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The Two Modes of Language Influencing Cultural Spirit

Layers and Phases of Thinking

The Sapir-Whorf hypothesis asserts that people who organize their experience with the help of different languages can have different pictures of the world.

This proposition evoked a large number of disputes at the time of its appearance. Since many philosophical questions are interrelated with this issue, philosophers, linguists, and psychologists have all along attempted to find concrete evidence to prove or reject it. Nothing definite has yet been found, but the idea that language and culture are intimately interconnected is nowadays a universally accepted fact.

The main problem facing the Sapir-Whorf hypothesis—that language determines the picture of the world of its speakers—is that the languages and cultures upon which Sapir and Whorf based their idea were Indo-European and of native American Indians. The task to explain the cultural differences between these two national groups through language is rather complex. The Indo-European and Native American cultures obviously do not have any easily comparable references points. Indo-European nations enjoy a high level of civilization, whereas Native Americans are left far behind, even though in their history they likewise experienced a glorious period of development. For this reason, it is not always clear whether the differences between the cultural spirits of nations are caused by language and orbits of

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thinking, or by their levels of economic and cultural development. Hence, the Sapir-Whorf hypothesis can only state, in very general terms, that language determines the picture of the world of its speakers (Whorf 1969, pp. 207–20). This broad formulation of a problem gives way to various explanations, which was one of the reasons the hypothesis caused so many disputes.

Chinese language and culture differ considerably from Indo-European languages and cultures. Both types of cultures, however, have reached a high level of civilization, have several thousand years of history and have produced a large number of literary classics. Therefore, we can compare them on an equal level of economic and cultural development.

In this paper I will comment on the two ways in which language influences the national cultural spirit. This process begins with language casting orbits of thinking.

It is a generally accepted view in linguistics that thinking depends on language. However, although thinking is a common ability of all nations, each nation has its own language. Thus, this argument is to a certain extent ambiguous. If thinking relies on language and the languages of different nations are dissimilar, how can the thinking of different nations be alike? And if thinking is similar for all nations, how can we prove it?

In my opinion, thinking can be divided into four layers: ability, orbits, modes, and methods of thinking. The ability to think is innate to mankind. It is an innate ability formed during thousands of years of human evolution, and is common for all nations. This ability to think consists of analogy (i.e., the ability to compare common traits and differences between two facts or events), language ability (i.e., symbolized activity), and induction and deduction (i.e., the ability to perform counter thinking and meta-analysis, which can be considered as products of induction and symbolization). Studies in the intellectual development of children have shown that the ability to think appears prior to the ability to speak, and is independent of language. Therefore, when linguists say that thinking is common to all nations, and psychologists state that thinking is prior to speech, "thinking" in both cases stands for the ability to think.

The so-called orbits of thinking, mentioned above, stand for the realization of the ability to think in language. The differences in orbits of thinking of different nations are determined by differences in the language systems of these nations. Thus, language casts orbits of thinking. The ability to think universally brought language into being. Various language systems, on the other hand, created differences between orbits of thinking of different nations. The ability of language to organize human experience presupposes that this experience undergoes categorization. In this process, audible sounds transform into phonemes, general experience

becomes lexicalized and ways of organizing lexicon become formalized. This process leads to the appearance of grammatical categories and structural relations. Since the structure of human intellect is largely the same for all people and the outer world has certain common characteristics, languages share many common features once they are categorized. The latter fact serves as a foundation of general linguistics. On the other hand, nations differ due to the random character of language symbols and the various innate cultural backgrounds of human experience. Thus, modes of categorization of experience likewise differ from language to language. When we are born, we accept a language categorized in a certain way. Thus, we can say that language casts orbits of thinking. This casting of orbits of thinking by language is realized through language categorization. (For a more detailed discussion on this subject, see my paper in Yuvan wenhua lun [Language and Culture] 3, no. 1 [1993].) The extent to which language casts modes of thinking can be observed in second language acquisition and artificial language studies. Westerners studying Chinese master measure words much later, and more slowly, than prepositions. This happens because Indo-European languages do not have the category of measure words intervening between nouns and numerals. This property of Indo-European languages has formed a deep speech habit in the speakers of these languages. However, the study of Indo-European children growing-up in China has shown that these children master measure words and prepositions at the same speed as Chinese children. The difference of study backgrounds in the two examples above is that Indo-European children growing-up in China do not have Indo-European language surroundings, whereas Indo-European adults studying Chinese are influenced in their orbits of thinking by Indo-European language surroundings and speech experience.

