

**PSYCHOLOGY IN RUSSIA
STATE OF THE ART**

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- Hackman, J.R., Oldham, G.R. (1980). *Work Redesign*. Reading, MA: Addison-Wesley.
- Hockey, G.R.L. (1997). Compensatory control in the regulation of human performance under stress and high workload: a cognitive energetic framework. *Biological Psychology*, 45, P. 73-93.
- Karasek, R.A., Theorell, T. (1990). *Healthy Work, Stress, Productivity, and the Reconstruction of Working Life*. NY: Basic Books.
- Kasl, S.V. (1978). Epidemiological contributions to the study of work stress. In C.L. Cooper and R. Payne (Eds.), *Stress at Work* (p. 3-48). Chichester, UK: John Wiley and Sons.
- Lazarus, R.S. (1966). *Psychological Stress and the Coping Process*. NY: McGraw-Hill.
- Leonova, A.B. (1996). Occupational stress, personnel adaptation, and health. In C.D. Spielberger, I.G. Sarason (Eds.), *Stress and Emotion: Anxiety, Anger, and Curiosity* (Vol. 16, p. 109-125). Washington, DC: Taylor & Francis.
- Leonova, A.B. (1998). Basic issues in occupational stress research. In: J.G. Adair, D. Belanger, K.L. Dion (Eds.), *Advances in Psychological Sciences*. Vol. 1: Social, Personal, and Cultural Aspects (p. 307-332). Hove, UK: Psychology Press.
- Leonova, A.B. (2001). *Managerial Stress Survey (MSS): Psychometric Evaluation of the Test*. Oelde: SMP Software fuer Management and Personalentwicklung.
- Leonova, A.B. (2003). Functional status and regulatory process of stress management. In: G.R.L. Hockey, A.W.K. Gaillard & O. Burav (Eds.), *Operator Functional State: The Assesmant and Prediction of Human Performance Degradation in Complex Tasks* (p. 36-52). NATO ARW Series. Amsterdam: IOS Press.
- Leonova, A.B. (2004). Complex strategy of occupational stress analysis. *Psychological Journal*, 25 (2). P. 75-86 (in Russian).
- Leonova, A.B. (in press). *Occupational Stress*. Moscow: Academia (in Russian).
- Leonova, A.B., Blinnikova, I.V., Kapitsa, M.S., Kuznetsova, A.S. (2001). Methods of assessment and prevention of human error. In: V. De Keyser & A.B. Leonova (Eds.), *Error prevention and well-being at work in Western Europe and Russia* (p. 135-151). Dordrecht: Kluwer Academic Publishers.
- Quick, J.C., Quick, J.D., Nelson, D.L., Hurrell, J.J. (1998). *Preventive Stress Management in Organization*. Washington, DC: American Psychological Association.
- Parke, K.R. (1994). Personality and coping as moderators of work stress process: Models, methods and measures. *Work and Stress*, 8, P. 110-129.
- Schaufeli, W., Enzman, D. (1998). *The Burnout Companion to Study and Practice: A Critical Analysis*. Taylor & Francis, London.
- Siegrist, J. & Peter, R. (1994). Job stressors and coping characteristics in work-related deceases: Issues of validity. *Work and Stress*, 8, P. 130-140.
- Warr, P.B. (1994). A conceptual framework for the study of work and mental health. *Work and Stress*, 8, P. 84-97.

IMAGINATION INFLATION AFTER A CHANGE IN LINGUISTIC CONTEXT*

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Participants in Experiment 1 completed a 36-item life events inventory (LEI) in their native language (Russian) two separate times, over a 1-week period. Between the two LEIs, participants got 12 items translated from Russian into English and 12 items in Russian. They performed a series of English-Russian language exercises on translated items and Russian-language exercises on non-translated items. After performing exercises on items translated from Russian into English participants increased their confidence that these life events had occurred in their personal past. There was no similar effect for non-translated items and for control items. Experiment 2 was run to examine if two factors - a change in linguistic context and a change in level of abstraction taken together boosted the effect. Participants completed a 24-item LEI in Russian two separate times, over a 1-week period. Between the two LEIs, participants got 12 of these life events at the higher level of abstraction (e.g., "Got lost in a shopping mall" or "found yourself at an unfamiliar public place") translated from Russian into English. Participants translated the event from English into Russian and wrote a sentence using the gist of the item. After performing language exercises on items at the higher level of abstraction participants increased their confidence that these life events had occurred in their personal past. The magnitude of effect was almost twice bigger than in Experiment 1. These results indicate that a change in linguistic context can produce imagination inflation. We discuss our findings in terms of familiarity misattribution, whereby processing fluency is experienced as familiarity and misattributed to autobiographical memory.

