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REGAINING THE LOST LANGUAGE THROUGH THE SAVINGS PARADIGM: IMPLICATIONS FOR FOREIGN/SECOND LANGUAGE TEACHING AND LEARNING

Dr. MÜBEHER ÜRÜN GÖKER
Canakkale 18 Mart University, School of Foreign Languages
murungoker@comu.edu.tr

ABSTRACT

A consensus has been built for the fact that attrition often shows itself in a language user's proficiency of vocabulary, however, structural and phonological representations manifest themselves most of the time among users of language who immigrated right after puberty. Focusing on this fact, this study attempts to find out the clue of probability of regaining the lost language examining the effect of L2 loss of an adult in Germany, who learnt German as a second language and later settled in Turkey. This case study also aims to confirm the idea of "recalling the lost knowledge" by the help of Savings Paradigm Theory. For the sake and content of this study, the participant (CE) and six control participants followed through the process of Savings Paradigm. Results indicated that CE displayed a better learning and keeping of old words and phrases than new ones. The clear difference gained between the results and those displayed by CE evidently shows that savings were a great advantage in performance. The results gained from this study present important highights on how savings could be turned into an important asset in performance.

KEY WORDS

Regaining the lost language, savings paradigm, language attrition.

INTRODUCTION

Scholars searching for language learning have always been interested in language attrition. Some scholars like Ammerlaan (1996) and Schmid and Köpke (2008) have recently achieved a consensus on the fact that attrition often shows itself in a language user's proficiency of vocabulary (both in his or her mental lexicon and lexical access), however, phonological and structural representations often manifest themselves among users of language, who immigrated after puberty (Schmid, 2009).

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Broadly speaking, to understand the language attrition process better, scholars are expected to define the areas of the L1 system mostly influenced by the effect coming from the L2. As there is not much evidence and data about L1 attrition, a better approach is to have a look at similar fields of scholar work on linguistics including L2 acquisition, language contact, aphasia, or creolisation. For most of the time, works on this issue focus on L1 loss. In some cases, especially in different situations like moving from somewhere to another place, it has been seen that L2 loss is also possible.

Within this context, in our study we wanted to examine the impact of L2 loss of an adult in Germany, who learnt German as a second language and later settled in Turkey permanently at the age of six. The study attempts to confirm the idea of "recalling the lost knowledge" by the help of Savings Paradigm Theory. So, control participants and the case study participant went through the process of Savings Paradigm.

CONCEPTUAL BACKGROUND

The main goal of the study is to find out any possible clue regarding regaining the lost language. This study's difference from its antecedents is testing an L2 attriter. According to Savings Paradigm theory, remnants of a lost language can be recalled by the attriter. The work of Heinz Kuhberg has similarities with our study. In the work of "Longitudinal L2-attrition versus L2-acquisition, in three Turkish children – empirical findings" Kuhberg searches for the same results, 'can the lost language be called back?' Previously lived in Germany, two girls were examined in terms of "language attrition" and the results were compared with the results of a Turkish boy who was learning German as an L2.

Similar topics were studied by various academics, too. For example, Bot and Stoessel (2000) in their research study 'In Search of Yesterday's Words: Reactivating a Long-forgotten Language', found that residual memory can be retained. Emiko Yukawa's (2001) 'Attrition, savings, and reactivation of L3 Swedish not used for 5 years' tries to searches the answers for a lost L3. The study focuses on the effect of time upon the L3 that has been forgotten for 5 years. Moreover, Yukawa wants to learn the possibility of regaining the language. The study of Lynne Hansen and Tomoko Asao (2000), "Beyond Vocabulary: Applying the savings paradigm to the relearning of Japanese complement structures" aims to give a broadened perspective on the regaining the vocabulary of a loss language by the help of savings paradigm.

Another study of loss of and L2 has been conducted by Teodora H. Mehotcheva. Mehotcheva discusses the processes of attrition of Spanish after the Erasmus Program attentands leave Spain in her doctoral thesis named "After the fiesta is over Foreign Language Attrition of Spanish in

Dutch and German Erasmus students". The final example is the research study 'Exploring Age and Loss Using the Savings Paradigm' conducted by Georgette Ioup in 2001. The study is not only busy with the language loss and its effects, but also the relationship between age and the loss of the language. Because of this feature of the study it differentiates itself from similar studies.

