On Memes and Memetics in Language

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Memetics is a theory for interpreting cultural evolution. Memes, invented to suggest a strong analogy with genes, are ideas that spread through human cultures and across the generations. Memes in language can be reflected in education and knowledge impartment, idiomatic usage of words and phrases, and casual exchanges in communication. They can be replicated and transmitted in two ways: the same content in different forms, and the same form with different contents. This paper analyses the impact of language memes on translation, culture and language teaching and learning. Research into memetics and memes in language would shed new light upon language understanding, its evolution and development, as well as language in social-cultural communication.

Keywords: memetics, genes of culture, language memes, memetic genotype and phenotype

1. Memetics and memes

Memetics is an alternative theory that attempts to explain cultural evolution based on Darwinist evolutionary views. Memetics tries to interpret, from both synchronic and diachronic perspectives, universal relationships among objects and the essential characteristics of cultural inheritance. The central term of memetics, *meme*, by analogy with 'gene', came from a Greek root with the meaning of imitation. It first appeared in Richard Dawkins's book *The Selfish Gene* (Dawkins, 1976: 206).

According to Dawkins, a meme is a replicator, a unit of cultural evolution, which makes it possible for human ideas to evolve in manners similar to biological evolution. In point of fact, Dawkins presents two versions of the definition of a meme:

- A meme is "a unit of cultural transmission, or a unit of imitation", and "examples of memes are tunes, ideas, catch-phrases, clothes fashions, ways of making pots or of building arches" (Dawkins, 1976: 206).
- A meme is "a unit of information residing in a brain", and "the phenotypic effects of a meme may be in the form of words, music, visual images, styles of clothes, facial or hand gestures" (Dawkins, 1982: 109).

In other words, "meme" is a term given to a unit of cultural information, and examples of memes are languages, cultural practices or concepts, or social behaviors that can be replicated and transmitted again and again. As Blackmore defines it, "as long as that information can be copied by a process we may broadly call 'imitation', then it counts as a meme" (Blackmore, 1999: 66; but cf. Sperber, 2000).

Some ideas may live longer while others may die soon; ideas may mutate as a result of misunderstanding. Besides, two kinds of ideas when combined may produce a new idea, which has some elements of the original meta-ideas. Given that memes are abstractions, when it comes to describing memes, people often resort to metaphorical means. For instance, in memetics, memes are usually described as "viruses of the mind" (Brodie, 1996), which parasitically infect human minds and alter their behavior, causing them to propagate the pattern. When we say memes are viruses of the mind, it means that they may be passed on from host to host, with varied shapes but fixed patterns. It may not be an easy matter to specify what memes are, but when we find a certain kind of phenomenon appears and spreads (from slogans to melodies, from inventions to fashions, from ideas to behavior patterns), we think it is the power of memes.

Memes are genes of culture, and language is one form of their carriers. There are two ways for language memes to be replicated and transmitted: the same core content being inherited in various forms, and the same set pattern being filled in by different contents. The former is of memetic genotype, and the latter memetic phenotype. In what follows, we attempt to discuss these issues with language use in focus.

2. Replication and transmission of language memes

As cultural genes, memes survive by means of replication and transmission. Memes contribute to language development and, at the same time, they are replicated and transmitted by means of language. In other words, memes and language are closely related to each other. Memetically speaking, language memes contribute to revealing how language gets spread and replicated. Memes in natural language may, as we see it, come from three sources: education and knowledge impartment, idiomatic usage of words and phrases, and casual exchanges in communication.

