## MAURICE ALLAIS

The final version of that memoir was entirely completed on November 3, 1986, and the *Postscript*, written on the suggestion of Bertrand Munier, was completed on April 27, 1987. These papers could only take into account the observations which Machina presented *before August 27, 1986*, date by which I received the last letter which Machina wrote to me <sup>7</sup>.

1.3 The reader will understand that I cannot accept to spend too much of a scarce time to correct Machina's mistakes, *line after line*, as I did not stop doing during three years, from 1983 to 1986, whatever their present presentation.

What matters is only that the reader be enabled to make his own judgment after a thorough reading of my 1986 memoir and of the *Postscript* to it, and in view of my observations on the assertions expressed today by Machina. *Paralogisms*, sophisms, mistakes and contradictions of Machina will by then without any doubt appear very clearly to him.

## The effective foundations of the proof of the Impossibility Theorem. Five fundamental properties

2.- The proof of the Impossibility Theorem rests on five fundamental properties of the local utility theory in the discrete case, all formally recognized by Machina as precised in the following § 3 8.

## 2.a Domain of definition of the local utility index in the discrete case

"According to Machina the local neo-Bernoullian index  $\pi$  (x ; p) in the discrete case is well defined over the whole range

$$0 \le x \le M \tag{11}$$

in which M represents the maximum value of x (1982, p. 294)". (M. 350 and 352)

254