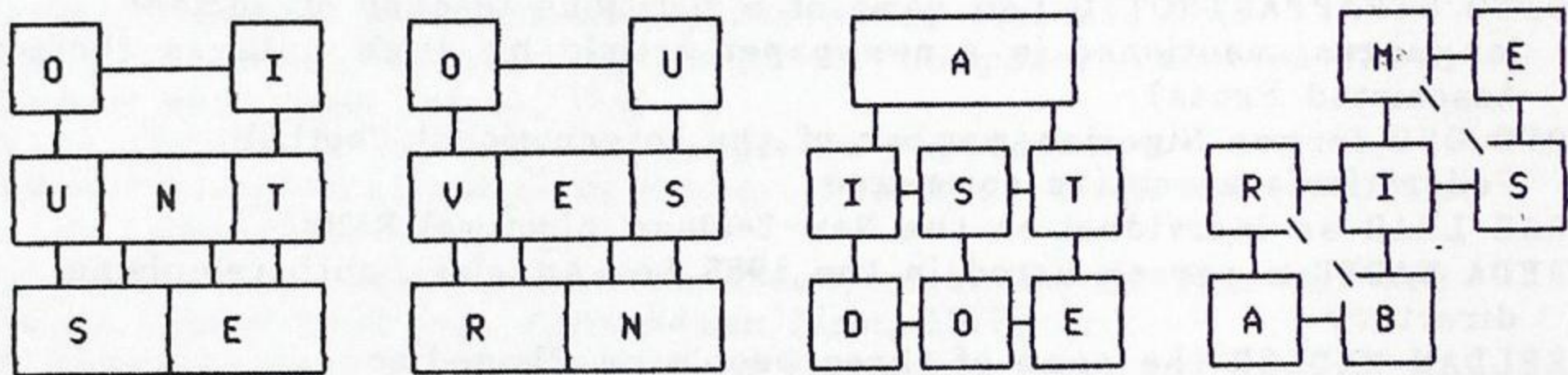


REVISITING THE BESTIARY

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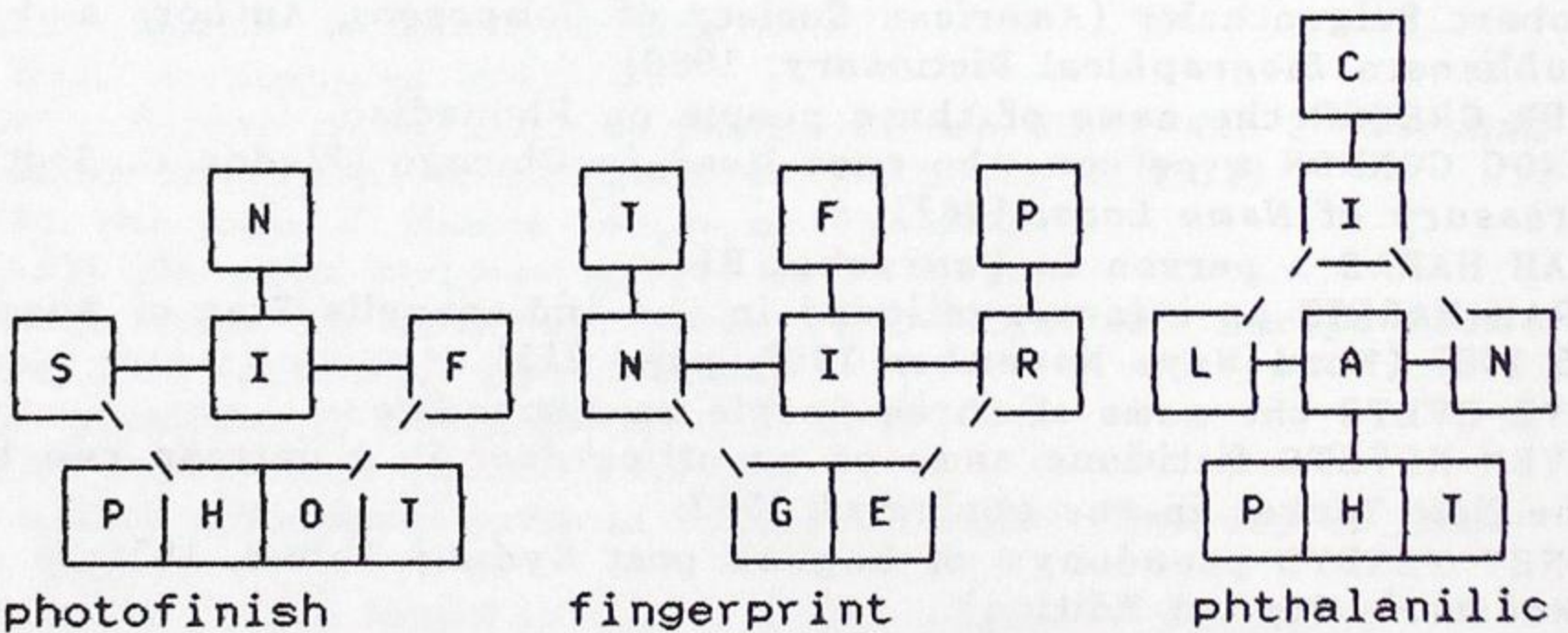
In the May 1996 Word Ways I exhibited a bestiary of symmetric graphs showing how the different letters of a word interconnect. Subsequently I realized that I could introduce instructions into my computer program so that it could do more than select words whose letters had a desired set of connective numbers (for example, ACETOVERATRONE 22234445: V,C,N form bigrams with two other letters apiece, A forms bigrams with three other letters, etc.).