RESEARCH QUESTIONS

The two research questions for this study were:

1. To what extent does the savings impact probability of regaining the lost language?
2. Is there any significant performance difference between the performances of the groups on learning and keeping of old words and phrases and new ones?

METHODOLOGY

Participants

Case Study Participant

The knowledge about the participant was given by himself. CE is a member of a guest-worker family in Germany. As known, after the Second World War, Germany made an announcement declaring the need of a working class to all countries. Turkey responded with a huge amount of people from rural parts of the country. CE was just a baby when his family had already settled in Cologne, a very industrialized city of Germany.

Till their return to Turkey permanently, CE was brought up as a bilingual person. He used to speak Turkish at home and German in social life. In his last year, he attended Kinderschule (today's Kindergarten). At the school, he was even taught reading and writing. Although it was beneficial for German knowledge, reading and writing German became a handicap for him in Turkey.

When they returned to Turkey he was six years old. The principal of the school told his parents that he knew how to read and write, so it was unnecessary for him to start from the 1st grade. That is why, he started from the 2nd grade and this resulted in difficulty in communication and socialization with the public.

From that point, CE could not keep his German knowledge and focused on learning Turkish as the primary language. Before that, he was able to use German better than Turkish, even though his mother tongue was Turkish. Now, he is unable to speak or write in German. According to him, he just remembers the very basic words like "Ja" or "Nein". However, when he was in

Germany, he used to speak like an ordinary German kid. That could be inferred from his memories about childhood and the details about these memories.

Participants for Control Study Group
The control sample consisted of six native Turkish-speaking male and female participants from Artvin province of Turkey and 4 males and 2 female participants joined voluntarily to the study. None of the participants had background of German and they declared that they had grown up in a Turkish speaking environment. Participants reported that they had not taken any German classes before.

Stimuli
CE left Germany when he was just six years old. So, the stimuli was tried to be chosen as suitable as possible. He was listened to German lullabies and children songs. Moreover, he watched simple German conversation videos from various internet sites. The used first in the tests can be seen in Appendixes S1 and S2. As we first wanted to test the possibility of regaining the power of memory, familiar vocabulary to a 6-year-old child was determined to be used for most tasks.

The words were chosen according to CE's lifetime in Germany. So, probably he learnt the very basic words in German. Considering this fact, Oxford-Duden German-English Dictionary was used to find the needed words. To find the most used words in the age of kindergarten a research was done and found some basic words for the tests. The first set was arranged as easy as possible and supported with pictures. The second test was more difficult than the first one to compare the results of acquiring new words for CE and control participants.

The third and the fourth sets were arranged according to the mostly used expressions. In the third set, the expressions were as simple as they could be. These expressions are the ones which can be used in daily routines of a child in Germany. On the other hand, similarly to the first and second sets, third and fourth sets were also arranged to compare the results of acquiring new expressions upon the basic knowledge.

Procedures
Six different sessions within a 2-month time were performed for the case study of which design can be seen in Table 1.

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Table 1: Task and Test Distributions

Sessions	Task	Tests
1	Cued recall, word recall and recognition, matching of picture-word	Pretest
2	Cued recall, word recognition, matching of picture-word, repetition (phonetic task)	Pretest
3 Savings Task 1	Savings paradigm task (SPT)	Post-test
4 Savings Task 2	(SPT)	Post-test Delayed test (Session 3)
5 Savings Task 3	(SPT)	Post-test (Session4) Delayed test (Session3) Delayed test

They involved two preliminary pretest sessions in which the procedure was negotiated and a variety of subsidiary measures were conducted to see what is left after the loss of German knowledge. After four sessions using the paradigm task, pretesting was applied. Tasks were all given to the case study participant and control study ones at the same time. The former one for the case study participant was administered by one researcher, the latter one was administered to six control participants by the other researcher. A preliminary discussion was first made in the office of one researcher and then following sessions were performed in a cafe for the comfort of the participants. One month was determined between the first and second pretest. Later on, other sessions were conducted each week and they were all recorded for the analysis. The researcher took notes about the sessions putting personal comments and observations following every session. To be able to compare, the control participant was just given the paradigm task throughout four sessions conducted every week in one month. Later, the same task was given to every participant separately in a cafe by the other researcher.

