1106-VI-1047 **Paolo Rocchi*** (procchi@luiss.it), via Salvini 2, 00197 Roma, Italy. *The Interpretation of Probability is not a Philosophical Argument.* Preliminary report.

It is worth underlying that in exact science the interpretation of a variable is established on the basis of a mathematical equation and not using philosophical statements. In particular the argument of the equation determines the exact physical significance of the result. Take, for instance, the time derivative: $y = dx/dt$. The significance that y has in the world depends on x; e.g. if x is the space s, then we obtain the linear velocity $v = ds/dt$; if x is the angular displacement α, then we obtain the angular velocity $\omega = d\alpha/dt$. It is evident how philosophical starting points are inappropriate to establish the meaning of probability and I propose two theorems in [1]. The former is the theorem of large numbers, which holds that $P(A_n)$ can be controlled in the physical reality, and thus $P(A_n)$ is a real quantity. The second theorem – called theorem of a single number – demonstrates that the probability of a single experiment $P(A_1)$ cannot be experienced in the world, thus $P(A_1)$ does not exist in the world as a real quantity. However, people is very concerned with $P(A_1)$ and we can assign a personal value to $P(A_1)$. [1] P. Rocchi – Janus-Faced Probability – Springer (2014). (Received September 10, 2014)