



# Corrigendum: Striatal dopamine ramping may indicate flexible reinforcement learning with forgetting in the cortico-basal ganglia circuits

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A corrigendum on Figure 2Cd of

Striatal dopamine ramping may indicate flexible reinforcement learning with forgetting in the cortico-basal ganglia circuits

by Morita, K., and Kato, A. (2014). *Front Neural Circuits* 8:36. doi: 10.3389/fncir.2014.00036

In the preparation of organized program codes for this article (Morita and Kato, 2014) for submission to public database after the publication, we have noticed that there was an error in the code for making Figure 2Cd written by one of

the authors Kenji Morita. Specifically, although RPE values at  $S_1$  for the cases with decay (i.e., the leftmost points of the three solid lines) should be proportional to the amount of reward as appeared in the formula for calculating them:

(at the start of the maze ( $S_1$ ))

( $j = n - 1$ )

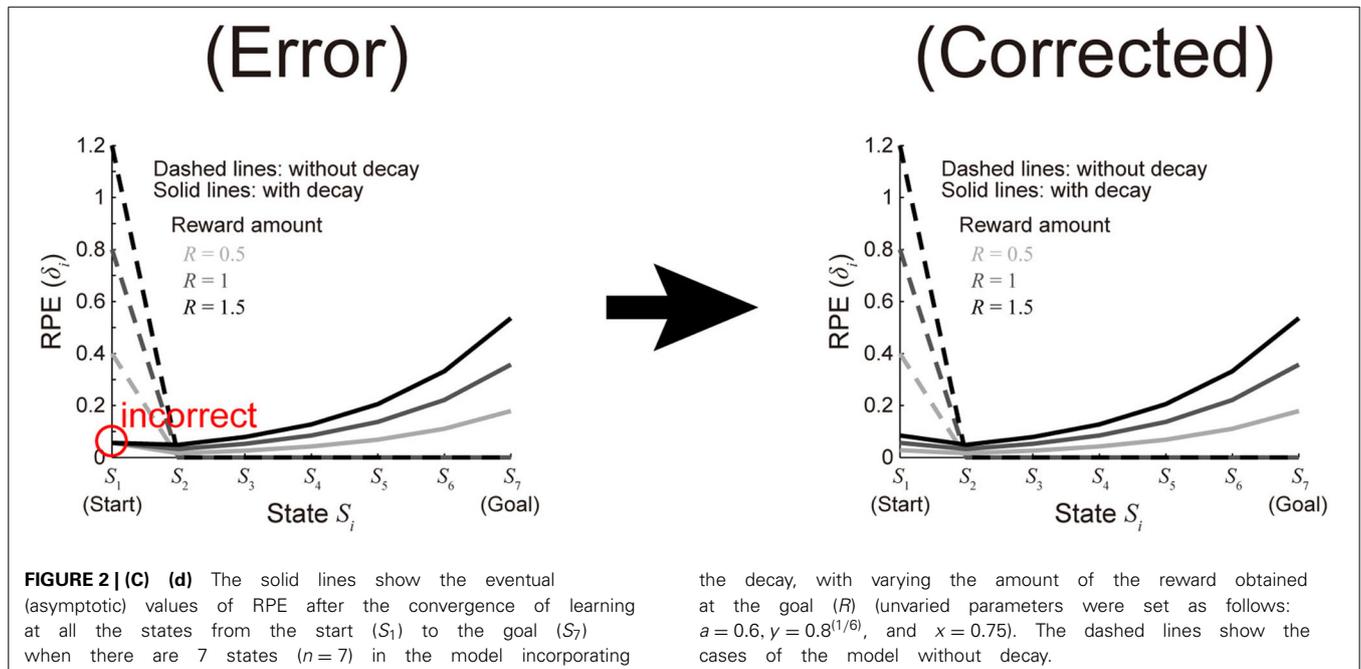
$$\delta_{n-j}^{\infty} = 0 + \gamma V_{n-j}^{\infty} - 0$$

$$= \gamma V_{n-j}^{\infty}$$

$$= \alpha^j \chi^j \gamma^j R / \{1 - \alpha(1 - \alpha)\}^j$$

(in the right-bottom of page 4),

where “R” represents the amount of reward, they were incorrectly plotted as an equal value in Figure 2Cd (indicated by the red circle in the left (“Error”) panel of the figure attached to this Corrigendum) because “R” was mistakenly dropped (i.e., effectively assumed to be 1 in all the cases) in the code. We have corrected the code and made the corrected Figure 2Cd [the right (“Corrected”) panel of the figure attached to this Corrigendum]. There is no need to change the texts explaining Figure 2Cd in the Methods, Results, and the figure legend. We sincerely apologize for the inconvenience. Lastly, we would like to take this opportunity to



announce that the program (MATLAB) codes for this article (with the correction described in the above) are now available on the ModelDB (Accession: 153573): <http://senselab.med.yale.edu/modeldb/ShowModel.asp?model=153573>

## REFERENCES

- Morita, K., and Kato, A. (2014). Striatal dopamine ramping may indicate flexible reinforcement learning with forgetting in the cortico-basal ganglia circuits. *Front Neural Circuits* 8:36. doi: 10.3389/fncir.2014.00036
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