2.1. Memes from education and knowledge impartment

In the process of education and knowledge impartment we learn from other people words, sentences and expressions, with which we send messages to people, then the people who receive the messages, will have them replicated and transmitted to other people. And it is in the very process (by which the information is continually replicated and transmitted) that memes emerge. For instance, **clone** is a biological term known in Chinese as 无性繁殖 wulxing fan zhi², which was seldom used in daily conversation. However, since the young lamb Dolly, with her surrogate mother, was created by cloning in Scotland, the transliterating of the term **clone** into Chinese as 克隆 ke long² has been learnt and widely used with the connotation of "replicating", "identical copy making":

- (1) a. 她和她姐绝对的**克隆**She's an exact **clone** of her sister
 - b. 这是一台**克隆** IBM This is an IBM **clone**.
 - c. 无良书商猛盗版 **克隆**两万本字典 (《广州日报》1999/04/13 A3) Conscienceless book-sellers pirate violently by **having cloned** 20,000 dictionaries. (*Guangzhou Daily*, April 13, 1999, A3)

Thus, Chinese 克隆 ke^4long^2 (clone) has become a popular meme replicated and transmitted widely in communication among Chinese people. Once new words or loanwords have been introduced and used for communicative needs, those new expressions, after the fashion of a particular group of people, may probably be widely used and replicated as memes.

2.2. Memes from idiomatic usage of words and phrases

Idiomatic usage of words and phrases in people's minds are continually repeated, modified, and changed in language use to form memes. New complexes may result from combinations of old usages, and still some other usages may fade out if less and less people use them.

保姆 bao^3mu^3 is explained as "female servant employed to care for children or to do housework". This word may be substituted by 阿姨 a^1yi^2 , which literally means **auntie** but in daily use it refers to the **female childcare worker** or **housemaid**. It appears to be a fixed usage that most people doing this kind of job are female, and more often than not, when it comes to the childcare worker at the kindergarten, we all think that it is a female. However, this is not always the case as shown in the following news reports:

(2) a. "男阿姨"从大学来

"幼儿园阿姨"这个固定词组,近两年已被一群五大三粗的须眉汉改写了,他们还以男性的刚阳气质和高出一个层次的文化素质而赢得了幼教"女儿国"里大人小孩的认同。(《广州日报》1997/01/12, p. 1)

"*Male auntie" (男阿姨 nan² a¹yi²) Comes from College

The once set phrase "kindergarten 阿姨 a^1yi^2 (auntie)" has in recent two years been rewritten (as *male auntie) by a group of tall and brawny males, who, with masculinity and higher cultural qualities, have commanded the acknowledgement of both adults and children at the "maid kingdom" for preschool education. (Guangzhou Daily, Jan. 12, 1997, p. 1)

b. 胡老师是江西师范大学数学系的本科毕业生,在当地中学教了几年电脑后南来发展,1995年成为"**男阿姨**"。(《广州日报》1997/01/12 p. 2)
Mr. Hu graduated from Jiangxi Normal University. Having taught at a local high school for some years, he came to the south for a new career. In 1995, he became a "*male auntie" (**男阿姨** nan² a¹yi²) at a kindergar-

ten. (Guangzhou Daily, Jan. 12, 1997, p. 2)

Regardless of the contradictory word combination, the expression 男阿姨 nan^2 a^Iyi^2 (*Male auntie) is used idiomatically, replicated frequently and spread widely as a new meme or meme complex emerged into people's verbal communication.

2.3. Memes from casual exchanges in communication

There is a kind of information which results from context improvisation before having itself replicated. Memes of this kind may happen, more often than not, with international business and cultural transactions. Such cross-linguistic, cross-cultural memes may exercise different effects upon different groups of people or upon a single group of people in different areas. A ready example is the code-switching or code-mixing of Chinese and English, which, as a linguistic phenomenon, seems to have become a popular meme among some people in contemporary China, but which is not necessarily universally accepted. Look at the following:

- (3) Hi, 你好呀! This morning 我们对你的 case 进行了 discuss, 我们发现,这件事情不 make sense。所以我们不得不遗憾地告诉你:与这件事相关的所有 project 都将被 cancel 掉。(《广州日报》2004/02/20, B14)
 Hi, how are you? This morning we discussed your case and found that this case did not make sense. Now we are sorry to tell you that all the projects pertaining to this case will be *cancelled*. (*Guangzhou Daily*, Feb. 20, 1997, B.14)
- (4) "年底跳槽: 跳还是不跳, That is the question!" (《广州日报》2004/11/05, p. 2) Work next year for a new boss or not? That is the question! (*Guangzhou Daily*, Nov. 5, 2004, p. 2).

