

**ON VARIATIONAL PROBLEMS  
ASSOCIATED WITH A MODEL OF  
WELFARE ECONOMICS**

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We shall consider a class of simple variational problems over measure spaces, often referred to as “Lyapunov problems.” They are closely associated with a model of welfare economics introduced by Hildenbrand in late sixties. Impulse solutions of variational problems then correspond to equilibrium states of economics in which small fractions of consumers can grasp a sizable portion of available goods. The question to be discussed is whether the existence of such “unjust” equilibrium distributions is the property of a given utility function or of the preference relation it determines. In terms of the variational problem, the question reduces to the following: is it possible to replace the integrand in the minimized functional by another integrand with the same level sets in such a way that the new problem would have an ordinary (non-impulse) solution. A sufficient condition will be given along with an example showing that in general such a replacement is impossible.