Two-Step Irreversible Series-Parallel Reactions in a batch reactor or a PFR
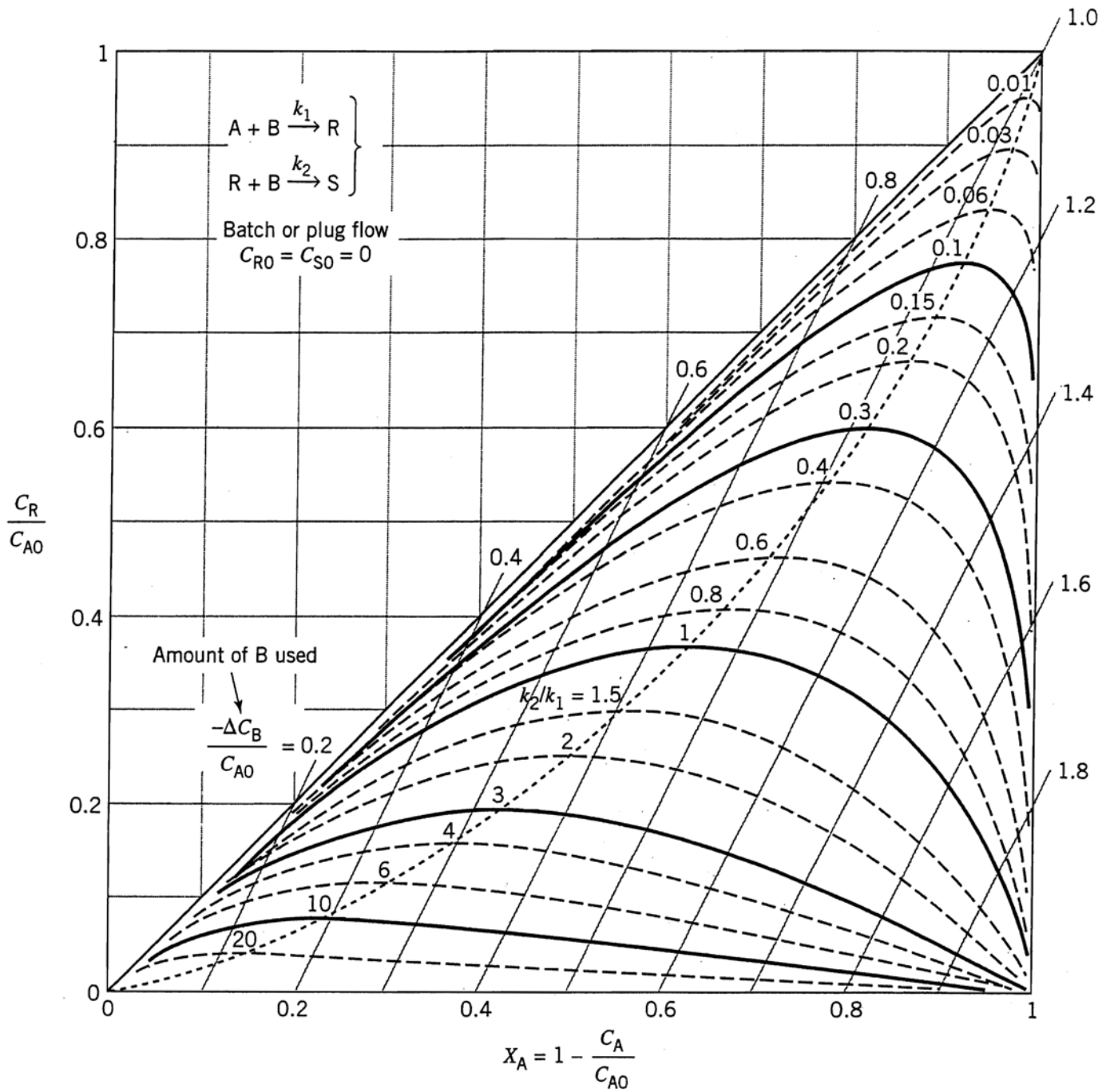
$$A + B \rightarrow R \qquad r_1 = k_1[A][B]$$

$$R + B \rightarrow S \qquad r_2 = k_2[R][B]$$

Figure 8.13 from O. Levenspiel, *Chemical Reaction Engineering*, 3rd ed, 1998, p. 190.

