CONNECTIONS BETWEEN L1 AND L2 READINGS: READING STRATEGIES USED BY FOUR CHINESE ADULT READERS

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Abstract
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This paper examines the reading strategies that four Chinese adult readers use in reading both Chinese and English texts. Their strategies they used are analyzed into two broad categories: the text-initiated strategies and the reader-initiated strategies. All participants demonstrated more strategy use in reading the English texts than in reading the Chinese text. In general, participants were more critical in evaluating the author's opinions with the Chinese than the English texts. Those who had a moderate to high L2 proficiency level showed more transfer of strategy use from reading the Chinese to reading the English than the one who had a low L2 proficiency level. However, L2 proficiency level does not seem to predict the readers' use of higher level thinking strategies. The readers' prior experiences with L1 reading and L2 learning as well as their exposure to the L2 culture all seem to contribute to affect the readers' strategy use in L2.

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<u>Introduction</u>

What is reading? According to Gough (1972), reading is a unidirectional process from letters to sounds to meaning. Like Gough, LaBerge and Samuels (1974) also depict reading as a linear process though they emphasize more the aspect of automaticity in reading functioned through memories. Goodman (1967) views reading as a psycholinguistic guessing game, allowing readers to rely more on their existing syntactic and semantic knowledge structures than on the knowledge of graphic and sounds. Rumelhart (1977) delineates reading as involving flexible processing and multiple information sources, depending upon contextual circumstances. To the early 80s, a fairly general consensus was reached that reading is a complex process in which cognitive and psychological functions of different levels interact with each other in making sense of the meanings of the text. In this process, readers need to utilize all the knowledge they have, including their linguistic knowledge, their background knowledge of the topic being discussed in the text, and their knowledge of the cognitive and metacognitive reading strategies.

What is L2 reading? What is the relationship between L1 and L2 readings? Is it a reading problem or a language problem (Alderson, 1984)? Or is it equal to L1 reading plus L2 language proficiency (Carrell, 1991)? An adult second language learner usually has some metacognitive knowledge of reading and reading strategies from literacy experiences in learning his/her native language (L1), but his/her linguistic knowledge of the second language (L2) is usually limited. What reading strategies will a second language reader use in L2

reading? Will she be able to transfer L1 reading strategies automatically to L2 reading, regardless of his/her knowledge in L2 (Goodman, Goodman, & Flores, 1979) as believed by the Linguistic Interdependence Hypothesis (LIH)? Or will the limited L2 proficiency 'short-circuits' his/her more effective high-level L1 reading method and reduce it to only low-level decoding skills (Clarke, 1980) as depicted by the Linguistic Threshold Hypothesis (LTH)? However, several recent studies show that both the readers' L1 reading ability and L2 language proficiency contribute to L2 reading comprehension (Carrell, 1991; Bosser, 1992) and evidence supports both LIH and LTH (Bernhardt & Kamil, 1995; Bristois, 1995). While this seems to be common sensical and supported by research, what exactly are the strategies being used in the L2 reading process, what L1 reading knowledge including reading strategies get transferred, and how much L2 knowledge is required in completing a reading task at a certain difficulty level need to be further explored.

To make matters more complicated, the written form of logographic language, such as Chinese, is independent from how it sounds, while alphabetical language, such as English, has certain connection between its written and spoken forms. Does this difference in the two writing systems have any effect on the reading strategies used by the readers? Studies show that this difference in orthography does exert some influence on the lower levels of the cognitive reading processes, such as visual perception and word recognition. Tzeng and Wang (1983) compared Chinese readers with native English readers in their ability to recall the position of nine items in a series. They found that the Chinese were superior with the visually presented than with the auditorially presented list, while no such preference was found with the English speakers. This shows that learning to read in a logographic language like Chinese "imposes a heavier demand on visual discrimination and memory than learning an alphabetic code" (Samuels, 1985, p.273). While different scripts may require different strategies for recall of visual and auditory information, Parry's (1996) comparative study between the Nigerian and the Chinese students found that "whereas the Nigerian students showed a marked preference for top-down methods of solving comprehension problems, the Chinese students reported a strong tendency to use bottom-up ones" (p.665). Parry also tried to explain the difference in terms of the different language backgrounds and their different experiences of literacy. In her view, the analytical feature of the Chinese writing system and the way it is taught may have affected the way the Chinese readers approach reading the English texts, or reading in general. However, the data that she collected for her analysis were students' self-reflections on their reading. In this study I will compare the reading strategies adult Chinese learners of English actually use in reading both Chinese and English texts, as well as their own account of how they usually read. The questions guiding this investigation are:

1. What reading strategies do Chinese ESL language learners use in comprehending texts in Chinese, their native and proficient language?
2. What reading strategies do they use in comprehending texts in English, their second and developing language?
3. In what ways do these strategies overlap and in what ways do they differ?
4. What are the possible factors affecting their strategy use, be it different or the same?

Background of the Study

Reading, or making sense of the written symbols, demands that readers be strategic and utilize their linguistic knowledge and their knowledge of the topic being discussed. When reading English as a second language, how strategic are the readers? What factors influence their strategy use? In this section, I'll briefly review some studies on how the strategy use plays out in L2 reading, and how the readers' background knowledge of the topic and their L2 knowledge affect their reading.

Hypotheses of L2 reading

With regard to the relationship between L1 and L2 readings, researchers have proposed different hypotheses to explain the second language reading process. One is Clarke's (1980) "short circuit hypothesis". He argues that "limited control over the language 'short circuits' the good reader's system, causing him/her to revert to poor reader strategies when confronted with a difficult or confusing task in the second language" (p.206). Clarke refers to the good reader's system as "using larger chunks of text in attempting to fill cloze test blanks" than poor readers and "relying more on the semantic cues rather than syntactic cues" (p.204). By this, he indicated that the use of a reading strategy in a second language is largely a function of linguistic proficiency in that language. Limited L2 proficiency prevents the transfer of the top-down approach (Goodman, 1967; Smith, 1982) in L1 reading to L2 reading and confines the reader to take the bottom-up approach (Gough, 1972; LaBerge & Samuels, 1974), using mostly word attacking strategies.

In contrast to this position, another hypothesis proposes that higher level strategies developed in L1 reading can be transferred to a second language reading situation and can operate alongside lower processing strategies (Hudson, 1982; Block, 1986). Davis and Bistodeau (1993) cite Lee (1991) as saying novice L2 readers simultaneously combine bottom-up strategies, constrained by limited L2 linguistic knowledge, and top-down strategies developed in L1. They define bottom-up strategies as including "comments on intra-sentential features; focus on individual words; restatement" and top-down as including " predicting what was coming next in the article; confirmation of the prediction; reference to antecedent information in the text; making inferences; comments on text order; using general knowledge to make associations with information in the articles; self-questioning; evaluative comments" (P.462). Thus the L2 reading process is bi-oriented or "interactive". Taking the readers' background knowledge into consideration, Lee also suggests that text topics affect greatly the L2 reader's ways of making meaning out of the text.

The assumed relationship between L1 and L2 reading strategies is based upon assumptions one makes concerning how readers read. If the reading process is held as a bottom-up process, going through linear stages and decoding from letters to words to sentences as depicted in the reading models by Gough (1972) and LaBerge and Samuels (1974), L2 readers may not be able to transfer higher level L1 strategies to L2 reading. This is so because this model of reading relies largely on the readers' linguistic knowledge and there is usually a gap between readers' knowledge of L1 and L2 in case of second language learners. Naturally "a short circuit" will occur. On the other hand, if the reading process is viewed as a psycholinguistic guessing game depicted by Goodman (1967), or as an interactive process by Rumelhart (1977), one's knowledge in L1 reading would be an asset in L2 reading, rather than irrelevant. This is also so if we view learning to read as "a matter of learning to recognize the aspects represented graphically and to infer those aspects of meaning which are not represented graphically at all" (Olson, 1994).

