

An algebraic account of categorizations in *Shuowen Jiezi*: Application capacity of Conceptual Blending Theory

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This presentation reports a study concerning the application capacity of the Conceptual Blending Theory (CBT) to Chinese categorizations, in particular *Shuowen Jiezi* (《說文解字》), and is fundamental for studying Chinese semantic categories, modern or ancient.

The CBT has so far been applied exclusively to sentence meaning integration for contending that the total meaning of a sentence be larger than the sum of its parts. The present author's systematic study of *Shuowen Jiezi* indicates that (i) CBT can also be utilized for explaining the ways of Chinese category formation, and that (ii) it is much more powerful than anticipated.

There are three general types of blending: multiplication vs. division, addition vs. subtraction, identical, and cause ^ effect, all of which can be described with the basic algebraic formulae.

(i) Multiplication vs. division: 𠄎 (bì), after 目 (mù, eye) and 大 (dà, large), meaning many times of the multiplication of eyes' expansion: 【大 (目 × 目 × 目) = GROWING LARGE】, a geometric progression; 𠄎 (sè, four feet, 止) means that the more feet the less smooth or even hard-going: 【止 ÷ 止 ÷ 止 ÷ 止 = UNSMOOTH/ HARD-GOING】. There are also the cases of Cause ^ effect that can be placed here: 𠄎, [wù, mound (阜, fù) + towering (兀, wù)], means 'disturbed for inclining danger of something', deriving from the condition that high hills piled up with earth only, the latter being apparently the cause for the worried psychology consequence: 【: [阜 × 兀], (∴ EARTH WEARING HILL, ∴ DANGER CONCERN)】.

(ii) Addition vs. subtraction: 𠄎 (yín) follows the formula '1 + 1 = 2', or 【斤 + 斤 = 2 JIN】, approximately an arithmetic progression; 𠄎 (zī, two 玄's, meaning black + red): 【玄 v 玄 = BLACK】, where the 'red' feature is removed; addition and multiplication may go together with some other categorizations, as in 𠄎 (xún): 【泉 * 泉 * 泉 ≤ THREE/MANY SPRINGS】 (* as combination of '+' and 'x').

(iii) Identical, as in 赫 (hè): the meanings of 赫 (hè) and 赤 (chì) are fundamentally identical because 赤 (chì) is integrated from 大 (dà, big) and 火 (huǒ, fire) and almost means the same as 赫 (hè), both being salient in the color of fire: 【赤 = 赤 = RED AS FIRE COLOR】.

In one word, all the semantic categories in *Shuowen Jiezi* can be described as one of these ways, which hence illustrate the explanatory power of CBT.

Key words: Conceptual Blending Theory; algebraic operation; *Shuowen Jiezi*; categorization