Baltic International Yearbook of Cognition, Logic and Communication

2013

Editors' Introduction

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Recommended Citation

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The idea of interpreting quantifiers in terms of a game between two players was first suggested at the end of the 19th century by one of the inventors of quantification theory, C. S. Peirce, but it laid buried in his papers until it was discovered in the 1980s. His idea was independently discovered in the 1950s, when Leon Henkin suggested a game semantics for infinitary languages. Paul Lorenzen introduced his *Dialogspiele* at the same time, while his student Kuno Lorenz introduced the vocabulary of game theory that led to our modern conception of game semantics shortly after. The idea is to provide an explanation of the meaning of the logical connectives and quantifiers in terms of rules for non-collaborative, zero-sum games between two agents, one of whom argues for the validity of the claim against moves from the other, and to define truth in terms of the existence of a winning strategy for the defender.

In mathematics, it is also during those years that the *Ehrenfeucht-Fraïssé* or back-and-forth games were first introduced. These games have had a great number of applications since, e.g., in finite model theory. Game semantics gained further momentum when Jaakko Hintikka picked up Henkin's ideas and developed his game-theoretical semantics in the late 1960s, which turn out to be of great interest *inter alia* for games of imperfect information, and when Andreas Blass, in a key

paper published in 1992, used Lorenzen's ideas to try and provide a semantics for linear logic. This led to numerous developments of interest in logic and computer science by Samson Abramsky, Giorgi Japaridze, and others, and also, in the work of Jean-Yves Girard, to ludics.

Alas, philosophers have, on the whole, paid little attention to these developments. There were discussions within the Erlangen school formed around Lorenzen, and Hintikka tirelessly campaigned for his game-theoretical semantics, but, regrettably, they both failed to make a major impact on mainstream philosophy at the time, though their ideas are vigorously pursued today by a new generation of logicians and philosophers. Game semantics not only opens up new avenues in the philosophy of language and logic, e.g., inferentialism, it is also involved in recent developments in the semantics of modal logic, with bisimulation, and in linguistics, where there has been a recognition of the importance of dealing with units larger than sentences, e.g., dialogues, for which Montague grammar turns out to be ill-suited. Semantic and pragmatic phenomena are currently largely studied in unison and game-theoretic conceptualisations have proved particularly well suited for that purpose. Game semantics should also be of interest to historians of philosophy and logic; for example, Peirce's ideas about game semantics lead to a better understanding of his ideas in semiotics, and thus of his philosophy as a whole, while game semantics opens up new areas of study in the history of logic, from dialectic in Ancient Greece to *obligationes* in the Medieval period.

Thus, we felt that the philosophical community would gain from learning more about recent work in game semantics, and about the new links it establishes between logic, computer science, linguistics, and philosophy. It is with the hope of furthering this aim that we convened some of the key contributors to game semantics in May of 2012 at the 8th International Symposium of Cognition, Logic and Communication held at the Center for Cognitive Sciences and Semantics in Riga, Latvia. For the fact that it turned out to be a very successful symposium, we have to thank the organizers: Jurģis Šķilters, Kristīne Ante, Līva Brice, Signe Cāne, Signe Mežinska, Katrīna Smoļska, Jānis Pencis, Andrejs Vojevoda. We would also like to thank the rector of

the University of Latvia, prof. Mārcis Auziņš for his support. This volume includes a selection of invited and contributed papers presented on that occasion.