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Break Down the Walls:  
How the “Folder Effect” Influences the Transfer of Learning

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Break Down the Walls:
How the “Folder Effect” Influences the Transfer of Learning

by

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Dedication

To those who seek the truth.
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Abstract

Break Down the Walls:
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Abstract: Categorizing knowledge into different disciplines and units may block knowledge within separate “folders”, which could limit its later retrieval and transfer to new contexts. To test this hypothesis, two experiments had been conducted. In one experiment, participants memorized a list of words with or without cuing which category these words belonged to. One week later, they were asked to recall all the positive adjectives, which required them to retrieve words that came from different categories. In the other experiment, participants read exactly the same story but embedded in two different subject domains or no context. A survey report was presented to test whether people from different contexts would have different transfer effect. The current study replicated previous results that successful transfer was hard to observe in the laboratory settings without explicit prompts. The memory test and transfer task in this study were too difficult and resulted into to the poor performance of the participants. The initial hypothesis had been neither supported nor rejected. To test the hypothesis, future studies
could reduce the time interval between study and test, and modified the transfer task to lower the difficulty of the experiment.
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Introduction

Transferring what is taught in schools over time and contexts is one major concern of our education system. In particular, *far transfer*, namely transferring learning in a dissimilar context as opposed to a similar context, is what most educators have long sought. "Despite the importance of transfer of learning, research finding over the past nine decades clearly show that as individuals, and as educational institutions, we have failed to achieve transfer of learning at any significant level." (Haskell, 2001, p. xiii). In response to this "failure", researchers pointed to the need to reconceptualize the concept "transfer", and proposed different concepts in replace of it. For example, Bransford and Schwartz (1999) broadened the conception of transfer by shifting the focus on people’s “preparation for future learning” (PFL), namely their abilities to learn in knowledge-rich environments. From the perspective of constructivism, Hager and Hodkinson (2009) suggested replacing the metaphor of transfer with participation and construction, which emphasize that learning is a complex social construction through participating in contextual and culturally grounded activities.

Why is far transfer hard to find and why does knowledge seem to be so context-bound? Several factors help to account for the failure of transfer, which have been highlighted by Mestre (2003) but resummarized here. First, many failures to produce transfer are due to inadequate opportunities for students to learn effectively in the first place (Brown, 1990). Second, people have different mental representations of even “similar” concepts. For example, although price rate measured in dollars per minute seems to be an isomorphic form of salary rate measured in dollars per year, students succeeded to transfer the concept of acceleration in a physics problem to solve a problem involving price rate, but not to a problem involving salary rate (Bassok, 1990). This result was explained as students interpreting dollars per minute as a continuous rate, which was similar to meters per second. But they interpreted dollars per year as a discrete quantity rather than a rate, and hence the failure of transfer. Third, people may have prior
assumptions of the applicability of the learned items. For example, Bassok and Holyoak (1989) found that students who learned to solve arithmetic progression problems could transfer this method to solve similar physics problems involving velocity and distance. However, those who learned to solve the physics problems first were unable to transfer the method to solve isomorphic arithmetic problems. Bassok and Holyoak argued that students who learned to solve the physics problems first appeared to consider the underlying physics context as crucial to the application of the problem-solving procedures. Consequently, these procedures were thought to be applied only in physics context. Moreover, students expected that arithmetic had broader applicability to other domains and their mindsets were ready to transfer it to a physics context.

The fourth reason lies in the way we assess transfer. In a standard experiment on transfer, participants first receive some learning materials or solve a problem, and later are tested with a variation of previous learned materials or problem. If participants solve the new problem correctly, transfer is said to have occurred. The problem with this methodology of assessing transfer is that those who succeed to retrieve previous knowledge but fail to apply it to the current problem will not be considered as successful. Their failure of applying their knowledge to solve the new problem might be due to their insufficient cognitive abilities or other factors. To further explore the failure of far transfer, it is necessary to distinguish those who retrieve the relevant knowledge but stumble at the last step of application and those who meet the criteria of both retrieval and application.

To remedy this methodology, I suggested that transfer of learning, as a cognitive phenomenon, be analyzed under a cognitive framework. Using a cognitive process approach, a four-stage of transfer model has been proposed, including encoding, schema induction, retrieval and application stages (e.g., Gentner, 1989; Gick & Holyoak, 1983; Ross & Kennedy, 1990). As a starting point, the current study focuses only on the encoding and retrieval phase as well as the factors that hinder the occurrence of transfer during these two phases. To ensure successful transfer requires the retrieval of relevant prior knowledge, which is influenced by its previous encoding. Bassok and Holyoak
(1989) have distinguished three general characteristics of the to-be-remembered (TBR) items that will influence how they are encoded and retrieved: surface content, underlying structure, and context. Surface content, underlying structure and the mapping of these two have been largely studied by previous researchers and several models have been proposed, especially in the field of analogical transfer (Gentner, 1983; see Gentner, Holyoak, & Kokinov, 2001, for an overview of these models; Gick & Holyoak, 1983). The similarities between surface and structure have played an important part of later retrieval of TBR items. Surface similarities are usually easier to notice than structural similarities. Therefore, people might fail to notice that the current problems differ in surface but have a similar structure to previous problem, which then hinders their transfer. Surface and structural similarities have been found to affect differently on (1) access to the transfer source (e.g. previous problems or knowledge) in memory, and (2) application of the retrieved transfer source to the target problem (see Ross, 1989, for a detailed discussion).

Since a large body of research has been conducted on the first two characteristics, i.e. surface content and underlying structure, the focus of current study is to explore how contexts influence transfer. More specifically, the research question asks how subject domains serve as contextual cues and influence transfer from one subject domain to another subject domain.

Previous research on context-dependent memory has shown that changes of contexts between study and test have impact on both recall and recognition of previously learned items. This result has been demonstrated with a variety of different manipulations of context, including physical environment (e.g., Godden & Baddeley, 1975), semantic context (e.g., Tulving & Thomson, 1973), mood states (e.g., Bower, Monteiro, & Gilligan, 1978), states after consumption of alcohol or drugs (e.g., Goodwin, Powell, Bremer, Hoine, & Stern, 1969; Peters & McGee, 1982) and so on.

