

Intelligence and Cognitive Psychology Through Idiomatic Prism

Natalya Zavyalova

Ural State Pedagogical University (USPU), Yekaterinburg, Russian Federation

Abstract: The article presents the vision of intelligence and national psychology through the prism of psychological analysis of idiom with 'head' component. I analyze idioms, belonging to 4 idiomatic systems: (Chinese, Japanese, British, American and Russian). With the help of on-line electronic linguistic corpuses (Chinese corpus), KOTONHA (Japanese corpus), BNC (British National Corpus), COCA (Corpus of Contemporary American English) I analyze intelligence and psychology on the basis of idiom frequency indexes.

Key words: Intelligence • Idiom • Cognition • Psychological analysis • Corpus linguistics • Frequency

INTRODUCTION

Among modern challenges the threat of terrorism takes the alarming first place. 11 September 2001(9/11) events made experts all over the world think over the rules of functioning in conditions of global dependency. 'The security and intelligence authorities are charged with the protection of the public' [1].

Understanding of cognitive mechanisms behind national intelligences is of vital importance. Psychologists define intelligence in many ways. I entirely support the propositions, provided by Mark M. Lowenthal in his article 'A Disputation on Intelligence Reform and Analysis: My 18 Theses' [2]. His main idea, relevant to this article is as follows: 'The core function of intelligence analysis is the ability to think interesting thoughts, to see beyond the apparent facts, to bring to bear expertise and to write the results in a clear and compelling fashion' [2].

According to my proposition it is possible to decipher interesting national psychological ideas from idioms and produce intelligence analysis this way. Modern psycholinguistics describes idioms as emotional elements, decoded by left and right hemispheres. "Emotional words trigger activation in other areas of the LH, such as the amygdala, orbitofrontal cortex and posterior cingulate gyrus, as well. These regions have been claimed to be part of the limbic system (Fig. 1), which plays a key role in emotion processing" [3]. "The data from a large body of research based on behavioral, electrophysiological and neuroimaging methodologies appear to converge in indicating that both hemispheres

are involved in the processing of words with emotional meaning, albeit in different and probably complementary, ways." [3].

On the material of Chinese, Japanese, British, American and Russian idioms with 'head' component we build the picture of intelligence and national psychology. We proceed from the idea that 'head' is the container of intelligence. So, the article I make an attempt to examine this container using the data from on-line linguistic corpuses.

Chinese Idioms: My analysis of the Chinese idiomatic system includes the analysis of 4-character idioms. "In Chinese lexical system Chinese idioms are a typical unit. As an individual type in the domain of idioms, most Chinese idioms have some unique qualities. One of the design features of most Chinese idioms on the dimension of form characteristics is the four-character form the Chinese lexicon provides an exact number of the characters in such a unit. According to the statistics given in Zhou [4], up to 95.57% entries in Dictionary of Chinese Idioms are four characters. The uniformity in form regulates to a large extent some other linguistic characteristics of Chinese idioms, specifically phonological and semantic distribution. Compatible with the rhythmical arrangement and prosodic features represented by the two-plus-two syllables, a great number of Chinese idioms consist of double substructures, mostly parallel with each other [5]. Branded with a distinct national style, Chinese idioms mirror the esthetic pursuit of symmetry deeply embedded in oriental thinking" [6].

The Limbic System

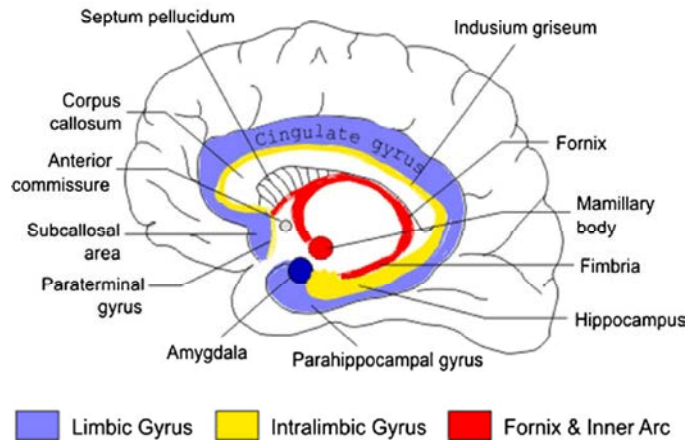


Fig. 1:

For analyzing Chinese idioms frequencies I used Chinese corpus at Leeds University. I provide each idiom with the frequency index, illustrating its usage frequency in the Internet and business Chinese. The most frequent idioms are viewed as the best examples of intelligences strategies, common to Chinese.