More and more studies show that the meaning making process in reading is interactive rather than going through linear stages from lower to higher, and that readers simultaneously utilize multiple sources of information, such as sensory, syntactic, semantic, and pragmatic, in making meanings of the written text. The simultaneous interaction of multiple sources of information allows compensation for deficiency of any level at any other levels (Rumelhart, 1977; Garner, 1987). For example, a reader who has limited vocabulary may be able to rely more on her knowledge of the content in reading a text successfully. An ESL reader will not be limited to only using word decoding strategy by her low English proficiency.

The Role of Background Knowledge in Reading

In addition to L1 reading ability and L2 language proficiency, there is another set of knowledge that is essential to the meaning making process of reading, namely the background knowledge. Much evidence has shown that a reader's background knowledge in forms of schemata plays a big role in her active construction of meaning of the text (Anderson & Pearson, 1984). Good comprehenders use cues from text to initiate appropriate schemata to form hypotheses. As they read on, they test these hypotheses and make appropriate adjustments as needs arise. Reading is an interactive process between the text and the reader's background knowledge. Wade (1990) categorized readers into good comprehender, non-risk taker, non-integrator, schema imposer, and story teller. She found a good comprehender was an interactive reader who constructed meaning from the text and personal background knowledge and monitored comprehension, making inferences, using text clues to confirm or abandon hypotheses.

Spencer and Sadoski (1988) studied the differential effects of pre-reading activities among ESL learners of different cultural backgrounds. They studied learners of Hispanic, Oriental and Arabic origins, and used two texts focusing on American holidays, Thanksgiving and Halloween. They found that providing background information during pre-reading activities produces much more effective literary comprehension among all three cultural groups, which the authors ascribe to the development of background schemata of the readers. At the same time they also found that without being given the background information, the Hispanic group scored higher than the other two groups. One plausible explanation that the authors suggested was that Hispanic culture had similar celebrations to the two American holidays, Thanksgiving and Halloween, as compared with the other two cultures. These indicated that cultural background knowledge made a difference in reading comprehension, especially with regard to texts closely related to culture practices. Another possible explanation might relate to the similarity between the alphabetic/script systems of Spanish as contrasted with either Arabic or Chinese/languages of oriental cultures and English.

Hudson (1982) applied schema theory in studying L2 reading. According to him, "the 'schemata' based learning theory indicates that readers process meaning which has been presented through print by using prior knowledge of the world to produce representations of anticipated meaning" (p.1). He found that the induced schemata "apparently allowed access to language decoding which was otherwise not available" (p.20), which shows that language proficiency is "not the only one determinant of reading comprehension" (p.20).

My study (course work done for CEP912, Fall 1994) on the reading strategies of a 12 year-old Chinese girl, Mengmeng, who had been in the U.S. for nearly 3 years, also indicated that her prior knowledge played a big part in achieving her reading comprehension. Before she came to the United States, Mengmeng was a passionate reader in Chinese and she read at her

grade level. After she came here, her passion for reading continued and she started to read mostly English due to her access to the reading materials. Two years after she was here at the sixth grade, she took the Stanford Achievement Test and scored a reading vocabulary at 13% and reading comprehension at 87% of students in her age group local-wide and 37% and 94% respectively nation-wide. How did she comprehend what she read with such a small vocabulary? In her think-aloud, I found she relied a lot on her background knowledge, both knowledge of the content and knowledge of the reading practice, in constructing the meaning of the print rather than focusing on decoding the linguistic symbols on the page. That explained largely why she achieved high comprehension with very limited vocabulary knowledge.

Effect of L1 Knowledge on L2 Learning

There is evidence that knowledge of the structure and function of L1 is a plus for readers in comprehending L2. Cummins (1986) developed a framework for empowering minority students. One of the components in this framework was cultural/linguistic incorporation, including taking into account an individual's previous culturally conditioned learning styles. Cummins believed this component was "additive" rather than "subtractive" (p.25) through enhancing the possibility of minority students succeeding in school. He based this on "the considerable evidence of interdependence of literacy-related academic skills across such that the better developed children's L1 conceptual foundation is, the more likely they are to develop similarly high levels of conceptual abilities in the L2. The moderate to strong correlation between academic skills in L1 and L2 suggests that L1 and L2 abilities are manifestations of a common underlying proficiency" (Cummins, 1994, p.38).

Cummins suggested that there was an underlying common underlying proficiency that could be applied to both L1 and L2 though the surface aspects (e.g. pronunciation, fluency, etc.) of the languages differ. Some evidence lends support to this assumption. Clarke(1979) studied "good" and "poor" Spanish readers in reading English and found that "good" Spanish readers performed better on English reading tasks than the "poor" ones.   Jimenez, Garcia and Pearson (1994) found the same with their study of the strategic reading processes of eight bilingual Latino children. They found that the less proficient Latino readers used fewer strategies and were often less effective in resolving comprehension difficulties in reading English than the proficient readers of Spanish.

This current study hopes to explore whether the Chinese ESL readers transfer their L1 reading knowledge to L2 reading, and if they do, what gets transferred and what does not? How does the language proficiency affect what strategies the ESL readers use?

Method

Participants

Four volunteers, Jian, Meiping, Xiaowei and Lingling, were recruited for this study. All were proficient Chinese native readers and ESL (English as a Second Language) learners. Jian was the only male participant and he was in his early 40s. He had a Bachelor degree in physics and Master degree in educational management from China. He taught physics at a college, worked as the chairperson of the physics department, and later became an administrator at the college level. He came to the United State 14 months before the study to accompany his wife, who was doing research work at a university. While he was helping

taking care of his family, he was also learning English and preparing to take the TOEFL test. Meiping was in her early 30s. She majored in mathematics in college and after graduation she worked as an editor for 8 years in a publishing company in China, responsible for editing publications on scientific topics. She had been in the U.S. for 12 months and like Jian, she was accompanying her spouse who was pursuing his Ph. D. study. Meiping was also studying to improve her English proficiency. Xiaowei, in her late 30s, was a student in her Ph.D. program in medicine. She received her BA degree in medicine and worked as a doctor in a hospital in China for 9 years before she came to the United States. Unlike the other three participants who had been in the United States for less than 14 months, Xiaowei had been here for 8 years, during which time she studied and received her Master degree in human pathology. Lingling was in early 20s, and she started her graduate study in Park and Recreation only 4 months earlier. She graduated from a Chinese university with a good standing, majoring in business administration. As far as their reading test scores are concerned, Lingling had the highest score, 610 out of possible 670 on the TOEFL reading test, and Jian had the lowest score, 490. Meiping scored 580 and Xiaowei 590.

Table 1. Participants

Name	Sex	Age	TOEFL score*	Time in U.S.	Other
Lingling	F	Early 20s	610/670	4 months	completed undergraduate study in China
Meiping	F	Early 30s	580/670	12 months	editor for 8 years China
Xiaowei	F	Late 30s	590/670	8 years	doctor for 9 years in China
Jian	M	Early 40s	480/670	14 months	college professor/administrator in China

* Usually a TOEFL score of 550 is required for non-English speakers to be admitted into graduate programs in the United States.

