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# A path to leptoquark aided leptogenesis

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Seesaw models of neutrino masses and leptogenesis are oft accompanied by LeptoQuarks (LQs) in various top down UV completions like Pati-Salam and $SO(10)$ and consider their impact on thermal leptogenesis. We demonstrate a minimal possibility of achieving successful leptogenesis with just an additional $(3, 2, \frac{1}{6})$ "doublet leptoquark" to the standard two Right Handed Neutrinos (RHNs) which significantly alters the standard scenario through additional CP asymmetry produced in their decays, additional scatterings of the leptoquark altering the abundance of the RHN and final lepton asymmetry. This opens up new possibilities to analyze the impact of general B-L violation, apart from the lepton number violating decays of the RHN in standard leptogenesis, thereby paving a way to understand further, the impact of "primordial" B-L asymmetry on leptogenesis.

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