

1056-91-1065

Michel De Lara* (delara@cermics.enpc.fr), CERMICS, Universite Paris-Est, 6 et 8 avenue Blaise Pascal, 77455 Marne la Vallee, France. *Preferences Yielding the Precautionary Effect*.

We study ranking of optimal initial decisions in two-stages decision problems with and without information arrival. Consider an agent taking two successive decisions to maximize his expected utility under uncertainty. After his first decision, a signal is revealed that provides information about the state of nature. The observation of the signal allows the decision-maker to revise his prior and the second decision is taken accordingly. Assuming that the first decision is a scalar representing consumption, the *precautionary effect* holds when initial consumption is less in the prospect of future information than without (no signal). Epstein (1980) has provided the most operative tool to exhibit the precautionary effect. Epstein's Theorem holds true when the difference of two convex functions is either convex or concave, which is not a straightforward property, and which is difficult to connect to the primitives of the economic model. Our main contribution consists in giving a geometric characterization of when the difference of two convex functions is convex, then in relating this to the primitive utility model. With this tool, we are able to study and unite a large body of the literature on the precautionary effect. (Received September 20, 2009)