Although the boundary between the context and the to-be-remembered (TBR) items is not always clear, researchers have made a distinction between two general types of contexts, using various labels: intrinsic versus extrinsic (Hewitt, 1977, cited in D.
Godden & Baddeley, 1980), local versus global (Dalton, 1993), interactive versus independent (Baddeley, 1982), integrated versus nonintegrated (Eich, 1985; Murnane, Phelps, & Malmberg, 1999), context alpha versus context beta (Wickens, 1987), and non-incidental versus incidental (Smith & Vela, 2001). The main difference between these two general categories is whether the contexts are processed during encoding phase. Intrinsic, local, interactive, integrated, context alpha, non-incidental contexts are processed along with the TBR items and can influence the meaning or representation of the TBR items. For example, the manipulations of singular versus plural words (e.g., Tulving & Thomson, 1973) and the auditory versus visual presentation of list items (e.g., Pessin, 1932) may be considered “intrinsic”.

On the other hand, extrinsic, global, independent, nonintegrated, context beta, incidental contexts are surroundings or backgrounds where learning takes place. Hockley (2008) summarized various types of extrinsic context, including different rooms (e.g., Dalton, 1993; Fernandez & Glenberg, 1985; Smith, 1979, 1985, 1986), underwater versus on land (e.g. Godden & Baddeley, 1975, 1980), different background colors (e.g. Dulsky, 1935; Weiss & Margoliou, 1954; Murnane & Phelps, 1993, 1994, 1995) and mood states (e.g., Bower, Monteiro, & Gilligan, 1978; Weingartner, Miller, & Murphy, 1977; Eich, 1985; Eich & Metcalfe, 1989). For example, in a seminal study done by Godden and Baddeley (1975), divers were asked to learn and recall lists of words in two separate environments: under water and on dry land. Results showed that those who learned under water had better recall when recall sessions occurred under water as well. Similarly, those who learned and recalled on land outperformed those who learned on land but recalled under water. These results demonstrated that changing the context between encoding and retrieval reduced people’s abilities to recall previous learned items.

In a meta-analysis of the effect of extrinsic contexts on memory, a modest but reliable effect has been found, regardless of the types of memory test, including free recall, cued recall, and recognition test (Smith & Vela, 2001). Even mentally transporting people to another place by imagination can have an effect similar to real changes in environmental context. In a study done by Sahakyan and Kelley (2002), participants were
asked to mentally walk through their parents’ home after studying one list of items. Following the imagination task, another list of items was presented. Results showed that the imagination task improved recall of the second list and but impaired recall of the first list. The impairment of the first list was explained by the mismatch between the original context and the new mental context generated by the imagination task. Consistent with this account, mentally reinstating the original context at the time of the test reduced forgetting. For example, witnesses’ memory for real-world events was improved when a retrieval probe that effectively reinstated the original environment was presented (Geiselman et al., 1984). In this experiment, participants were instructed to (a) mentally reinstate the environmental and personal context of the crime and (b) report every information they could think of, regardless of the perceived importance of the information. These two retrieval mnemonics increased the features overlap between encoding and retrieval contexts, leading to the improvement of retrieval. Similarly, judging the source of memories reduced the negative impact of misinformation (Lindsay & Johnson, 1989).

To account for the context-dependent effect on recognition, a global matching model has been proposed and later extended to the ICE model (item, context, and ensemble information, Murnane & Phelps, 1993, 1994, 1995; Murnane, et al., 1999). According to these models, memory representations of items consist of item information, contextual information, and the integration of item and context information (i.e. ensemble information). Both the item information and the context information contained in the test probes can activate previous memory. The retrieval of TBR items is dependent on the extent to which the test probes match with item information and contextual information in memory. For example, presenting an item in the same context at study and test would have a high degree of activation, because both item and context information would match with that in memory. When an item is presented in a new context, it would have a lower degree of activation because only the item itself would match with information stored in memory. The ICE model extends the global matching model in that it distinguishes the effect of extrinsic and intrinsic contexts on familiarity and discrimination in a recognition
test. Matching extrinsic context at study and test will increase both the hit rate and the false-alarm rate without necessarily influencing discrimination. In contrast, intrinsic context will affect both familiarity and discrimination (Murnane, et al., 1999). Macken (2002) has further explored the extrinsic context effects on the recollection and familiarity of items. The recollection procedure requires participants to recall specific details of a prior experience whereas the familiarity procedure only requires them to indicate their familiarity without the recollection of any specific details. Results showed that the effects of context were found only by using the recollection procedure. Macken argued that extrinsic context effects resulted from the encoding and retrieval of specific item-context associations.

In the school setting, one important yet understudied context is the subject domain. Our schools have included similar knowledge in different disciplines and each discipline has organized that knowledge into different chapters and units. To use a computer analogy, knowledge is blocked within different “folders”. When we want to find a file, we usually go to the folder that we think this file belongs to, and search within that folder. Our failure to find that file is mostly because we look for the wrong folder. Using this analogy to transfer of learning, our failure to retrieved relevant knowledge to solve the current problem may be partly due to searching within the wrong problem domain. Take the study by Bassok and Holyoak (1989) mentioned in the beginning of this paper as an example. The failure of transferring the physics problems to arithmetic problems can be explained by the fact that when the students were given the arithmetic problems, they were probably searching a relevant arithmetic equation in their heads and excluding everything else. Organizing knowledge into different categories or “folder” shortens our time of searching, but it poses limitations to overly specific and bounded problem domains, resulting in our failure to locate the “file” we need. In other words, categorization has “built” up walls between knowledge and limited our searching space.

Although research on context-dependent memory has provided much evidence on how context affects memory, transfer of learning is more than a memory test. In a standard memory test, we only need to recall a set of items or judge the familiarity of
them. In the transfer of learning, by contrast, we are only informed of the goal of the task without not explicitly instructing which knowledge we should retrieve. Thus, one contribution of the current study is to explain the failure of transfer by context effect that is induced by categorization. Another contribution is in regard to the test materials employed here. A large body of previous research employs puzzle-like problems, such as Missionaries and Cannibals, the Tower of Hanoi problems and Duncker’s radiation problem, or mathematical equations. By contrast, the learning materials of the current study were excerpted from economics and sociology lectures, which were less quantitative in nature.

Two experiments were conducted. The aim of experiment one was to test our final hypothesis in a simpler form in a typical memory experiment to investigate whether explicitly cuing the categories of the TBR items would generate a boundary between them and impair cross-category retrieval. It served as a preliminary study for experiment two where we actually tested the hypothesis in a real transfer task. In experiment two, we hypothesized that even learning exactly the same knowledge but embedded in two different subject domains or no context would have different transfer effect.
Method

Participants

Fifty-five undergraduates from a southern university in China participated in the experiments. They were recruited on a voluntary basis through a psychology class, following procedures on informed consent approved by the IRB of the researcher's institution. Eight of them did not participate in the experiment on the eighth day and their data were not included in the study. Thus, only forty-seven participants comprised the final data.

