

memory system seems to work pretty reliably up to about seven items, but beyond that it tails off quite markedly. Look up a telephone number in the directory and you will be able to remember up to about seven digits quite well, at least long enough to dial. If the number were nine digits long you would be quite likely to make a mistake. Many years ago the British telephone system used letters rather than numbers for the part of the code that identified the town; three letters were used, and they were usually the first three letters of the name of the town itself. This meant they simply did not need to be remembered from short-term memory, but could be reconstructed from our long-term memory of the town name. The letters were reproduced on the old telephone dial in sequences corresponding to the numbers, but of course there were several letters for each number. For this reason, several different letter codes actually produced the same dialling sequence. Eventually, as telephone exchanges proliferated, there were no sensible remaining mnemonic codes, and the authorities decided to abandon the system in favour of the numerical codes in place today. I was part of a team who accurately predicted the increase in telephone traffic on the system due to the dialling of wrong numbers caused by the short-term memory problem.

As well as our memory system beginning to decay above seven items, so does our apprehension system. Look briefly at a random display of dots, and with up to about seven items you can tell pretty accurately how many are there (Fig. 3.10) – you simply recognize the number. Above seven, and you need to close your eyes and count from the image in your mind. Nine dots are hard to recognize. Arrange them in a square layout of three by three and they become easy to recognize again, but of course here we are cheating by recognizing not ‘nineness’ but ‘threeness’ and using our knowledge of the square of three to calculate the nine!

The answer to our question of when a repeated foreground object becomes background is therefore at about seven. Six columns form a portico that is the very centre stage of a classical façade. It uses symmetry and the point of the gable above to emphasize the line of the axis upon which the entrance is bound to be located. However, a row of ten columns tends to become a colonnade, and it might form a background in front of which we might expect to see a fountain or sculpture. There is a tension here when a building is trying to be grand. Surely a grand portico will have more columns than a rather humble one? Even the grandest of all, the Parthenon, only has eight. When it comes to repeated architectural elements, you can simply have too much of a good thing if you want to stay in the foreground and attract attention!

Meaning

We have seen that our short-term memory has a rather limited capacity. By contrast, our long-term memory thankfully seems to have an