Áng2 shou3 ting3 xiōng1-'with one's head up and one's breast put a front'-very proud of oneself [the Internet-230; business Chinese-90]. *Dāi1 tóu2 dāi1 nǎo3*-'silly head, silly brains'-silly [the Internet-148; business Chinese-28]. *Bào4 tóu2 shu3 cuàn4*-'to run away like a rat holding one's head with hands'-to run away in panic [the Internet-105; business Chinese-20]. *Huí2 tóu2 shì4 àn4*-'to turn one's head and find oneself on a safe bank'-to repent and become happy [the Internet-121; business Chinese-39]. *Jiāo1 tóu2 làn4 é2*-'to burn one's head and forehead'-to be in dire straights [the Internet-417; business Chinese-194]. *Sān1 tóu2 liù4 bì4*-'3 heads, 6 hands'-to be extremely powerful [the Internet-109; business Chinese-34].

Idioms with the highest frequencies. *Méi2 tóu2 méi2 nǎo3*-'not to have neither head, nor brains'-to act thoughtlessly [the Internet-403; business Chinese-38]. *Chè4 tóu2 chè4 wú3*-'to have both a tail and a head'-complete, from head to bottom [the Internet-482; business Chinese-300]. *Chū1 rén2 tóu2 dì4*-'to surpass others by head'-to surpass, to be superior to others [the Internet-482; business Chinese-205].

The analysis of Chinese idioms demonstrates that the idioms with the highest frequencies correspond to the unanimous psycholinguistic stereotypical opposition 'high-low'. Besides this observation, we have to stress

that absence of head and brains is viewed as a negative trend, which is also frequently highlighted in conversation. Intelligence is perceived by Chinese as an important feature, necessary for one's completeness, as by the rest of the world.

Japanese Idioms: Japanese phraseology is described through frequency indexes, which I got using corpus data. KOTONHA on-line corpus of modern written Japanese submits the contexts of a considerable time period between 1880 to 2008. This on-line corpus was organized by Japanese ministry of education, sport and tourism in collaboration with national scholars of Japanese. Each Japanese idiom is given with an index of frequency and the years of usage in writing. There is not a clear-cut distinction between the Internet communication and other types of communication as in Chinese corpus, but all idioms used in 2000-2008 were mentioned in Yahoo blogs.

Atama ga aru-'to have a head'-to be clever [46 contexts. From 1890 to 2008. Male contexts-40, female contexts-6]. *Atama ga nai*-'not to have a head'-silly [9 contexts. From 1920 to 2008. Male contexts-40, female contexts-6]. *Atama ga tarinai*-'the head is not enough'-silly [3 contexts. From 1920 to 1950. Male contexts-3, female contexts-1]. *Atama ga hataraku*-'the head works'-clever, intelligent [28 contexts. From 1890 to 2008. Male contexts-18, female contexts-9]. *Atama ga katai*-'the head is firm'-silly [30 contexts. From 1930 to 2008. 11 contexts are during 2000-08. Male contexts-11, female contexts-8]. *Atama ga takai*-'the head is high'-haughty [12 contexts. From 1920 to 2008. 7 contexts are during 2000-08. Male

contexts-3, female contexts-1]. *Atama ga hikui*-‘the head is low’-modest [3 contexts. From 1930 to 2008. Male contexts-3, female contexts-1]. *Atama ga hen da*-‘the head is strange’-strange, crazy [26 contexts. From 1880 to 2008. 4 contexts are during 2000-08. Male contexts-22, female contexts-2]. *Atamani irete oku*-‘to be put into the head’-to consider, to think something over [2 contexts. From 1930 to 2005. Male contexts-1, female contexts-1]. *Atama ni ukabu*-‘to emerge in one’s head’-to imagine something, to recall [373 contexts. From 1900 to 2008. 120 contexts are during 2000-08. Male contexts-150, female contexts-20]. *Atama ni hirameku*-‘to lighten in one’s head’-insight [7 contexts. From 1920 to 1940. Male contexts-7, female contexts-0]. *Atama o waru*-‘to devide one’s head’-to get the very best of something [9 contexts. From 1940 to 1981. Male contexts-4, female contexts-5]. *Atama o marumeru*-‘to make the head round’-to become a monarch. [29 contexts. From 1910 to 2008. 7 contexts are during 1910-08. Male contexts-25, female contexts-5]. *Atama o motageru*-‘to put up one’s head’-to feel recognition [139 contexts. 26 contexts from 1980 to 2008. Male contexts-87, female contexts-40]. *Atama o osaeru*-‘to press one’s head’-to manipulate somebody [64 contexts. 17 contexts from 1990 to 2008. Male contexts-30, female contexts-8].