Two-Step Irreversible Series-Parallel Reactions in a CSTR

$$A + B \rightarrow R \qquad r_1 = k_1[A][B]$$

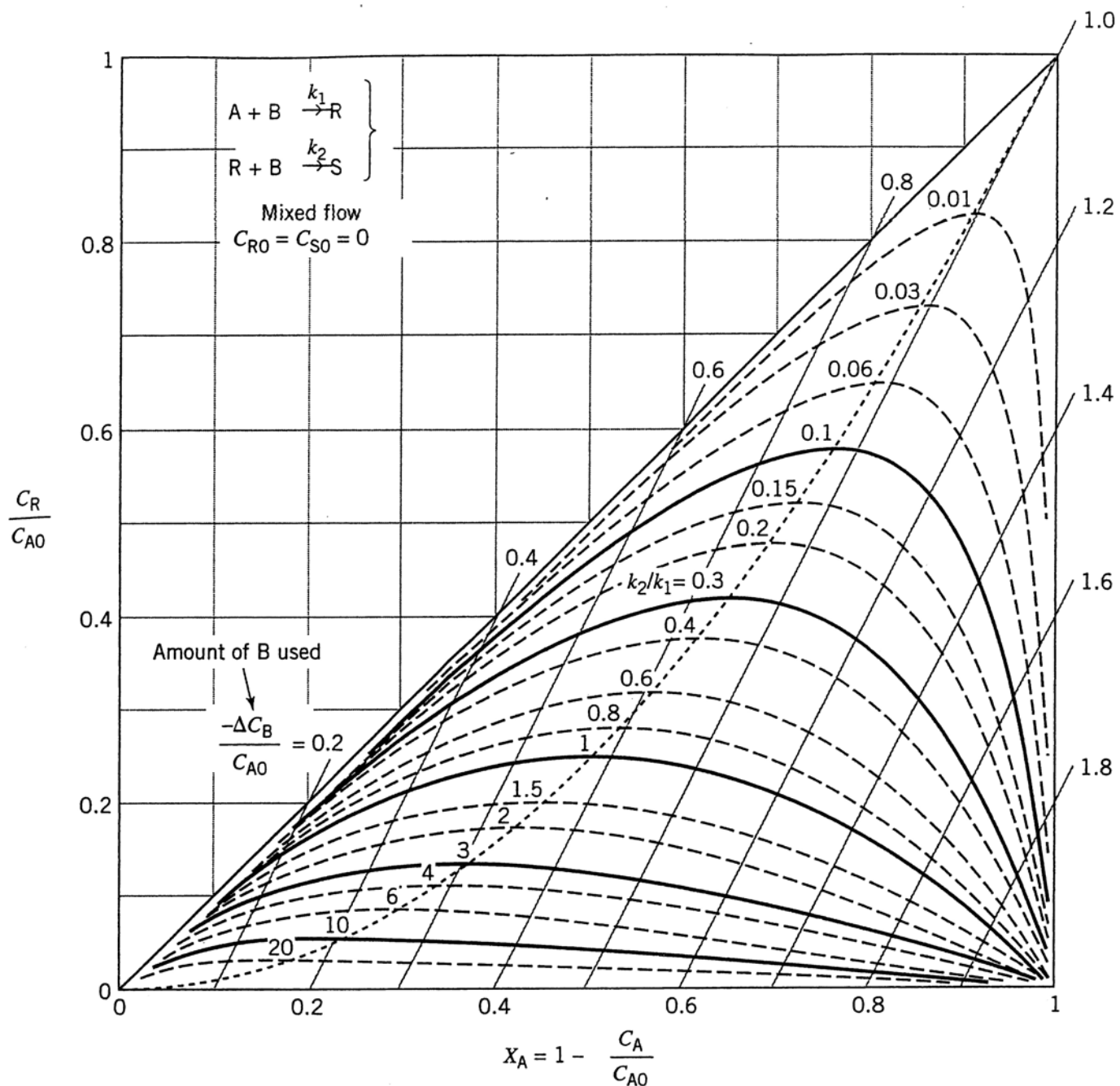$$R + B \rightarrow S \qquad r_2 = k_2[R][B]$$

Figure 8.14 from O. Levenspiel, *Chemical Reaction Engineering*, 3rd ed, 1998, p. 191.