Imagination inflation after a change in linguistic context

Although autobiographical memory, or memory for personal events, is generally accurate, sometimes people mistakenly believe that they experienced events that never occurred. Many techniques produce false autobiographical memory, including strong suggestion, imagination, and even unscrambling life events (see Loftus & Bernstein, 2005). For example,

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imagining that one found a \$10 bill in a parking lot, or unscrambling the word, "window" in the sentence, "broke a window playing ball" increases one's confidence that this event occurred in one's childhood. This "imagination inflation" has been shown in numerous studies, using various life events and experimental manipulations (Bernstein, Whittlesea, & Loftus, 2002; Garry, Manning, Loftus, & Sherman, 1996; Goff & Roediger, 1998; Sharman, Manning, & Garty, 2005).

Imagination inflation results from a source-monitoring failure, where one misremembers the source of one's (false) memory (Johnson, Hashtroudi, & Lindsay, 1993; Libby, 2003). Another means by which imagination inflation occurs is when participants fail to realize that the act that they performed, be it imagination or unscrambling a word, is related to the feeling of familiarity that they experience for target events. If the source of the feeling of familiarity is too obvious (for example, participants fabricate an event immediately before determining if the event occurred in their past) there is no source monitoring failure (Bernstein, Godfrey, Davison, & Loftus, 2004).

In previous work we showed how creating a biographical sketch (from a third person perspective) for a fictional adolescent increases one's confidence that these events personally occurred in one's own adolescence (Nourkova, Bernstein, & Loftus, 2004; see also Libby, 2003). Participants wrote a story about a boy named John using events that we provided. Unbeknownst to participants, these events were similar to, but at a higher level of abstraction than the actual life events that they later rated in terms of their own autobiography. For example, participants may have written about how John fractured a bone. Later, when asked whether they themselves ever "broke a hand," they said, "yes." We argued that the different level of abstraction between the fictitious, biographical events and the autobiographical events created an encoding-retrieval context mismatch, which, in turn, resulted in a feeling of familiarity for the events and a source monitoring failure (see Pansky & Koriat, 2004 for evidence that people tend to remember information at an intermediate, or basic level of abstraction).

In similar work, Libby (2003) asked participants to imagine particular life events either from a first-person (e.g., "Getting in trouble for calling 911") or a third-person perspective (e.g., "Got in trouble for calling 911"). Later, when asked whether they remembered doing these things (first-person perspective) or whether these things happened to them (third-person perspective), participants inflated their confidence for events that matched the perspective they had used earlier to imagine the events. Thus, imagination inflation was greatest when the perspective used during encoding and retrieval matched.

We suppose that the similar phenomenon of memory distortion as a result of source monitoring failure may appear when people deal with biographical-like events in non-native language especially if their fluency in that language is far from excellence. Information in proceeded in non-native language later on if appears in native language may seem familiar without awareness of the real source of familiarity. It was already shown that cueing in the language different from the language in which the event was experienced leads to difficulties in retrieval (Schrauf R. W., Rubin D., 2000).

In the present work, we asked bilingual participants to complete a Life Events Inventory (LEI) in Russian. Several days later, participants performed a variety of Russian-English language exercises on some of these life events translated into English. They also performed similar exercises on original items without translation. Finally, participants completed the LEI again. Our primary goal in this work was to explore the conditions under which a change in linguistic context can lead to false autobiographical memory. In the additional experiment we combined two factors, which possibly might lead to increase of belief ratings – a change in linguistic context and a change in level of abstraction. In that case intermediate task included performing language exercises on LEI's items at the higher level of abstraction translated from Russian into English. Participants translated the event from English into Russian and wrote a sentence using the gist of the item.

In both experiments, we expected that a change in linguistic context would lead participants to increase their confidence that particular life events had occurred in their past, but in the Experiment 2 we expected the bigger effect.

Experiment 1

Method

Participants. Seventy five undergraduate students from different departments of the Black Sea branch of Moscow State University (Ukraine, Sevastopol) participated in the study. The group consisted of 26 males, 49 females (mean age 18.73, $SD = 1.19$). All participants were native Russian speakers.