Reading Materials

In order to compare readers' strategy use in reading proficient Chinese (L1) and target language English (L2) texts, a Chinese text (with about 800 characters) and two English (about 500 words each) texts were used (See Appendix III). Consideration was taken to make the reading materials in the two languages compatible in style, content, and length. The Chinese text and one English text were essays of personal views from newspapers. The Chinese text discussed the changes in attitudes towards money by the Chinese intellectuals and the English text commented on the assisted suicide. The other English text was chosen from an intermediate ESL reader and it discussed how the communication of human beings differ from the animals. These texts were chosen because of their familiar themes and the comparatively simple English language.

Procedure

Meaning-making in reading is a covert process. The principal methods employed to collect information on the readers' strategy use in this study is think-aloud. Participants were asked verbalize their thinking processes while reading the Chinese text (L1) and the English texts (L2). While the participants were reading, the researcher observed them and took notes of their reading behavior. Immediately after each reading, a one-on-one interview was held to

ask the participants to reflect upon their reading process and the strategies they used. In educational research, there are concerns about the reliability of the data collected by using think-aloud and interview methods, such concerns include that the interviewer may provide too much cueing, that some automatically performed process may not be available to report, and that verbalizing thinking may disrupt and distort the participants' thinking process. However, both Garner (1987) and Wade (1990) agree that the think-aloud method can yield rich data about cognitive processes "that are invisible to other methods" (Garner, p.69) and "that otherwise could only be investigated indirectly" (Wade, p.444). Think-alouds allow "access to the reasoning underlying cognitive behaviors" (Wade, p.444). Since the questions in this study examine the innate cognitive process in achieving reading comprehension, the think-aloud and the one-on-one interview methods seem to provide more data in helping understanding the process.

Preparation session. A half-hour session was held to prepare the participants to do the think-aloud. All participants were at the session. The researcher modeled the process first, using a short paragraph in Chinese. Then participants were given a Chinese text to practice think-aloud, a text that had similar length and style to the text to be used for data collection. Chinese texts were chosen for modeling and practice because the researcher was afraid that the participants might have more difficulty in verbalizing their sense-making process of the Chinese text, since they were proficient readers of the language and much of the process might have already become automatic. The assumption was that if readers became aware of the more automatic sense-making process of reading, they might be able to report in more detail the strategy use while reading the less-proficient language, English, when the reading process was less automatic. During the practice session, participants were asked to share their thinking process on how to make sense of the text after reading each paragraph and the researcher provided the feedback. Personal responses were encouraged in their think-aloud.

Think-aloud session. The think-aloud session was held on a one-on-one base. Before they started to read the texts, they were questioned about their personal background, including age, education, time of learning English, interest in reading, goals in reading, time spent in reading, and ways of reading both Chinese and English, etc. (See Appendix II). Then two of the participants were asked to read the Chinese text first and the other two read the English texts first. While they read, they were asked to read the text aloud to themselves and, at the same time, verbalize what they were thinking and doing to comprehend the text at that moment. While the participants were doing the think-aloud, the researcher was present and observed the subject's behavior. Each think-aloud session was audio-taped. Participants were told that they could use whatever language they felt comfortable with. The language the participants used in reporting their thinking was mostly in Chinese with a few English words intersepted when they read the English texts and it was all in Chinese when they read the Chinese text.

Interview section. The interview was conducted one-on-one immediately after he/she read a text. Both the researcher and the participant had a copy of the text in hand. Questions (see Appendix IV) were posed to the participants to seek information on their comprehension and strategy use. All interviews were conducted in Chinese, with occasional English words inserted. Chinese was used as the means of communication, because both the participants and the researcher felt more comfortable and expressive in Chinese and thus more data would be collected. The interview questions fell mostly into two categories. One was on content, to see how much and how well they understood the texts, and the other was on the strategies they

utilized in reading these texts. Some questions were open-ended to illicit more response from the participants. For example: What do you think the author is trying to say in this article? What made you think so? Some questions were more specific, for example, did you notice the structure of the text? Sometimes the researcher shared her own observation to frame questions when needed. For example, she asked, "I saw you reading the last two paragraphs again after you finished the whole text, why did you do that?"

Data from think-alouds and interviews were transcribed and analyzed for strategy use in reading. The strategies used were analyzed into two groups adapted from the strategic categories designed by Jimenez, Garcia & Pearson (1994). The two groups of the reading strategies were text-initiated strategies and reader-initiated strategies. Data from the think-alouds and interviews were predominantly (85-90% roughly) in Chinese and the researcher translated them into English when incorporating them into this analysis report.

Results and Discussion

In this section, the reading strategies used by the participants in reading both the Chinese and the English texts are described into two categories: the text-initiated and the reader-initiated. Similarities and differences are analyzed between the two reading tasks and among the individuals and possible explanations are sought to account for the phenomena.

Strategies Used in Reading the English Texts

In general, the participants exerted an extensive range of strategy use in reading the English texts.

Text-Initiated Strategies

This strategy group included problem solving skills which relied most on the visual signs and focused more on the available text. In the present study, the strategies grouped under this category involved focusing on vocabulary, using text structure, summarizing, and utilizing pictures. Some of the strategies might overlap with each other to some extent.

Focusing on vocabulary. Participants used a variety of strategies to attack the unknown vocabulary items. After they identified the problematic words, they sometimes tried hard to recall the meaning of the words from their memory, sometimes decoded the components of the words for meaning, and sometimes inferred the meaning from the contexts and their own general knowledge. They also had the option to use a dictionary. Lingling tried to recall the meaning of the word dignity, "I still don't know this word, dignity. I learned this word before and I came across it many times. But in here, I can't recall its meaning. It might be "wenya" (Chinese, meaning cultured), or "gaoshang" (glory/noble), or something like that." On another occasion, she succeeded in remembering the meaning of the word. "I still don't know what chimp means. I learned it before, but now I forget. I think it is a human, because the text says 'who is now studying at the University of California', ... Oh, maybe it is not a human. ah-ha, I remember now, it means "xingxing" (chimpanzee) and that sort. Yes, it IS "xingxing (chimpanzee)."

A good example of decoding the word components was given by Meiping, when she said, "Oh, it's called MEDICIDE." ... "I guessed it. Two parts. 'Medi' has something to do with medicine and doctor, and 'cide' means to kill. Medicide is to kill with medicine". Jian also utilized this decoding strategy a lot. He articulated how he figured out the meaning of the word unconstitutional, "'Unconstitutional', I guess I know its meaning by dissecting the word.

Constitution means "xianfa"(constitution), un- means "bu fuhe"(not conferring to). I guessed it in this way".

  Sometimes participants used context and other knowledge to guess the unknown or unsure words whether with or without success. For example, Xiaowei had some difficulty figuring out the meaning of vocal chord? "What chord? I don't know what it is". After reading the next sentence: you'll notice that these differences are physical, not mental, she said, "I think it might be something in the brain." A few lines below, she read, Our vocal chords can make many more different sounds than can the vocal chords of chimps and gorillas, and this confirmed to her that it was "the language center".

  Both Jian and Xiaowei used both the text and their general knowledge to guess the meaning of chimp. The text said that "Sarah, a chimp who is studying at the University of California" and "learning words" and they believed primates were the smartest animals besides humans, they both figured that chimp must be someone from the "monkey's family".

  Using text structure. This strategy involved the readers' recognition of the organization of the text being read, including their comments on the writing styles. Some participants noticed the text structures and utilized them. After reading "The Language Barrier", Meiping, who worked as an editor for 8 years, commented that "the text raises a point and then comments on it, then raises another point and comments on it, and continues to do so". She also evaluated the text, "This text is not very complex. The language does not have hidden meanings and it is pretty direct. It is a popular science reader, not for the professionals". When reading "Denying Dignity", she only read the last few paragraphs, the title, and the first paragraph and skipped several of the middle paragraphs, and she said that would be enough to get the author's message. Lingling reread the previous text when she came across a comprehension marker, such as "scientists point to two things: ...". She said, "I think things like this are pretty important. I usually pay more attention to them".

