Pairing off in dynamic networks

I will describe a simple network dynamical system in which the dynamics at nodes is coupled to the underlying graph, making the underlying graph part of the extended dynamics of the system. The evolution (or rewiring) of the graph follows a standard stochastic homophilic principle, and is chosen so that the network tends to a stationary network with probability one. Curiously, parameters can be chosen so that the stationary network is very simple, containing only synchronised mutually coupled pairs and singletons. This provides a very simple model for pairing off in populations.