

# **Statistical entropy of open quantum systems**

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Dissipative quantum systems are frequently described within the framework of the so-called “system-plus-reservoir” approach. In this work we assign their description to the Maximum Entropy Formalism and compare the resulting thermodynamic properties with those of the well - established approaches. Due to the non-negligible coupling to the heat reservoir, these systems are non-extensive by nature, and the former task may require the use of non-extensive parameter dependent informational entropies. In doing so, we address the problem of choosing appropriate forms of those entropies in order to describe a consistent thermodynamics for dissipative quantum systems.