A random walk with memory perturbed by a dynamical system

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A random walk with unbounded memory is introduced as a mixture of the Elephant Random Walk and the Dynamic Random Walk which we call the Dynamic Elephant Random Walk (DERW). We prove a strong law of large numbers for the DERW and, in a particular case, we provide an explicit expression for its speed. Also, we give sufficient conditions for the Central Limit Theorem and the Law of the Iterated Logarithm to hold.