Pretesting

Before the task of paradigm, CE first was told to go through pretesting process to see any remnants of memory in the attrited language. Some tasks of recognition were employed. The 1st set (Task 1) consists of basic words like numbers, descriptive adjectives, colors, and basic daily expressions were used during the pretest session. The other set (Task 3), which included basic expressions was also used during the pretest session serving as stimuli. CE could recognize nine words (out of ten) from the Task 1 and 7 (out of ten) from the Task 3 used for the pretest, but CE did not have any recall of what those 3 words mean in Task 1 and 6 in Task 3. Later, a 40-picture-set that represents concrete nouns ($k = 17$) and verbs of action ($k = 23$) were presented for recall in a picture naming task and that did not give any findings. However, a recognition task with word-picture matching gave a few positive identifications.

Then a recognition task with 8-10 pictures were showed and their names in German given. But no information was given about what pictures match with what words. The researcher repeated

twice to have any semantic association. The participant was expected to say if he remembered the word through matching the word presented with the right picture. The first and second pretest sessions were administered with this task.

Savings Paradigm Task

The savings paradigm task was carried out in four different sessions (Table 1) for CE and the control participants. When they did it, following differences in carrying out the task were observed. The first researcher as a native speaker of Turkish did both word training and testing for CE using a total of 40 pictures (see Appendix). A total of 15 or 16 words (7 new and 8 or 9 old) were taught randomly. The researcher asked the participant to repeat every word in the training process, while doing this, a physical picture card was viewed and the target action or object was depicted at the same time. Target words were given in three sets together with posttests after every word training in order to make memorization easier.

Right after this process, CE and control group participants were told to carry out forced-choice Task 2 and Task 4, which contained 3 words already learned, however, for the false responses no correction was made. For the Task 2, two picture sets were given to CE and he was expected to hear one word and show the right picture, which accompanies given word. For the Task 4, CE was presented one picture with two words by the researcher and asked to name it after the other. In other words, he was told to give a name to the word related with the relevant action or object. Then, the words were all given for picture naming recall task. For CE, one picture was shown each time and he was asked to give a name. Later on, all of the pictures were mixed not to give a clue. Another similar test was done afterwards.

Having completed the learning process, which included naming picture after an identification, two immediate posttests were applied for CE. While doing this, CE was given a picture card in order to remember the match of word and picture. After one-week training, delayed testing, which included both naming picture and identification of unremembered words-phrases were carried out. The researcher as experimenter scored all performances.

The researcher later did word testing and learning via (https://quizlet.com/131304167) for the control participants. The main concern here was to make the word learning experiment similar to the case study as much as possible for the purposes of experimental control, that is why, the first researcher did audio-recording, each audio clip of which featured twenty-five seconds of silence, for all target words. Thus, all clipart images, which depicted every word were chosen for the sake of resembling those employed in the case study. PowerPoint, which lets the experimenter replay audio-clips whenever needed, was also used during training, which included immediate posttests.

Later on, all the audio-recorded words representing clipart images were presented in three different sets just like in the case study and the participants repeated every word. Next, cumulative forced-choice tests were given while training and this time the participant was told to choose the right picture representing the target word and repeat it again just like in the case study.

Analyses and Predictions

The word retention in delayed posttests was the main focus in this current study. For the case study, the predictions given below for the paradigm task were made as the evidence gained from the control group must match with the predictions in our study. As no participant had any knowledge about the language for the control participants, any significant differences were not expected for accuracy and reaction times for old and new phrases-words, as any difference could bolster the interpretation of any possible benefits of relearning for CE.

To avoid any confusion in the report of findings, relearning sessions given are shown and numbered as in sessions of savings (Table 1). In this context, the two sessions of the task (Savings 1 and 2, determined as sessions 3 and 4) included just nouns, but Savings 3, shown as Session 5 in Table 1 included verbs.

To conclude, as no statistical analyses would be used to make a comparison of CE's performance with any control sample, differences of performance of control participants and CE were used to compare.

RESULTS AND DISCUSSION

As can be seen in Table 2, firstly, we examined the performance on the delayed task of naming picture. A main trend, which shows better retention for old ones instead of new ones, was observed for CE. Secondly, we analyzed percent accuracy for delayed remembering session for the control sample and used paired-samples *t* tests.