The difficulties encountered by Chinese students of Indo-European languages also demonstrate how language casts orbits of thinking. For example, the translation of the words "million" (vi bai wan; literally, "hundred times ten thousand") and "billion" (shi vi; literally, "ten times hundred million") by Chinese students of English is much slower than that of the words "hundred" and "thousand." Likewise, students tend to make more mistakes with the words "million" and "billion" than with the words "hundred" and "thousand." This is because there are no mathematical categories for "million" and "billion" in Chinese comparable to those of English, while the categories "hundred" and "thousand" exist in both languages.

Modes of thinking are models formed during thinking. As human thinking often proceeds in accordance with certain given patterns, these patterns form an altogether unified model. Hence, different people, different groups and nations form different models of thinking in this way. The most representative types of modes of thinking are the Chinese and Western modes. Many scholars agree that the Chinese mode of thinking is characterized by intuitive mastering, while the Indo-European mode of thinking is marked by logical analysis. Below, we will show how these characteristics are interconnected with orbits and modes of thinking.

Methods of thinking are tactics and techniques designed to solve problems, and are formed on the basis of ability, orbits, and modes of thinking. Hence, methods of thinking are connected not only to ability, modes, and orbits of thinking, but also to postnatal acquisition of knowledge. For example, if we know whether the sum of digits of a number is a multiple of 9, we can immediately determine whether this number can be divided by 9 or 9n with no remainder. This example demonstrates a technique designed to solve problems. This quick analysis is determined by the scope of our acquired knowledge. The question of how this knowledge was first formed is connected with the strong or weak abilities to think, with the modes of thinking influencing culture (as we will discuss below), and with the orbits of thinking. Since language casts orbits of thinking, this question is also connected with language structure.

In order to avoid unnecessary arguments that might arise due to imprecise definitions, we can divide thinking into three phases on the basis of its four layers. These three phases of thinking are: (1) thinking prior to language; (2) language thinking; and (3) ultra-language thinking.

"Thinking prior to language" is a kind of activity that cannot organize complex experience. It is characterized by being individual, not having any underlying model or sequence. An important proof of the existence of thinking prior to language comes from the research materials of Jean Piaget. Piaget observed that in the process of the intellectual development of children, thinking (or more precisely, the ability to think) develops prior to the ability to speak. Children between one and two years of age have already acquired feeling-movement thinking ability. According to Piaget, this phase of a child's development already contains elements of reasoning. If a child pulls a blanket to get a toy laying on it, he will be also able to pull his blanket to get other things lying on the blanket. Moreover, the child will in this way study how to pull a rope in order to obtain the thing on the other end of it. This experience proves that children between ages one and two are able to form generalizations based on their actions. To be more precise, Piaget's experiment reflected children's ability to reason by analogy (Piaget 1924, 1957, and other works).

"Language thinking" is an activity designed to organize complex experience. It is characterized by being shared by a group of people, by having a certain model cast by language, and by being sequential. Ordinary thinking is performed in this phase. Orbits of thinking become sequential through language, which in turn increases and deepens the activity of thinking.

The question of whether ultra-language thinking exists is still under discussion. Ultra-language thinking denotes an activity characterized by the understanding of problems based on language thinking. Ultra-language thinking is individual and does not have a model. It is a breakthrough form of language thinking, and may be an individual inner coding or a variation of language thinking. Ultra-language thinking is nonsequential. Transformation of an understanding of the world into language signs enables us to organize high levels of experience. This transformation would not be possible without language. Understanding of the world is always individual; it cannot be socialized, and is characterized by being sequential.

Due to the group nature of culture, language thinking is the most important of the three phases of thinking listed above. The casting of orbits of thinking by language also takes place at this stage.

On the Isomorphism of Language Categories

Culture organizes experience essentially with the help of already formed language categories. Orbits of thinking of speakers who belong to a certain culture are also cast by language. Therefore, categories of culture and language tend to be isomorphic. Here, this phenomenon will be called the isomorphism of language categories. Its manifestations can be observed from the example below.