Design. Experiment 1 followed a 3 (Condition: Control, Experimental 1, Experimental 2) X 2 (Time of Testing: Before Manipulation, After Manipulation) within-subject design.

Materials and procedure. Participants took part in three sessions, each separated by two days (first day, fourth day and seventh day). During session 1, participants completed a life events inventory (LEI) containing 36 items.

LEI items were in the participants' native language (Russian). The LEI asked participants to rate their confidence that certain events had occurred to them at any time in their past before they entered University. We chose this particular time frame because we considered entering University as the most common life-changing point in our participants' autobiography. As we have shown previously, people are more susceptible to memory distortion for events occurring prior to their last life-changing event, or what we call a person's "subjective past" (Nourkova et al., 2004; see also Ross & Wilson, 2003). Participants marked a number between 1 (certain the event did not occur) and 8 (certain the event did occur) to indicate their confidence that the event occurred in their past (e.g., "got lost in a shopping mall for more than an hour"). Participants were told that they were taking part in a sociological study devoted to the topic of typical human life events. Of these 36 items, 12 items were chosen randomly as experimental items for "translation" condition, 12 items were chosen randomly as experimental items for "non-translation" condition (to be included in the intermediate task) and the remaining 12 items served as control items. For the intermediate task, the experimenter (VN) translated 12 items into English. All participants received the same set of items. Items were prepared in advance and projected on the screen during class.

Participants performed the intermediate task at the time of their regular English classes. The rationale of the procedure for participants was sociological study of fluency in English and Russian. They accepted it because in Crimea there is a tense discussion about accepting Russian as a second state language. First participants received a list of 12 experimental items translated from Russian into English as a test of English language competence. For each item, participants were asked to translate the item from English into Russian, to write it down by hand and to underline irregular verbs. Second, participants received a list of 12 experimental items exactly the same with items in LEI 1 as a test of Russian language competence. For each item, participants were asked to copy it by hand and to underline words those to their knowledge were foreign by origin. Two different experimenters conducted sessions 1 and 2, thus obscuring the relation between the two sessions.

Two days later, participants returned for session 3 and completed the same LEI that they completed at session 1. They were asked to remember their original answers to maintain reliability of sociological data. Because all participants had already taken courses in sociology they readily accepted this rationale. By presenting critical items at different levels of abstraction during Session 2, we intended to obscure the connection between sessions.

This procedure seemed to work, for no participant claimed to realize that the experimental exercise during session 2 was related to session 1, and no participant guessed the true nature of the study. At the end of session 3, the experimenter debriefed participants.

Results

The main question we addressed was whether Russian bilingual participants who performed exercises on LEI items translated into English containing certain life events would increase their confidence that related life events had personally occurred. To determine this, we compared the number of participants who increased their scores from LEI 1 (before manipulation) to LEI 2 (after manipulation) for experimental items and control items. For that goal we calculated the mean change separately for experimental translated, non-translated and control items for each participant. For experimental translated items, 50 participants (66,7%) increased their scores. For experimental non-translated items, 28 participants (37,3%) increased their scores. For control items, 26 participants (34,7%) increased their scores (see Figure 1). This difference, tested using McNemar's test was significant for experimental translated vs. control conditions ($p = .000$), for experimental translated vs. experimental non-translated conditions ($p = .000$), but not significant for control vs. experimental non-translated conditions ($p > .868$).

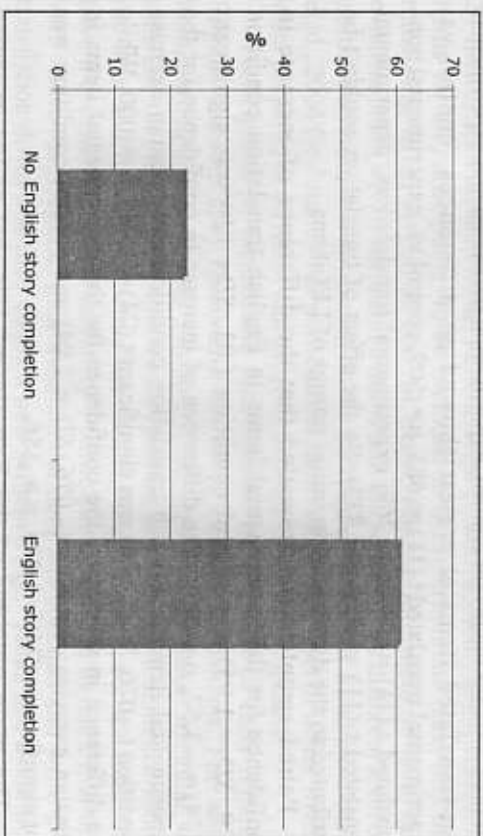


Figure 1. Percentage of subjects who increased from LEI 1 to LEI 2 in Experiment 1

