

Inquisitive Intuitionistic Logic: An Application of Nuclear Semantics

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Inquisitive logic is a research program seeking to expand the purview of logic beyond declarative sentences to include the logic of questions. To this end, the system of inquisitive propositional logic extends classical propositional logic for declarative sentences with principles governing a new binary connective of inquisitive disjunction, which allows the formation of questions. Recently inquisitive logicians have considered what happens if the logic of declarative sentences is assumed to be intuitionistic rather than classical. In short, what should inquisitive intuitionistic logic be? This talk, based on joint work with Guram Bezhanishvili, will provide an answer to the question from the perspective of nuclear semantics, an approach to classical and intuitionistic semantics pursued in our previous work (A Semantic Hierarchy for Intuitionistic Logic, forthcoming in *Indagationes Mathematicae*). In particular, we show how Beth semantics for intuitionistic logic naturally extends to a semantics for inquisitive intuitionistic logic. In addition, we show how an explicit view of inquisitive intuitionistic logic comes via a translation into the system of propositional lax logic, whose completeness we prove with respect to Beth semantics.