Obviously, (4) follows Shakespeare's "To be or not to be? That is the question." Code-mixing language, both spoken and written, thus has become a meme, being frequently used, replicated and propagated through people's casual exchanges in their communication.

2. How language memes are replicated and transmitted?

As Blackmore points out, "it is true that we do not understand in detail how memes are stored and transmitted. But we have plenty of clues and we certainly know enough to get started" (Blackmore, 1999: 58). The replication of memes does not necessarily mean that the original and the replicated are identical in terms of both form and content. One thing that should be pointed out is that new meme complexes may emerge as a result of the influence of various contexts. From the perspective of memetics, we can distinguish two replicating patterns of language memes, viz., "same content in different forms" (genotype) and "same form with different contents" (phenotype).

3.1. Same content in different forms—genotype spreading

Ideas or information patterns may become memetic once they get spread and imitated. Memes may have the same or different forms in the process of replication and transmission, whereas the contents they contain may remain the same. The same information may be transmitted with different forms in different contexts, and this kind of meme may be called the genotype, or to use Blackmore's (1999: 61) phrase, the "copythe-instructions" type.

3.1.1. Same information spread directly

Under appropriate contexts, this kind of information can, be transmitted directly with no content changed. Examples are sayings, quotations, slogans, that are widely used in daily interaction:

- (5) a. 高高兴兴上班去,平平安安回家来 gao¹gao¹ xing⁴qing⁴ shang⁴ban¹ qu⁴, ping²ping² an¹an¹ hui²jia¹ lai²。
 - Go to work happily, and come back home safely.
 - b. 鞠躬尽瘁,死而后已 ju¹gong¹ jin⁴ cui⁴, si³ er² hou⁴ yi³ Bend one's back to the task until one's dying day.

People like to use the slogan of (5a) to remind someone of driving safely for work. (5b) is an old proverb. It is used when someone is determined to give himself entirely to public service.

3.1.2. Same information spread in different forms

There is a kind of meme that keeps the contents of information unchanged but spreads in various forms. We may say different things that represent the same information. In China, 同志 tong²zhi⁴ (comrade), 师傅 shi¹fu⁰ (master) and 小姐 xiao³jie³ (miss) were widely addressed to a waitress in different periods of time, but later, 小姐 xiao³jie³ (miss), the most popular address was abandoned because it brought up associations of the women who practised prostitution under the cloak of that occupation. Now, in Guangdong Province of China, 靓女 liang⁴nv³ (beautiful girl) is addressed to the waitress in most restaurants instead of 小姐 xiao³jie³ (miss), while in Hubei Province, 翠花 Cui⁴ Hua¹, a girl's common name, is used, which was said to have appeared for addressing a waitress in a popular song entitled Cuihua, serve us some pickled cabbage (sauerkraut).

The same information transmitted in different forms is very popular in Chinese netspeak. The original information of "ugly boy" in netspeak turns out to be either 青蛙 qing¹wa¹ (frog) or 菌男 jun¹nan² (fungous boy), while the original information of "ugly girl" finds its expressions as 恐龙 kong³long² (dinosaur) or 霉女 mei²nv³ (mouldy girl). Sarcastically, both 菌男 jun¹nan² (fungous boy) and 霉女 mei²nv³ (mouldy girl) are modelled on the sound of 俊男 jun⁴nan² (handsome boy) and 美女 mei³nv³ (pretty girl) respectively, but their meanings are just the opposite.