Ten Categories of Aristotle. The ten categories proposed by Aristotle are: substance, quantity, quality, relation, place, time, posture, state, action, and passion. According to Aristotle, these ten categories are the most comprehensive generalizations of properties of the objective world. Note that the category "substance" corresponds to nouns, the category "quality" to adjectives, the category "action" to verbs, the category "passion" to passive forms of verbs. These correspondences are not coincidental. If Aristotle had happened to live in China at the time of the inscriptions on oracle bronze [Shang dynasty, c. 1 sixteenth to eleventh century B.C.E.—Ed.], he would hardly have considered the category "passion" to be the most comprehensive generalization of the objective world, for at the time of the oracle bronze inscriptions there was no category of passive in ancient Chinese.

Categories "Subject" and "Object" in Aristotelian Logic. Aristotle analyzed the structure of logical judgments in ancient Greek as consisting of subject and object. These categories corresponded to the linguistic notions of subject and predicate. Subject and predicate were grammatically marked in ancient Greek, and agree in "quality" and "quantity." Therefore, Aristotle easily distinguished subject and predicate of sentences. Native speakers of English likewise can easily distinguish between subject and predicate in modern English. To put it even more generally, all Indo-European languages have a basic division of sentences into subject and predicate. For this reason, it is relatively easy to think of logical categories of subject and object, and to build-up logic founded on the difference between them. Again, if Aristotle had happened to live in China, he would not necessarily have come to the conclusion that the "subject-object" structure is the basic organization of a logical judgment. Moreover, he would hardly have been able to propose any systematic logical theory at all. He would have encountered difficulties looking for subject and object in sentences, and would also have come across numerous strange sentences in the Chinese language. For example:

Ta zuo shou la qin (He plays the zither with his left hand).

1. Ta zuo shou la qin.
3S left hand play zither
"He plays the zither with his left hand."

Wo huang toufa (I have blond hair).

2. Wo huang toufa.

1S yellow hair

"I have blond hair."

Wang Mian qi sui si le fuqin (At the age of seven Wang Mian lost his father).

3. Wang Mian qi sui si le fuqin.
Wang Mian seven year die PF father
"At the age of seven Wang Mian lost his father."

Qiang shang gua zhe ditu (A map hangs on the wall).

4. Qiang shang gua zhe ditu.
Wall up hang DUR map
"A map hangs on the wall."

Jiaoshi li zai shang ke (A class is in progress in the classroom).

5. Jiaoshi li zai shangke + classroom inside in Have a lesson

"A class is in progress in the classroom."

What is the subject and what is the predicate of the sentences above are

still unresolved issues. It is not easy to understand and analyze these sentences in accordance with Aristotelian formal logic.

Modern Mathematical Logic. Modern mathematical logic is a further development of the classical logical system of Aristotle, built on the basis of Indo-European languages. This system of logic is also, to a certain extent, restricted by language categories of Indo-European languages. The notion of predicate in mathematical logic is opposed to the notion of variable, an example of which is the grammatical category of case in Indo-European languages. Hence, speakers of Indo-European languages can easily associate predicate with a variable.

Phrase Structure Rule by Noam Chomsky. According to Chomsky, phrase structure rule is a deep underlying structure of sentences, universal for all human languages. For example, among these rules there is:

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S = NP + VP
                  (Sentence = Noun phrase + Verb phrase)
but not:
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$$S = NP + NP$$
 (Sentence = Noun phrase + Noun phrase)

The latter construction, however, is frequently used in Chinese. For example:

Lu Xun Zhejiang ren (Lu Xun was from Zhejiang).

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6. Lu
           Xun
                    Zhejiang
                                  ren.
   Lu
           Xun
                    Zhejiang
                                 person
   "Lu Xun was from Zhejiang."
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Mingtian xingqiyi (Tomorrow will be Monday).

7. Mingtian xingqiyi. Monday tomorrow "Tomorrow will be Monday."

Ta gang shi qi sui (He has just had his seventeenth birthday).

8. Ta shi sui. gang qi **3**S year iust ten seven "He has just had his seventeenth birthday."

Ta yi shen hong yifu (He is dressed all in red).

9. Ta vi shen hong vifu. **3S** one body red clothes "He is dressed all in red."

Chomsky's assertion, that the underlying structure of all national languages is alike, was most likely inspired by the syntactic organization of English.

The isomorphism of language categories implies that cultural categories are influenced by language and have a structure similar to that of language categories. Therefore, the prototype of culture is determined by language. Cultural categories form cultural spirit. Therefore, cultural spirit is formed by language. The Sapir-Whorf hypothesis, thus, is also a theory of the isomorphism of language categories (Whorf 1969, pp. 207–20).