Materials

Experiment 1 The impact of cueing: Materials consisted of a list of 18 English words. For half of the participants, there was a cue before first 8 English words, saying, “Here’re some words that could be used to describe a person.” The remaining 10 words consisted of one noun, three verbs and six adjectives that were used to describe non-person objects. Another cue was presented before these ten English words, saying, “Other English words” (see Appendix A.1). The other half of the participants received the same English words without cues. However, there was one line of empty space between the first eight words and the other ten words (see Appendix A.2).

Participants received one point per word if they spelled it correctly. If they spelled the words wrong or simply wrote the Chinese meanings of the words, they received 0.5 point. This grading criterion was employed throughout experiment one.

Experiment 2 The impact of content context: Materials consisted of a transcript of a lecture presentation and a story. One third of the participants received twenty PowerPoint slides of an economics lecture. A story about an economist was presented on the last three slides (see Appendix B.1). In this story, the economist conducted a survey and asked restaurant owners to indicate whether they would accept Chinese people in the establishment of their restaurants. 90% of respondents answered no, which was
inconsistent with how they actually behaved. Indeed, this was a true story happened to Richard LaPiere, a psychology professor in Stanford University. This story was intended to alert people to the reported attitude and be careful readers of various surveys and polls. The lecture slides were followed by six questions (see Appendix B.2).

Another third of the participants received twenty PowerPoint slides of a sociology lecture. The first seventeen slides were equivalent to the economics lecture slides in terms of organization and numbers of words. The same story was presented on the last three slides except that the title of the story was changed to “A Story about a Sociologist” (see Appendix B.3). The lecture slides were also followed by six questions (see Appendix B.4).

In the final control group, participants received the same lectures slides, story and questions as the economics group except that the slides and the story were separated. In addition, the story was presented in the format of a regular magazine article rather than in PowerPoint slides and the title of the story was changed to “A Story about a Professor”.

Eight days later, all the participants were given a report of a market survey presented in nine PowerPoint slides. In this report, people's willingness to purchase a new IT service, the popularity and accepting price of this service were presented (see Appendix C.1).

**Procedure**

The study consisted of four phases using the materials described in the previous section. The first two phases of the study were administered on day 1 and the last two phases eight days later. The first and fourth phase comprised one experiment whereas the second and third phase comprised another experiment. The rationale for administering the first two phases together was to lead the participants to believe that the whole experiment was to assess their learning abilities. In this way, when they were given the survey report on the eighth day, they were led to believe that this was just another test of their learning abilities so that they were less likely to guess the purpose of survey report was actually to test whether they could transfer what they learned from the first day. The following
section provides detailed descriptions of all four tasks the participants were asked to complete.

**Phase 1:** At the start of experiment one, participants were informed that the purpose of the experiment was to evaluate their learning abilities, and asked for their consent to participate. After the collection of the signed consent forms, participants were randomly assigned to either cued or noncued conditions. In both conditions, participants were given the list of 18 English words and required to memorize them within 10 minutes. The only difference was that in the cued condition the first 8 English words were labeled as adjectives that can be used to describe a person whereas in the noncued condition no such label was presented. After 10 minutes, they were required to write down all the 18 words and given 5 minutes to complete their answers. This memory test was to make sure they had memorized all of English words and it prepared them for the memory test on the eighth day.

**Phase 2:** After this initial memory test, the second phase of the experiment began. Participants were informed that the aim of this part of experiment was to evaluate their quick-learning abilities for new knowledge. Participants were randomly assigned to one of three groups, namely the economics group (E group), the sociology group (S group) or the control group. One third of the participants were assigned to the E group where they were given an economics context lecture slide presentation. Another third of the participants were assigned to S group where the lecture notes were based in a sociology context. To make sure the participants in E group had read and viewed both the economics content and the story, six questions were presented after the twenty PowerPoint slides. The first three questions targeted the economics content. The fourth question asked the participants to explain the result in the story. The last two questions asked them to indicate if they had read the content of the economics lecture and story before on a 5-point Likert scale from 1 (*never*) to 5 (*very familiar*). Similarly, participants in S group were required to answer six questions. The first three questions targeted the sociology content. The last three were the same as those in the economics group, that is,
the fourth question asked the participants to explain the result in the story and the last two questions asked them to indicate their familiarity of this sociology lecture and story.

The rest of the participants were assigned to the control group. People in the control group received almost the same materials as with the E group except that economics lecture notes and the story were separated. They were instructed to read the story and answer its corresponding questions first, and then read the lectures notes and complete the corresponding questions. For the E group and S group, the rationale of presenting these lecture notes before the story was to embed the learning into two different contexts, i.e. two different subject domains. Inversely, for the control group, reading the story first was to make the story free from any context while receiving almost identical learning materials as the E group.

**Phase 3:** One week later, the same participants were called back to participate the third and fourth phases of the experiment. Participants were informed that the aim of this part of the experiment was to evaluate their abilities to analyze data and make decisions. All participants were given the same report of a market survey about a new IT service. After reading the results in this report, they were asked to assume themselves as the CEO of this IT company and indicate whether they had confidence to launch this IT service and write down as many reasons as possible (see Appendix C.2). They were given 10 minutes to read the report and complete their answers. The grading criterion was based on whether they have mentioned the issue of inconsistency between people's behavior and their reported attitude. Those who mention this issue received one point, otherwise they got zero.

**Phase 4:** After 10 minutes, their answer sheets were collected. Finally, participants were required to write down all nine positive adjectives within the 18 English words presented on the first day. The correct answer consisted of nine words. Among these nine words, seven of them came from the first eight words that can be used to describe a person, and the other two came from the remaining ten words that were labeled “Other English words”.

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On the same page, we asked the participants to indicate whether they had thought of the story presented on the first day, when they were writing their answers to the survey report (see Appendix D). They were given totally 7 minutes to complete their answers on this page.

The first two phases were administered on day 1 and the last two phases eight days later. The first and fourth phase comprised one experiment whereas the second and third phase comprised another experiment. The rationale for administering the first two phases together was to lead the participants to believe that the whole experiment was to assess their learning abilities. In this way, when they were given the survey report on the eighth day, they were led to believe that this was just another test of their learning abilities so that they were less likely to guess the purpose of survey report was actually to test whether they could transfer what they learned from the first day.
Results

Experiment 1

Initial Recall

**Overall Recall.** People in cued condition performed equally well as those in noncued condition, recalling on average 12 out of 18 English words (M=12.08, SD=.466), whereas those in noncued condition recalled approximately 12 words (M=11.86, SD=.370). In other words, people in the cued and noncued condition recalled 67.11% and 65.89% of the word list respectively (see the first two columns in Figure 1). No significant difference was found between these two conditions, t(45)=.364, p=.718.

