present paper are the gas kinetic values.

6. E.g., in Ref. 7, the intercept of Fig. 2 yields $(\Delta F^*)_o \sim 12$ kcal mole$^{-1}$. (Ref. 7 gives $\Delta F^{\ddagger}$'s but $\Delta F^* = \Delta F^{\ddagger} - RT \ln hZ/kT = \Delta F^{\ddagger} - 2.8$ kcal mole$^{-1}$ when the standard state in $\Delta F^{\ddagger}$ is 1 mole liter$^{-1}$).[5a] Since the largest $|\Delta F°|$ there was 12 kcal mole$^{-1}$, (10) is fulfilled. Again, in electrochemical systems in which the transfer coefficient is measured over an electrode potential range of perhaps 0.2 volts from the equilibrium potential, and in which the typical $(\Delta F^*)_o$, (value of $\Delta F^*$ at $\eta_a = 0$) in Table I is of the order of 7 kcal mole$^{-1}$, condition (10) is again fulfilled since $|\Delta F°/(\Delta F^*)_o| \sim 0.2 \times 23/7$.

7. M. H. Ford-Smith and N. Sutin, J. Am. Chem. Soc. 83, 1830 (1961). The data satisfy condition (10).[6] It is assumed that in the first approximation the substituents leave the $k_j$'s and $\Delta q_j^o$'s unaltered.

8. Data are largely but not entirely taken from Ref. 4(a). The transfer coefficients are either those of the reduction process or are (1-transfer coefficient of the oxidation step): Fe(II)-Fe(III) in 1M $H_2SO_4$ 0.42,[a,b] 0.62,[c] 0.61[c]; $Fe(CN)_6^{-4,-3}$ in 1M KCl 0.45,[c] 0.50,[c] and (graphite) 0.5,[d]; V(II)-V(III) in 1M $HClO_4$ 0.52,[e] 0.50 to 0.57,[f] and in 1 M $H_2SO_4$ 0.46[f]; Tl(I)-Tl(II) in 1 M $HClO_4$ 0.5[g]; Tl(III)-Tl(II) in 1M $HClO_4$ 0.5[g].

At lower supporting electrolyte concentration: Fe(II)-Fe(III) in 0.1 M $HClO_4$, 0.78[h]; $Cr(CN)_6^{-3,-4}$ in 0.2 M NaCN 0.67[i]. (The exchange current in the latter system was very sensitive to salt concentration.)

Low values are: Ce(III) - Ce(IV) in 1N $H_2SO_4$, 0.25,[b] and Mn(II) - Mn(III) in 15 N $H_2SO_4$, 0.28.[a,b]

(a) R. Parsons, Handbook of Electrochemical Constants, Butterworths, London (1959); (b) K. J. Vetter, Electrochemische Kinetik, Springer-Verlag (1961); (c) M. D. Wijnen and W. M. Smit, Rec. trav. chim. 79, 289 (1960); (d) A. Regner and J. Balej, Collection Czechoslov. Chem. Communs. 26, 237 (1961); (e) K.M.Joshi, W. Mehl and R. Parsons, Trans. Symposium Electrode Processes, E. Yeager, Ed., John Wiley and Sons (1961), p. 249; (f) J.E.B. Randles, Can. J. Chem. 37, 238 (1959); (g) H. Catherino and J. Jordan, private communication; (h) J. Jordan and R. A. Javick, Electrochimica Acta 6, 23 (1962); (i) P. Delahay and M.Kleinerman, J. Am. Chem. Soc. 82, 4509 (1960).