# Erratum: Dopamine, inference and uncertainty

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In [1], the update rule for the volatility (Eq. 3.9) was stated incorrectly. It should be:

$$\Delta q_d = \eta h_{td}^2 \frac{\delta^2/\lambda_t + 1}{\lambda_t}.$$
(1)

Note that this formulation will give qualitatively similar behavior to the original (incorrect) learning rule. Critically, both learning rules change the volatility estimate in proportion to the squared prediction error.

I am grateful to Jesse Geerts for pointing out this error.

## References

[1] Samuel J Gershman. Dopamine, inference, and uncertainty. *Neural Computation*, 29(12):3311–3326, 2017.