![Figure 1. Percentage of Correct Answers between Two Conditions](image)

**Recall between categories.** To test whether people in two conditions had different recall patterns of the first eight adjectives and the other ten words, a repeated measures
ANOVA was conducted, in which category (first category vs. second category) was a two-level within-subjects variable and experimental condition (cued vs. noncued) was the between-subjects variable. Note that the first category of the words referred to the first eight adjectives and the second category referred to the other ten words. Because the first and second category consisted of different numbers of words, participants’ scores were also transformed into percentages (see Figure 1).

Tests of main effect of cueing showed that participants in the two conditions did not perform significantly different, $F(1,45)=.23$, $p=.629$. Although not statistically significant, all the participants indicated better recall on the first category of the words (M=80.71%, SD=.168) than the second category (M=74.89%, SD=.197), $F(1,45)=3.59$, $p=.065$ (Figure 2). Given that the first category consisted of fewer words than the second category, a slight difference in these two categories was reasonable.

![Figure 2](image_url). Percentage of Correct Answers between Two Categories

7-day Delayed Recall

*Overall Recall.* Participants were required to recall all nine positive adjectives they memorized on the first day, seven of which came from the first category and the
other two from the second category. People in both conditions performed poorly (M=1.40, SD=1.43). Fourteen out of 47 people recalled nothing and 15 out of 47 recalled only one word, accounting for 67% of total participants. People in the cued condition performed slightly better than those in the noncued condition, recalling on average 1.46 (SD=1.41) and 1.34 respectively (SD=1.48). No significant difference was found between these two conditions, however, (t(45)=2.82, p=.779).

Recall between categories. The number of positive adjectives recalled from the first category ranged from 0 to 4 whereas that from the second category ranged from 0 to 2 (see Figure 3a and Figure 3b). People in the cued and noncued conditions recalled 1.12 (SD=1.00) and 1.11 (SD=1.25) out of seven target words from the first category respectively, and .34 (SD=.62) and .23 (SD=.43) out of two target words from the second category respectively. When these data were transformed into percentages, people in the cued and noncued conditions recalled 16% and 15.9% correctly from the first category, and 17% and 11.5% correctly from the second category.

Figure 3a. Distribution of Correct Answers from the First Category
The chi-square test revealed that the experimental condition did not significantly predict the number of correct words from the first category, $\chi^2 = 6.33$, $p = .502$. Plus, no significant relationship was found between the experimental condition and the number of correct words from the second category, $\chi^2 = 2.396$, $p = .389$.

**Experiment 2**

**Participants’ Analysis of the Story**

All participants reported low familiarity of the story presented on the first day, where the Economics group indicated a mean of 2.12 on the 5-point Likert scale (the higher the value, the higher the familiarity), Sociology group indicated 2.71 and the control group indicated 2.77. One-way ANOVA analysis revealed no significant difference between these three groups, $F(2,44) = .80$, $p = .455$.

When participants were asked to analyze the reasons why people behaved differently from their reported attitudes, they listed approximately four reasons on average. I summarized their answers into four general categories: social pressure induced
by the presence of others, inherent discrepancy between thoughts and actions, transient thoughts or attitudes contingent on the context, and impression management as well.

**Transfer Task**

Twelve out of 47 participants indicated they had no confidence to launch this IT service (*Figure 4*). The chi-square test revealed that no significant relationship was found between groups and confidence, $\chi^2 = 8.79$, $p=.648$.

Among these twelve participants, only 3 mentioned the issue of inconsistency between people's behavior and their reported attitudes. These three participants indicated high familiarity of the story ($M=3.67$, $SD=2.31$), compared to the other forty-four participants ($M=2.43$, $SD=1.55$). Two of them were from the control group and the other one was from the Sociology group. Surprisingly, although these three participants mentioned the issue with reported attitudes, they reported that they did not think of the previous story when they were answering the question.

![Figure 4. Distributions of Responses across Three Groups](image-url)

*Figure 4. Distributions of Responses across Three Groups*
Discussion

The memory test in experiment 1 and the transfer task in experiment 2 appear to have been too difficult, as indicated by the low scores achieved overall. This led to the poor performance on the delayed memory test where 67% of participants recalled only one word or even nothing as well as on the transfer task where only three people “succeeded” to transfer what they learned. The experiments failed to generate large enough variances between the participants, let alone the group or condition differences, which had severely hampered the analysis of the data.

Recall Between Categories

Contrary to my hypothesis, people in the cued and noncued conditions did not perform significantly differently in the cross-category retrieval test on the eighth day. One of the main reasons could be that the time interval between study and test was too long for a free-recall test.

Although no statistically significant difference was found, people in the cued condition did recall slightly larger number of positive adjectives from the first category than those in the noncued condition. This result was reminiscent of earlier findings reported in the literature. Earlier researchers argued that with a larger space to be searched, it would take more time to search through the list and retrieve a specific category of words from it (Fisk & Schneider, 1983; Naus, Glucksberg, & Ornstein, 1972). In the present study, participants in the cued condition had been explicitly told that the words from the first category were adjectives that could be used to describe a person at the learning stage. Therefore, when they were required to recall the positive adjectives, which contained a subset of words from the first category, they could limit their searching space within the eight words from the first category and retrieved the positive one from it. By contrast, people in the noncued condition would find it harder to retrieve the positive adjectives from the first category, because without cuing they had to search within all eighteen words. In Naus et al.’s (1972) experiment, results showed that search
of words in memory was serial and exhaustive for a single taxonomic category whereas the search remained serial but was not exhaustive for two-category lists of words. Therefore, once people retrieve the target words from two-category lists of words (i.e. the cued condition in this case), they can exert self-determination of searching, which take less time than retrieving from a single category of words (i.e. the noncued condition).

In addition, while people in the cued condition would show a preference for retrieving words from the first category, it was supposed that people in the noncued condition would show a random pattern of retrieval from the first and second categories. Hence, I predicted that people in the noncued condition might exhibit better recall of words from the second category, compared to the cued condition. However, this prediction was not verified by the result, due to the low performance in both conditions. It might be due to the fact that only two out of seven target words were required to be retrieved from the second category. This limited number of words was insufficient to detect a large variance between the two conditions. Moreover, these two words were scattered among the other eight words in the second category, which added to the difficulty of retrieval for both conditions.

