compensation effect

In a considerable number of cases plots of $T\Delta^{\ddagger}S$ vs. $\Delta^{\ddagger}H$, for a series of reactions, e.g. for a reaction in a range of different solvents, are straight lines of approximately unit slope. Therefore, the terms $\Delta^{\ddagger}H$ and $T\Delta^{\ddagger}S$ in the expression partially compensate, and $\Delta^{\ddagger}G = \Delta^{\ddagger}H - T\Delta^{\ddagger}S$ often is a much simpler function of solvent (or other) variation than $\Delta^{\ddagger}H$ or $T\Delta^{\ddagger}S$ separately.

See also *isokinetic relationship*.

1994, *66*, 1098