

I. Reading Comprehension: Choose the best answer to each question based on the following passages. (30%)

The Whorf Hypothesis

The view that language shapes thought is most often associated with the work of Benjamin Lee Whorf. The Whorf hypothesis consists of two parts, linguistic determinism and linguistic relativity. Linguistic determinism refers to the notion that a language determines certain nonlinguistic cognitive processes. That is, learning a language changes the way a person thinks. Linguistic relativity refers to the claim that the cognitive processes that are determined are different for different languages. Thus, speakers of different languages are said to think in different ways. There are several notions here. One is that language 'carve up' reality in different ways. Another is that these language differences are covert or unconscious; that is, we are not consciously aware of the way in which we classify objects. Third, these language differences influence our world view. These are profound ideas, but not ones easily amenable to experimental test.

For example, whorf noted that in the American Indian language of Hopi, just one word covers everything that flies except birds (for example, the same word for insects, airplanes, aviators, and so on). The Hopi speaker calls all of these disparate objects by the same name without any apparent difficulty. Whorf argued that although this class might seem very broad to us, so would our word snow to an Eskimo:

We have the same word for falling snow, snow on the ground, snow packed hard like ice, slushy snow, wind-driven flying snow-- whatever the situation may be. To an Eskimo, this all-inclusive word would be almost unthinkable; he would say that falling snow, slushy snow, and so on, are sensuously and operationally different, different things to contend with; he uses different words for them and for other kinds of snow.

Whorf suggested that there is no 'natural' way to carve up reality; different languages do it in quite different ways.

Whorf's observations about Eskimo words for snow have been criticized by Martin (1986). Martin claims that Whorf and other writers greatly exaggerated the lexical differences between Eskimo and English. The number of words in a lexicon varies with how one defines the word. If we only count root words (free morphemes), we will get one number, but if we count each suffixed version of each root word, the estimate will rise dramatically. Martin suggests that the failure to attend to the rich morphological system of the Eskimo language led Whorf and others to the myth that Eskimos have vastly more words for snow than English speakers. It appears that when morphology is taken into account, Eskimos has perhaps a dozen words for 'snow'. But then English has quite a few as well, including slush, avalanche, blizzard, and powder. It is not clear that Eskimos have a more highly differentiated 'snow' domain than English speakers.

(背面仍有題目,請繼續作答)

Whatever the final consensus might be on Eskimo 'snow' word, the more general notion that languages differ in the degree to which they differentiate various lexical domains does not seem to be at issue. The question is whether these differences lead to differences in thinking. Whorf suggested that they did, in the sense that when we encounter a particular word on a regular basis, it may influence our habitual thought patterns.

Although some of Whorf's lexical examples, such as his comments on Eskimo, have generated a considerable amount of discussion, it appears that he was more interested in the grammatical differences among languages. In English, we come to respect the differences between nouns and verbs as a fundamental distinction. Nouns refer to long-lasting and stable events, such as 'horse' and 'man', whereas verbs refer to short-lived actions, such as 'hit' and 'run'. Yet, Whorf asked, why then do we classify temporary events such as 'lightning' and 'spark' as nouns? And why are 'dwell', 'persist', and 'continue' verbs? Whorf also mentioned Nootka, a language used on Vancouver Island, in which all words seem to be treated as verbs. This is just one indication of how grammatical characteristics vary from language to language. Although Whorf provides many lexical and grammatical examples of how language may influence cognition, he did not present convincing evidence for his hypothesis. (adapted from Carroll, D. W. (1999). *Psychology of language*. Brooks/Cole Publishing Co.)

1. Whorf used the example of 'snow' in Eskimo language to account for... (3%)
 - a. cross-linguistic morphological typology
 - b. lexical differences and the world view
 - c. chemical nature of snow in different geographical areas
 - d. reconstruction of American Indian Languages
2. Martin's criticism on Whorf's evidence of 'snow' was based on...(3%)
 - a. linguistic determinism and relativity
 - b. myth in Eskimo
 - c. the differences in the definition of a word
 - d. prefix and suffix
3. According to Martin, if we take morphological structure into account, ...(3%)
 - a. English actually has more terms for 'snow' than Eskimo language does.
 - b. Eskimo language has more terms for 'snow' than English does.
 - c. English has as many terms for 'snow' as Eskimo language does.
 - d. it is doubtful to say that there are more terms for 'snow' in Eskimo language.
4. Is there a universal principle in the distinction between nouns and verbs? (3%)
 - a. Yes. In general, nouns refer to long-lasting and stable events and verbs refer to short-lived actions.
 - b. Yes. When we encounter a particular word on a regular basis, it may influence our habitual thought patterns.
 - c. No. There are grammatical differences among languages.
 - d. No. We are not consciously aware of the way in which we classify objects.

5. Whorf suggested that there is no 'natural' way to carve up reality because...(3%)

- a. each language classifies the world differently.
- b. some languages use morphology more extensively than word order.
- c. some languages are more developed than other languages.
- d. our thought processes will determine linguistic structure.

Advances in Computer Technology

Most people think of the computer as a relatively new invention, but the history of computers may be said to have begun long ago with the use of the abacus. Another early computing device was the calculating clock invented by Wilhelm Schickard of Germany in the 1500s. The design was unknown to historians until sketches and letters which described the device were discovered in the 1930s. As well, Blaise Pascal, the famous mathematician, also invented an adding machine which he presented to King Louis XIV in 1642.