Table 2: Delayed Recall Task and Performance Accuracy

	Ü				Control sample					
	Old		New		Old		New		*t*(5)	*p*
Session	*k*	*M*	*k*	*M*	Range	*M*	Range	*M*		
Savings 1	10	.50	3	.15	.00–.00	.00	.00–5.00	2.00	–2.58*	.049
Savings 2	10	0.42	3	.33	.12–.100	.42	.20–.100	1.00	.76	-.076
Savings 3	10	0.41	3	.50	.56-100	.55	.40-.100	1.00	-2.63	-.1.08

k = number of words given; for each control participant, same words were given. For the control sample (n = 6), range is given as a measure of variability in in recall performance.

Based on these findings, no significant performance difference was observed between new and old words. These might mean that for the control sample, there was no preference for new or old words. When examined the difference between the performances of the control sample and CE, it can clearly be said that CE showed much higher accuracy of remembering and much better performance for the old phrases-words.

As can be seen in Table 3, on the delayed identification of pictures we analyzed the performance. In other words, we conducted the recognition test just for unrecalled items for CE; however, based on the findings, no savings effect was observed. To have a better interpretation, we should keep in mind that just one or three unrecalled words were included for each session, whereas, for the control sample, both recalled and unrecalled items were included.

Table 3: Delayed Recognition Task and Performance Accuracy

	Ü				Control sample					
	Old		New		Old		New		*t*(5)	*p*
	k	*M*	*K*	*M*	Range	*M*	Range	*M*		
Savings 1	5	.25	2	.10	.00–.100	.50	.00–2.00	1.00	-1.17	- 2.96
Savings 2	5	0.40	3	.33	.15–.100	.45	.20–.100	1.00	.88	-.063
Savings 3	2	0.43	3	.50	.50-100	.52	.40-.100	1.00	.93	-.3.08

Note. For CE, *k* = number of unrecalled words given; for control sample (n = 6)., *k* = number of unremembered words analyzed.

Paired-sample *t* tests were used to analyse accuracy on the delayed task. CE's performance displayed consistency for phrases and words which are new, even though notable differences were just seen in the first session, $t(5) = -2.96$, $p < .05$, and the last session, $t(5) = -3.08$, $p < .05$.

It should be noted that the task had two options which means that there is %50 chance for the participant.

These findings, in terms of limitations, should be evaluated taking the variable together with low number of items. Contrary to our predictions, when examined the findings for the control sample in the delayed recognition tasks, it can be said that new phrases and words were more correctly identified than the old ones. The performance of the control sample in identifying the words could not keep up with the findings of of CE.

To sum up, we can clearly say that in the recall task the case study participant displayed a better learning and keeping of old phrases and words than new ones. However, we could not observe a clear effect due to the low means. On the other hand, according to the findings gained through delayed recall and recognition testing, it can be said that scores on old phrases and words were not different from the new ones, because new phrases and words were longer than the old words. Considered from this angle, what can be assumed that for anybody exposed to German for the first time, the words familiar with a six-year-old German-speaking person are difficult to learn than the those that person could learn later. This might not support the fact that it is easier to acquire new words as a native speaker naturally acquires them at early ages. To conclude, the clear difference between the findings and those displayed by CE clearly indicates that savings were a great asset in performance patterns of CE.

Discussion

The previous studies employing the savings paradigm aimed to explore its impact for the languages, which were learned but forgotten later. The impact for those mainly L2s is clearly seen while the relearning task. In other words, the words learned before are regarded as old, however, the words that the persons were not familiar before are regarded as new. In this sense, the advantage of relearning old words is clearly seen as the savings effect. What can be argued in this sense is that the knowledge gained in the early years of life can be regained because of the traces left in memory (Nelson, 1978). When examined a number of studies, which employs the savings paradigm to prove hypothesis given above, the savings effect for the language that is lost was explored (de Bot et al., 2004; Hansen et al., 2002; Van der Hoeven & de Bot, 2012). Also in some previous works, the savings paradigm was employed again as a regaining apparatus for the studies. But the paradigm in our study was employed taking the assumption into consideration that the paradigm could work and that, if the impact is seen, the language or languages tested could be lost by the participant.

