We revisit alternative mechanisms of gravitational wave production during inflation and argue that they generically emit a non-negligible amount of scalar fluctuations. We find the scalar power is larger than the tensor power by a factor of order $1/\ep^2$. For an appreciable tensor contribution the associated scalar emission completely dominates the zero-point fluctuations of inflaton, resulting in a tensor-to-scalar ratio $r\sim \ep^2$. A more quantitative result can be obtained if one further assumes that gravitational waves are emitted by localized sub-horizon processes, giving $r_{\rm max} \simeq 0.3 \ep^2$. We calculate the scalar 3-point correlation function in the same class of models and show that non-Gaussianity cannot be made arbitrarily small, i.e. $\fnl > 1$, independently of the value of r. Possible exceptions in multifield scenarios are discussed.