Sometimes, the abbreviations of Chinese *Pinyin* are used instead of their full expressions: 拍马屁 pai¹ ma³pi⁴ (soft-soap) is shortened to PMP, and 弟弟 di⁴di⁰ (younger brother) is shortened to DD. Some Arabic numeral combinations, when read in Chinese, sound roughly like certain Chinese expressions: the combinations of "770" (that sounds in Chinese like qi¹qi¹ling²), "7456" (qi¹si⁴wu³liu⁴) and "8147" (ba¹yao¹si⁴qi¹) are used respectively for their Chinese homophonic expressions of 亲亲你 qin¹qin¹ni³ (kiss you), 气死我了 qi⁴si³wo³ le⁰ (it makes me frustrated and exasperated) and 不要生气 bu²yao⁴ sheng¹qi⁴ (don't be angry).

It holds good for English too. Instead of "before" there is a common shorthand as B4"; the message "ur 2 good 2 me 2 be 4 got 10" has to be deciphered as "You are too good to me to be forgotten." All the phenomena above belong to the meme category of the "Same information spread in different forms."

3.2. Same form with different contents—the spread of memetic phenotypes

This type of meme adopts one and the same form but expresses different contents in accordance with different needs. For instance, the contents of certain folk rhymes, as time goes on, may lose their realistic significance, and in the process of replicating these folk songs, people would keep their forms (e.g., keep the same rhythms, same number of words and lines, or forms of arrangements) but insert new contents in them according to various needs. This kind of "new wine in old bottle" is what we call the phenotype of language memes, which is similar in form but different in content.

3.2.1. Same sound with different meanings

Language memes, with the original structures unchanged, can be grafted in the form of "identical sound with different meanings". This is quite often the case in advertisements, where "4-character phrases" like Chinese idioms are created for specific needs. Compare 一明惊人 yilming² jing¹ren² (amazing the world with bright eyes)— a pseudo-idiom in an advertisement of eye-drops, with 一鸣惊人 yilming² jing¹ren² (amazing the world with a single brilliant feat)—an authentic Chinese idiom. Obviously, the former was a homophonic replica of the latter. While the basic structure "一[...]惊人" of the Chinese set phrase is kept unchanged, the keyword 鸣 ming² (bird's cry) in it was replaced by a homophone 明 ming² (bright eyesight), the meanings of which are certainly different.

3.2.2. Same form association and grafting

Although some language forms do not change, different interpretation or association may occur when they are used on different occasions. There is an advertising slogan, a cosmetic urge, 做女人挺好 zuo⁴ nv³ren² ting³hao³, that can be understood in two ways: if 挺好 ting³hao³ is taken as an epithet 'very good', the slogan means "It is very good to be a woman"; but, if 挺好 ting³ hao³ is taken as a description 'good to have firm and elastic breast', it means "it is good for a woman to have beautiful breast."

Having put forward this cosmetic urge the advertisement agent attempts to make use of the polysemous character *ting*³ (meaning either "very" or "with one's chest thrown out") in the promotion of a cream for firm and elastic breast, trying to attract prospective customers by means of memetic association and grafting.

3.2.3. Same structure with different contents

As language grafts, these are memes in which the form or the structure is the same but the contents are replaced by other words. For instance, since the case of the Watergate Building during R. Nixon's presidency, the word "Watergate" has become a prototype for political or economic scandals concerning high ranking officials in the government or other administrations. As a meme complex, the word combination of suffix-like "x-gate" with any case to be called a scandal has become quite popular. The literal translation of "x-gate" into Chinese"[...] \\capprox "x-men^2" retains the original cultural meaning, and now "[...] \\capprox "x-men^2" in Chinese is broadly replicated as a substitute for \(\mathref{H}\vec{\textit{R}}\) chou³wen² (scandal). Here are some examples of "[...] \(\capprox\)" "x-men² in Chinese:

