Maximisation of Social Welfare

Analysis of Pareto optimality failed to provide us a 'unique optimum solution' which represents maximum social welfare. There are a large number of solutions which are optimum on the basis Pareto criterion. In terms of Edgeworth-box diagrams every point on the contract curve represents the optimum position. But Pareto criterion does not tell us the best of them. The concept of maximisation of social welfare based on the approach of Pareto optimality analysis and the concept of social welfare function gives a more thorough and comprehensive approach in the sense that it views the problem from the point of view of general equilibrium analysis and explains simultaneous determination of (a) the unique allocation of factors into different products.

(b) Unique output of different products and

(c) unique distribution of products between individuals

which ensure maximum of social welfare.

Together with Grand Utility Possibility Frontier (GUPF), social welfare function enables us to find a determinate and unique solution regarding maximum social welfare as well as the desired distribution of welfare between the Two individuals.

Now GUPF is a locus of the various physically attainable utility combinations of two persons when the factor endowment, state of technology and preference order of the individuals are given. In other words each point of GUPF indicates a utility possibility point corresponding to a given point on the production possibility frontier (PPF), given the equality of marginal rate of transformation (MRPT) in production with the marginal rate of substitution (MRS) is satisfied. Thus every point on the GUPF represents a Pareto optimum and as we move from one point to another

on it, the utility of one individual increases while that of the other falls.

Social welfare function is generally represented by the social indifference curves each of which indicates utility combinations of two individuals which yield equal level of aggregate welfare of two individuals (ie equal social welfare). The higher the level of social indifference curve, the greater the level of social welfare.

Let us now superimpose GUPF on the social indifference curves.

In fig① below social indifference curves W_1, W_2, W_3 and W_4 representing the social welfare function have been drawn along with the GUPF VV'. Social indifference curve W_3 is tangent to the GUPF VV' at point Q. Thus point Q represents the maximum possible social welfare, given the factor endowments,

state of technology and preference scales of the individuals.
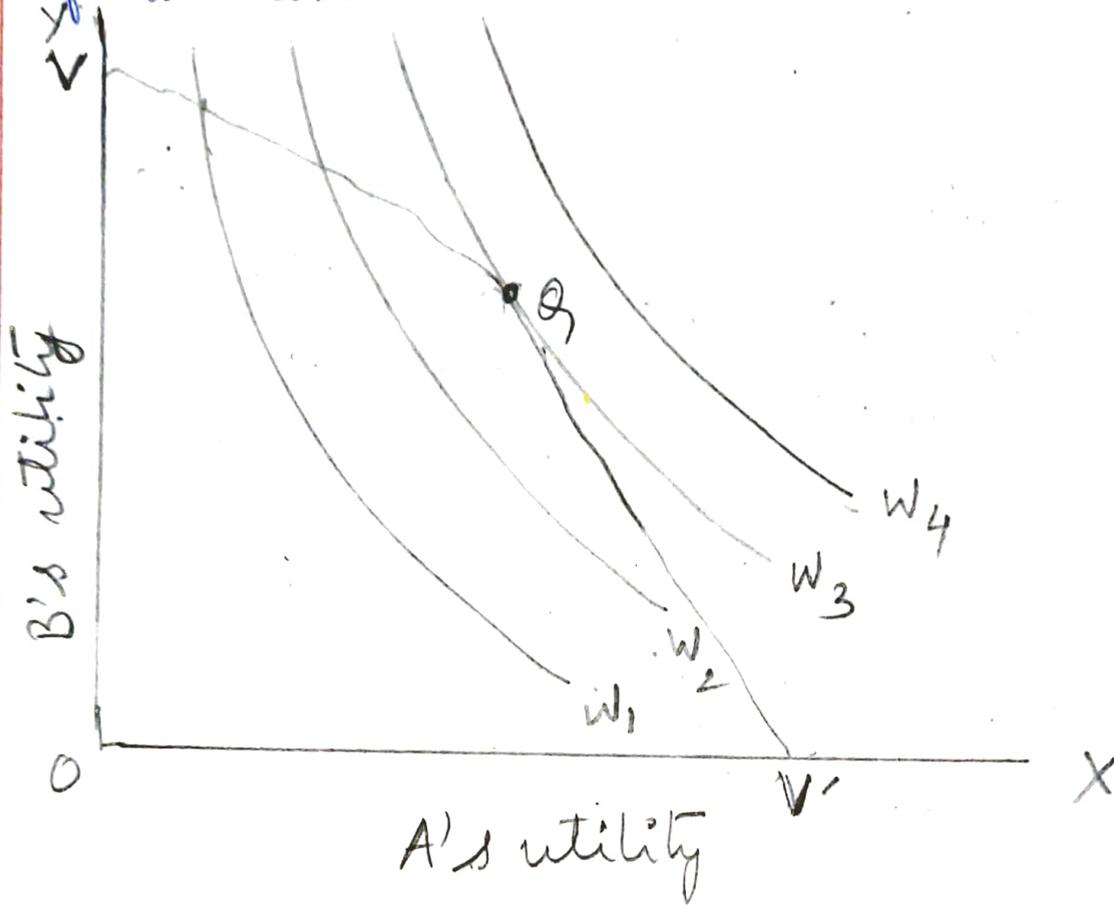
Point Q is known as the point of 'constrained bliss' since, given the constraints regarding factor endowments and the current technology, Q is the highest possible state of social welfare which the society can attain. Social welfare represented by W_4 is higher than at Q, but it is not possible to attain it, given the technology and factor endowment.

The point of constraint bliss represents the unique pattern of production of goods, unique distribution of goods between the individuals and unique combination of factors employed to produce the goods.