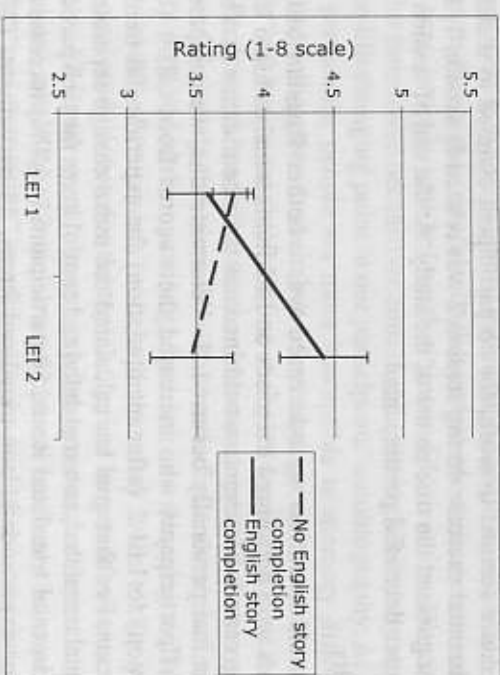


Figure 2. Mean score on LEI 1 and LEI 2 in Experiment 1. Error bars are standard error of the mean

To examine the magnitude of effect we first wanted to state whether experiment and control items were equal on the LEI rating at pre-test. Paired-sample t-tests for means for control, experimental translated and experimental non-translated items at pretest showed no differences (control vs. experimental translated $t(11) = .683, p > .509$, control vs. experimental non-translated $t(11) = .936, p > .369$, experimental translated vs. experimental non-translated $t(11) = .215, p > .833$). So the effect of translation couldn't be attributed to the differences in initial ratings of LEI items.

Paired-sample t-tests revealed that the difference of increase in confidence for the experimental items in English translation condition ($.29, SD = 1.95$) and control condition ($.03, SD = 1.9$) was significant $t(74) = -3.57, p = .001$. The difference of increase in confidence for the experimental items in English translation condition and Russian exercise condition ($-.076, SD = 2.04$) was significant $t(74) = 3.965, p = .000$. While the difference in increasing the confidence for the experimental items in Russian exercise condition ($-.076, SD = 2.04$) and control condition was not significant $t(74) = 1.335, p > .186$.

The main outcome of the Experiment 1 is that as we expected manipulating with life event like items in a language different from one's native language increased one's confidence that the target events personally

occurred. Our findings supported this idea. Thus, the act of performing a simple exercise in non-native language was sufficient to produce this effect.

Experiment 2

Method

Participants. Ninety-three undergraduate students from the departments of Economics and Management of the Black Sea branch of Moscow State University (Ukraine, Sevastopol) participated in the study. Because of the reason described in Experiment 1, we asked participants if entering into university was a significant event of that kind. The exact question was "Do you feel that entering into university has changed your personality to a significant extent?" Participants answered "yes" or "no." Only those participants who answered "yes" were included in the study. This left 86 participants (31 males, 55 females, mean age = 18.65, $SD = 1.49$). Participants were run in large groups as part of their regular classes.

Design. Experiment 2 followed a 2 (Condition: Experimental, Control) X 2 (Time of Testing: Before Manipulation, After Manipulation) within-subject design.

Materials and procedure. The materials and procedure were similar to Experiment 1. As in Experiment 1, participants completed three sessions, each separated by two days. During the first session participants completed a 24-item LEI. Of these 24 items, 12 items were chosen randomly as experimental items for all participants (to be included in the intermediate task) and the remaining items served as control items. For the intermediate task, the experimenter (VN) translated 12 items into English, but at a different level of abstraction from that appearing on the LEI (see Experiment 1 and Nourkova et al., 2004 for details). All participants received the same set of items. Items were prepared in advance and projected on the screen during class.