  Summarizing. As the participants proceeded reading, they stopped frequently to summarize what they had just read. Xiaowei commented, "Here discusses the process. How animal picked up words. That part describes recognizing word, this part discusses how they learned to write; one is to know, to recognize, the other is to produce". Jian stopped after each paragraph to try to make sense of what he read, restating and paraphrasing some parts of the text.

  Utilizing pictures. Some participants used pictures to help to make sense. Xiaowei read the title "Denying Dignity" and said, "I have no clue what the text will be about after reading the title, no idea, but the sign here indicates it is related to medical science". When reading "the Language Barrier", she did the same too. The picture has a lady talking to a chimp who is reading. She said, "It doesn't matter that I don't know this word, I read the title and according to the picture, the idea will be talking between humans and animals".

  Meiping also liked to look at pictures for clues of the article. She said, "I always read the title first and the pictures as well before I start to read the content". Though in this case, the pictures in "The Learning Barrier" confused her first, for she took the spectacled chimp as a bearded human scientist and it took her a while to figure out what *chimp* meant!

Reader-Initiated Strategies

The strategies in this group included invoking prior knowledge, predicting, evaluating, monitoring and translating. While doing these, readers utilized more information from within themselves rather than directly obtainable from the visual text.

Invoking prior knowledge. In their reading, participants constantly made connections to their prior knowledge and reading experiences. Two participants shared visualizing a circus performance when reading the part describing how scientists taught Sarah, a chimp, to use language (Meiping & Lingling). Xiaowei read a paragraph and knew the author was talking about assisted suicide, but she couldn't understand the author's argument. She said, "I'm not clear about here, but recently I read an article on this topic and a doctor at Ann Arbor was involved in this. I'm not sure if this article is related to that". She also noticed new information and added it to her existing knowledge base. "I learned some new information. I know there are countries that legalized assisted suicide, but had no idea which country. Here it says Australia is one."

Another example of how prior knowledge affected reading comprehension is the participants' confusion over who Sarah was in the article, "the Language Barrier", because the chimp had a human name, Sarah. Three of the four participants thought that Sarah was a human being. Jian said, "Sarah, a name? Is she a scientist at the college?" Associating animals with human names was not in their schema because in China it was very rare to see animals with human names. However, Xiaowei, who was a medical student and had much experience in doing experiments on animals here at a research institution, immediately recognized that Sarah was an animal. Though she didn't know the word chimp, she guessed, "perhaps it's a monkey or something, and it's about the training process."

Predicting. Participants constantly made predictions in reading and read on to either confirm or disconfirm them. Meiping found her prediction was not supported by the text, "What is related to dignity? It seems it should be about one's self identity being insulted, or that sort. But as I read it, it does not seem to be like that." Xiaowei explained, "I usually like to read the title first. After reading it, I know what the author is going to talk about and then it will be easier for me to guess the words, which will be limited within the topic." After reading three paragraphs into the article, Xiaowei commented, "I thought my guess was wrong, but now I feel my guess is still within the extent of the topic, pretty okay."

When reading "the Language Barrier", Meiping first thought a chimp was a bird and predicted that the article would be on how scientists feed them, because birds can talk and follow some directions. But later when encountering that Sarah wrote with a special typewriter, her prediction of chimp as bird was challenged. "How can a bird type with its claws?" She then looked the word chimp up in a dictionary.

Evaluating. Participants constantly evaluated the authors' points of view, either agreeing or disagreeing with them. Meiping challenged whether Sarah was actually learning the language or if she was only conditioned to give certain performance like the puppies do in a circus show. On the other hand, she also noticed that "In this case, it was different, because the gorilla at the University of California learned over 100 words and could combine some of them to make logical sentences, and he even made jokes on his teacher and laughed loudly himself." After reading "... **only** humans can communicate through words", Xiaowei responded, "That might not be true! Humans have human words, animals have animal words. We can't say animals don't have words just because we don't understand them."

Being a student of medicine, Xiaowei had a strong opinion on assisted suicide. She contended that "doctors should never assist suicide. This stands in contrary to doctor's duties and goals. Maybe priests can take care of the suicide part."

Monitoring. The participants demonstrated their knowledge of themselves as readers, of the task of reading or of the usefulness of different reading strategies. Xiaowei told the researcher, "This article (Denying Dignity) is too difficult for me. I usually don't read it if there are so many unknown words. Usually if an article or a paragraph has more than 7 unknown words, it is out of your reading ability, it is better not to waste your time on it, unless it is extremely interesting. Then I will look the new words up before continue reading." On the other hand, as a student of medicine, she commented on herself," usually I am not patient with readings containing too many new words. However, if it is an article on biochemistry and I'll be examined on it, I'll read it very carefully, even if it has a lot of new words. I probably will decode word by word, and sentence by sentence, and translate them into Chinese, and then I will try to recite the English sentences, because they will be on the test." "With newspaper, I usually just scan it. If there is a report on a new drug, I will read it very carefully and look up all the new words, for I want to find out exactly. Other articles are usually just read for fun." She told me an anecdote. Once she was waiting for a plane at an airport and bought a newspaper. A report on a new drug caught her attention and she started to read it very closely. An old man was sitting beside her and when she finished, he asked her, "Are you studying medicine?" Xiaowei was surprised at the question and the old man explained, "You must be doing medicine, otherwise nobody would read such a boring report."

Meiping shared her strategy, "If the article is very difficult and after two or three paragraphs I still can't figure out what the author says, I would re-read parts of the texts I have just read." Jian had most problems reading the English texts due to his limited English proficiency. He said, "When there are lots of new words, you must look them up in the dictionary. Otherwise, you cannot continue." Though the participants were all provided with a dictionary to use, only two made use of it. Lingling explained that she didn't want to use the dictionary because she felt the time pressure like in a exam.

Translating. Meiping and Lingling said explicitly that they must translate the text or sentences into Chinese in order to really grasp their meaning. Lingling demonstrated this by trying constantly to recall the Chinese equivalent of the unfamiliar words. Jian mentioned how important and how hard for him to think in English, and so did Meiping. Jian actually translated the last paragraph of "the Language Barrier" into Chinese as he read aloud sentence by sentence. The interest point was that he did the translation when the text was comparatively easier for him to understand. With "Denying Dignity", a text too hard for him to follow, he did not even try to translate. This seemed to indicate that the ESL learners use translation as a means to reassure his/her understanding. Translation was used as a support or backup device.

Strategies Used in Reading the Chinese Text

Whatever the reason, participants seemed to demonstrate much less explicit strategy use in reading the Chinese text than in reading the English texts. The Chinese text seemed to be easier and much of the comprehension effort became automatic and may have been inaccessible to consciousness. In this section, the same categories were used to describe the strategies used in reading the Chinese text.

Text-Initiated Strategies

   <u>Focusing on vocabulary.</u> Though this strategy was used frequently by the participants in reading the English texts, only one word, <u>pinwei</u> (the quality of the product), was mentioned by one participant as unfamiliar. Lingling said, "I don't know this word. Position or what? But I can guess its meaning".