Even though language casts orbits of thinking, the correspondence of language and cultural categories is not absolute. For example, those categories of lexicon, which did not previously exist in language, can be inferred and obtained through experience. This is the basis of the formation of new words. Counter-thinking and analogy also allow the formation of supernatural language categories. For example, on the basis of the decimal and binary systems in natural languages, we can by analogy infer base 3, base 4, base 5, and any other systems, thus creating new categories of new systems that we did not have in natural languages before.

The correspondence of language and cultural categories in grammar is not absolute, either. The meaning of a certain grammatical category in one language can be expressed by means of lexical expressions and phrases in another language. For example, Chinese has no grammatical category of number. However, singular and plural can be conveyed in Chinese by means of lexical expressions. Compare the following sentences:

There is a white cloud in the sky.

```
1. Tian
                                        duo
            shang
                      you
                               yi
                                                 bai
                                                           yun.
                                                           cloud
  skv
            up
                      exist
                               one
                                        flower
                                                 white
   "There is a white cloud in the sky."
  (Singular is expressed by the numeral yi [one].)
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There are white clouds in the sky.

- Tian shang you xie bai yun. sky up exist some white cloud "There are some white clouds in the sky." (Plural is expressed by the indefinite classifier xie [some].)
- 3. Tian shang you haoxie bai yun. sky up exist many white cloud "There are many clouds in the sky."

 (Plural is expressed by the indefinite classifier haoxie [many].)
- 4. Tian shang you bai yun. sky up exist white clouds "There are white clouds in the sky."

 (Number is not specified.)

The phenomenon of the isomorphism of cultural and language categories can be observed in all cultures. However, this correspondence is not absolutely strict. Language influences modes of thinking by casting orbits of thinking. Then, through modes of thinking, language can influence the cultural spirit of the nation. It would be erroneous to say that language determines modes of thinking and cultural spirit. In fact, besides language, cultural categories are also interrelated with objective phenomena of the world, and with the innate structure of thinking common to all human beings.

On the Isomorphism of Cognition

Although the category of number can be expressed in Chinese by means of lexical expressions and phrases, it will always be different from the expression of number in English. In order to explain another aspect of the influence that language has on the cultural spirit of a nation, I propose a theory of the "isomorphism of cognition." The essence of this theory is as follows: People with orbits of thinking cast by a certain language are accustomed to using a fixed set of methods determined by this language to perceive and analyze things. To explain this process, we should first distinguish between two key concepts. The first is "strict category," and the second is "broad category." The sentences below reflect the main difference between these categories:

The cup has been broken.

- 1. Beizi gei za po le. cup give smash break PF "The cup has been broken." (Passive marker: gei.)
- 2. Beizi bei za po le.
 cup PAS smash break PF
 "The cup has been broken."
 (Passive marker: bei.)
- 3. Beizi za po le.
 cup smash break PF
 "The cup has been broken."
 (No passive marker used.)

In all sentences above, the noun, "cup" is the recipient of the verb "break." In English, a recipient serving as the subject of the sentence should be followed by the verb in the passive voice. In other words, the verb denoting passive meaning should be in a morphological form of the passive voice (i.e., "to be broken"). Verbs expressing passive voice in Chinese can be

modified by passive markers gei or bei. However, when the semantic relationship between words in the sentence is clear from the context, the indicator of passive in Chinese can be omitted. This process of inferring meaning from the context, without making use of any formal grammatical indicators, will be called "context related cognition." This is an important difference between the expression of the passive in Chinese and English. A morphological indicator of passive voice is compulsory in English, even when the relationship between words is clear from the context. In Chinese, however, the use of a passive marker is optional.

Passive is a strict grammatical category in English, and a broad grammatical category in Chinese. The difference between these two categories lies in the compulsory or optional use of grammatical indicators.

Indo-European languages know many strict grammatical categories, such as gender, number, case, tense, aspect, manner, mode, and mood, whereas most of grammatical categories in Chinese are broad. If a language contains many strict grammatical categories, it will be called a strict language, whereas a language consisting of many broad grammatical categories will be called a broad language. Indo-European languages are by nature strict, while Chinese is broad.