In particular, I asked for further conditions to be satisfied. For words with connectivity 2233334, I asked that letters with connectivity 4 join only letters of connectivity 3, resulting in the graphs below.



unsententious overnervousness osteodiastasis semibarbarism

Next I asked for words with connectivity 11122333, requiring that letters with connectivity of 1 join letters of connectivity 3.

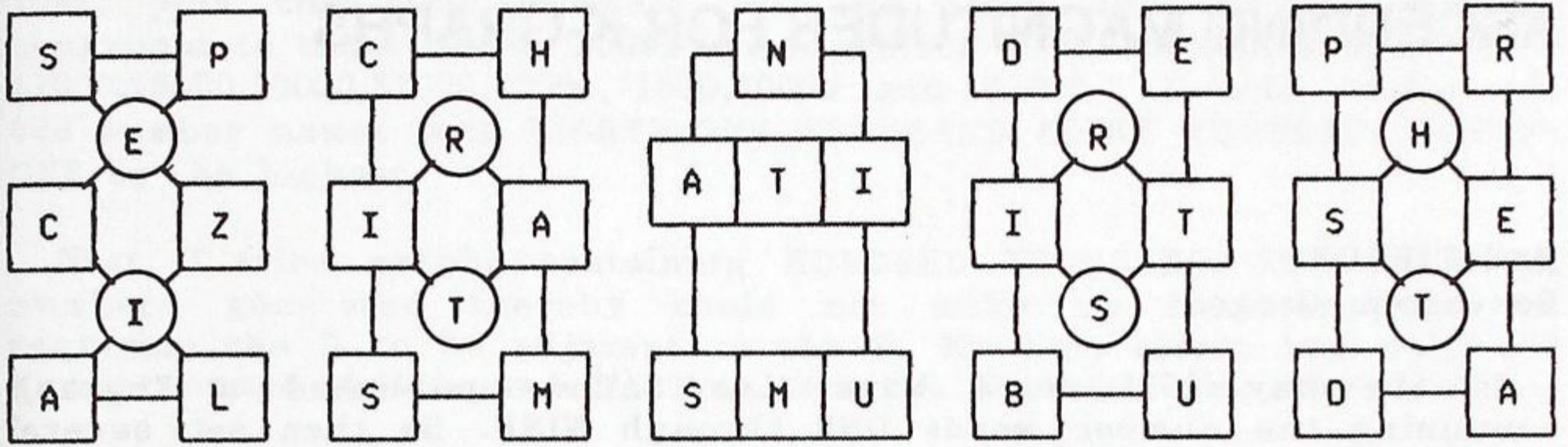


photofinish

fingerprint

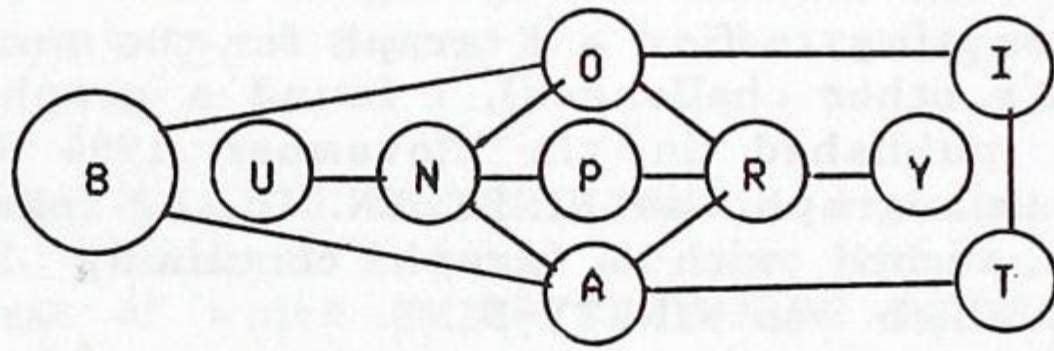
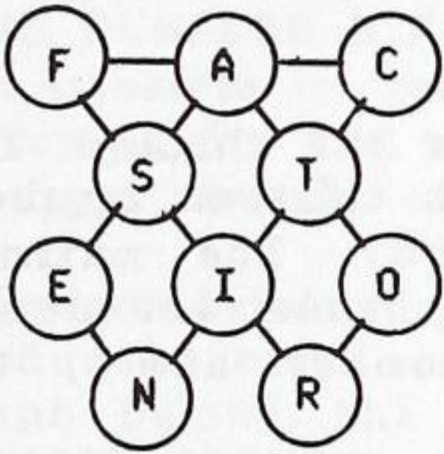
phthalanilic

Next I called for 22222244 and disallowed for 4-4 joins. All three possible graphs are symmetrical; two have a second degree of symmetry. Note how the words flow around the graph.



specializes charismatic sanitariums distributed spreadsheets

Then I asked the computer to find words with ten different letters and with either 1122224444 or 2222224444 connectivity and required that all four letters with four joins must form a loop. Not all the graphs were symmetric. Here is a sample of each case, spelling out SATISFACT-ORINESS and UNPROBATIONARY.



Start with CISCOS, add R to get SCISSORS, add T to get ISOCITRIC or RIOTISTIC, add P to get POSTSCRIPT, add B to get STROBOSCOPIC, add U to get SUBPOSTSCRIPT, and add N to get SUBSCRIPTIONS. Each added letter (like a virus) slips in and reorganizes the graph.