Transfer of Knowledge

The results of experiment two again supported the claim that successful transfer was hard to observe in the laboratory settings without explicitly cuing (Gick & Holyoak, 1983). Despite that fact that all the participants had analyzed the story and listed roughly four reasons why people behaved differently from what they said, when they were not explicitly told to be aware of this issue, they returned to their former ways of dealing with the task.

The low rate of successful transfer could be explained by several reasons. First, it was possible that simply analyzing the reasons for the issue with reported attitudes was not adequate for people to develop a solid understanding of it, which was one of the causes for the failure of transfer mentioned at the beginning of this article (Brown, 1990). Especially in this case, directly asking people to report their interest and attitudes towards
a product was widely used in market surveys. To create adequate opportunities for participants to master the learning materials, we could expose them to multiple application and examples, which had been found to improve transfer (Gick & Holyoak, 1983). Thus, in a future study we could present to the participants several similar applications of the knowledge before we test them.

Second, transfer of learning may be overshadowed by the measurement I used. In experiment two, participants were instructed to make a yes/no decision first and then justify their decision. Kunda (1990) found that people often utilized “motivated reasoning” and were more likely to arrive at conclusions that they wanted to arrive at. It was possible that some of the participants did think of the story and were aware of the issue with reported attitudes. But because this factor was only one of many factors that should be taken into account, it was not a sufficient enough reason to lead to the rejection of launching the product. To verify this explanation in the further study, we could ask the participants to list all the factors that they would consider but without requiring them to make a final decision. In this way, they would list their arguments of both sides.

Third, many participants reported after the experiment that due to the poor quality of printing, the figures in survey report were not very clear such that they did not know what these figures were referring to. As a result, their answers to the question were based on partial guessing.

Although the initial learning failed to produce successful transfer for the majority of participants, the only three participants who succeed to transfer indicated high familiarity of the story (M=3.67), which was much higher the other forty-four participants (M=2.43). Additionally, none of them came from the economics group. Although it was inappropriate to generalize this result, it did not dismiss the necessity to further verify the initial hypothesis.
Conclusion

Successful transfer was hard to observe in the laboratory settings without explicit prompts. The memory test and transfer task in this study appeared to be too difficult and resulted in the poor performance of the participants. The long time interval between study and test as well as the unsuitable way we asked the question in the transfer task may have contributed to this poor performance. No big conclusion can be drawn at this point and the initial hypothesis had been neither supported nor rejected. However, the results appeared to be consistent with previous research.
Appendix

Appendix A.1  Phase 1: Word List in Cued Condition
Please memorize all the following 18 words. You’ll be tested how well you’ve memorized them within 15 minutes. (Note that you’re only required to memorized the words but not the phrases or sentences)

Here’re some words that could be used to describe a person.

<table>
<thead>
<tr>
<th>Definition</th>
<th>Related phrase or sentence</th>
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<tbody>
<tr>
<td>clement</td>
<td>merciful</td>
</tr>
<tr>
<td>genuine</td>
<td>sincere</td>
</tr>
<tr>
<td>deft</td>
<td>skillful</td>
</tr>
<tr>
<td>literate</td>
<td>cultured</td>
</tr>
<tr>
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<tr>
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<tr>
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<td>genuine</td>
<td>She seems genuine but can I trust her?</td>
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<td>deft</td>
<td>She is deft at dealing with angry customers</td>
</tr>
<tr>
<td>literate</td>
<td>Every literate person should read this book</td>
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<tr>
<td>impartial</td>
<td>He is an impartial observer without bias.</td>
</tr>
<tr>
<td>frugal</td>
<td>a frugal housekeeper</td>
</tr>
<tr>
<td>smug</td>
<td>He needn't be so smug, I know something he didn't know</td>
</tr>
<tr>
<td>stout</td>
<td>She's growing very stout</td>
</tr>
<tr>
<td>probe</td>
<td>investigate closely</td>
</tr>
<tr>
<td>tedious</td>
<td>tiresome; boring</td>
</tr>
<tr>
<td>manifest</td>
<td>clear and obvious</td>
</tr>
<tr>
<td>nova</td>
<td>star that suddenly becomes much brighter for a short period</td>
</tr>
<tr>
<td>trite</td>
<td>hackneyed</td>
</tr>
<tr>
<td>console</td>
<td>give comfort</td>
</tr>
<tr>
<td>plead</td>
<td>make repeated urgent requests</td>
</tr>
<tr>
<td>stunning</td>
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</tr>
<tr>
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<td>blurred or indistinct</td>
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<tr>
<td>probe</td>
<td>I don't want to probe too deeply into your personal affairs.</td>
</tr>
<tr>
<td>tedious</td>
<td>The work is tedious</td>
</tr>
<tr>
<td>manifest</td>
<td>a manifest truth</td>
</tr>
<tr>
<td>nova</td>
<td>&quot;Nova&quot; means a star that suddenly becomes brighter for a short period</td>
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<tr>
<td>trite</td>
<td>Her speech sounded trite</td>
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<tr>
<td>console</td>
<td>Nothing could console him when his pet dog died</td>
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<td>She pleaded with him not to leave her alone</td>
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<td>stunning news</td>
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<td>The poem is elusive</td>
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<td>fuzzy</td>
<td>This photo was so fuzzy it was hard to tell who was who</td>
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Appendix A.2  Phase 1: Word List in Noncued Condition

Please memorize all the following 18 words. You’ll be tested how well you’ve memorized them within 15 minutes. (Note that you’re only required to memorized the words but not the phrases or sentences)

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Appendix B.1  Phase 2: Lecture Slides for Economics Group

Intro to Microeconomics

Jianguang Wang
Department of Economics
Nankai University

Chapter Five: Theory of Demand

- Section 1: Demand Curve
- Section 2: Supply Curve
- Section 3: Results of the interaction of demand and supply
- Section 4: Utilitiy Theory
Section 1: Demand Curve

1. Definition: the demand for a commodity at a particular time refers to the quantity of the commodity that consumers are willing and able to buy.

Section 1: Demand Curve

2. Factors that affect demand

- The price of goods: price ↑, demand ↓
- Preference of the consumers: preference ↑, demand ↑
- Income of the consumers: income ↑, demand ↑
Section 1: Demand Curve

- Price of other goods
  - Price of alternative goods ↑, demand ↑
  - Price of complementary goods ↑, demand ↓

- Expectations of future price
  - Expected price ↑, demand ↑

- Regulations, rules, climate, number of consumers, time and other factors also affect the demand for goods

Section 2: Supply Curve

1. Definition: the supply of a commodity at a particular time refers to the quantity of the commodity that a single producer is willing and able to sell.