   <u>Using text structure.</u> Participants all seemed to have a pretty good knowledge of the text structure and also used it in understanding the author's point of view in general. They seemed to use that knowledge so naturally, comfortably and effortlessly. Meiping and Xiaowei both recognized the style of the writing immediately and responded similarly. "'<u>Dengxia manbi</u>'(random thought in the lamp-light)! This is nonsense!" said Meiping. "'<u>Dengxia manbi</u>'(random thought in the lamp-light)! I hate those Chinese intellectuals write '<u>manbi</u>'(random thought). It makes you feel they draw a snake and add feet to it'. Redundant!" commented Xiaowei. Meiping explained how she usually read this type of Chinese texts, "I read a lot of Chinese articles like this, so I just skim it. I sometimes skip over sentences and paragraphs; sometimes a glance is enough to get the idea." "When you see <u>why</u>, you know he (author) will give several reasons."

   Xiaowei read the text aloud, her stress and intonation showed clearly of her understanding of the text. She also picked up the key linking words and phrases and repeated them. Lingling made use of the comprehension marks in the text as she did the same with the English texts. "When I see point #2, I always recall what #1 is." She also commented on topic sentences. "When I read the topic sentence, I have some general idea in the next paragraph and sometimes can skip over part of it."

   <u>Summarizing.</u> Except for Jian, who demonstrated more strategy use in reading the Chinese text than the others, no other participants verbalized using the summary strategy. However, Jian almost stopped after each paragraph to summarize the key point in it and to comment on it with the first few paragraphs of the Chinese text.

Reader-Initiated Strategies

   <u>Invoking prior knowledge.</u> In his comment, Jian commented on quite a few of the author's opinions. He used both his own experiences and sometimes experiences of other people around him to support or refute certain points made by the author in the text. Xiaowei shared that she had some personal contact with one of the artists mentioned in the text and also made comments on what she thought of his works.

   <u>Visualizing.</u> Lingling mentioned that when she read <u>Tangbohu</u> who was a famous classical artist and became popular among her generation by a Chinese local opera movie, she could visualize him and his painting like in the movie.

   <u>Predicting.</u> Jian made a clear prediction at the beginning of the reading, which seemed to misinterpret the author a bit. As he proceeded with the reading, his prediction did not seemed to be confirmed and he began to stop much less frequently to make comments and came to the end pretty abruptly. Jian seemed to have a strong personal view on the issue being discussed but his seemed to mismatch with the author's view. His final comments indicated he was not convinced by the author and he still held the same view as he made in his prediction.

   All participants read the title of the article first except Lingling, who said she usually skipped the titles if they are printed vertically, as is in this case. For Lingling, when predictions were unmet, she usually went back to reread the parts again. Sometimes this does not clarify the confusion, and she just continued reading and let the latter information helped to explain, which seemed to work out well.

Evaluating. Readers felt much more comfortable and confident at critiquing the article, from its writing techniques to its ideas than with the English articles. Xiaowei disagreed with the author, "Can intellectuals and artists be the same? Artists are artists, they are different from intellectuals". Later, she commented, "What is spiritual product? The concept is unclear! I think spiritual products should be philosophical and of very precise logic. They are different from works of art created for beauty appreciation. I don't think I agree with him." Xiaowei made a lot more comments on this issue. Finally she said, "I agree with some of his opinions but not others. I feel this article is very mediocre, not a good article. Nowadays, it's very difficult to come across a good article in China, unlike during the cultural revolution. The articles are simply not convincing enough." She also commented on how intellectuals should do to make money, as the author was doing in the article.

Meiping commented on the writing, "it's a good thing that this article cites some examples, usually Chinese articles don't. However, these examples do not seem to explain the issue at hand very well." Jian also commented that "this article is not well-written, not a good article."

Different and Overlapping Strategies

Do readers use the same reading strategies as in reading L1 and L2? How do they differ? First, the above descriptive account of the strategies used by the Chinese native speakers in reading both Chinese and English texts showed that they verbalized more strategy use in reading English than in reading Chinese. Flavell (1987) has pointed out that "some metacognitive knowledge and self-regulatory activity is not accessible to consciousness" (p.21) especially with those well-practiced movements and routines, the decoding of characters and sentences, the intratextual connections, and the comprehension of the illocutionary force required in reading the Chinese text became so automatic that the readers might not be consciously aware of these mental processes. As a result, while the comprehension of the Chinese text came naturally and automatically, the figuring out of the English texts took greater effort and longer time, during which more strategies were consciously employed and verbalized.

Second, data analysis revealed some similarities and some differences in strategy use employed between the Chinese and English texts. The ones that they used in reading both scripts were the strategies of a) using text structure, b) invoking prior knowledge, and c) evaluating what they read. The most often used one was prior knowledge utilizing their knowledge of the text structure and the knowledge of themselves, as well as their prior content knowledge in figuring out the authors' points of view in both texts.

As far as the differences were concerned, the obvious one between reading the two languages was whether the focus was on the words or the text as a whole. With Chinese, vocabulary did not seem to pose any problem for the readers. Except for one reader reporting one unusual combination of characters, nobody else seemed to utilize specific strategies to deal with the vocabulary in the Chinese text. This might be explained by the fact that Chinese was their native and proficient language. Understanding of the vocabulary had become so automatic that no specific effort was needed in processing the meaning of the vocabulary. Besides, they had already mastered almost all of the most frequently used characters. Since the article was published in a popular newspaper, the language was not that difficult. According to the Chinese language system, after the beginning stage of learning the characters, vocabulary is usually not an issue in reading, except for very rare words. Dejiang Xu, in an article in

People's Daily: Overseas Edition (Dec. 30, 1995), says that "some 500 characters constitute 75% of the most frequently used Chinese characters and 1000 characters constitute 90%" (p.3). That was why, for these college graduates, when they read, they just read it through once and said, "I got it". While in reading English, their target and developing language, vocabulary was obviously a big obstacle in comprehension. Thus, they spent more time and demonstrated more strategy use in working out the meanings of the words. This focus on vocabulary hindered the readers from paying more attention to the overall text for getting the author's view.

Another explanation why the participants focused so much on the vocabularies might be related to the process in which they learned English. In China, English is usually taught following a bottom-up model. It is generally believed in the field of English language teaching that one should learn letters first, then words, then phrases, then sentences, paragraphs, texts, etc. If one knows all the words in a sentence, one will be able to understand the sentence, and in turn, the paragraphs and the whole text. Thus, vocabularies are usually taught with meanings isolated from the text and sometimes on a one to one translation base. Lingling's constant use of recall of the dictionary definition of words showed that the words were memorized for their own sake. The bottom-up learning process might condition the participants' ways of approaching the English texts.

The second difference between the reading of the two texts was the comfort level or confidence in oneself that readers exerted in the reading. With Chinese, readers felt more at ease in reading and more confident at what they believed they got from the text. While with English, they were less certain about what they got and had to recheck it. Xiaowei said, "When I read English and come across a few unknown words, I begin to panic. Word is always priority. But when I get Chinese texts, I would think I could write better than he (author) does. I feel very confident." This lack of confidence in oneself in reading English was also expressed by other participants too. Lingling said, "Reading English only gave me a vague idea, not the exact meaning. If there is no time limit, I would look all the words up to make sure." Meiping explained this situation in a metaphor. "Reading English only provides me with some very vague ideas, very hazy, as if the meaning is floating on the surface, as if I'm not engaging my role as a reader. Only after I translate it into Chinese could I really appreciate his (the author) ideas." She also compared reading to chewing food, "with Chinese, you chew as you swallow; while with English, you chew it and don't dare to swallow. You want to chew it again and again before you swallow it."

