugoslavia, it is also true that the toll was higher in Bosnia-Herzegovina (Human Rights Watch, 2000; Tabeau & Bijak, 2005).

Data collected in Izmit, Turkey, demonstrate that H-DAPs can be created by natural disasters as well as by civil war. In August 1999, Izmit was partially destroyed by an earthquake. When people who lived through the quake were tested 6 years later, 13% of their justified estimates included reference to this event. In the same way that H-DAP references were closely associated with the civil war years in Bosnia, most (75%) earthquake references were elicited by events that happened between 1998 and 2000, and 49% of the events recalled from this 3-year period were dated with reference to the earthquake. There was only one quake reference in the protocols collected from a comparable sample in Ankara, Turkey, a city located 250 km to the southeast of Izmit, $\chi^2(1, N = 784) = 47.58, p < .0001$. Thus, as in the Balkans, we found the memorial impact of a calamitous event to be geographically limited and temporally constrained.

We collected protocols in New York City and Jerusalem, Israel, to determine whether terrorism also affects the organization of autobiographical memory. To our surprise, New Yorkers, and also people living in Ann Arbor, Michigan (800 km to the west), almost never mentioned the attacks of September 11, the wars in Iraq or Afghanistan, or any other public event. In both samples, public events or historical periods were mentioned in less than 1% of the dating protocols. The absence of H-DAPs here is of particular interest because the September 11

TABLE 2
Examples of Reported Memories, Verbalized Date Estimates, and Assigned Content Categories

Cue	Phase 1		Response type	Sample
	Reported memory	Phase 2: Verbalized date estimate		
Rock	Hiking in Jasper on the Athabasca Glacier and picking a pretty multicolored stone.	And that was in August of this year. August 2004.	Unjustified	Canada
Bread	I learnt how to make all kind of pita bread at a camp.	That was last year; it was May 2004.	Unjustified	Israel
Pill	I took a Bayer's pill to relieve the pain in my tooth.	I remember this one. This was . . . senior year. Beginning of senior year of 2003. Um . . . It was fall, but it was middle of fall. I think it was October 2003. Yeah, I remember that.	Personal/generic	New York City
Box	Buying boxes for storage for my classroom.	That was when I was still working at Superstore, but I was still living with my grandma, so it would have been August 2004.	Personal/generic	Canada
Dog	Lilica dies at the veterinary school of medicine.	That's my dog that got bit by leeches, and we had to take him to the veterinary faculty. That happened during the time of the bombing, 1999 in May.	Historical only	Serbia
Pill	When my mom took a sedative pill.	This was also during war times. It was during those fearful times and all that horror—1995 maybe, though it happened throughout all those years. I remembered that one specific night when it was the worst. Month I can't remember. I have no idea. Any one? April?	Historical only	Montenegro
Chair	When I helped my friend to move out.	That was—let me tell you—this is 2004 . . . that is 2000. And it was month, I know I had a fight with my girlfriend in October, no November, yes November . . . Wait, it's not 1999, it is my good friend's husband, and we helped them move. They got married after the bombings. Yes, so it is 2000.	Historical and personal/generic	Montenegro
Street	Losing a hair pin in the street.	That's also in childhood, and it happened during the war period, when I walked with my friends down the street. I got the pin from my mom, and it had sentimental value, and looking for it I realized it was gone. I felt sad. That was in spring.	Historical and personal/generic	Bosnia-Herzegovina
River	The afternoon with cousins from Germany on Dunav.	That was last year, 2004, uh . . . month . . . cousins were in . . . semester I was supposed to go to the sea in August, and I left in August, but they were there before then. Yes, at that time Pink was there. What month was that? In July I was doing the Exit; I went to the sea in August. Sometime between the Exit and the sea. After the Exit, so second half of the July 2004.	Pop/sports/weather	Serbia
Chair	Playing with my younger brother in our rotating rocking chair.	We did this after watching <i>Ghostbusters</i> , and that movie came out in 19, oh, 19 . . . 87 maybe. And we did it in the winter 'cause we were playing inside, so I think it was probably February of 1987.	Pop/sports/weather	Canada
Window	Once I accidentally hit the glass of a window too violently with my palm and I shattered the window.	I just, I think it was the year after the army. After I got back from Spain, it means. I came back at August, August, it was September 2003.	Military service	Israel
Automobile	Car accident for the first time while driving.	I was transferring between units, and I had a few hours off, and I went to visit my grandmother, and I remember it was May 2001—no, sorry, 2000. It was about 8 months after I joined the army, and I was transferring between one unit and the other. That's how I remember it.	Military service	Israel

