(+)	A	T	C	G
A	0.00	0.75	0.25	0.00
T	0.43	0.14	0.43	0.00
C	0.40	0.00	0.00	0.60
G	0.67	0.33	0.00	0.00

(a)

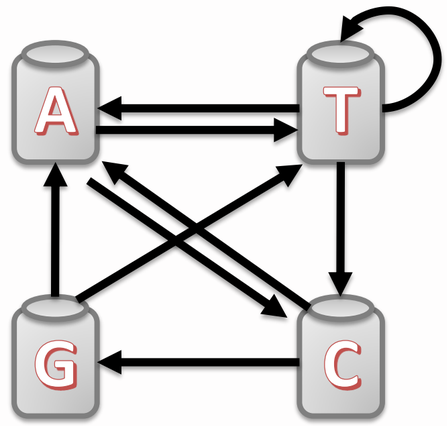
A = {TTTTTTTTTTTTTTTCCCCC}
75% 25%

T = {AAAAAAAAATTTCCCCCCCCC}
43% 14% 43%

C = {AAAAAAAAGGGGGGGGGGGG}
40% 60%

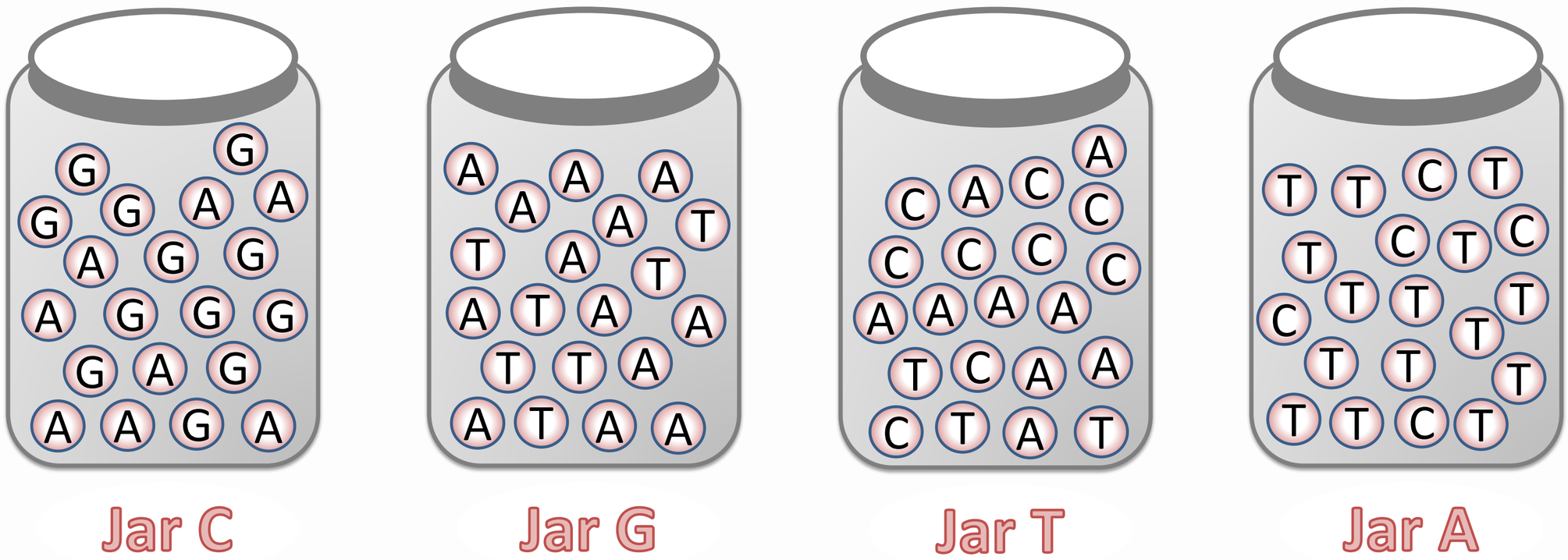
G = {AAAAAAAAAAAAATTTTTTT}
67% 33%

(c)



(d)

(b)



Markov Chain experiment

Markov Chain experiment. (**a**) The probability values present inside a 4x4 transition matrix (P) are directly used for an automatic generation of (**b**) the letter composition that make up the representation of four jars. Each row in the transition matrix is associated with a state (a jar/state "A", "T", "C" or "G"). (**c**) The values on each row of a transition matrix are mirrored in a string. The four letter sequences have a calculated proportion of "A", "T", "C" and "G" letters according to the values on the rows of the matrix. Thus, the composition of a string reflects the probability values on a row. The chance of a letter selected at random from one of the four sequences is dictated by the proportions of "A", "T", "C" and "G" letters. (**d**) A set of rules is imposed on this system. Initially, the random selection of a letter can be done arbitrarily from one of the four strings. The randomly selected letter is noted and added to the output sequence and it also indicates the next string from which the random selection will be made.

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