Participants performed the intermediate task as part of their regular English classes. They received a list of 12 experimental items. For each item, participants were asked to note if the verb was regular or irregular, to translate the item from English into Russian and to write a sentence using the item and the words "while" or "when." For instance, for the item "to have a conflict with local authority", participants first had to mark that the verb "have" is irregular, then translate the item into Russian and write the translation down and then create a new sentence e.g., "Anna had a conflict with the local authority when she was informed that her brother was fined for parking in the wrong place." This exercise lasted about 10 minutes. Two days later, participants returned for session 3, at which time they completed

the same LEI that they completed during session 1. Participants were asked to remember their original answers to maintain reliability of sociological data as in Exp 1.

Results

While examining the data we noted that four participants changed their scores from 1 to 8 and from 8 to 1 more than 8 times out of 24 possible answers. We believe that they misunderstood the instructions; therefore, we removed their data. The data pattern did not change when we included these participants. This left 82 participants for further analysis.

As in Experiment 1, we compared the number of participants who increased their scores from LEI 1 to LEI 2 for experimental items and control items. For that goal we calculated the mean change separately for experimental and control items for each participant. For experimental items, 60 participants (73%) increased their scores. For control items, 38 participants (46%) increased their scores (see Figure 3). As can be seen on the right-hand side of Figure 3, about three quarters of the sample increased their confidence that the target events had personally occurred after they performed the English translation exercise. This difference, tested using McNemar's test was significant ($p = .03$).

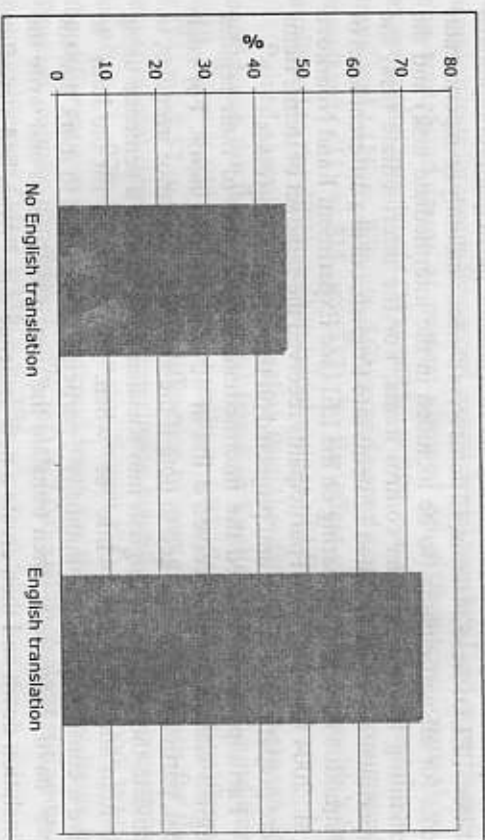


Figure 3. Percentage of subjects who increased from LEI 1 to LEI 2 in Experiment 2

Next, we conducted a 2 (Condition: Experimental, Control) X 2 (Time of Testing: Before Manipulation, After Manipulation) repeated measures ANOVA using the average confidence rating that participants gave to the experimental and control items before and after they completed the story manipulation (see Figure 4). This resulted in significant main effects of Condition $F(1,81) = 6.28, p = .014, \text{partial } \eta^2\text{-squared} = .07$, and Time of Testing $F(1,81) = 24.13, p < .01, \text{partial } \eta^2\text{-squared} = .23$. As expected, the Condition X Time of Testing interaction was also significant $F(1,81) = 16.55, p < .01, \text{partial } \eta^2\text{-squared} = .17$. Follow-up analyses on this interaction using paired-sample *t*-tests revealed that the increase in confidence for the experimental items ($M = 4.46, SD = .59$) was significant $t(81) = 5.48, p < .021$, while the increase in confidence for the control items ($M = 3.45, SD = .45$) was not significant $t(81) = 1.39, p > .10$.