   In a fully competitive market situation, the combined effect of the supply and demand curves results into the formation of the equilibrium of price.
Section 3: Results of the interaction of demand and supply

The meaning of equilibrium

1. The concept of equilibrium was introduced from physics to economics. It represents a state that the competing forces cancel each other out within a system, so that the status of the system will not change. In economics, it generally represents the equilibrium relationship between two variables. For example, the equilibrium of supply and demand means these two opposing forces are in the equal or balancing states, or that both the suppliers and demanders are satisfied, and therefore willing to accept and maintain the current state.

Section 3: Results of the interaction of demand and supply

- 2. In microeconomics, there're two types of equilibrium: partial equilibrium and general equilibrium.

- Partial equilibrium: within a single or part of market, the market price and supply-and-demand are in a relatively static state;
  - General equilibrium: within the whole society, the market price and supply-and-demand are in a relatively static state;

3. The general equilibrium is built on the basis of partial equilibrium.
Section 4: Utility Theory

So far, we’ve analyzed the demand curve and supply curve, but have not specified the reasons for the formation of them. In microeconomics, what underlies the demand curve and supply curve are the behaviors of consumers and producers.

In the following section, we will analyze consumers’ behaviors and how the demand curve derives.

---

Section 4: Utility Theory

The concept of utility

1. **Definition.** Utility refers to how well the products can satisfy human desires.

   We can discuss it from two perspectives:

   - from the perspective of consumers, utility is the satisfaction by consuming the products;
   - from the perspective of products, utility means how well the products can satisfy human desires.
Section 4: Utility Theory

2. Some notes about the utility:

(1) Utility is a psychological feeling.
   Do not use one individual’s feeling to replace others. Utility is
different from the use value of goods.

(2) Utility itself does not have ethical meaning.
   Whether a product has utility depends on whether it can satisfy
people’s desire or need, without involving the judgement of the
need.

Section 4: Utility Theory

(3) The opposite meaning of utility is negative utility.
   It refers to the fact that a product can result into the
uneasiness to people.

(4) The utility of the same product may vary across
different people.
   Therefore, unless some specific assumptions are given, we
can’t make a comparison of the utility of a product
between different people.
Section 4: Utility Theory

2. Marginal Utility (MU)
Definition: Each unit of increase in consumption will lead to an amount of increment in the total utility.

<table>
<thead>
<tr>
<th>X (单位)</th>
<th>TU_X</th>
<th>MU_X</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
<td>6</td>
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<td>4</td>
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<tr>
<td>5</td>
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<td>6</td>
<td>30</td>
<td>0</td>
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<tr>
<td>7</td>
<td>26</td>
<td>-4</td>
</tr>
</tbody>
</table>

Section 4: Utility Theory

3. The law of diminishing marginal utility
In a given period of time, keeping the consumption of other commodities constant, as the consumption of a specific product increases, the total utility will increase. However, the amount of increase in utility is diminishing. It's known as the law of diminishing marginal utility.
Section 4: Utility Theory

Ghosn, a German economist, has proposed a law of pleasure, saying that the repeating of the same pleasure gradually decreases the enjoyment that it brings.

Why marginal utility is diminishing?

Section 4: Utility Theory

There are two possible explanations:
The first is due to physiological or psychological reasons.

Initial desire usually surfaces people’s desire most. Thus, increasing one unit of consumption will reduce the increment of it.
Section 4: Utility Theory

The second one is a result of the diversity of the product itself.

Each product has multiple uses and each usage weights differently. Usually consumers utilize the most important product, and then used the less most important product. As a result, its marginal utility will become smaller and smaller.

Extra Reading: A story of an economist

It dates back to 1936. Richard LaPiere, a Stanford sociology professor, was on a tour across California with some close friends who happened to be Chinese. LaPiere was worried that they would encounter problems finding welcoming restaurants and hotels because of his Chinese friends.

At that time in the US there had been lots of stories in the media about how prejudiced people were against Chinese people. LaPiere and his friends were, therefore, pleasantly surprised to find that out of the 128 restaurants and hotels they visited, all but one served them courteously.

So it sounds like a happy ending: perhaps the papers had just exaggerated people’s negative attitudes towards Chinese people? But when LaPiere got home he started to wonder why there was such a gap between what the newspapers were reporting about people’s attitudes and their actual behavior. To check this out he decided to send out a questionnaire to the restaurants and hotels they had visited along with other similar places in the area (LaPiere, 1934).
Extra Reading : A story of an economist

The questionnaire asked the owners about their attitudes, with the most important question being: “Will you accept members of the Chinese race in your establishment?” The answers they could give were:
Yes.
No.
Depends upon the circumstances.

Incredibly 90% of respondents answered, no, they wouldn’t accept members of the Chinese race into their establishments. Imagine LaPiere’s surprise when he looked at the results. People genuinely did say one thing and do the complete reverse. They didn’t even select ‘it depends’.

Extra Reading : A story of an economist

LaPiere himself argued that the problem lay in the questionnaire. The questions themselves cannot represent reality in all its confusing glory. What probably happened when people were asked if they accept Chinese people was that they conjured up a highly prejudiced view of the Chinese which bore little relation with what they were presented with in reality.

Here was a polite, well-dressed, well-off couple in the company of a Stanford University professor. Not the rude, job-stealing, yobbish stereotype they had in mind when they answered the questionnaire.

This study has actually been subsequently criticized for all sorts of reasons. Nevertheless its main finding - that people don’t do what they say they will in many situations - has been backed up by countless later studies, although in more sophisticated fashion.

The question is: why?
Appendix B.2  Phase 2: Answer Sheet for Economics Group

After reading the lecture notes of the economics course, please answer the following questions. You have 30 minutes to complete these 6 items. (You’re allowed to refer to the lecture note)

1) Holding other factors constant, if people expect the price of a product goes up, what will happen to its demand?
   A. Increase
   B. Decrease
   C. Remain the same

2) What’s the meaning of “marginal utility”? Use your own words to describe it.

