# Hypergeometric series and analytic semigroups generated by degenerate elliptic operators

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**Abstract**    We consider equations of the type $Bu := x(1-x)u" + \beta(x)u'$ with Wentzell boundary conditions $\lim_{x \to j} Bu(x) = 0$ for $j = 0, 1$ in $C[0,1]$, or $Lu := ((1-x)u')'$ (Lagrange operator) with maximal domain in $C[-1, 1]$. We prove that under suitable assumptions on $\beta$, they generate analytic semi-groups of angle $\pi/2$. This goal is achieved by means of the hypergeometric series and special functions. In the case of operator $B$, the results are to be compared with the ones by G. Metafune and M. Campiti and G. Metafune, but our approach is quite different and allows to deal with different boundary conditions like operator $L$, as well.