Summary: This paper studies the implementation problem of a mechanism designer with ambiguity averse agents. The mechanism designer, desiring to implement a choice correspondence, can create ambiguity for agents by committing to multiple allocation rules and transfer schemes without revealing which one to use. By extending the cyclical monotonicity condition from choice functions to choice correspondences, we show that the condition can fully characterize implementable choice correspondences. We then study the implementability of choice correspondences in supermodular environments. As an application, we consider a mechanism designer who wants to allocate one object to one of her most desired agents and show that she can strictly benefit from concealing the tie-breaking rules. An intuitive and computationally tractable condition is provided to characterize when the mechanism designer’s preference induces an implementable choice correspondence.

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91B03 Mechanism design theory
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implementation; ambiguity aversion; cyclical monotonicity; randomized reports

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