Analyses of the data indicated that the readers exerted far more confidence in themselves in reading Chinese, their native and proficient language than in reading English, their second language. What caused their lack of confidence in reading English? Three factors might affect their self-confidence. First, their linguistic knowledge of the English language was much limited compared with their knowledge of the Chinese language. Second, which was kind of related, was a lack of knowledge of how the language was practiced in its cultural community, a lack of understanding of the language in use. For the participants in this study, Chinese was the language they grew up with. The language had been practiced in their lives all the time. They could feel the language and the language became part of themselves. That's why they found it easier and had such confidence in reading it, rather than that Chinese was an easier language, as Xiaowei believed. She said English was too complex and she gave the example of the usage of the word "appreciate". She complained that sometimes it meant 'thank you'; at other places, it meant 'I enjoy the beauty of it'; and still at another place, it

might mean, 'I understand'. She thought it was hard because the meaning was not exact. As she and I continued to talk about this, we discovered that Chinese had the same feature with its words if not worse. For example, the Chinese word "da" as a verb could mean differently when followed by different objects. For example, it could mean "hit" somebody, "fight" with somebody, "knit" a sweater, "report" on somebody, "make" a phone-call, and even "buy" soy-sauce. Though these words enriched human expressions, they did cause problems for language learners. However, the multiple meanings of a word was not the "potency" of English language only, but a universal feature for all human living languages. Sometimes these subtleties in use or idiomatic expressions can't be translated to another language and they pose the hardest problem for learners especially in a foreign language learning situation.

Still another reason for the lack of confidence in L2 reading might be derived from the differences in how ideas were presented between L1 and L2 scripts. Lingling commented, "the difficulty in reading English lies in the ways of thinking and arguing. Sometimes I don't know what the author thinks. When I read Chinese, the ideas are so straight forward and I can constantly make predictions and confirm them." Xiaowei also mentioned that lack of cultural knowledge prevented her from understanding words she already learned in special context, for example the cartoons. She said, "this is because you have not entered their lives, and it is pretty hard, if not entirely impossible (for her) to enter their (American cultural) circle."

However, evidence showed that the reader's self-confidence in reading played a vital role in how one approached the reading task and how one utilized reading strategies. At the same time, one's knowledge of the language and its cultural practices determined, to a large extent, how much confidence one had in reading.

Individual Differences

Apart from the differences exerted in reading the two different writing scripts, the analysis of the strategy use indicated that there were great differences between individual readers. Obvious evidence showed that one's reading strategies transcended across his/her readings of both languages, though to different degrees. For example, while Meiping noticed the text-structures of both the Chinese and the English texts and used prediction and questions on the content as she read along, Jian focused more on vocabulary in reading the English texts and the local information in the Chinese text. Both Meiping and Xiaowei noticed the pictures and the visual decorations accompanying the texts. Jian commented on the pictures as "not very useful". Xiaowei responded more personally to the texts and was generally critical with whatever she read, even when her comprehension might not be accurate. Lingling, like Jian, paid more attention to the dictionary meaning of particular words and neglected their meaning in the contexts in reading English. Lingling also ignored the title of the Chinese text because "it was written vertically".

Individual experiences with reading and literacy learning. What factors affected these individual differences? A brief account of the readers' reading history and engagement of reading might help provide some explanations to this question. Xiaowei shared that she personally enjoyed reading. She had read Chinese extensively when she was younger and had more time. She said when she was at college back in China, reading was a fashionable thing to do. Students competed with each other to see who read the most, the books usually being the classics including the translated foreign literature. They believed reading those books was an indication of their knowledge. Books were circulated at great frequency. This continued after

she graduated from college and started to work in a army hospital as a doctor. Once she got hold of a book at 3 a.m. after her night shift and had to pass the book onto somebody else at 8 a.m. on the same day! Now she still enjoyed reading. Apart from the assigned readings from her professors, Xiaowei tried to skim through the school newspaper almost everyday and she wished she could have more time to spend to read some English novels. As a result of her extensive reading practices in reading Chinese and enjoyment in reading, during the reading of this data collection, she demonstrated more top-down strategies in making sense of the not-so-easy English texts. She relied more on the overall text structures, used prediction, used pictures and other printed clues, and constantly questioned about what she read. She was very critical, and maybe over-critical, with whatever she read in both the Chinese and the English texts. Sometimes she was so eager to express her own opinion that she even did not bother too much about understanding the text, like her comment on "assisted suicide".

Meiping also approached both readings from a more global perspective and tried to grasp the main ideas. Her experience with reading was pretty extensive too. After graduation, she worked at a publishing company as an editor of scientific publication. She read serious texts during her work time and after work she said she liked to read pictorials, because they were "less demanding" but "pretty telling". Maybe due to her professional habit, during this data collection, she not only made use of the pictures in reading the text "Language Barrier", she also commented on the effectiveness of the inclusion of them in conveying the key ideas of the text, saying "a simple sketch, with a few words, very interesting. Chinese texts are usually pretty formal, no cartoon, few pictures. Sometimes cartoons make you think and bring humor and connections to the texts. Serious ideas can be passed on lightly and be accepted by the readers." She was interested in learning about new things and usually only read things that interested her in her leisure time. She would scan briefly political news but would read very carefully those articles that had some practical use in daily life, like how to clean a stain on the clothes, how to keep fit, etc., and she also tried them out too.

Jian was an interesting person to study. He showed far less strategy transfer across the two languages than the other three readers. When he read the Chinese text, he was very responsive and critical to what he read and commented a lot. When he came to read the English texts, he focused largely on the words and commented that "you must look them (unknown words) up, otherwise you would not be able to continue to read". He was also the one who tried to translate the sentences word by word in reading English. He seldom tried to use context to help figure out the meaning of new words. Why so? Jian said he did not read much when he did the administrative work, almost none of English text. After he came to U.S., he started to read English. Now he was preparing for TOEFL test and there are two goals for his reading. One was to learn the content and the other was to learn vocabulary. This might help to explain why he focused so much on vocabulary in this data collection. Another reason that helps explain why he read the English texts so differently from the Chinese text might be his low English proficiency, which prevented him from using the more top-down or global strategies. This will be further discussed in the next session.

Lingling scored the highest in TOEFL test. However, she exerted a lot of bottom-up strategies in her reading. She tried extremely hard to recall the meanings of single words, instead of trying to catch the flow of ideas. Unknown words seemed to bother her a lot. Being a full time student all her life up to now, she had been taking tests constantly. She had taken big exams from middle school to high school, to college, and then to graduate programs in the united states, on top of countless other small and medium tests. As a result, many of her

reading strategies were oriented towards test taking. She reported twice during her reading that she thought this (the data collection task) was an exam, except that she did not have to answer specific comprehension question in writing. Having no comprehension questions became a problem for her, for she didn't know what to focus on. She told me that usually in an exam situation, she would have some very vague ideas after reading the text once. Then she would read the questions and then go back to the text to look for the answers. So when the researcher asked her comprehension questions during the interview, she had to refer back to the text.

L2 language proficiency. How does one's L2 language proficiency affect how one reads in a second language? Jian's low proficiency level (490 out of 670 in TOEFL) seemed to stop him from transferring his critical and responsive reading strategies in reading Chinese to reading in English. On the other hand, Lingling's high test score (610 out of 670 in TOEFL) didn't seem to guarantee her with more effective use of the reading strategies in English either. Lingling exerted a lot of attention on unfamiliar words in her reading. Instead of seeking clues for meaning within the context and her own world knowledge, she tried very hard to recall the dictionary meaning of the word she learned and remembered. Although many times the meaning she recalled was one of the word meanings, but sometimes these definitions did not seem to fit exactly in the context. The effort to try to recall the meaning of the words from memory sometimes hindered her from comprehending the whole text. Lingling reported this problem in reading herself, "I feel one thing bad about me is that when I read, I am often not clear with what the article is saying. Although there are not many unknown words, I still do not comprehend it. The whole text does not connect." Because of the way she learned English and the extensive experience with test-taking, She learned how to take reading comprehension exams rather than how to read for her own comprehension. She also exerted less critical thinking in reading either Chinese or English, seldom questioning or commenting on what the author said.

