

## THE ADEQUACY OF MATERIAL DIALOGUE-GAMES

ERIK C. W. KRABBE

The concept of a *material dialogue-game*\* is explained by P. Lorenzen, by K. Lorenz, and, from a somewhat different point of view, by K. J. J. Hintikka.<sup>1</sup> Whereas in *formal dialogues* the formulas uttered are meaningless schemata, *material dialogues* are carried through in an interpreted language: their sentences—at least the elementary ones—may have truth-values, and these truth-values have their bearing on the possibilities of winning or losing. Each of the three authors mentioned has asserted, at least implicitly that his game is *adequate* in the following sense: there exists a winning strategy for the proponent of a thesis, iff this thesis is true according to classical semantical theory.<sup>2</sup> K. Lorenz's proof of *Hauptsatz 1* can be reinterpreted to establish the adequacy of his *reine (faktische) Dialogspiele*.<sup>3</sup>

In this paper I will present a rather general definition of "*material dialogue-game*", though one limited to games in which all the elementary sentences are either true or false. This definition makes it possible to state and prove a theorem asserting the *adequacy* with respect to any two-valued model theory  $\mathfrak{M}$  of all material dialogue-games that have three properties to be explained shortly: *local finiteness*, *regularity*, and *accordance in logical rules with the particular model theory under consideration*. These, to my opinion, are properties a reasonable material dialogue-game should have. The proof of the theorem is straightforward, once its key-concept—that of a *P-favorable position* in a game—has been defined. The adequacy of most known material dialogue-games follows as special cases of the theorem.

**1** A definition of '*material dialogue-game*'     Material dialogues must be held in a *language*. In the following, let  $\mathfrak{L}$  be some fixed language, with sentences,  $A, B, C, \dots$ , some of them elementary. It is not required that

---

\*I would like to thank E. M. Barth, G. Berger, A. A. Drukker, and J. Vtieve for their help in preparing this paper.