

Binaries

Code may be simplest when it is set in binary relations of 0 and 1. This notion will be particularly attractive as a model for coding in binaries now that computer programme design is familiar—or at any time since OFF/ON became a common mode of comprehension. In computer bytes, or for that matter in the scheme of light switches, say, at top and bottom of a staircase—turn off or on at the top of the stairs or turn off or on at the bottom—binary relations can be linked and bundled with wonderful practical applications, all the while utilising what can be represented by only 0 and 1.

Also binary are 1 and 2 when they are the terms of the set. In graphic design—in the realm of extensional patterns in solid materials—where 0 and 1 do not work, the most elementary binary set is 1 and 2. An extension 1 can be doubled or halved, then cut into thirds and fourths, and so on, by maneuvers of the kinds illustrated in the ‘arithmetical ratio’ section of Chapter 3. It can be cut into unequal segments not answerable to integer expression by other maneuvers, illustrated in the ‘geometrical ratio’ section of the same chapter. The practical setting out of typical Insular designs, though, begins with 1, division into two equal parts for bilateral symmetry, and proceeds to divide those two equal parts into unequal segments of a ‘geometrical’ kind. The code (as it were) for design of the Tara Brooch, for example (Table 4.T), proceeds from 1 and 2 and the repeated division of 1 (into *a*, *b*, *c*, *d*) by the ‘golden’ ratio; that ratio itself reduces to not-terribly-elaborate relations between 1 and 2: $\frac{2}{\sqrt{1^2+2^2}-1}$.

One other set is 2 and 3, which seems to be used in devising forms for verse texts primarily. The relations implicit in these two numbers, when represented as extensions at a right angle, correspond to the lengths of sections of the written texts measured by count of their metrical lines. *Andreas* has 3×600 lines, *Christ II* has 3×165 lines, etc., with sectional divisions answerable to both arithmetical and geometrical ratios involving 2 and 3. An exceptional form evolved from this binary pair is a carpet page, the only cross page in the Harburg Gospels. The lines forming the shape of the cross fall along halves and thirds (and halves ...) of the width of the frame, and at halves and thirds (...) of the length of the frame. The frame itself has dimensions in the ratio of $2 \times 2 \times 2 \times 2 \times 2 \times 2$ for width, $3 \times 3 \times 3 \times 3$ for height.