- (6) a. 垃圾门 *la^lji^l men²* (garbage-gate, a beautiful residential area was once a waste-yard.)
 - b. 拉链门 *la¹lian⁴ men²* (**zipper-gate**, referring to sexual harassment or any sexual scandals);
 - c. 鞋带门 xie²dai⁴ men² (shoelace-gate, the scandal that the footballer was taking a passive attitude toward matches and pretending to tie up his shoelace);
 - d. 秘书门 mi⁴shu¹ men² (secretary-gate, referring to the dispute between a CEO and his secretary, which resulted in the CEO's resignation for his indifference to the subordinates);
 - e. 贿赂门 *hui⁴lu⁴ men²* (bribery-gate, the scandal of a company with a client for a contract dispute).

Recently, with the great success of the TV serial 爱你没商量 ai^4ni^3 mei^2 $shang^1$ $liang^0$ (Love You at My Will), the very title of it has quickly been replicated, resulting in a set of meme varieties on different occasions:

- (7) a. **宰你**没商量 zai³ni³ mei² shang¹liang⁰ Fleece you at my will.
 - b. 骗你没商量 *pian⁴ni³ mei² shang¹liang⁰* Fool you at my will.
 - c. 迷你没商量 mi²ni³ mei² shang¹liang⁰ Infatuate you at my will.
 - d. 炒你没商量 chao³ni³ mei² shang¹liang⁰ Fire you at my will.
 - e. **离你**没商量 li²ni³ mei² shang¹ liang⁰

Divorce you at my will.

The meme grafting of the "same structure with different contents" is not confined to a word or a phrase only, it may sometimes be a sentence, a paragraph or even a text. We know J. Taylor's *Twinkle*, *Twinkle*, *Little Star* from our childhood:

(8) a. Twinkle, twinkle, little star,
How I wonder what you are!
Up above the world so high,
Like a diamond in the sky.
Twinkle, twinkle, little star,
How I wonder what you are!

And we find the similar song sung by the Hatter in L. Carroll's *Alice's Adventures in Wonderland*:

b. Twinkle, twinkle, little bat,
 How I wonder what you're at!
 Up above the world you fly,
 Like a tea-tray in the sky.
 Twinkle, twinkle—

Rhetorically, it reminds us of the parody, a piece of writing which copies the style of someone well-known in an exaggerated and sarcastic way. Thus the following parody replicates from the prose *Transient Days* by 朱自清 (Zhu Ziqing, 1898–1948), a famous writer in modern China. Let's look at the first paragraph of Zhu's prose:

(9) 燕子去了,有再来的时候;杨柳枯了,有再青的时候;桃花谢了,有再开的时候。但是聪明的,你告诉我,我们的日子为什么一去不复返呢? If swallows go away, they will come back again. If willows wither, they will turn green again. If peach blossoms fade, they will flower again. But, tell me, you the wise, why should our days go by never to return?' (see Zhang 1999: 75)

The following are two of the replicated memes, the contents of which are somewhat sarcastic, totally unrelated to the original text:

- (10) a. 股票跌了,有再涨的时候;工作没了,有再找的时候;老婆跑了,有再娶的时候。但是聪明的,你告诉我,我们的风险融资为什么一去不复返呢? If stocks go down, they will rise up again. If I lose a job, I will find a new one. If my wife runs away, I will marry another. But, you the wise, tell me, why should our risky fund-raising be gone forever?
 - b. 硬盘小了,有再换的时候;内存低了,有再加的时候;屏幕窄了,有买的时候。但是,聪明的,你告诉我,为什么刚买的电脑就出现故障呢?

If the hard disk gets too small, it will be replaced. If random access memories are too low, more will be added to. If the screen is too narrow, a wider one will be bought again. But, tell me, you the wise, why should my newly-bought computer break down so soon?

4. The significance of meme studies

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In what follows, we attempt to explore some new light that meme studies might shed upon language studies.

