



Ignorance and competence in choices under uncertainty[☆]



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ABSTRACT

We propose a model of decision making that captures reluctance to bet when the decision maker (DM) perceives that she lacks adequate information or expertise about the underlying contingencies. On the other hand, the same DM can prefer to bet in situations where she feels specially knowledgeable or competent even if the underlying contingencies have vague likelihoods. This separation in terms of sources of uncertainty is motivated by the Heath and Tversky's competence hypothesis as well as by the Fox and Tversky's comparative ignorance effect. Formally, we characterize preference relations \succsim over Anscombe–Aumann acts represented by

$$J(f) = \min_{p \in C} \int_A u(f) dp + \max_{p \in C} \int_{A^c} u(f) dp,$$

where u is an affine utility index on consequences, C is a nonempty, convex and (weak*) compact subset of probabilities measures, and A is a *referential chance event*. In this model there is a clear separation of ambiguity attitudes. The case $E \subset A$ captures possible familiar target events while the case $E \subset A^c$ might refer to the case of relative ignorance concerning related contingencies. This model captures a special case of event dependence of ambiguity attitudes in which the well known maxmin model is a special case. We also characterize the case where we have a Choquet Expected Utility representation. *Journal of Economic Literature Classification Number*: D81.

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1. Introduction

Motivated by the well-known Ellsberg paradox (1961), ambiguity became an important issue in decision theory modeling sensitivity to the lack of precise probabilistic information. The most well known models capturing ambiguity sensitivity are given by preference relations with a non-additive functional representation, as

in Schmeidler (1989)'s Choquet Expected Utility (CEU) and Gilboa and Schmeidler (1989)'s Maxmin Expected Utility (MEU) models. In this perspective, the classical additive case of Subjective Expected Utility (SEU) of Savage (1954) (or Anscombe and Aumann, 1963) imposes strong behavioral conditions on preferences, which includes independence, that implies an insensitive or neutral attitude towards ambiguity.¹

The widely discussed hypothesis that *people prefer to bet on known rather unknown probabilities* is the basis for the notion of ambiguity aversion (uncertainty aversion). For instance, this hypothesis is essential in the MEU model where a DM behaves as if he had a set of probability measures that determinates his *ex ante*

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¹ Ghirardato and Marinacci (2002) provided a complete characterization of a comparative notion in which the SEU model is the benchmark of ambiguity neutrality.