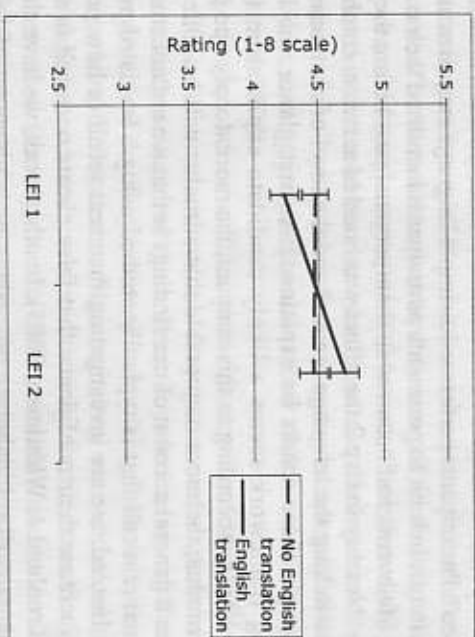


Figure 4. Mean score on LEI 1 and LEI 2 in Experiment 2. Error bars are standard error of the mean

Experiment 2 supported our prediction that factors of switching linguistic context and level of abstraction are independent factors those while influencing together produce the cumulative effect. In our previous study (Nourkova et al., 2004) manipulation with the level of abstraction produced 0.29 increase in 8-points scale in confidence that the certain event had occurred in one's personal past. In the recent Experiment 1 manipulation

with linguistic context mismatch we got 0.29 increase in confidence that artificial event had occurred. In Experiment 2 we combined both conditions and it resulted 0.46 increase.

General Discussion

Participants completed a 36-item life events inventory (LEI) two separate times, over a 1-week period. The LEI was in their native language (Russian). Between the two LEIs, participants received 12 of these life events translated from Russian into English. In Exp 1 the translated items were exactly the same with items in LEI, while in Exp 2 they were slightly different from those that appeared on the LEI. For example, participants rated the LEI item: "Got lost in a shopping mall for more than an hour"; however, they received an item that preserved the meaning of the original item, but was at a more general, or superordinate level of abstraction: "Found yourself at an unfamiliar public place". Participants performed a simple language exercises using these translated items. In both Experiments participants increased their confidence that these life events had occurred in their personal past before they entered University. Notably in Exp 2 the effect was boosted at twice, combining the effect of switching the language context and the level of abstraction.

How might these results be explained? At first glance, the levels-of-processing framework seems a likely candidate explanation (Craig & Lockhart, 1972). According to this account, the more deeply one processes a given stimulus, the more memorable that stimulus will be. One problem with this as a general account of our findings is that we are not studying the type of *correct* recall that is typically studied using a levels-of-processing approach. Instead, we are investigating incorrect recall or how people can be led to increase their confidence that false events occurred in their past (see also Kronlund & Whittlesea, 2005). In other work, we have shown that if participants perform elaborate processing on a given set of life events, and they are later aware of this elaborate processing, they will not increase their confidence in the target events (Bernstein et al., 2004; see also Sharmar, Garty, & Hunt, 2005). Thus, a simple levels-of-processing account of our present data seems untenable.

As we have argued elsewhere, we believe that the type of memory distortion observed in the present work can be explained by familiarity misattribution (Bernstein et al., 2002; Nourkova et al., 2004; see Jacoby & Whitehouse, 1989; Whittlesea & Williams, 2000). According to this account, the elaborate processing that one performs on experimental items leads to enhanced processing fluency when one encounters those items later (on the

second LEI). By processing fluency, we mean ease of processing. Ease can be operationalized as speed of processing or the overall coherence of the stimulus (see Whittlesea, 2004). In order for this enhanced processing fluency to produce memory distortions, the person must be unaware of the correct source of the fluency (although see Whittlesea & Williams, 2000 for evidence that the fluency must be unexpected or surprising to produce illusory feelings of familiarity).

For example, in other work we have shown that participants who generate sentences using key words that we initially provided later claim to have experienced events that contain those words in a scrambled form (Bernstein et al., 2004). Thus, participants might see the word, "window" and generate the sentence, "last week, I saw a dirty window on my way to the bank". If participants later encounter the word, window, embedded as an anagram within a life event (broke a nwidwo playing ball), they are more confident that the event occurred in their childhood. Importantly, when we asked participants to generate *childhood life events* with those same key words (e.g., "window" – "the child saw a bird fly into the window"), and those key words appeared later as anagrams in life events, this effect disappeared. We argued that this occurred because participants in the latter case were aware of the source of their processing fluency, and subsequently discounted this fluency when making judgments about their childhood autobiography (see Oppenheimer, 2006).

In the present set of studies, participants were likely unaware of the source of the fluency with which they processed experimental items. Participants had encountered these items days before in a different context (in an English class that they believed had nothing to do with the study) and at a different level of abstraction. Moreover, they were not asked to remember items, so they remembered them involuntarily. Participants likely processed these items more fluently, due to their prior elaboration on these items. However, participants did not realize the source of this fluency. In turn, they misattributed the fluency to their own autobiography.

