We are assuming for the moment that $C^1<1$, so r is well defined. Now let us check the feasibility of a stationary distribution scheme. By direct substitution, we find that

$$C^1+\frac{C^2}{1+n}\leqq 1 \text{ if and only if } r\leqq n.$$

Thus, the feasibility of a stationary distribution scheme is *equivalent* to the statement that the rate of interest is no greater than the rate of growth of population. Furthermore, the same algebraic operation which yielded the equivalence of the above inequalities also yields the equivalence of the strict inequality $r<n$ and the strict inequality $C^1+C^2/(1+n)<1$. With a stationary distribution scheme, a rate of interest which falls short of the rate of growth of population means that some output is being discarded in every period. In other words, the inequality $r<n$ means that the distribution scheme under consideration is *inefficient* (unless consumers are satiated). This result has a familiar ring to it. In models where investment and capital accumulation are possible, we often find that, among all feasible stationary paths, the path which maximizes per capita consumption is the so-called golden-rule path, which is characterized, among other things, by the equality of the rate of interest and the rate of growth of population. Indeed, we know that a stationary path along which the (constant) rate of interest is lower than the rate of growth of population is in fact inefficient in the sense that everybody's consumption can be increased (see, for example, Phelps, 1965).

Let us recapitulate: Every stationary distribution scheme is characterized by a pair of nonnegative real numbers, C^1 and C^2. The set of all feasible schemes is represented by the shaded area in Figure 1, and it corresponds precisely to the set of all schemes with a rate of interest which is no greater than the rate of growth of population. Among the latter, only the schemes that are represented by points on the northeastern boundary line of the shaded area are *efficient*. These efficient schemes are precisely those for which the rate of interest is, in fact, *equal* to the rate of growth of population.

Note that Figure 1 actually contains part of Samuelson's (1959, p. 519) Figure 1 in his reply to Lerner. In that figure, Samuelson marks

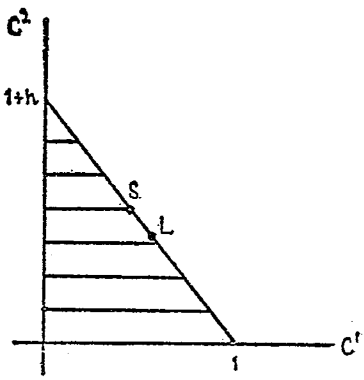

FIG. 1