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* Pure states: the system by means of a single vector
* Mixed states: statistical ensembles of pure states
* Rho: density operator, the Von Neumann entropy, the mixture of the statistical grouped edges
  + If 0 = pure state, One Edge
  + Larger rho = more mixed, more edges
  + Use Rho to distinguish between multilayer network and aggregated, single layer
    - For multilayer: the sum of the entropies of all layers
    - Dependent on the # of layers and ech layer structure
    - Appropriate aggregation reduces the entropy value
* An aggregated network is an adjacency matrix that is created by summing the adjacency matrix’s layers.
  + If multilayers are identical, the aggregated are equivalent, rho = 0
  + If rho is mixed (> 0), then layers are distinguishable from the aggregated. Multilayer structure should be preserved.
  + Aggregation of two layers needs to decrease the relative entropy with respect to the multiplex to justify the aggregation.
* Reduced Multilayer
  + If rho is large, the non-aggregated multilayer network is “more distinguishable”
  + Reduce the multiplex yielding the maximum value of distinguishability from the aggrigated graph.