Limitations of the Study

There were several limitations of this study. First the participants were recruited on a voluntary base in exchange of 10 two-hour TOEFL test-preparation lessons, except for Lingling. The researcher knew her before the study and she participated to help the researcher. Though I asked the participants to read carefully until they understood the text and were able to share with others about the author's opinions in the texts, still they had a feeling that it was okay if they didn't understand it completely. A couple of times the participants said that they would not read the texts if they were not doing this for the researcher's study. Both Xiaowei and Lingling said they would read them differently and would try to understand the text to their best if they were required to read the texts (English) by the professors they are taking courses with or if they needed to read them to prepare for a test. Though this was an effective metacognitive strategy to be used in reading, it did prevent the participants from exhausting all possible strategies in solving the comprehension problems they encountered in the data collection.

Second, in order to have the Chinese and the English texts compatible in style, content, and length, the Chinese text turned out to be very easy for the participants. Meiping read the Chinese text from the beginning to the end without a stop and then said she got it, though she sometimes read it slowly and thought for a while and othertimes proceeded pretty fast, and sometimes gave more emphasis on certain words and expressions. As a result, the think-aloud

data collected did not demonstrate much strategy use in their reading of the Chinese text. Third, this study based its data analysis collected from only four participants who had very diverse learning and reading experiences.

Conclusion

Several findings could be drawn from the present case study. First, all four participants verbalized much more strategy use in reading the English texts than in reading the Chinese text. This might be explained by the fact that some well practiced movements and routines of reading have become so automatic that the participants may not be consciously aware of them (Flavell, 1987). Second, the participants obviously demonstrated much more confidence and critical responses in reading and responding to the Chinese text than to the English texts. They exerted more anxiety and self-doubt in reading the English texts. The participants' more accomplished proficiency level in the Chinese language and their familiarity with the Chinese culture in which the language and the content of the text were embedded clearly gave them an advantage in making sense of the text. Third, although in general all four participants focused more on word meanings in reading English and more on comprehension in reading the Chinese text, they each demonstrated different degrees of transfer of strategy use across the readings of the two texts. While a higher L2 proficiency may make it easier for the participants to transfer the higher level cognitive and metacognitive knowledge across the tasks of reading the two languages, as in the cases with Meiping and Xiaowei, a low L2 proficiency seem to hinder the participant from using the more top down strategies even though they were exerted in L1 reading, as in the case of Jian. This indicates that ESL readers need to develop L2 to a certain threshold level in order for the transfer to occur. Fourth, however, at the same time, data from the study also raised question on the belief that knowing more vocabulary and grammar would automatically enable L2 learners to integrate more efficiently reading strategies in L2 reading. Evidence shows that the literacy activities that an ESL reader engages in doing, such as the amount of reading done in L1, the amount of the exposure of L2 in situated practice, and the way one learns L2 seemed to be the shaping power in cultivating how one reads in a second language. As Parry (1996) points out that different language backgrounds and different experiences with literacy may be an important factor in influencing one's strategy use in the sense-making process of written texts.

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Appendix I

Personal Information Questionnaire

Name: Age: Sex: M F

1. College Degree(s):

    Major(s):

2. Years in the U.S. or other English speaking countries:

3. Years of learning English:

4. TOEFL score on structure and reading if any (time of taking) <u>OR</u>   MSU language test on grammar and reading:

5. Do you read Chinese now and in the past?

        - What? How often? How much?

        - For what purpose? (School work, exam, news, entertainment, etc.) and How do you read?

6. How often and how much do you read English now and in the past?

        - What do you read?

        - For what purpose and how?

7. Do you enjoy reading in general? What type(s) of books and articles do you like to read?

8. Have you taken any reading strategy classes?

Appendix II
Articles Used for Collecting Data

Article One: This article is adapted from ``The Language Barrier'', in Finding the Main Idea, written by Sheldon L. Tilkin & Judith Conoway, published by Educational Development Corporation in 1980.

Here's another article about people and animals. Look for the main idea of each paragraph as well as of the article as you read.

The Language Barrier

Today's scientists are breaking down the biggest barrier that separates humans from other animals. That barrier is language.

Until quite recently, it was thought that only humans could use language. In fact, language was the proof that humans were the smartest creatures on earth. You've probably heard the argument. Elephants, apes, and bears are all stronger than people. Cats and dogs have better senses of smell and hearing. Bats and birds have better eyesight. But only humans can communicate through words.

That's no longer true. Take the case of Sarah, a chimp who is studying at the University of California. Sarah is learning words from Ann and David Premack, two scientists. The Premacks use colored plastic shapes as word symbols. Sarah knows more than 100 words by sight. When the Premacks say "apple," Sarah picks the symbol for apple.

Sarah can also read the plastic symbols. For example, her trainers placed six symbols in front of her. These were the shapes for "Sarah," "insert," "apple," "pail," "banana," and "dish." Sarah looked at the shapes. She then put the apple in the pail and the banana in the dish.

Sarah has also learned to write with the symbols. Sarah has a special typewriter on which she can write in her symbol language. She's even taught the language to another chimp.

Another way of talking with chimps is to use sign language, the same language that is used by deaf people.

Sign language has also been taught to gorillas. Both chimps and gorillas have shown that they understand abstract ideas, such as "love" and "fairness." The gorilla at the University of California tells his trainer about his feelings, too. One day he even played a practical joke on his trainer. In sign language, he gave his trainer the wrong information. He then laughed and laughed when the trainer believed him.

If chimps and gorillas can use language, what does separate humans from the apes? Scientists point to two things: the size of the human brain and the human vocal chords. You'll notice that these differences are physical, not mental. Scientists say we are more "intelligent" because our brains can store more information. In other words, we have longer memories. So every time we try to solve a problem, we can call up more facts to help us. Human speech also has created what we call "intelligence." Our vocal chords can make many more different sounds than can the vocal chords of chimps and gorillas. With more sounds, we can express more different ideas. We can also get to the facts that are stored in the brains of the other people.

Now some scientists are talking about breeding chimps and gorillas so that they will have larger brains. With better memories, the apes could learn even more words in sign language. Who knows? Perhaps someday we'll be able to know what the animals really think of us. Talking to the animals is bound to change the way we think of ourselves.
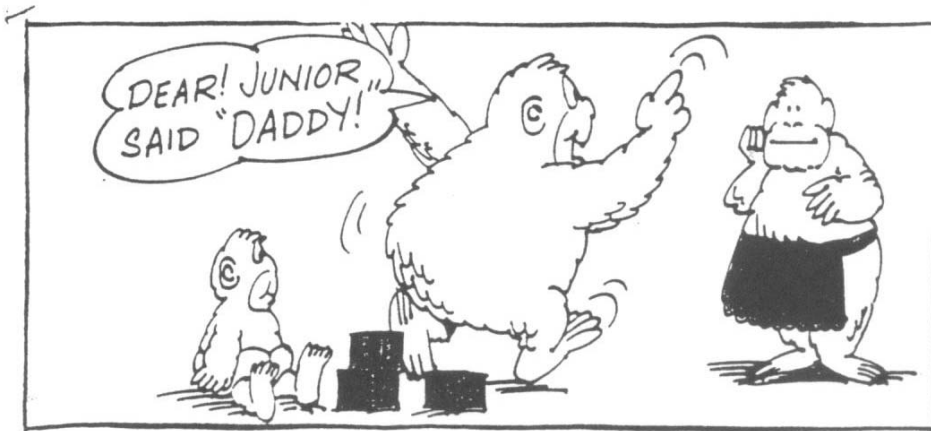
Article Two: This article appears in <u>The State News</u> newspaper on August 9, 1995.