We believe that these findings have important implications for memory in bilinguals (Marian & Neisser, 2001; Parvjo, 1991; Schrauf & Rubin, 2003). Bilinguals and polyglots often switch between languages. The more fluent the speaker is in each language, the more naturally she or he switches between languages. This natural switch, we argue, will subtly and persistently enhance the fluency with which a given utterance is processed in the language *not* originally used to make the utterance. For instance, if my native tongue is Russian, but I speak English, each time I describe an event or series of events in English, I will also process those events fluently in Russian. If I am unaware

of the reason (source) of this enhanced fluency, and the events pertain to somebody else's life. I may mistakenly assume that the fluency arose from my own past experience and believe that the events actually occurred in my own life. In this way, translation can serve as a form of cryptomnesia or unconscious plagiarism by obscuring the source of fluency with which another language is processed (e.g., Marsh & Bower, 1993; see also Stark & Perfect, 2006). Under the right circumstances, this enhanced fluency can be understood correctly as arising from one's past utterance (e.g., "oh yes, I was discussing this in my non-native tongue"). However, under the wrong circumstances, this enhanced fluency can also be misunderstood, resulting in misattribution (e.g., "I must have broken a window while playing ball as a child").

Bilingualism, or the knowledge of two languages, is wide spread throughout the world. Definitely, there may be different degrees of bilingualism. According to U.S. Census Bureau, about 47 millions Americans (20% of total population) speak language other than English at home. 22 millions of them speak English less than very well. So the huge part of American population may be defined as bilinguals. They may seek psychotherapy and get it in English. Hence, these people may be more vulnerable to memory distortion and possibly memory implantation through counselling and witnessing. As a result, they could easily become victims of false memories (i.e. memories of childhood abuse). The same might be said about typical legal procedures, which take place in English. These people may demonstrate stronger misinformation effects be interviewing as witnesses. So in our opinion, future investigations in the field of memory distortions in bilinguals promises to be of high both theoretical and practical importance.

Limitations and future directions. One limitation of the current study, and one that applies to most investigations of imagination inflation and autobiographical memory, is that it is hard to determine whether the increase in confidence that participants demonstrate for particular life events reflects false memory or simply the re-activation of an actual memory. We have addressed this concern elsewhere (Morris, Laney, Bernstein, & Loftus, 2006), but agree that it is a valid concern. Another limitation of the current work is that in both experiments, participants completed a series of language exercises aimed at increasing their confidence for autobiographical events. Thus, any one of these exercises or their combination could have produced the increased confidence in autobiographical memory that we observed.

REFERENCES

- Bernstein, D.M., Godfrey, R., Davison, A., Loftus, E.F. (2004). Conditions affecting the revelation effect for autobiographical memory. *Memory & Cognition*, 32, 455-462.
- Bernstein, D.M., Whittlesea, B.W.A., Loftus, E.F. (2002). Increasing confidence in remote autobiographical memory and general knowledge: Extensions of the revelation effect. *Memory & Cognition*, 30, 432-438.
- Crak, F.I., Lockhart, R.S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning & Verbal Behavior*, 11, 671-684.
- Garry, M., Manning, C.G., Loftus, E.F., Sherman, S.J. (1996). Imagination inflation: Imagining a childhood event inflates confidence that it occurred. *Psychonomic Bulletin & Review*, 3, 208-214.
- Goff, L.M., Roediger, H.L. III. (1998). Imagination inflation for action events: Repeated imaginings lead to illusory recollections. *Memory & Cognition*, 26, 20-33.
- Jacoby, L. L., Whitehouse, K. (1989). An illusion of memory: False recognition influenced by unconscious perception. *Journal of Experimental Psychology: General*, 118, 126-135.
- Johnson, M.K., Hashtroudi, S., Lindsay, D.S. (1993). Source monitoring. *Psychological Bulletin*, 114, 3-28.
- Kronlund, A., Whittlesea, B.W.A. (2005). Seeing Double: Levels of Processing Can Cause False Memory. *Canadian Journal of Experimental Psychology*, 59, 11-16.
- Libby, L.K. (2003). Imagery perspective and source monitoring in imagination inflation. *Memory & Cognition*, 31, 1072-1081.
- Loftus, E.F., Bernstein, D.M. (2005). Rich false memories: The royal road to success. In A. Healy (Ed). *Experimental Cognitive Psychology and its Applications: Festschrift in Honor of Lyle Bourne*, Walter Kintsch, and Thomas Landauer. Washington DC: American Psychological Association Press. P. 101-113.
- Marian, V., Neisser, U. (2000). Language-dependent recall of autobiographical memories. *Journal of Experimental Psychology: General*, 129, 361-368.
- Marsh, R.L., Bower, G.H. (1993). Eliciting cryptomnesia: Unconscious plagiarism in a puzzle task. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 19, 673-688.
- Morris, E.K., Laney, C., Bernstein, D.M., Loftus, E.F. (2006). Susceptibility to memory distortion: How do we decide it has occurred? *American Journal of Psychology*, 119, 255-276.

