Erratum to: Stochastic optimization of a biologically plausible spino-neuromuscular system model

A comparison with human subjects

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There were errors in Fig. 11, Eq. 5, and section 4.4 in the final manuscript published in Genetic Programming and Evolvable Machines (2007) 8:355–380. The corrections are listed below.

- Figure 11. The data shown in (a) and (b) of this figure is mismatched. The pattern in (a) is supposed to result in the behavior in (b), but actually it does not and such behavior would be inconsistent. Fortunately, this does not affect the analysis because (a) still corresponds to an arm motion that follows the target in a way similar to (b) and others shown in the paper.

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- Equation 5 has errors in the 2nd and 3rd term. It should read:

$$v(t) = \Omega(t-1)v(t-1) + (c_1)(r_1)(x_b - x(t-1)) \\ + (c_2)(r_2)(x_{gb} - x(t-1)).$$

The x component is currently missing which is a key component of the algorithm.

- A sentence in section 4.4 (the neural net modeling section) was omitted during editing. It is the following: “Both afferent neurons’ outgoing excitatory synaptic weights are allowed three times the value of the other neurons’ outgoing weights to have an effect comparable to the remaining inputs to the alpha-MN.” Given the other model parameters, it is unlikely this would prevent the model from generating the behavior types highlighted in the paper; however, the afferent pathways are key features of the model with respect to the observed behaviors and this variation may influence how readily the training algorithms take advantage of these pathways.