Denying dignity

Oregon assisted suicide law unjustly ruled unconstitutional

Assisted suicide: A slight mention of those words erupts into instant controversy across the nation.

U.S. District Court Judge Michael Hogan entered the battle last week by ruling Oregon's assisted suicide law unconstitutional. In formulating his argument, Hogan stated that it violated the equal-protection clause of the 14th Amendment. But this ignores the principle of individual rights.

When ratified by Oregon voters in 1994, the Death with Dignity Act provided a responsible answer with a common-sense approach for people suffering from terminal illnesses. But the well-thought-out proposal was blocked by a state court challenge. Some opponents fear this type of law would open the floodgates to suicide.

So how easy would it be to end a life under this law? Oregon residents would have needed two doctors to diagnose a terminal illness and speak for the patient's mental competency. A person also would have to make a written request signed by two witnesses and wait 48 hours before the medication was prescribed. These guidelines would hardly allow healthy people to commit suicide.

Yet medicide critics believe that doctors should only be in the business of saving and prolonging lives, not ending them. Are these people more concerned with their morals or worried about the possible loss of cash flow?

What they are really overlooking is how assisted suicide focuses on suffering people's rights to determine their own future — even if the decision involves death.

Other countries are quickly recognizing these individual rights, so why can't the United States? Australia recently approved the "Right of the Terminally-Ill Bill," which legalized the world's first lethal injection suicide measure. The judicial system, however, silenced terminally ill patients' cries to die with dignity by claiming the state should not sanction such actions upon its people.

This is extremely hypocritical — government can cause death by capital punishment while simultaneously denying a person's individual choice to die.

Death is a natural part of life and must not be used as a punishment for anyone. But terminally ill patients should not be punished with a respirator during their final years.

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灯下漫笔

君子、小人与铜钱

从儿时听故事到进校门读书，都曾留下个很深刻的印象：儒雅之士多穷困。在过去的中国，不管是作家、诗人，还是作画、书法的名家；不管是演员、艺人，还是作曲、唱歌的天才，大凡多是寒窗苦读、辛勤耕耘一辈子，许多人穷困潦倒伴随终身，有的甚或陷于妻离子散的悲怆境地。

老天缘何亏对这些知识分子？是智商比人低，是好逸偷懒，其实都不是。真正原因有三：一是受传统清高观念的制约。古人有言：君子喻于义，小人喻于利。当然，有知有识之人要争当风雅脱俗的君子，离开专讲铜钱的小人越远越好了。二是受职业分工的限制。知识分子从事精神产品的创造，与每时每刻和铜钱打交道的人不同，铜钱意识淡薄。可谓"无钱财可，无德才不可"。三是受市场经济发育程度的历史条件限制。自社会主义市场经济新体制建立以来，全国的各种市场迅速发育成长，除商品市场外，图书、字画、书稿等精神产品的特殊市场也纷纷建立。于是，如今的知识分子和前辈们很不一样了，他们创造的精神产品可方便地进入市场，具备了让腰包鼓起的良好环境，所以现在的知识分子形象今非昔比，很少给人穷困潦倒伴终身的印象。

在经济生活中出现的这一变化，意味着社会的进步，应该肯定。

知识分子从不屑言钱、谈钱脸红，到理直气壮地按作品的品位谈钱，岂不表明时代的发展，思想观念的调整。前不久，海南港澳管理公司主办的中国书画拍卖会上，100多件精品成交，字画家和字画所有者共得500多万元。但有数位国画家私下表示并不满意，认为一张画数万元卖价和他们的辛勤创造不太相当，还应卖更多的钱。不难看出，市场经济下已激发出新的意识。字画和其他精神产品一样，不仅具有鉴赏、研究、保存价值，还体现一定的社会劳动的凝结，所以值钱，有的还是无价之宝。然而早先人们对此不全懂，后来多数人仍为似懂非懂。明代画家唐伯虎一日路过街头，一老妇求其买扇，并告生活艰辛之状。唐动了恻隐之心，挥笔为其扇作诗作画，并告其每扇由20文钱提到20两。这可说是现今的义画。苦禅老画家进入晚年，愈真愈善，明知自己的画值钱，但遇上索画者，即使不相识，都不好意思拒绝，致使许多名画流失在外。齐白石先生平易近人，好与百姓交往，有时不辨对方来意，便把名画让人拿走。其实，不少拿画者也不知画的真正价值。

有市场就有画价，有画价就能卖钱，这是市场经济出现以后的事。

西方国家对精神作品中的画，素来是市场中的骄子。凡高的一幅《加歇医生》拍卖价为8250万美元；毕加索的一幅《自画像》卖到4790万美元。所以有人认为文化艺术已形成新兴的产业。据美国统计资料表明，过去的10年中，投资盈利最高的产业依次是：画、古董等收藏品为28%，房地产为5.1%。

中国的字画价也年年看涨。六十年代，一幅张大千的名画仅换8尺布票。1991年价值高达187万元。他的《幽谷图》卖到816万港币，创近代国画卖价之最。不久前，石鲁的代表作《雄鸡一唱天下白》，在海南拍卖会上以85万元落锤成交。

知识分子的劳动成果既然得到当今社会的承认，他们的创作成品当然可作特殊的商品进入特殊的市场，并按规定成交。这是社会主义市场经济给知识分子的一条劳动致富之路。但是，在一片光明面前，知识分子仍然存在"君子"和"小人"的抉择。功夫放在"喻于利"上，则搞不出好作品，树不起好形象；扭制滥造，作假仿冒，忽视职业道德，则成不了"君子"。

现今的人们，希望君子越多越好，小人少些再少些。在市场经济条件下，知识分子既想腰包里有钱，又要成为"君子"，这应该是不难做到的。怎么办？"君子爱财，取之有道"，古人的这句话，也许给人诸多启发。

陈振华

Appendix III

Interview Prompts

On content:

- What's the article about?

- What do you think the authors want to tell their readers? (Author's opinion)

- What do you think of the article? (Topic, style, opinion clarity, structural organization, concept complexity, language difficulty, etc.)

On strategy use:

- Did you read the title or not? What went through your mind when you read the title? Did you have any questions or predict what would be included in the text you were about to read?

- Did you read from the beginning to the end without a stop? Did you stop during the reading or after each paragraph? Where/when did you stop? Why? What did you do then?

- Were you confused during the reading process? What, specifically, made you confused? What did you do when you were confused? (Did you go back to the previous text during your reading? When and why? Did you relate it to your previous experience or prior knowledge on a particular issue? etc.)

- Were there words that you did not understand or were not sure of? What were some of them? What did you do to them?

- Were you trying to summarize the opinion of the author? When did you do that? How did you do that?

- Did you read the Chinese and English texts in similar or different ways? How? Any examples?

- In general, what problem(s) present the greatest difficulty in your reading English and Chinese texts? Why so?

- Do you think you comprehended the authors pretty well? What made you think so?

- Is there anything else you feel like telling me about your reading experience?