One characteristic trait of Chinese is that the majority of sentence component parts can be omitted in conversation. In Indo-European languages, on the contrary, very few sentence component parts can be thus omitted. This has already become the central issue in language and culture comparisons between China and the West discussed by many scholars. This difference between Chinese and Indo-European languages is often explained with the help of psychological factors such as "like to omit" and "not like to omit." However, if we go one step further, and try to explain what brings about the "like to omit" and "not like to omit" psychological factors, we will end up in circular reasoning. I think that whether a language can omit sentence component parts or not is based on the deep ontology of this language. Languages that tend to omit component parts of sentences are languages with broad grammatical categories. Those that cannot omit component parts are languages with strict grammatical categories.

Hence, the opposition of strict and broad categories determines the possibility of "omission" of language categories. Furthermore, this opposition dictates the choice between the mode of thinking consisting of understanding based on the inner structure of the language or the mode consisting of understanding based on context. The opposition of modes of thinking in this case is between methods of analysis proceeding from a part to the whole and methods of understanding from the whole to parts.

Strict grammatical forms cannot be omitted in strict languages due to the

strict relations between words. The process of semantic understanding in such languages goes, in most cases, via the inner structure of the language, forming a dependency of understanding on this inner structure. The mode of thinking dominating in such languages is an understanding of the whole from its constituent parts. Here, thinking proceeds from finding basic factors constituting the examined object and the strict relationships between these factors, to the explanation of the whole of the examined object. Since the whole of the examined object is understood through the relationship between its constituent parts, this relationship is presented as quantified and logical. For example, the analysis of the phenomenon A/B in such a language will consist of first distinguishing between basic factors A and B, then understanding the relationship between A and B and, finally, understanding the phenomenon A/B as a whole.

In broad languages, broad grammatical forms can be omitted due to the nonstrictness of grammatical categories. In such languages the process of semantic understanding consists of inferring meaning from the context. This forms a dependency of understanding on the context. The mode of thinking typical for such type of languages is an understanding of the consisting parts through an understanding of the whole of the examined object. A characteristic feature of this mode of thinking is that it always considers phenomena in bigger environments. For example, a phenomenon A/B in such a language will be considered in the following way: The value of the whole of the examined object A/B will be made clear in various language surroundings (e.g., XABY and WABY). The relationship between an event, an entity, and its environment is complex, and often cannot be understood through simple logical and quantified relations. An understanding of the whole of the examined object requires multiple and multilayered analysis, understanding and mastering, and analogy and association. Therefore, the mode of thinking that proceeds from the whole to its consisting parts, called here "broad mode of thinking," is always accompanied by analogy and association.

The influence of strict and broad types of languages on culture can be clearly manifested by the opposition between the traditional cultural spirit of China and that of the West. Confucianism, Daoism, and Buddhism are often considered as the three pillars of the traditional Chinese cultural spirit. These cultural movements are distinctly different from each other, but they share the same mode of thinking. All three advocate understanding and mastering of the whole of studied objects by means of analogy and association. The idea of Lao zi (Old Master), that "The Way gave birth to one, one gave birth to two, two gave birth to three and three gave birth to all things," analyzes the world by proceeding from the whole to its consisting parts. The eight trigrams in the Zhouyi (Book of Changes) consist of broken and/or long

lines. The eight initial trigrams form the 64 hexagrams. Laozi's ideas, that "all things of the world are born from existence [you] and existence is born from nonexistence [wu]," and that "misfortune relies on fortune, fortune hides in misfortune," both reflect an understanding of the organic connection between things. The Confucian explanation of "benevolence" (ren) does not start from the analysis of the inner structure of this concept, either. On the contrary, Confucius proceeded from the whole of the concept and explained the character of "benevolence" through analogy. Hence, Confucius never gave a conceptual definition of this term. This method of understanding, analogy, and association is also reflected in educational sayings by Confucius, such as "learn new things by reviewing old things," "learning without thinking leads to confusion, thinking without learning leads to perilous circumstances," and "study without getting bored, teach others without respite." The Chinese Chan (Zen) sect of Buddhism paid even more attention to "self-examination" and "sudden recollection." Man, in Chinese philosophy, is regarded as an integral part of nature. Chinese philosophy has always considered the world as a whole, which inevitably leads to broad analogies and associations. The relationship between five notes of traditional Chinese music (gong, shang, jue, zhi, and yu), and between the five classes of initials in ancient Chinese