Idioms with the highest frequencies. *Atama ga warui*-‘a bad head’-silly [102 contexts. From 1900 to 2008. Male contexts-45, female contexts-13]. *Atama o nayamasu*-‘to hurt one’s head’-to worry about something [179 contexts. 80 contexts from 1990 to 2008. Male contexts-69, female contexts-30]. *Atama ni hairu*-‘to enter one’s head’-to understand, to realize [347 contexts. From 1900 to 2008. 125 contexts are during 1990-08. Male contexts-180, female contexts-53].

From the research we see that Japanese idioms with ‘head’ component are bigger in number. They are rather transparent and coincide with world languages trends. There is no need to look for some very special intelligence within Japanese culture. From the point of psycholinguistics Japanese trends fall in line with global concept of intelligence.

British and American Idioms: “The English language in Britain evolves constantly. Foreign words have long been de rigueur (pilfered most notably from the French) and today they’re absorbed from all over the place. In 2007, for example, the word wiki found its way into the Oxford English Dictionary, derived from a Hawaiian word meaning quick but now meaning quick but now applied to a certain type of Internet site. ... Metaphor and simile are equally prone to rapid evolution. The British love new,

glib phrases (it’s a country where pretty much anything can go ‘pear-shaped’, particularly when it’s ‘cheap as chips’), repeated interminably for a couple of years until some intangible social code decides they’re ‘past their sell-by date’... urban Britain is particularly inventive, it’s multicultural streets generating a new tongue for the 21st century with the unstoppable rise of Jafaican. Despite the name, experts claim it’s not actually an affectation but a shift in language born of multicultural mingling in post-war Britain, most notably with the mix of Jamaican, West African and Bangladeshi cultures. Such has been Jafaican’s growth that today you’ll find youngsters from Tower Hamlets to Torquay calling each other ‘blud’ and discussing whether those ‘skets’ is butters” [7].

It’s a common knowledge English is not a homogeneous nowadays. ‘In any discussion of nationalism, identity, or current affairs, language is never ‘innocent’. The choice of words reveals the underlying outlook of the speaker. So for example the word ‘foreign’ in English is much more hostile ...than the German *ausländer*. Latent British xenophobia is revealed in the offensive tabloid expression ‘Johnny Foreigner’. ... to Welsh is to cheat or renege; to Scotch is to thwart, to squash, to prevent; an Irish lanyard is an untidy rope. In other words the names of the three ‘subsidiary’ nations in the British Isles have negative connotations in the language of the dominate one. Thus national prejudice is encoded in the English language’ [8]. ‘Language, accent, vocabulary and idioms of speech form important regional differences. For example, Welsh, a version of which was spoken in Britain when the Romans invaded in 55 BC, is one of the oldest languages in the British Isles. Tens of thousands of people still speak Welsh, adult educational institutions run language courses and since 1970 education in Wales, or *Cymru*, has been bilingual... Also, Gaelic, another variant of the ancient Celtic languages, is still spoken by some people in Ireland, Scotland and , to a lesser extent, the Isle of Man. Accent and idiom vary enormously throughout Britain, although since the 1990s there has been concern expressed over the spread of ‘estuary English’: an outer London accent and dialect characterized by features of pronunciation such as lisped ‘r’s and by words such as ‘basically’[8-12].

