

# Scope w/o Syntax: A Game Theoretic Approach

Luke Smith—September 27, 2017

Here I develop a novel and putatively universal framework for analysing and predicting the availability of quantifier scope ambiguity, formalized in **Game Theory**.

Specifically, available scope interpretations are *not* licensed or restricted by the narrow syntax, rather are gradually weeded out by a strategic assessment of other interlocutors' communicative intent. That is, speakers word sentences in such a way to avoid marked constructions and communicate the intended interpretation of their sentence with the most clarity; hearers can intuit the intentions of the speaker by implicitly analysing how a speaker navigates these constraints.

I employ Game Theory to analyse these strategic behaviors and derive several cross-linguistic empirical generalizations from this. Chief among which is the general fact that **syntactic rigidity causes ambiguity**, while equivalently, **syntactic flexibility disambiguates**. In formal terms, each available scope interpretaion is a Nash Equilibrium; if there is only one Nash Equilibrium, the sentence is unambiguous.

I also propose some ways to further generalize the theory to a complete framework of scope analysis, integrating world knowledge and other pragmatic factors.