From this point of view, this type of reconceptualization for the savings method together with the early age during which the participant (CE) had forgotten his language during childhood urged us

to have more changes in the savings paradigm. As compared with the previous studies, delayed testing following learning to criterion was given a main focus, as measured by delayed not by the posttests carried out immediately. However, delayed posttests, on the other hand, would better indicate that type of effect. As a corollary, we can maintain that with the early age during which the participant forgot his language together with the limited vocabulary, and the loss of semantic connections among the words recovered could stop us to see results gained in each immediate savings impact measured during posttests. Viewed in this light, delayed posttests would again better indicate that type of effect.

One might conclude from these assumptions that it is hard to detect the savings effect if robust intrusive behavioral measures are not carried out as suggested by Hyltenstam et al. (2009). However, if better retention for old words is shown by the participant in delayed posttesting, it can be maintained that the relearning/retention of the old vocabulary is facilitated by the residual memory even though it is minimal. That is why, in our current study, we employed a lot of unknown words as we wanted to get rid of any prospective impact of old words, that were learned more easily than new words including a control group employing the paradigm.

Taking all these into consideration, several tasks of recognition were used. The 1st set (Task 1) consisting of basic words like numbers, descriptive adjectives, colors, and basic daily expressions was used during the pretest session. The other set (Task 3), which included basic expressions was also used during the pretest session serving as stimuli. CE could recognize nine words (out of ten) from the Task 1 and 7 (out of ten) from the Task 3 used for the pretest, but the participant did not have any meaning recall of 3 words in Task 1 and 6 in Task 3. Later, a 40-picture-set (as a recall task), which represents concrete nouns and action verbs was given together with a word-picture matching (as a recognition task) set.

Our results seem to be consistent with the previous assumption of Bowers et al. (2009) that the savings impact in pervasive language loss cases for children may be seen only if sessions are repeated many times. While doing this we should foresee that old words were more recollective and easier to comprehend.

The findings we gained through the control group were not good to tell us that better retention of old words existed. However, it was seen that they show a better retention on new phrases and words than old ones in two tests, which was also not consistent with the assumption that old words could be learned more easily. On the other hand, control group could not show the same degree of detecting the words like CE. But the fact that the preference for old vocabulary found for CE shows what is left (and could be used to learn more) after the loss of L2. That also supports our conclusion.

CONCLUSION

This study attempted to investigate whether there was any clue of probability of regaining the lost language examining the effect of L2 loss of an adult in Germany, who learnt German as a second language and later settled in Turkey. It also aimed to confirm the idea of "recalling the lost knowledge" by the help of Savings Paradigm Theory. Results revealed that savings were a great advantage in performance. The results gained from this study present important highights on how savings could be turned into an important asset in performance.

As the results gained through our current study correlate with previous studies regarding residual memory, they contribute to better understanding the usage of what is left after a loss of an L2 like in the case of CE. Many examples of those paradigms could be seen in prior studies testing the effect of savings paradigm (de Bot&Stoessel, 2000; Hansen et al., 2002; Van der Hoeven & de Bot, 2012).

Our current study seems to have helped reconceptualize the savings method applying it to a lost childhood language study. As widely known, such case studies always bring some obstacles with them as Montrul (2011) says, but contribute to construction of the theory. This study was conducted in a limited timeline, however longitudinal studies could be conducted with different sample sizes and timelines.

To conclude, due to all obstacles and difficulties encountered in such case studies like this one, in which a control group has been added to the design (not traditionally existing in this pradigm), we believe that this current study would contribute to other similar studies.

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APPENDICES

Appendix S1: der Tag, das Haus, drei, Klein, Neu, Schwarz, Sommer, Entschuldigung, Guten Abend, Spielen.

Appendix S2: Der Fernseher, Heute, Hoch, Jetzt, Die Karte, Der Pass, Spielzeug, Verschieden, Der Vogel, Zwischen

Appendix S3: Nein, danke, Ich weiß nicht, Ich möchte..., Es gefällt mir, Wir spielen, Ich verstehe nicht, Wie geht es dir? Bis bald! Viel Glück! Schade!

Appendix S4: Einverstanden, Es tut mir leid, Wo sind die Toiletten? Wie ist das Wetter? Ich bin Krank, Mein Deutsch ist schlecht, Ich suche eine Apotheke, Ich vermisse dich, Ich esse kein Schweinefleisch! Gib mir das!