In our study we decided to combine British and American variants. Idioms are analyzed by checking frequencies using BNC (British National Corpora) and COCA (Corpora of Contemporary American). This type of analysis is very important as it helps demonstrate to which variety of modern English, British or American, this or that idiom belongs. ‘The Corpus of Contemporary

American English (450 million words) is more than four times as large as the British National Corpus (100 million words). As a result, it often provides data for lower-frequency constructions that are not available from the BNC. ... COCA and the BNC complement each other nicely and they are only large, well-balanced corpora of English that are publicly-available. The BNC has better coverage of informal, everyday conversation, while COCA is much larger and more recent, which has important implications for the quantity and quality of the data overall' (Corpus of Contemporary American).

To bang one's head against a brick wall-to be doggedly attempting the impossible and suffering in the process [BNC-1; COCA-7 (2002-1990)]. *To be hanging over someone's head* (of something unpleasant)-to threaten to affect someone at any moment [BNC-7; COCA-40 (2012-1990)]. *To be on someone's head*-to be on someone's sole responsibility [BNC-2; COCA-4 (2012-1990)]. *To bite someone's head off*-to reply sharply and brusquely to someone [BNC-4; COCA-17 (2012-1990)]. *To hold up one's head*-be confident or unashamed [BNC-5; COCA-26 (2012-1990)]. *To keep one's head above water*-avoid succumbing to difficulties, typically debt [BNC-6; COCA-16 (2012-1990)]. *To make head or tail of*-[usu. with negative] understand at all [BNC-13; COCA-19 (2012-1990)]. *To take it into one's head to do something*-to impetuously decide to do something [BNC-16; COCA-24 (2012-1990)].

Idioms with the highest frequencies. *To put their/our/your heads together*-to consult and work together [BNC-19; COCA-99 (2012-1990)]. *To lose one's head*-to lose self-control; panic [BNC-31; COCA-91 (2012-1990)]. *Head over heels*-turning over completely in forward motion, madly [BNC-38; COCA-208 (2012-1990)]. *To come to a head*-to reach a crisis [BNC-149; COCA-363 (2012-1990)].

From the analyses I see that American and British idioms with the 'head' component tend to follow common trends. The process of 'losing one's head' is viewed as a negative trend. So, intelligence is also very important in these cultures.

CONCLUSION

The research has 2 important conclusions: 1) the idea of 'intelligence' is very important to all cultures under analysis from psycholinguistics point of view; 2) idioms with 'head' component manifest a trend, common to all cultures under analysis. Intelligence is viewed as a major value, losing of which is detrimental to one's wellbeing. These common trends testify to equality of nations and cognitive mechanisms of all nations under analysis.

REFERENCES

1. Sir Omand, D. and M. Phythian, 2013. Ethnicity and Intelligence: A Debate. *International Journal of Intelligence and CounterIntelligence*, 26: 38-63.
2. Lowenthal, Mark, M., 2013. A Disputation on Intelligence Reform and Analysis: My 18 Theses. *International Journal Intelligence and CounterIntelligence*, 26: 31-37.
3. Abbassi, E., K. Kahlaoui, M.A. Wilson and Y. Joannette, 2011. Processing the emotions in words: The complementary contributions of the left and right hemispheres. *Cognitive, Affective and Behavioral Neuroscience*, 11(3): 372-385.
4. Zhou, J., 2004. A study on the structure of Chinese lexicon (hanyu cihui jiegoulun). Shanghai: Shanghai Dictionary Press (in Chinese), pp: 230.
5. Sun, W.Z., 1989. A study on Chinese idioms (hanyu shuyuxue). Jilin: Jilin Education Press (in Chinese), pp: 77.
6. Hui Zhang, Yiming Yang, Jiexin Gu and Feng Ji, 2013. ERP correlates of compositionality in Chinese idiom comprehension. *Journal of Neurolinguistics*, 26: 89-112, pp: 90.
7. Whittaker, A., 2009. Britain: Be Fluent in British Life and Culture. London: Thorogood Publishing Ltd., 400: 40.
8. Storry Mike, 2002. Childs Peter. *British Cultural Identities*.-London: Routledge, 305: 16.
9. Corpus of the Internet and business Chinese. URL: <http://corpus.leeds.ac.uk/query-zh.html>
10. Corpus of Written Japanese. URL: http://www.kotonoha.gr.jp/shonagon/search_form
11. British National Corpus. URL: <http://corpus.byu.edu/bnc>
12. Corpus of Contemporary American English. URL: <http://corpus.byu.edu/coca>