4.1. Memes and translation

Chesterman may be one of the first to introduce meme theory into translation studies. He proposes the theory of *Translation memes* (Chesterman, 1996; 1997). According to Chesterman, some translation memes may disappear as a result of not being universally accepted, while some may become popular for a period of time before being replaced by new meme complexes. Still some others seem to be very powerful and able to survive. Chesterman argues that there exist a great many *translation memes*. On the one hand, each meme is the result of replication and inheritance of previous memes; on the other hand, the meme may have variations in the process of replication and transmission for better survival.

As we said earlier, meme replication does not guarantee the same content or the same form during its replication and transmission. This is also true for *translation memes*, too. The process of translation meme replication is dynamic rather than static: something may be added or abridged. We hold there exist various kinds of memetic genotypes and memetic phenotypes in the meme pool of translation. The former (the genotype) means that the transformation from source language (SL) to target language (TL) is a vertical, direct transmission of the original information in terms of semantic or pragmatic equivalence. As for the latter (the phenotype), it means that the transformation from SL to TL is a process of non-equivalent horizontal replication and transmission, where the TL can be represented in various ways: paraphrases, excerpts, briefings, free renderings, etc., according to different needs. We believe that memetic theory is conducive to deepening our understanding of *translation memes* and making new contributions to translation studies.

4.2. Memes and culture

As cultural genes, memes can be passed on non-genetically from generation to generation by imitation. Memes are closely related to culture. The cultural load of language are the time-standing cultural prints of speech—accents, usages, the way of saying things, etc. There is no denying that some profound cultural allusions in Chinese can be understood only by the people of considerable Chinese culture. See the follow-

ing example (He, 2000: 358):

(11) "…… 序言事我以为不必,因为足下现在创业时期,一切宜自创新义。倘使我 …… 有权威性见解,又当别论,但我所知不如足下,装样不如藏拙,谅为足 下谅解。否则**沐冠于市**,反为识者所笑。"

I don't think it necessary to write a preface for your work because you are now doing pioneering work and every effort should be exerted to produce something original. If I...had authoritative understandings, it would be another matter. Since you are more knowledgeable than I am in this respect, it is better to hide my ignorance than to put on a silly show. Please forgive me, or the wise will laugh at me for 沐冠于市 $mu^4guan^4yu^2shi^4$ (=pretending to be an authoritative figure.)

The expression 沐冠于市 $mu^4guan^4 yu^2shi^4$ in the above example originated from the idiom 沐猴而冠 $mu^4hou^2\ er^2\ guan^4$, whose literal meaning is simply "a monkey with a hat on", but it is usually used to refer to a worthless person dressed up as an important figure. This idiom as a meme has been replicated and passed on for a long time. Sometimes, people use the original phrase 沐猴而冠 $mu^4hou^2\ er^2\ guan^4$ directly, while other times they use its variant as was the case in the example above. No matter whether we use the original idiom or its variant, this language meme, full of cultural load, is replicated continually in people's communication and interaction.

Language memes are related to native, as well as non-native culture. The memes with Chinese culture, formed and spread in language, may originate from the actor's lines in TV programs:

(12) 钱不是万能的,但没有钱却万万不能。

Money is not everything, but without money you're absolutely nothing.

The structure "[…] 不是万能的,但[不/没有…] 万万不能" (x is not everything, but without x you're absolutely nothing) has now been spread everywhere as a popular meme:

- (13) a. 懂外语不是万能的,但不懂外语却万万不能
 - A foreign language is not everything, but without a foreign language you are absolutely nothing.
 - b. 老婆**不是万能的**,但**没有**老婆**万万不能**。
 A wife is not everything, but without a wife you are absolutely nothing.

Now the Chinese version of the famous line from *Ode to the West Wind* by P. B. Shelley (1792–1822)—"If Winter comes, can Spring be far behind?"(冬天来了,春天还会远吗?) is often replicated to form a meme complex of "same structure with different contents"—If x, can y be far behind? (如果/要是/x, y 还会远吗?):

(14) a. 如果阳光回来了,温暖还会远吗?