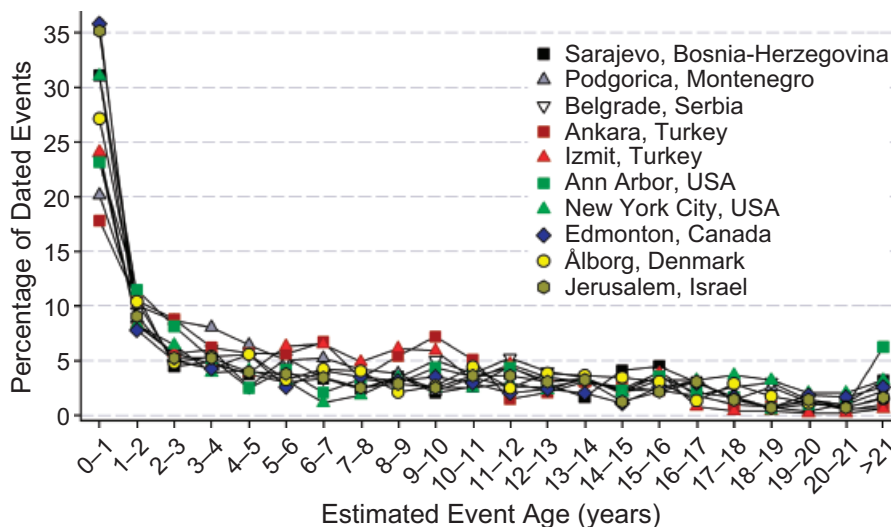


Fig. 1. Distribution of the dated events. For each sample, the graph shows the percentage of these events as a function of estimated age.

attacks had a profound, if transient, effect on the emotions, attitudes, and mental health of Americans (Galea et al., 2003; Li & Brewer, 2005; Schuster et al., 2001), and it has played a critical role in shaping foreign policy. However, those attacks and the events that followed did not produce widespread and fundamental alterations in the American way of life. Indeed, for most Americans, the years immediately following 2001 were little different from those immediately preceding it (Knudsen et al., 2005; U.S. Department of Labor Statistics, 2002).

H-DAP references were also absent from the Israeli protocols. Again, this sort of information showed up less than 1% of the time. It is possible that this lack of H-DAPs reflects the chronic nature of the conflict that afflicts the region. It seems that stable situations, even negative ones, do not generate H-DAPs because they do not engender marked changes in material circumstances that signal the transition from one period to another. In Israel, group conflict is a fact of life, and psychological, social, and physical responses to this fact are part of the daily routine.

CONCLUSION

In brief, we observed a *living-in-history* effect, defined as the frequent use of public events or periods to date personal events, in only 2 of 10 samples.¹ In some ways, the two samples

¹Following up on this study, we collected data from several additional samples and found that the living-in-history effect is predictable, long lasting, and intensity graded. As expected, Danish and Dutch people who lived through World War II often mentioned the war when dating personal events. Americans and Canadians of the World War II generation also mentioned the war, but much less often than their European counterparts (Hansen, Brown, Vanderveen, Conrad, & Lee, 2008). These data demonstrate the sensitivity of our method, and in so doing speak to the absence of H-DAP references in New York and Jerusalem. It seems unlikely that a method capable of detecting H-DAPs in these older samples would fail to find them in the more recent samples examined in this study.

were very different—the Bosnians endured a 3-year civil war; the Izmit Turks survived a short-lived natural disaster—but there are also obvious similarities. Both the war and the earthquake were extremely destructive in their own ways, and both produced dramatic, enduring changes in the fabric of daily life in the affected regions. In contrast, the living-in-history effect was absent from the New York and Jerusalem samples and much reduced in the Belgrade sample, even though public events of undisputed historical significance had occurred recently in each of these cities (i.e., the attack on the World Trade Center; the suicide attacks associated with the Second Intifada; NATO-directed air raids carried out during the Kosovo war). From these results, we conclude that historical significance is necessary, but not sufficient, to produce the living-in-history effect. It remains to be seen whether cataclysmic upheaval or the rapid transition from one way of life to another is the key element.

Regardless, these findings indicate that researchers may have to distinguish *emotionally charged* public events (e.g., the September 11 attacks), which affect people's emotions, attitudes, and beliefs, from *epoch-defining* ones (e.g., Siege of Sarajevo), which change the way people live. There is good evidence that events of both types are remembered and commemorated (R. Brown & Kulik, 1977; Olick, 1999; Schuman & Scott, 1989; Schwartz, 1982). However, it seems that only the latter play a central role in defining, altering, and augmenting group identity as it unfolds over time (Cairns & Roe, 2003; Pennebaker et al., 1997; Schuman & Rogers, 2004; Tessler et al., 2004). Although further research is required to determine whether this hypothesis is correct, we now have a method that enables us to distinguish between these two classes of events. And we live in a world in which epoch-defining events have been and continue to be all too common.

