This short but ‘everywhere dense’ study of a subject spanning many cultures and whose roots are to be sought in all sorts of aspects of human activity such as poetry, music and religion is at the same time wide-ranging and incredibly detailed. First, the article begins with a description of the 64 hexagrams found in the famous *Book of changes* (*Yijing*) and of the 81 ternary tetragrams introduced in Yang Xiong’s (53 BC – 18 AD) *Canon of supreme mystery* (*Taixuan jing*). Second, the presentation of Sanskrit prosody is associated with Morse code sequences and Fibonacci numbers. Then, the similar themes of Greek and Latin prosody and music lead us from antiquity to Athanasius Kircher’s (ca. 1601–1680) *Mursurgia universalis* where an enumeration of all three and four notes rhythms is attempted. Third, early lists of permutations and combinations and similar topics, including John Wallis (1616–1703), Seki Takakazu (1642–1708), Bhāskara II and his *Lilavati* (ca. 1150) and as-Samawal (ca. 1130 – ca. 1180), Ramon Llull (ca. 1232–1316) and others follow. Fourth, the topic of permutable poetry appears all the more interesting that it has attracted the interest of mathematicians from the 17th century, including Leibniz, J. Wallis and J. Bernoulli. Remarkably, the author does not limit himself to an enumeration of the related facts but also presents on this occasion the long history of a difficult problem concerning the number of distinct permutations of a certain hexameter verse obeying the strict rules of the Latin classical hexameter: the problem in question was solved only in 1902 and depends on what is now called the backtrack method (p. 24) – here, we in passing that in the widely different Chinese domain, a similar problem concerning ‘palindromic’ poetry (Huìwen shì and Xuanji tu) also exists with attempts of enumeration of poems, the constraint being determined this time not by the rules of prosody but, quite differently, by the fact that Chinese characters do not belong to rigid syntactic categories. Fifth, Japanese partitions found in the *Genji Incense game* (ca. 1500) are introduced and are associated with related European topics. Sixth, beyond partitions, the author does not forget the trees with Cayley and Catalan and lastly a glimpse into what happened after 1950 with the arrival of electronic computers is provided.

For the entire collection see [Zbl 1269.01001].

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MSC:
01A05 General histories, source books
05-03 History of combinatorics
01-02 Research exposition (monographs, survey articles) pertaining to history and biography

Keywords:
combinatorics; *Book of changes* (*Yijing*); *Mursurgia universalis*; *Canon of supreme mystery* (*Taixuan jing*); prosody; poetry; music; Sanskrit language; Greek language; Latin language; Morse code sequences; Fibonacci numbers; permutations; combinations; backtrack method; *Lilavati*; *Genji incense game*; partitions; electronic computers

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