3) Suppose you have to explain the law of diminishing marginal utility to a friend who is not majoring in economics, give us an example to illustrate the main idea of this theory
   (If you need extra space, please write down your answer in the back)

4) At the last few pages, it mentioned about story of an economist. How do you explain the phenomenon that what people report is different from how they behave? (Try to think of as many as reasons as you can. You don’t need to detail on each reason because only the number of reasons you give matters.
   (If you need extra space, please write down your answer in the back)

5) Have you heard about the lecture before?  
   Never 1 2 3 4 5
   Middle 1 2 3 4 5

6) Have you heard about the story of the economist before?
Appendix B.3  Phase 2: Lecture Slides for Sociology Group

Intro to Sociology

Jianguang Wang
Department of Sociology
Nankai University

Chapter Ten: Symbolic interactionism

- General description of Symbolic interactionism
- Mead and the origin of symbolic interactionism
- Blumer and the development of symbolic interactionism
- Goffman's Dramaturgy theory
1. General description of Symbolic interactionism

- In symbolic interactionism, society is composed of interactive individuals. So social phenomena can only be interpreted by this interaction.
- Mead is the founder of symbolic interactionism whereas Blumer later continued to construct the theory. During the 60s and 70s of the 20th century, Goffman turned this theory into full glory.

2. Mead and the origin of symbolic interactionism

**George Mead, American, 1863-1931**

- The founder of symbolic interaction theory
- Representative work: "Mind, Self and Society" (edited and published by his students after his death).
2. Mead and the origin of symbolic interactionism

(1) Mind

◆ Mead believed that the human mind is unique in that it has the ability to understand and employ symbols (especially language).

◆ When an individual can understand the meaning of symbols (especially language), and is able to comprehend and understand others through these symbols, he has a mature mind.

◆ When a symbol (such as body language) leads a common reaction of its senders and receivers, it has attained its social meaning.
(2) Self

- Mead believed that people are not born with self-concept, but in the process of interaction with others.
- Self can be divided into "I" and "Me".
- "I" is a human instincts have not been socialized, naturally formed me;
- "me" is the result of socialization

3. Blumer and the development of symbolic interactionism

Herbert Blumer, American, 1900-1987),

- A representatives of Chicago School of symbolic interactionism. In 1937, he clearly proposed the term of "symbolic interactionism"
- Representative work:
  "Symbolic interactionism: perspective and Method" (1969)
3. Blumer and the development of symbolic interactionism

(1) the interpretation process of interaction is the intermediary between stimulus and response

◆ Society is the result of interaction and this interaction is not carried out in the simple form of the "stimulus - response", but through interpretation and definition of symbols that people send out.

3. Blumer and the development of symbolic interactionism

(2) "joint action"

◆ Joint action refers to two or more people act out the action. When people have a common definition of something, there will be a fixed mode of action.
4. Goffman's Dramaturgy theory

Erving Goffman, American, 1922-1982),

- His research focuses on daily life, hence coined his "Dramaturgy theory."
- Representative work: "The Presentation of Self in Everyday Life." (1959) and so on.

All the world's a stage,
And all the men and women merely players:
They have their exits and their entrances;
And one man in his time plays many parts,

—Shakespeare

Goffman introduced the metaphor of drama into Sociology. People's daily activities compared to the theater performances and the social interaction between people is analyzed from the perspective of drama. Therefore, his theory is called to be Drama Theory (Dramaturgy).
(2) Analysis of Drama

◆ Theater: Goffman likened society to the stage of a theater, and everyone is an actor performing on stage.

◆ Front: The area where individuals are performing. It includes setting, appearance and behavior.

◆ Back of stage: It is hidden from the audience and preparing for the performance.
  
  ➢ People behave differently on the front and back of the stage.
  ➢ In the front, the socialized self is acted out
  ➢ In the back of stage, the spontaneous, the most essential part of self is acted out.
(2) impression management

- "Impression management" refers to how we shape our ideal images in others' minds.
- Impression management has its specialized techniques, including the following three aspects.
  1. Idealized performance: We should cover up those actions that are inconsistent with social values, norms, and standards, and only behave those that are consistent with them.

---

(2) impression management

2. Mysterious Performance: It means that the actor often behaves in a mysterious manner by limiting his contact with the audience, and to . (This techniques is generally limited to high-level actors)

3. Remedial Performance: In order to prevent accidents and lead to embarrassed situation, actors and audiences will deploy certain actions to remedy it.
Three principle pemedial performance

(1) actors will deploy some defensive action
(2) audiences help the actors to remedy the performance. These kinds of audiences are called "sophisticated."
(3) The actors have to take some action to correspond to the audiences' remedial action. This is called "sophisticated for sophisticated"

There are two main strategies:
First, the performers must be able to accept the implication from the audiences;
Second, the performer has to act according to the specific rules of etiquette so that the audiences can find a reason for him to remedy.

Extra Reading: A story of an economist

It dates back to 1936. Richard LaPiere, a Stanford sociology professor, was on a tour across California with some close friends who happened to be Chinese. LaPiere was worried that they would encounter problems finding welcoming restaurants and hotels because of his Chinese friends.

At that time in the US there had been lots of stories in the media about how prejudiced people were against Chinese people. LaPiere and his friends were, therefore, pleasantly surprised to find that out of the 128 restaurants and hotels they visited, all but one served them courteously.

So it sounds like a happy ending: perhaps the papers had just exaggerated people's negative attitudes towards Chinese people? But when LaPiere got home he started to wonder why there was such a gap between what the newspapers were reporting about people's attitudes and their actual behavior.
To check this out he decided to send out a questionnaire to the restaurants and hotels they had visited along with other similar places in the area (LaPiere, 1934).
Extra Reading: A story of an economist

The questionnaire asked the owners about their attitudes, with the most important question being: “Will you accept members of the Chinese race in your establishment?” The answers they could give were:
   Yes.
   No.
   "Depends upon the circumstances."

Incredibly 90% of respondents answered, no, they wouldn’t accept members of the Chinese race into their establishments. Imagine LaPiere’s surprise when he looked at the results. People genuinely did say one thing and do the complete reverse. They didn’t even select ‘it depends’.

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Here was a polite, well-dressed, well-off couple in the company of a Stanford University professor. Not the rude, job-stealing, yobbish stereotype they had in mind when they answered the questionnaire.

This study has actually been subsequently criticized for all sorts of reasons. Nevertheless its main finding - that people don’t do what they say they will in many situations - has been backed up by countless later studies, although in more sophisticated fashion.

The question is: why?
Appendix B.4 Phase 2: Answer Sheet for Sociology Group

After reading the lecture notes of the sociology course, please answer the following questions. You have 30 minutes to complete these 6 items. (You’re allowed to refer to the lecture note)

1) Which one is unsocialized
   A. ego
   B. objective self
   C. super self

2) What’s the meaning of “symbol”? Use your own words to describe it.