phonology (glottals, velars, palatals, dentals and labials) with the study of the five phases, is marked by analogy and association. The twelve signs of the zodiac, the twelve laws of the juridical system, the twelve time periods of a day, the twelve animal signs related to the year of one"s birth, the twelve veins and arteries of acupuncture points, are likewise interconnected through analogy and association. The two opposite principles (yin and yang) of heaven and earth, of rhymes and tones, of vital energy and blood, of men and women, likewise have the property of analogy and association. These modes of thinking are dramatically different from the methods of Western philosophy, which consists of initial division of the studied objects into their smallest parts, of a structural analysis of quantitative and structural relations between these parts and, finally, of logical deduction.

The principle of understanding advocated by the Chan school of Buddhism is not simply the result of the transmission of Buddhism from India to China. In fact, the native tradition of Confucianism and Daoism had already developed the principle of understanding of the whole from its constituent parts prior to the time when Buddhism began its eastern expansion into China. Moreover, the principle of understanding was the only element of Buddhism that took roots in Chinese soil. Buddhist logic, for example, has never been fully developed in China. Furthermore, the principle of understanding is much stronger in Chan Buddhism than in Indian Buddhism, for after Buddhism entered China, it was assimilated by the concepts of understanding of researched objects as a whole, analogy, and association of Chinese culture. Afterwards, Buddhism in its turn influenced Confucianism and Daoism.

Other elements of Chinese culture are likewise marked by an understanding of the whole of the researched object, analogy, and association. In Chinese traditional medicine, for example, physiological functions, processes, and pathological changes are examined in the context of the physical state of the body as a whole. For this reason, anatomy has never played an important role in China. Instead the circulation system of the human body and the system of deep breathing exercises (qigong), which control local illnesses on the basis of general maintenance of the body, were both considered to be of particular importance. Many other categories have developed together in Chinese traditional medicine. For instance, the two opposite principles in nature (i.e., the feminine and negative yin, and the masculine and positive yang), the five phases, the twelve veins and arteries, chills and fever, true and false, are used to explain physiological functions, processes, and pathology by analogy with other phenomena of the world. These categories and methods of treatment are in marked contrast with Western anatomy and cytology, which treat the whole starting from its consisting parts.

In literature, the methods of "analogy" and "allusion" in the Shijing (Book of Odes) are typical examples of analogy and association. As long as there is the slightest relation between things, the Chinese easily connect them through analogy and association. Tang poetry creates in the reader a certain frame of mind that is achieved through the blending of subjective states and objective situations. This is a significant manifestation of understanding of the whole, analogy, and association in the Chinese cultural tradition. It contrasts with the plot and the psychological analysis that are found in epic poems and drama of the Western literary tradition.

Chinese painting often depicts the "spirit" and "tone" with methods such as techniques of representing irregular surfaces with color added to them, as well as an opposition between dry and humid, shadowy and light, real and unreal, loose and dense layers. This is likewise different from the Western tradition of depicting the "form" and the "plot" in painting by using perspective.

Chinese music uses the general method of melody, and frequently employs analogy and symbolism imitating sounds of the world. This is, again, quite the opposite of the Western musical tradition based on structural analysis and harmony.

The opposition between the understanding of the researched object as a whole, analogy, and association in China, and the structural analysis and logical deduction in the West, is likewise manifested in many other cultural phenomena. This basic clash between the Chinese and Western modes of thinking has resulted in the appearance of numerous important concepts and theories in China and the West.

Understanding of the researched object as a whole, analogy, and association pay particular attention to the organic relations between things and are particularly deep and significant in Chinese culture. For example, the twelve veins and arteries in Chinese traditional medicine, and in *yin* and *yang* philosophy, are valuable cultural phenomena. Many categories of the Chinese traditional culture, such as the Way, *yin* and *yang*, *qi*, appearance and carriage, frame of mind, and others, as well as prepositions such as "heaven and people are united in one," are obtained through understanding of the whole from its consisting parts, analogy, and association. The Chinese system of deep breathing exercises (*qigong*) is an even better illustration of this type of thinking.

Conclusion

