

*Model Theory:
groups, geometry, and combinatorics*

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Stability theory, created by Shelah, exhibits the structure of models of *stable* theories by looking at *forking*-independence and the interaction of types. Its methods were extended in two directions, NIP and simple theories, in order to include a broader range of applications: These two extensions are orthogonal in the sense that a theory is stable if and only if it is simple and NIP. Also the stability theoretic methods developed in the two classes were quite different. One expects that the study of the class of NTP_2 -theories, which contains both classes, will yield a unification of methods. Other notions of independence generalizing the notions from stability theory have been studied recently in various contexts, most notably stable (and compact) domination, stationary independence and independence induced from counting measure in pseudo-finite structures.

We hope that these tools will also shed new light on the model theory of non-abelian free groups.