3) Suppose you have to explain Goffman’s Dramaturgy theory to a friend who is not majoring in sociologist, give us an example to illustrate the main idea of this theory
   (If you need extra space, please write down your answer in the back)

4) At the last few pages, it mentioned about story of an sociologist. How do you explain the phenomenon that what people report is different from how they behave? (Try to think of as many as reasons as you can. You don’t need to detail on each reason because only the number of reasons you give matters.
   (If you need extra space, please write down your answer in the back)

5) Have you heard about the lecture before?
   Never  1  2  3  4  5
   Middle
   Very familiar

6) Have you heard about the story of the economist before?
   Never  1  2  3  4  5
Appendix B.5  Phase 2: The Story Presented in Three Groups

It dates back to 1936. Richard LaPiere, a Stanford sociology professor, was on a tour across California with some close friends who happened to be Chinese. LaPiere was worried that they would encounter problems finding welcoming restaurants and hotels because of his Chinese friends.

At that time in the US there had been lots of stories in the media about how prejudiced people were against Chinese people. LaPiere and his friends were, therefore, pleasantly surprised to find that out of the 128 restaurants and hotels they visited, all but one served them courteously.

So it sounds like a happy ending: perhaps the papers had just exaggerated people's negative attitudes towards Chinese people? But when LaPiere got home he started to wonder why there was such a gap between what the newspapers were reporting about people's attitudes and their actual behavior. To check this out he decided to send out a questionnaire to the restaurants and hotels they had visited along with other similar places in the area (LaPiere, 1934).

The questionnaire asked the owners about their attitudes, with the most important question being: "Will you accept members of the Chinese race in your establishment?" The answers they could give were:

- A. Yes.
- B. No.
- C. Depends upon the circumstances.

Incredibly 90% of respondents answered, no, they wouldn't accept members of the Chinese race into their establishments. Imagine LaPiere's surprise when he looked at the results. People genuinely did say one thing and do the complete reverse. They didn't even select 'it depends'.

LaPiere himself argued that the problem lay in the questionnaire. The questions themselves cannot represent reality in all its confusing glory. What probably happened when people were asked if they accept Chinese people was that they conjured up a highly prejudiced view of the Chinese which bore little relation with what they were presented with in reality.

Here was a polite, well-dressed, well-off couple in the company of a Stanford University professor. Not the rude, job-stealing, yobbish stereotype they had in mind when they answered the questionnaire.

This study has actually been subsequently criticized for all sorts of reasons. Nevertheless its main finding - that people don't do what they say they will in many situations - has been backed up by countless later studies, although in more sophisticated fashion.

The question is: why?
Appendix C.1  Phase 3: The Survey Report about an IT service

Market Research Report
of Cloud Services

Consigned by: En Xin Information Technology Co., Ltd.
Presented by: Din zhaixiao Weizhi Marketing Consultants Limited
Date: November 2008

Research Background

- Cloud computing is an emerging business model. Taking advantage of high-speed Internet, the processing of the data can be carried out by the cluster of computers on the Internet. These computers are very common industry-standard servers. They are managed by a large data processing center which allocates computing resources according to the customers’ need and achieves the same effect with a super computer.
Research Background

- Cloud computing services make it possible that supercomputing power can be attained through the Internet. Enterprises and individual users no longer need to investment huge amounts of money to purchase expensive hardwares. They simply need to rent this computing power through the Internet. “Think of your computer as an access port. Leave everything to the Internet.”
- We can imagine how wonderful it is when the computer’s computing power is longer limited by its hardware. With smaller size, lighter weight, yet able to attain more powerful processing capacity, this mobile terminal is within your fingertips. We can run on thin and light notebooks the most demanding online games, and edit photos on your phone.

Purposes of the Survey

- In overseas markets, several IT tycoons have already stepped into the field of cloud service, including Google, Amazon, Yahoo, Sun, IBM, Microsoft, and so on. In China, China Mobile and China Telecom also intended to launch a plan for cloud service.
- In view of this, En Xin Information Technology Co, Ltd. intends to enter the field of cloud computing and puts out a series of cloud services. Hence comes the current market research.
Methodology and Sample

- A random sample of 120 people was attained. The ratio of male to female was 48:52
- 120 questionnaires were sent out, of which 114 were valid. Returned ratio was 95%.

Survey Results
Part I: The popularity of cloud computing services

Have you heard of cloud computing, or cloud service before?
- Never
- Yes, but never use it before
- I've used it, but not frequently
- Yes, I use it a lot

Part II: Acceptance of cloud computing services

If we launched cloud computing services in the market, will you be interested in using it?
- Yes
- Just so so. But I want to know more about it
- Not sure
- No
Part III: Accepted price of cloud computing service

After we launch cloud computing service, what is the price range that you can accept?

- Never thought about it
- >¥ 50/month
- >¥ 25 - 50/month
- >¥ 10 - 25/month
- <¥ 10/month

Part IV: What kinds of services they are interested in

- use software online without installing it
- play online 3D games
- online photo editing
- online video/audio editing

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Appendix C.2  Phase 3: Answer Sheet of the Survey Report

You’ve ten minutes to answer the following questions

The report reflected that a lot of people might be interested in cloud computing services. Suppose that you’re the manager of En Xin Information Technology Co., Ltd.. After reading this report, will you be confident to launch cloud computing services in the market? List your reasons. (Try to think of as many as reasons as you can. You don’t need to detail on each reason because only the number of reasons you give matters. (If you need extra space, please write down your answer in the back)
Appendix D  Phase 4: Answer Sheet of Memory Test

1) When you were writing your answers to the question of today’s survey report just now, have you thought of the story included in the PPT on Day 1?
   A. Yes
   B. No

2) Please write down all the positive adjectives within the 18 words that you've memorized on Day 1. You have 7 minutes to complete your answer. Here’s an example:

   positive adjectives: e.g. brave;
   negative adjectives: e.g. anxious

   If you’re not sure whether a word belongs to positive or negative adjective, please also list it below. Please write down as many words as possible. (Even you spell wrong, you can get partial credit)
References


Vita

Jingjie He was born in Shunde, Guangdong, China. In 1999, he attended Shunde No.1 Middle School. In 2005, he entered the Guangdong University of Foreign Studies, and received a Bachelor of Science degree in Psychology. On August 9th, 2009, he step into the “land of dreams” and began his first journey in the United States. He entered the Graduate School at the University of Texas at Austin.

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This thesis was typed by Jingjie He.