

Letter from Hans Kamp to A.N. Prior, September 6, 1969.

Ithaca 6-9-'69

Dear Professor Prior,¹

Finally I get to write this letter, which I have prepared again and again. The main reason is that the paper on 'now', — about which I talked to you in Vienna — has been laying around — waiting to be typed — for more than half a year. Here it is eventually. I am sending it only now to Noûs, and so I do not know yet if they will reject it. If so, then, as you suggested, the possibility of it being published in JSL, I will let you know.

I received a paper by Dov Gabbay, a student of, I believe, Michael Rabin in Jerusalem, that proves completeness for 'now' for a special case (linear time), some time in November. The proof is fairly straightforward and much along the lines of all the other completeness proofs (Henkin-type) that he has given for tense-logic.

I also send you my disserta-^{2}-tion, as well as notes on a seminar I gave here this Spring. I wanted to do my own stuff, but got hung on deductive completeness, and so we went through a whole series of Gabbay-like proofs, some of which, however, I think, are new (at least they were not in a paper that Gabbay sent me together with his thing on 'now'. But the method is entirely his.

At the end there is a, very tentative, discussion of the meaning of such completeness proofs, and the possibility to regard them — or, rather, the construction involved —, as constructions of moments. The idea is, of course, essentially the same as that of your 'world' propositions. But the [?] ² here is much more complicated, since the assumption that the moments are characterized by particular propositions is not made. (Thus ^{3} a moment might be characterized uniquely by an infinite set of propositions but, at the same time, share each finite subset of that set with some other moment. The situation can become rather complicated, as I have tried to illustrate with a few examples.*)³ And I have far from disentangled the different possibilities. I do not quite know moreover if it would be worth it to work this out in more detail.

The only interesting case of completeness for your logic which the notes do not contain, is that of integer-like time. As a matter of fact Gabbay's method cannot work in that case, since the system is not compact. Bull gave a completeness proof in JSL, March '68, but his proof for integral time, — the only case where his method is essential, since, to my knowledge, no others work — is unfortunately wrong. I think I patched it up: But the proof is considerably ^{4} more complicated after repair.

The really important problem in this area is, I believe, to axiomatize "Since" and "Until". I still have not succeeded in doing so, but hope to accomplish this during the Summer. I want to publish my dissertation, and it would be nice if I could include this completeness proof.

Dana Scott told me about a conference about time — or maybe, more specifically, tense logic — this summer at Oberwolfach in Germany. Do you know anything about it? I would like very

¹ This letter has been transcribed by Woosuk Park, Adriane Rini and David Jakobsen. It is located at the Bodleian Library Oxford in the Arthur Prior Collection, box 2.

² Editors' note: The word is unclear.

³ Kamp has written in the left margin: "(*) This discussion is in the typed notes at the very end."

much to come, but have no information, nor any idea how one could qualify for going there. If you have any positive information, I would appreciate very much if you let me know. I am leaving for Europe on Thursday, and will be in Holland during most of the time this summer. (Wollegrasweg 4, Bergen (N.H.) NETHERLANDS) {5}

I would like to spend a week in Oxford – or elsewhere in England – at the end of the summer, and I would enjoy very much seeing you then if possible. Will you be in Oxford during, say, the second half of August? Norman Kretzmann told me that you will not be at Balliol next year, but I am uncertain as to whether that implies your leaving already at the beginning of the summer or not.

You must have heard of all the troubles at “Cornell”. Well, in comparison to other Universities we are still fairly well off (at least no people shot and no buildings burnt, so far). The country is really falling apart. And the Nixon-administration helps it a good deal along that path. I am still fairly optimistic about America’s power to eventually cure itself. But it takes everyday more of an effort to think {6} that way. Anyway, after next year I will have to be out for two years, and after that we will just see what the situation is.

Very best regards, also for your wife and Ann,

Your

Hans K.