Due to the structural difference between Chinese and Indo-European languages, both types of languages differ considerably in the orbits of thinking they cast and in the way they influence the cultural spirits of their respective territories (i.e., China and the Western nations). The Indo-European cultural spirit is dominated by knowledge, whereas the Chinese cultural spirit is marked by understanding of the researched object as a whole. The main factor that has played a role in creating this difference is the strict character of the Indo-European languages and the broad character of the Chinese language. This influence is cast through the similar structure of language categories and of language cognition. The influence of the latter appears to be more considerable than that of the former. On the level of the similar structure of language categories, cultural categories of two nations can, to a certain extent, influence each other when two cultures come into contact. Cultural categories of one nation can penetrate the cultural categories of another nation—which, as a consequence, leads to a mutual exchange of relevant vocabulary. On the level of the isomorphism of cognition, the transition of strict categories into broad and vice versa during cultural contact is a much more complex process. Following recently enlarged contacts between the Western and Chinese cultures, vocabularies of Indo-European and Chinese languages have exchanged a number of important items. Thus, the influence cast by the isomorphism of language categories on the difference between cultural spirits becomes, therefore, ever weaker. However, the isomorphism of cognition still plays a latent role in the differences between these two types of cultures. The differences between language categories of strict and broad languages still remain easily perceivable. It is exactly this difference

between strict and broad types of languages that is the major factor in the possibility of omitting certain language categories, and which distinguishes a strict language and knowledge-oriented cultural spirit from a broad language and understanding-oriented cultural spirit. This opposition between two types of languages and cultural spirits can be summarized as follows:

- Indo-European Languages. Strict languages -> Strict orbits of thinking → Structural analysis → Logical deduction → Knowledge-oriented cultural spirit
- Chinese. Broad language \rightarrow Broad orbits of thinking \rightarrow Understanding and understanding of the studied object as a whole → Analogy and association -> Understanding-oriented cultural spirit

Conversely, differences between cultural spirits bring about differences between languages. For example, the embodiment of the cultural spirit literary texts influence considerably the language they are written in. Theoretically speaking, one language can have an unlimited number of literary texts. (Literary texts are limitless; any syntactic phrase, sentence, or story can be regarded as a literary text.) However, due to the influence of the cultural spirit, one language and culture often has only one characteristic literary style. For example, the scientific literary style is typical for Indo-European languages and cultures, whereas the poeticized literary style is common for the Chinese language and culture. As time goes by, this literary style is concentrated in proverbs, words, and even morphemes. The cultural spirit is thus accumulated through time from the literary style into the language. Hence, the differences between knowledge-oriented and understanding-oriented cultures become even more solid. Therefore, the transition from the literary style to the assembly of proverbs is the way cultural spirit influences language. This is, of course, the formation of the lexicon of a language. In the past expressions like "man is an integral part of nature," yin and yang, "the five phases," fengshui, "a frame of mind," "poetic quality," and others were understood as components of literary texts. However, nowadays they entered into common Chinese lexicon. This process can be understood as being the opposite of the isomorphism of language categories.

Cultural spirits can, likewise influence broad and strict categories. The understanding oriented cultural spirit of the Chinese nation makes Chinesespeaking people in their speech rely more on context, and not employ already existing broad categories. This makes these broad categories become broader, which in turn makes it more difficult to develop in the direction of a strict language. As has been shown in our research, from the two types of forms below, the Chinese will often choose the first and avoid the second, if in this way they can achieve the purpose of communication.

Broad categories not used			Broad categories used	Reason for not using symbols of broad categories
Cup	da po hit break p has been		Ba beizi da po le. PTR cup hit break PF "To break the cup"	
			Beizi bei (gei) da po cup PAS give hit break "The cup has been broken."	le. Limitations of the semantic PF structure of the context
been ea	already bu chi	eat Pl le. PF dy	, ,, , , , , , , , , , , , , , , , , , ,	le. Limitations of the PF semantic relations in the context

Contrary to the use of the above sentences by the Chinese, students of Chinese who natively speak Indo-European languages prefer to use sentences from the second column of the table above. In other words, they avoid using broad language forms, and instead concentrate on the inner structure of sentences. Thus, the mutual formation of language and cultural spirit enlarged the difference between the cultural spirits of China and the West.

Abbreviations

1, 2, 3	1st, 2d, 3rd person personal pronouns
DUR	Durative aspect expressed by the particle zhe
PAS	Passive voice expressed by the particle bei
PF	Perfective aspect expressed by the particle le
PTR	Pretransitive particle ba used to mark a direct object preceding a verb
S	Singular

Editor's Note

 Transcriptions and glosses have been added to the examples given in the text in order to show the structure of the Chinese sentences commented upon by the author.

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