- Nourkova, V.V., Bernstein, D.M., Loftus, E.F. (2004). Biography becomes autobiography: Distorting the subjective past. *American Journal of Psychology*, 117, 65-80.
- Openheimer, D.M. (2006). Consequences of erudite vernacular utilized irrespective of necessity. *Applied Cognitive Psychology*, 20, 139-156.
- Paivio, A. (1991). Images in mind: The evolution of a theory. Hertfordshire, England: Harvester Wheatsheaf.
- Pansky, A., Koriat, A. (2004). The basic-level convergence effect in memory distortions. *Psychological Science*, 15, 52-59.
- Ross, M., Wilson, A.E. (2003). Autobiographical memory and conceptions of self: Getting better all the time. *Current Directions in Psychological Science*, 12, 66-69.
- Schrauf, R.W., Rubin, D.C. (2003). On the bilingual's two sets of memories. R. Fivush, & C.A. Haden (Eds). *Autobiographical memory and the construction of a narrative self: Developmental and cultural perspectives* (p. 121-145). Mahwah, NJ: Lawrence Erlbaum Associates.
- Sharman, S.J., Garry, M., Hunt, M. (2005). Using source cues and familiarity cues to resist imagination inflation. *Acta Psychologica*, 120, 227-242.
- Sharman, S.J., Manning, C.G., Garry, M. (2005). Explain this: Explaining Childhood Events Inflates Confidence for Those Events. *Applied Cognitive Psychology*, 19, 67-74.
- Stark, L.J., Perfect, T.J. (2006). Elaboration inflation: How your ideas become mine. *Applied Cognitive Psychology*, 20, 641-648.
- Whitlessa, B.W.A. (2004). The perception of integrality: Remembering through validation of expectation. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 30, 891-908.
- Whitlessa, B.W.A., Williams, L.D. (2000). The source of feelings of familiarity: The discrepancy-attribution hypothesis. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 26, 547-565.

MENTAL MODEL OF FEMININITY AND RELATION TO SKIN *

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A new approach for measuring basic problems, connected with the female identity is elaborated. Identity is considered as a result of assimilation of cultural principles and their internal integration. The structure of identity defines the border between Ego and non-Ego and determines implicit gender models. The basic component of gender identity is a body and its border - skin. Body and attitude to it is considered as one of the determinants, influencing formation of the highest cognitive functions, which predetermine the formation of mental gender models. This method is developed and tested on the material of facial creams characteristics. The stimuli were 37 descriptions of creams, from which the participants had to choose the most important. Six categories were extracted, grouping all the descriptors reliably: treatment, nutrition, cleaning, defense, relaxation (anti-stress), and age prevention. These categories are considered as dimensions for the structure of female identity. It is proved empirically, that there is the correlation between the preferred creams descriptors and personal traits of the participants, such as: strategy of exiting from the conflict situations, strategy of coping behavior, and self-estimation.

The problem of identity is interdisciplinary and developed in a framework of different approaches: sociology, social psychology, personality sciences and individuation.

The structure of advanced gender identity is characterized by stability and simultaneously by lability allowing to integrate consistently cultural tradition, social customs and individual norms. "Identity is not the isolated essence. Thus, Self and others not only are in a constant interaction with each other, but also with various collective structures (archetypes, images, ideological and social systems, etc.)" (Papadopoulos, 1996, p. 156).

When the problem of identity is elaborated in sociological context, the basic emphasis is on the formation of adequate social representations, mastering of adaptive social standards, training of gender stereotypes and gender roles. During the process of socialization a person learns the system of social rules, following that he or she presents to the others as a man or a woman.

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