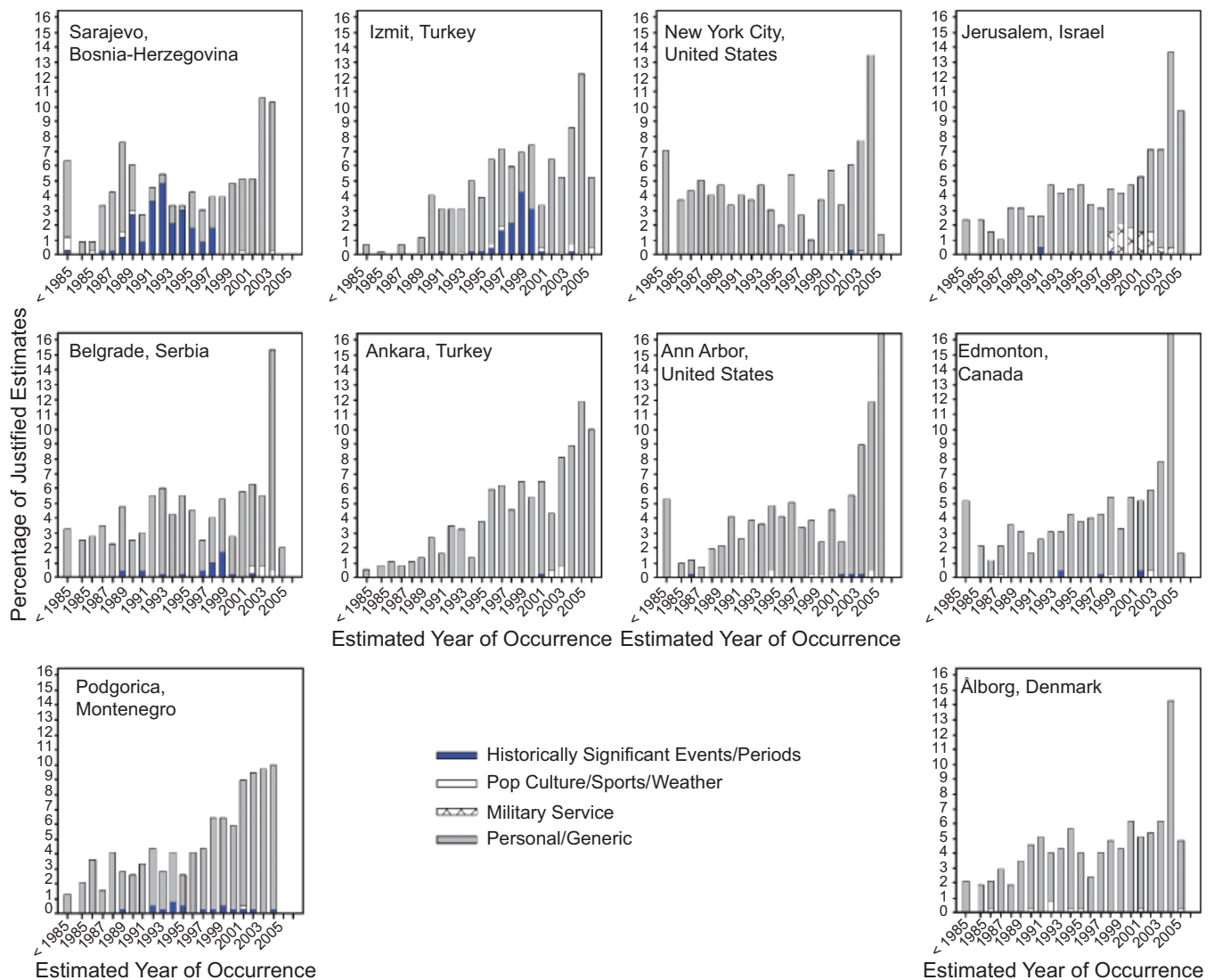


Fig. 2. Distribution of verbal-response categories. The graph for each sample shows the percentage of justified responses as a function of content category and estimated year of occurrence.

Acknowledgments—This research was supported by a Natural Sciences and Engineering Research Council of Canada operating grant (to N.R.B.). We thank Nenad Havelka, William Hirst, Tuğba Karaca, and Ilan Yaniv for their contributions to this project.

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(RECEIVED 7/8/08; REVISION ACCEPTED 9/24/08)