If sunshine returns, can warmth be far behind?

- b. **你要是**坚持学习,成功**还会远吗**?

 If you persist in the study, can success be far behind?
- c. 小贝来了,辣妹**还会远吗**?

 If Beckham comes, can Victoria be far behind?'

These examples have illustrated to some extent the close relationship between language memes and culture. By integrating cultural knowledge in the observation of language memes we might obtain a deeper understanding of language and use it appropriately.

4.3. Memes and language teaching and learning

We believe that memetic theory can shed light upon language teaching and learning, and upon foreign language teaching and learning in particular. Within the framework of memetic theory, some traditional teaching methods and arguments that have been abandoned or regarded as irrational or undesirable should be re-evaluated or readvocated. For instance, reciting lessons from memory is in fact an effective way of language learning, and we must think highly of the positive role of imitation.

According to the laws of memetic evolution, language learning is a process of replicating and spreading memes. The students learn something from books or from people by means of imitation and replication. They should learn not only how to express the same information in different ways, but also how to use the same form to express different contents.

In language teaching, we should make the students obtain the skills of using different structures according to the context to express the same thought; meanwhile, we should make them learn to use idiomatic English expressions to communicate various thoughts with other people. For all this, however, the students should first be encouraged to learn by heart as much as possible.

The memetic theory makes us realize that it is both important and useful to foster imagination or awaken association in language teaching and learning. Look at the following sentence:

(15) I don't think there's much to choose between the two, but on the whole I prefer yours.

This sentence, which appears in *Linguaphone English Course* (Lesson 8, book 1), is about comparing two houses. The students may be asked to learn it by heart and try to replicate the same structure ("...not much to choose between...") to compare different things according to different contexts. They may be encouraged to imagine two different books, papers, meals, clothes, etc. and then compare them using the above structure. We believe that further studies of memes will probably make more positive contributions to language teaching and learning.

5. Conclusion

Memes and memetics introduce the view of *information replication* into language studies. The two ways memes get replicated and propagated (i.e., "same content in different forms" and "same form with different contents") can account for the laws of self-replication and evolution of memes as cultural genes. Further research of those laws may contribute to a better understanding of the emergence and doom of certain language phenomena in social interaction.

The replication and transmission of memes may have either positive or negative effects upon social interaction. Certain language policies and language planning must be formulated so as to guide the use of language, inhibit the self-replication of pernicious memes and create a healthy language environment.

Language memes find expression in education and knowledge impartment, idiomatic usage of words and phrases, and casual exchanges in communication. Research into the replication and transmission of memes in language will probably contribute to language teaching and learning, as well as translation studies.

References

Blackmore, S. 1999. The Meme Machine. Oxford: Oxford University Press.

Brodie, R. 1996. Virus of the Mind: The New Science of the Meme. Seattle: Integral Press.

Chesterman, A. 1996. "Teaching Translation Theory: the Significance of Memes." In: C. Dollerup and V. Appel (eds.) *Teaching Translation and Interpreting 3*, 63-71. Amsterdam: John Benjamins.

Chesterman, A. 1997. Memes of Translation. Amsterdam: John Benjamins.

Dawkins, R. 1976. The Selfish Gene. New York: Oxford University Press.

Dawkins, R. 1982. The Extended Phenotype. Oxford: Oxford University Press.

He, Z. 2000. Explorations in Pragmatics. (in Chinese) Guangzhou: World Book Publishing Company.

Sperber, D. 2000. "An Objection to the Memetic Approach to Culture." In: R. Aunger (ed.) Darwinizing Culture. The Status of Memetics as a Science, 163-173. Oxford: Oxford University Press.

Zhang, P. 1999. Selected Modern Chinese Prose Writing (Annotated bilingual edition). Shanghai: Shanghai Foreign Language Education Press.