Erratum

A Synaptic Modification Algorithm in Consideration of the Generation of Rhythmic Oscillation in a Ring Neural Network

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3.4 The Number of Cells

The characteristics of rhythmic oscillation are also affected by the number of cells. Figures 7 and 8 illustrate the relationships between the number of cells N (N : odd number) and the parameters on 4 pairs of τ_1 , τ_2 , β_1 , and β_2 . As shown in Fig. 7, p and p^+ increase linearly in proportion to the number of cells, except in the case of $N=3$, (so that the extended lines may pass through the point of origin), and therefore p^+/p is almost constant. When $N \geq 5$, the influence of the

Fig. 10. The result for the synaptic modification of applying the algorithm proposed in Sect. 5 to the network on the right in Fig. 9. The constants in the algorithm are $\delta^{(1)}=0.0004/u^2$, $\theta^{(1)}=0.4u$, $\eta^{(1)}=-2.0u$, $\delta^{(2)}=0.0012/u^2$, $\theta^{(2)}=0.4u$, and $\eta^{(2)}=0.0u$. Each figure from the left corresponds to the outputs of excitatory cells at a set of synaptic strengths (see Appendix 2) after 0, 180, or 3000 modification steps

6 Synaptic Modification

The synaptic modification algorithm proposed in Sect. 5 is applied to the disturbed ring networks where the rhythmic oscillation has been previously extinguished.

Figure 10 shows the result of the application of the modification algorithm whose constants are $\delta^{(1)}=0.0004/u^2$, $\theta^{(1)}=0.4u$, $\eta^{(1)}=-2.0u$, $\delta^{(2)}=0.0012/u^2$,