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EQUIVALENCE: *P* ≡ SOMEONE KNOWS THAT *P*

jurij Derenikovič has devoted very much time and, as always, fruitful work to a certain important part of verbal semantics, viz. to the concept *know* / Russian *znat'*. For many decades now he has insisted on its primitive character. We find a new exposition of this idea in [Apresyan 2018] where a large number of other epistemic expressions are scrutinized as well. While his view of the concept of knowledge is not identical with mine in all its details, I share with him the basic non-conventional attitude concerning the widely debated issue of definability of 'knowledge' and ways of defining it. I myself have spent much time arguing for the treatment of the fundamental expression 'someone knows about _ that _, not: _' as simple, i.e. indefinable, and universal [cf., in particular: Bogusławski 1981].

Along with my heartfelt wishes of good health and many further scientific achievements in the new decades of Jurij's life, I submit a short reasoning which shows that **any** proposition *p* with its inherent so called *truth claim* is equivalent to the statement that there is a subject who knows that *p*. Thus, it is not only the case that the aletheic *knows that* entails, in the most elementary way, the corresponding *p* as true, but also *any p*, with its *truth claim*, entails 'someone knows that *p.*' This circumstance reflects both the abovementioned simplicity of the notion and its nature of one of the pivot-stones of the existence of living beings, humans in particular, next to the phenomenon of 'doing' (recall Goethe's memorable verse *Im Anfang war die Tat*). At the same time the deduction offers a rationale for the theistic claim of the Almighty and **Omniscient** Creator of "all things seen and unseen."

The reasoning applies to single states of affairs. But on the strength of a due logical extension of the deduction, the result is also valid for complex states of affairs as represented by conjunctions, alternatives etc.

The deduction has the following shape.

[∃x *knows that p* (x)   ≡ *p*]
1. *a* knows that *p* ⇒

$\Rightarrow$ [(*a knows that p* $\lor$ *a does not know that p*) $\qquad \land$

$\land$ (*a knows that p* $\Rightarrow$ $\exists$x knows that *p* (x)) $\land$ (*a does not know that p* $\Rightarrow$ $\exists$x knows that *p*
    (x))] $\Rightarrow$

$\Rightarrow$ $\exists$x knows that *p* (x) $\land$ (x = *a* $\lor$ x $\neq$ *a*)

The first apodosis in 1 includes the tautological alternative of *a*'s knowledge and ignorance (which is always accessible as an apodosis) and the analytic truth saying that both *knows that* and its **basic** negation *does not know that* entail someone's positive knowledge to the effect that the state of affairs represented in the propositional complement **obtains** (attention must be called to the fact that the negation in question has to be distinguished from the negation *it is not the case that a knows that* _ which applies to certain structures representing complex states of affairs).

2. Contraposition of the first conjunct in the last apodosis in 1 as applied to the first protasis in 1, with the expansion of that protasis yielding *a knows that p* $\land$ *p*, a move which is made possible by the entailment *a knows that p* $\Rightarrow$ *p*, leads us to accept the following:

$\sim$ $\exists$x knows that *p* (x) $\Rightarrow$

$\Rightarrow$ ([*a does not know that p*] $\lor$ $\sim$ p) $\Rightarrow$

$\Rightarrow$ [*a does not know that p* $\land$ $\exists$x knows that *p* (x) $\land$ $\sim\exists$x knows that *p* (x)] $\lor$ [$\sim$ p $\land$ $\sim\exists$x
    knows that *p* (x)] $\Rightarrow$ $\sim$ p

The first apodosis results from De Morgan's laws concerning the negation of the conjunction *a knows that p* $\land$ *p*. The second apodosis is based on the implementation of the law ($\alpha \rightarrow \beta$) $\rightarrow$ ($\alpha \rightarrow \alpha \land \beta$) and the law of existential generalization. The final apodosis results from the elimination of the first constituent of the alternative in the second apodosis as exhibitig self-contradictoriness, the elimination being based on the law of Disjunctive Syllogism, as well as from the reduction of the conjunction in the second constituent of the alternative by canceling its fragment which just reiterates the protasis , viz. $\sim$ $\exists$*x knows that p (x)*.

3. Contraposition of the last apodosis in 2 as applied to the first protasis in 2 yields:

p $\Rightarrow$ $\exists$x knows that *p* (x).

References

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