Sustainable Intergenerational Preferences

Combining Sensitivity for the Interests of the Present with Respect for the Interests of the Future

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According to the Brundland Report *Our Common Future*, sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

In my presentation I will first discuss how various criteria for intergenerational justice fail to take into account the interests of both present and future generations. These include discounted utilitarianism (which may undermine the interests of future generations), classical utilitarianism (which may result in unbounded growth, thus leading to an inequitable outcome) and lexicographic maximin (which may perpetuate poverty, thus preventing development). The two latter criteria also have the drawback that they are incomplete criteria which are not representable by numerical social welfare functions.

I will then turn to various solutions to this problem. Chichilnisky (*Social Choice and Welfare*, 1996) proposes two axioms which directly impose that both the present and the future must have a say in the ranking of intergenerational utility streams: *No dictatorship of the present* (*NDP*) and *No dictatorship of the future* (*NDF*). Combining *NDP* and *NDF* with numerical representability and sensitivity for the interests of each generation, yields what Chichilnisky calls a 'sustainable preference'. However, while *NDF* protects the present and *NDP* protects the interests of the infinite future, neither axiom takes care of the interests of generations in the finite future. This leads to existence problems when a 'sustainable preference' is used to determine optimal utility streams in growth models.

I will proceed by reporting on joint work with Tapan Mitra and Bertil Tungodden, where we have considered a different axiom – called

Hammond Equity for the Future – to ensure that the interests of all future generations are respected. By combining this axiom with numerical representability, some sensitivity for the interests of the present, and a stationary axiom, we show existence of a class of social welfare function that satisfy both *NDP* and *NDF*. This class includes the subclass of 'sustainable discounted utilitarianism', which departs from the usual discounted utilitarianism by requiring that the social evaluation *not* be sensitive to the interests of the present generation if the present will be better off than the future. Hence, 'sustainable discounted utilitarianism' trades off present and future well-being if and only if the present is worse off than the future, while it gives priority to the interests of future generations otherwise.

Finally, I will report on joint work with Tapan Mitra, where we apply 'sustainable discounted utilitarianism' to models of economic growth. In the models of capital accumulation and resource depletion often associated with the names of Dasgupta, Heal, Solow and Stiglitz, the application of this criterion resolves in an appealing way the distributional conflicts that arise in these models: It allows for growth and development initially when the economy is highly productive, while protecting the future generations against the grave consequences of discounting when resource depletion and capital accumulation undermine the economy’s productivity. It thereby allows for development without compromising equity.