

Assignments

1. The regularity effect consists in the fact that words with a regular spelling (e.g., *wick*) gets named more quickly than words with an irregular spelling (e.g., *wand*; McCann and Besner, 1987; Rastle and Coltheart, 1999). Explain how the DRC offers an account for this effect, and verifies it by simulating the reading of a bunch of regular words (`regular.txt`) and a comparable set of irregular words (`irregular.txt`). Illustrate which activations in the DRC dynamics confirms your verbal account. Now try to make the regularity effect bigger, or smaller – how would you do that? Illustrate with simulations.
2. The pseudo-homophone effect consists in the fact that nonwords that are homophonic to real words (e.g., *brane*, *brees*) are read faster than otherwise comparable control nonwords (e.g., *clafe*, *kraaf*; e.g., McCann and Besner, 1987; Taft and Russell, 1992). Try and see whether the DRC is able to simulate the effect (use `nonwordPseudohomophones.txt` and `nonwordNonPseudohomophones.txt`). Why does this effect arise? Illustrate with reference to the activation dynamics.
3. A brain injured patient is diagnosed with Surface Dyslexia when s/he's better at reading regular words (`regular.txt`) and nonwords (`nonwordsNonPseudohomophones.txt`), as compared to irregular words (`irregular.txt`; e.g., Patterson, Marshall and Coltheart, 1985). How would you simulate such a patient with the DRC? Is there only one way to do so? If not, describe two different damages to the system that would generate the impairment, and illustrate their (different) behaviour.