

Second Pisa Colloquium in Logic, Language and Epistemology

Edited by

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PREFACE

The origins of this collection of essays trace back to the “Pisa Summer Workshop in Proof Theory”, held in June 2012 at the Department of Philosophy of the University of Pisa, where several people urged the importance of devoting a volume to reflections concerning features of contemporary logic that have become more and more significant with respect to both the mathematical and the philosophical dimension. The participants to the Workshop who contributed to this volume are Michael Arndt, Luca Bellotti, Nissim Francez, Pierluigi Minari, Laura Tesconi and Luca Tranchini. All of them prepared fresh papers, even though some traces of the talks given at the Workshop sometimes survive. It is important, however, to remind this origin, since that meeting was a remarkable event, and one of the aims of this volume is to provide a tangible record of part of the discussions started there.

Afterwards, a series of colloquia held in Pisa, at the same Department of Philosophy, between the end of 2012 and the first months of 2013, focussed on important aspects of logical inquiry, also covering historical and epistemological topics. It seemed in a sense natural to the editors to bring together the papers which originated from those colloquia and the first group of contributions, so many and so significant being the threads which connect them all. Actually, no single specific theme was heading the resulting collection of papers, a fact which is reflected by the bare alphabetical arrangement we chose. However, we may suggest some routes which allow one to detect broadly the following areas.

On Transcendental Syntax: a Kantian Program for Logic?, by V. Michele Abrusci and Paolo Pistone, *Principles of Explicit Composition*, by Michael Arndt and Laura Tesconi, and *How to Understand Arbitrary Reference: A Proposal*, by Massimiliano Carrara and Enrico Martino, propose fine reflections on syntactic questions, such as the place occupied by the Cut Rule within the range of activity of a more general Composition Principle, the different role played within quantified logic by variables, constants and parameters, and the proposal of the first steps towards an ambitious program where the *normative* features of logical languages (such as those embodied in the meta-properties of completeness, consistency, cut elimination, etc.) are not to be pursued by reference to external structures, but find an explanation through internal, so to speak *geometrical*, criteria directly applicable to syntactical artifacts.

The Second Order Alternative in Set Theory, by Luca Bellotti, *Does Logic Slowly Pass Away, or Has It a Future?*, by Carlo Cellucci, *Husserl on Schröder's View of Logic*, by Stefania Centrone and Pierluigi Minari, and *On the Source of the Notion of Semantic Completeness*, by Enrico Moriconi, share a philosophical and historical attitude concerning logical inquiry. Issues are vastly different, both in nature and in generality, but a unifying feature is that these historical investigations have a strong theoretical aim. The purpose of these papers is not to reconstruct the route towards some results or some theory (which anyway would be a useful and important goal), but rather to put in perspective some chapters of logical inquiry in order to shed new light on some portions of current logical research.

Inference and Compulsion, by Cesare Cozzo, and *Gettier Problems, C-Justifications, and C-Truth-Grounds*, by Gabriele Usberti, deal with epistemological issues, spanning from the general question of why an inference can be compelling to a proposal for a solution to Gettier's problem. The latter exploits an anti-realistic notion of *truth as justification*, grounded on the cognitive status of an observer who realizes that the true belief of the knowing subject is actually not justified.

A Proof-Theoretic Semantics for Contextual Definiteness, by Nissim Francez and Bartosz Wieckowski, *Proof-Theoretic Harmony and the Levels of Rules: Generalised Non-Flattening Results*, by Grigory K. Olkhovikov and Peter Schroeder-Heister, *Harmony and Rule Equivalence*, by Luca Tranchini, and *Varieties of Inferential Semantics*, by Giacomo Turbanti, concern questions relating to the area named (by Peter Schroeder-Heister) proof-theoretic semantics. This area belongs to the family of *inferentialist* semantic theories, so called by Robert Brandom, in contrast to *denotationalist* ones. The latter paper concerns this general philosophical framework, and compares two inhabitants of this area: the proof-theoretic semantics and the *incompatibility* semantics. In the first paper of this group we are given a promising treatment, within the perspective of the proof-theoretic semantics, of some extensions of first-order logic, and of an extensional fragment of English that includes the definite article. The remaining two papers are deep investigations on questions concerning the property of *Harmony* between various kinds of rules, and show how much this area of research has grown since it was launched in the late Eighties of the last century.

As Editors, we wish to warmly thank all people involved in the project of this volume for their willingness, and for having made it possible to publish the volume just one year after some of the talks. Anyone who ever ventured to edit a collection volume knows that this is a very reasonable delay time. We also

express our gratitude to Giacomo Turbanti for his invaluable help in making the contributed papers ready for the publisher.

THE EDITORS

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