Results from 1D random walk

Experiment run on 16/6/2010 at 09.38

Parameters

Number of moves in each walk	30
Number of walks	81
Probability of moving right	0.4
Probability of moving left	0.4

Theoretical Values

expected distance travelled in 30 non-blocked moves	0.00
expected mean square distance for 30 non-blocked moves	24.00

Measured Values

Cell 0

average distance travelled in 30 moves	-4.54
average square distance for 30 moves	29.75
maximum frequency of distance	14
pathways and frequency histogram	Figure 1

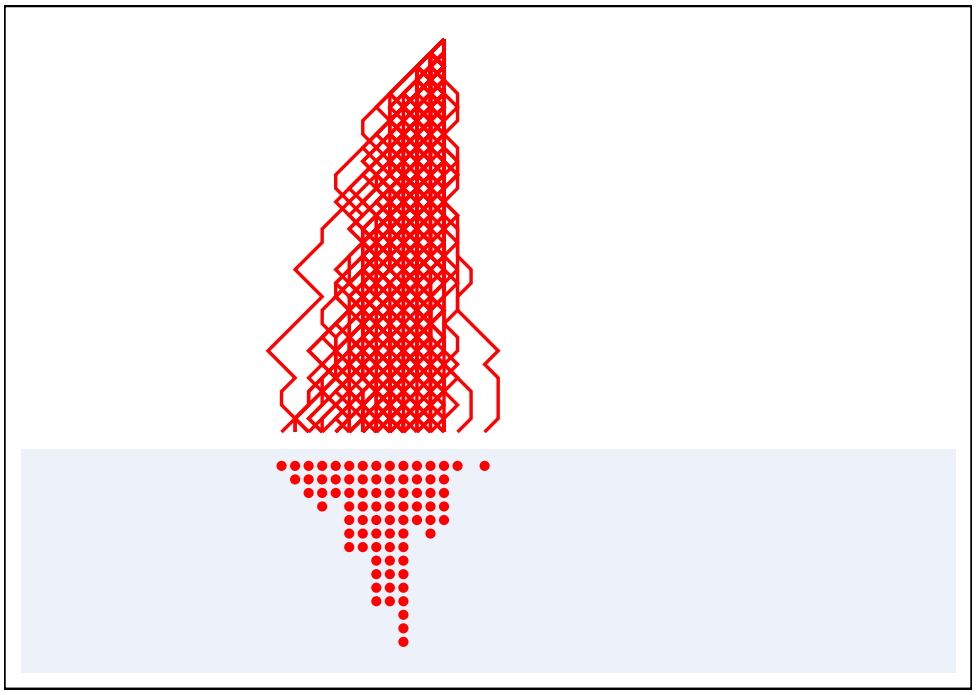

Figure 1: Cell 0 pathways and frequency histogram. Upper panel shows cell pathways with vertical position representing timestep. Lower panel shows the distribution of final (horizontal) cell positions. Each dot in the histogram represents 1 result.

Cell 1

average distance travelled in 30 moves	-1.49
average square distance for 30 moves	7.94
maximum frequency of distance	18
pathways and frequency histogram	Figure 2

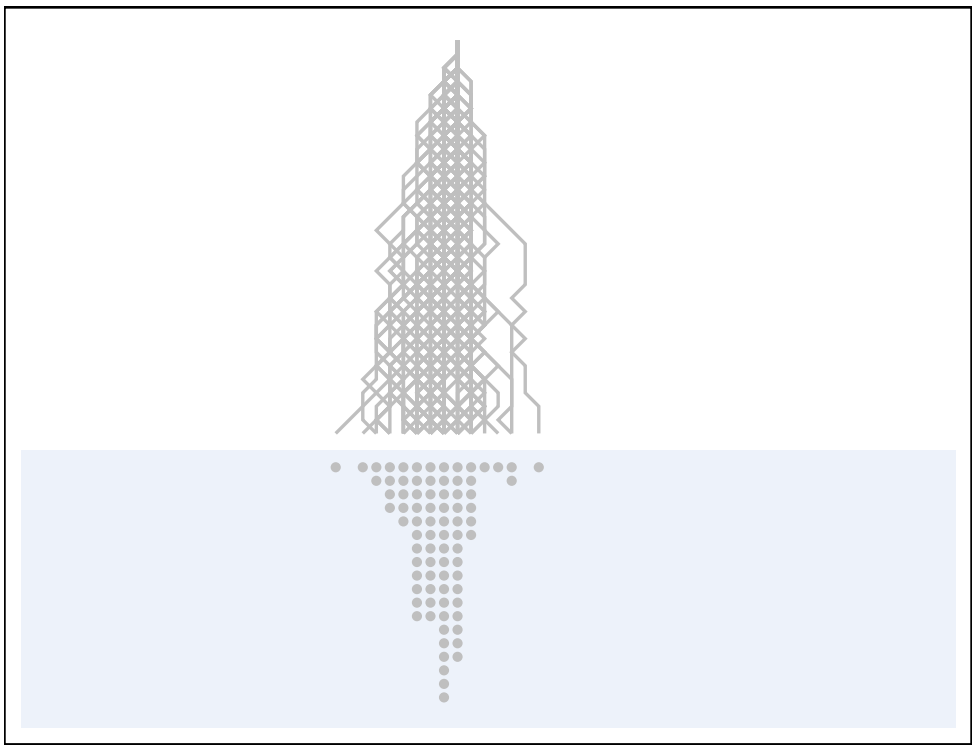

Figure 2: Cell 1 pathways and frequency histogram. Upper panel shows cell pathways with vertical position representing timestep. Lower panel shows the distribution of final (horizontal) cell positions. Each dot in the histogram represents 1 result.