The first real advance in computer technology came in the 1830s when Charles Babbage of England hit on the idea of using punch cards as a programming device for his calculating machine which was designed to measure the tide. Mr. Babbage died before a working version of his machine could be made, so his dream machine was never produced. However, his idea for using punch cards in calculating machines was later taken up by Herman Hollerith of the United States who was able to use this approach to calculate the number of people in the United States through the 1890 census. Mr. Hollerith went on to start his own company which built calculating machines for businesses. This company eventually became the company named International Business Machines Corporation (IBM).

The next big step in computer technology came in the 1940s with the use of electronic switches in calculating machines. The first generation of computers involved large commercial computers used for business and research. These machines, which lasted from 1952 to 1958, were big and noisy and used large amounts of energy. The invention of transistors led the way for the next generation of computers. This second generation of computers lasted from 1959 to 1963. These were smaller in size and used less energy.

The computer market has seen very large growth since the early 1970s. A study in 1970 found that 80,000 computers were being used in business in the United States, and another 30,000 computers could be found in use worldwide outside of the United States. The number of computers, exploded to 29 million computers in use in the United States alone in 1993.

In 1982, the first computer virus was developed. Jim Hauser, a professor at California Polytechnic State University, worked with one of his students to create a program which could copy itself and be secretly introduced into another program of computer. Because he was working on an Apple computer, Mr. Hauser named his new program a computer "worm".

(背面仍有題目,請繼續作答)

6. How many calculating devices which were designed before the 1800s are mentioned? (3%)
- a. one
b. two
c. three
d. four
7. What was Mr. Babbage's calculating machine planned to use for? (3%)
- a. punching cards
b. measuring the tide
c. sewing patterns
d. building computers.
8. What invention allowed second-generation computers to be smaller and more energy efficient? (3%)
- a. binary switches
b. microprocessors
c. parallel networks
d. transistors
9. The fourth paragraph explains the ... (3%)
- a. growth of the computer industry.
b. largest computer company.
c. most recent generation of computers.
d. invention of the virus.
10. Who created the virus that infected thousands of computers through the Internet? (3%)
- a. a graduate student
b. Herman Hollerith
c. Jim Hauser
d. Robert Morris

II. Translation: Translate the following Chinese passage into English and English passage into Chinese. (30%)

1. 教育部將通令全國各縣市教育局，全面取締補習班以雙語或美語幼兒園、幼兒學校名義招生。教育部國教司長吳財順說，幼稚園不是不能教美語，但不能全時制雙語教學、也不能單獨設科，只能採融入式教學。吳財順強調，坊間很多的美語或雙語幼兒園、幼兒學校，其實是以短期補習班名義申請立案。他說，既然業者申請的是補習班，就不能以幼兒園或幼兒學校的名義欺瞞家長，讓家長誤以為送小孩到立案的教學機構兼學美語，「就像明明申請開餐廳，就不能經營理髮廳」。聯合晚報 93-02-25 (10%)

2. Chomsky (1966) described the language user's behavior as being composed of three parts: competence, performance, and capacity. Competence is the speaker-listener's knowledge of the rules of the language: semantic, syntactic, morphological, and phonological. Performance is the speaker-listener's actual use of the language in particular situations and under certain conditions. Thus the language user's comprehension and production of utterances can be affected by such factors as who is participating in the interaction, where it is taking place, and the physical state of the listener. Capacity is the innate "language forming capacity" of humans. In Chomsky's view the role of the linguist is to describe the native speaker's competence. This competence is composed of knowledge of what has been termed linguistic "universal" and of the rules specific to the language for the realization of these universals. (adapted from Menyuk, P. (1977). *Language and maturation*. The MIT Press.) (10%)
3. If two phones can be substituted for each other in the same environment without destroying the identity of the lexical items under consideration, they can be said to be free variants of the same phoneme. For instance, in English final stops can be released with explosive noise or unreleased, and often reinforced with a glottal stop (as in cat [kæt^h] or [kæt^o] or [kæʔt]), whereas in some languages like French they must be released explosively. The various types of final [t] in English would be said to be free variants of phoneme /t/. It is often pointed out by sociolinguists that so-called 'free variants' are, in fact, controlled by sociolinguistic variables and not freely interchangeable as suggested by the traditional labeling. (adapted from Durand, J. (1990). *Generative and non-linear phonology*. Longman.) (10%)

III. Essay Writing (about 300 words). (40%)

Read the following passage. In an organized and detailed essay, SUMMARIZE its main ideas and then explain why you agree or disagree with what the article says. Support your agreement/disagreement with an ANALYSIS of the essay's argument.

Many people believe that how we are brought up determines how we will act. We think that environment plays a greater role in determining our personalities than inherited characteristics. But psychologists studying identical twins separated at birth and raised in different households suggest otherwise. They point to story after story of separated twins who lived strangely similar lives. Take the "Jim Twins," for instance, who did not meet until age thirty-nine. Each had married a woman named Linda. Each has owned a boyhood dog named Toy. Each worked as a deputy sheriff. They had done well in the same subjects at school and even shared a common slang. Repeated stories like this have led researchers to claim that our genes determine who we are much more than does our environment.