

Principia Mathematica on Relative Product

This is from the Summary of *34:

“The relative product of two relations R and S is the relation which holds between x and z when there is an intermediate term y such that x has the relation R to y and y has the relation S to z. Thus e.g. the relative product of brother and father is paternal uncle; the relative product of father and father is paternal grandfather; and so on. The relative product of R and S is denoted by “R|S”; the definition is:

*34.01 $R|S = df \ \wedge x \wedge z \{ (Ey). xRy.ySz \}$

In my case:

R is the relation between a word and an idea.

S is the relation between an idea and an object.

So

R|S is the relation between word & object.

For me, words are typically physical, e.g. marks on paper or sounds. Ideas are mental, however mind is to be analyzed.

I will just use “E” for existential quantification, to make discussion easier.

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