Cell 2

average distance travelled in 30 moves	0.46
average square distance for 30 moves	5.96
maximum frequency of distance	16
pathways and frequency histogram	Figure 3

Cell 3

average distance travelled in 30 moves	3.65
average square distance for 30 moves	22.10
maximum frequency of distance	13
pathways and frequency histogram	Figure 4

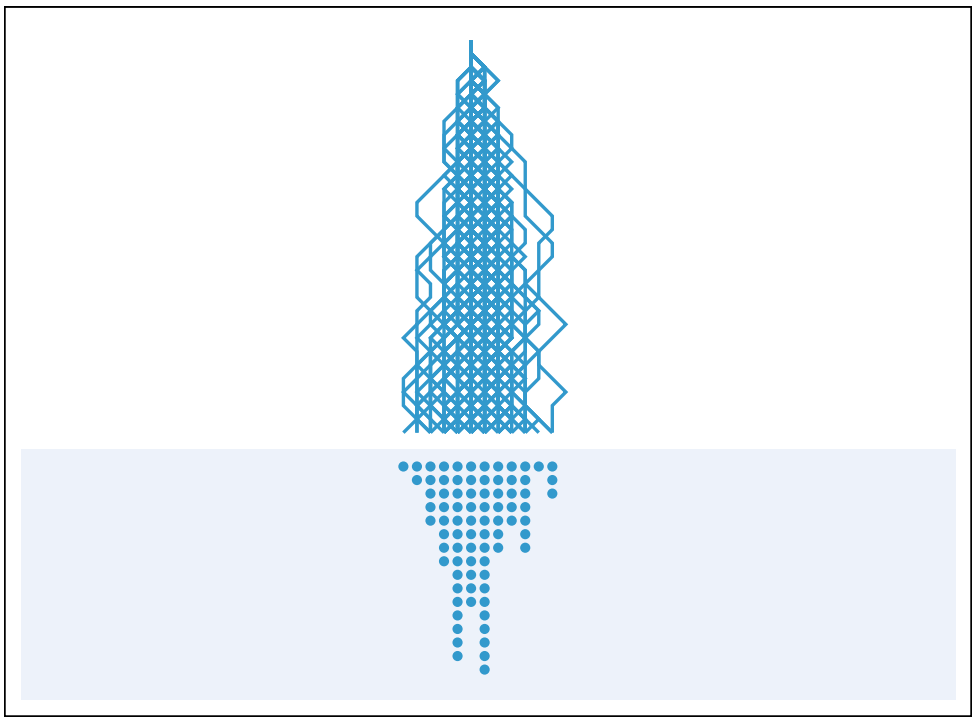

Figure 3: Cell 2 pathways and frequency histogram. Upper panel shows cell pathways with vertical position representing timestep. Lower panel shows the distribution of final (horizontal) cell positions. Each dot in the histogram represents 1 result.

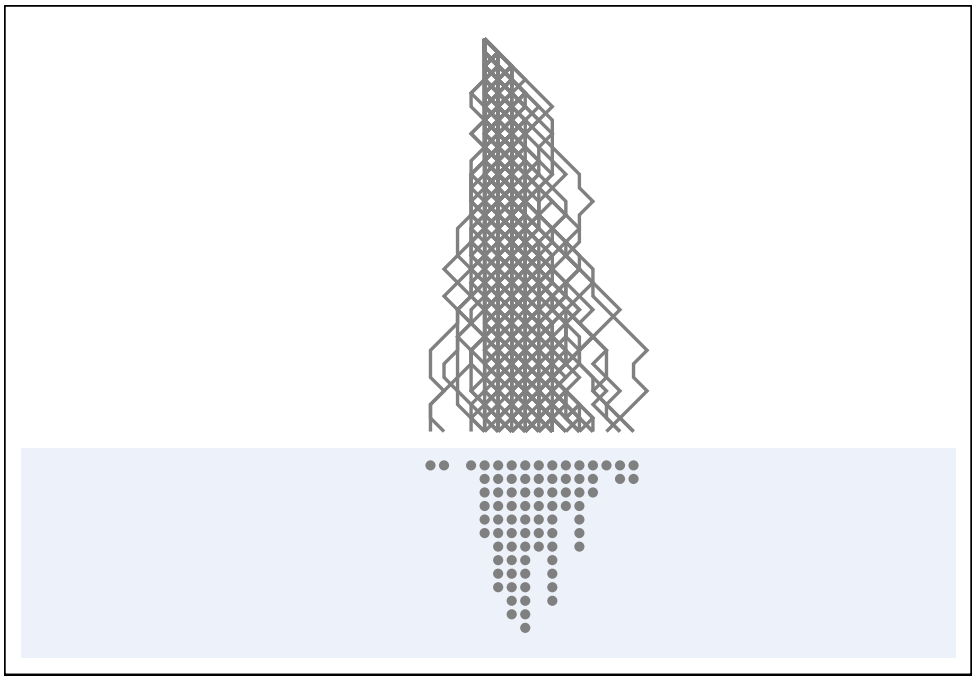

Figure 4: Cell 3 pathways and frequency histogram. Upper panel shows cell pathways with vertical position representing timestep. Lower panel shows the distribution of final (horizontal) cell positions. Each dot in the histogram represents 1 result.