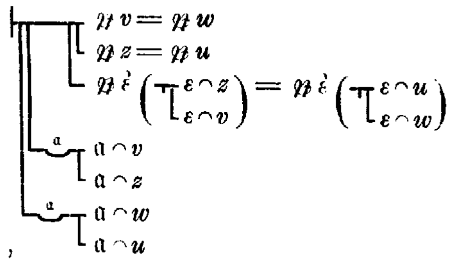
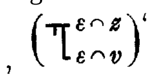
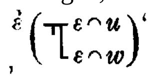
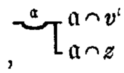
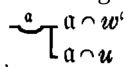
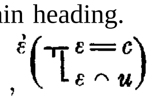
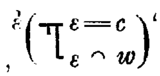
O. Consequences

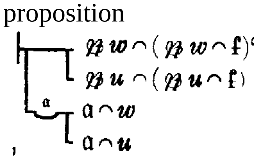
a) Proof of the Proposition



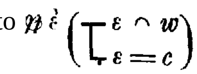
§45. Analysis

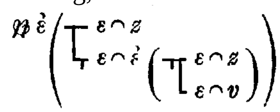
By leaving *'x'* and *'u'* in (469) unchanged, but by placing  for *'v'* and  for *'w'*, and by introducing the subcomponents  and , we easily reach the proposition in our main heading.

If we then place  for *'z'*, and  for *'v'*, and introduce the condition that *c* falls under the *u*-concept, we obtain the proposition

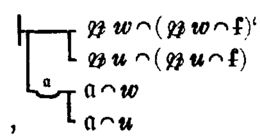


(α,476)

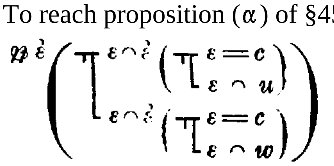
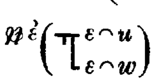
We can make use of this proposition in proving that every number stands in the **f**-relation to some number, which, in the first volume, was demonstrated only for finite numbers. Let us assume that the number *n* belongs to the *w*-concept. Then there is either an object *c* which does not fall under it, and then ℕ*w* stands to  in the **f**-relation; or there is no such object, in which case, the (0⌒℧∪**f**)-concept is subordinate to the *w*-concept, and we find, according to proposition (α), that ℕ*w* stands to itself in the **f**-relation.

In order to prove the proposition in our main heading, we must show that  coincides with ℕ*v*, if the *z*-concept is subordinate to the *v*-concept.

b) Proof of the Proposition

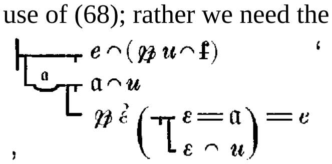


§47. Analysis

To reach proposition (α) of §45, we must prove that  coincides with  if *c* falls under the *u*-concept.

§49. Analysis

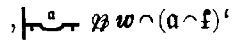
In order to obtain the proposition with main component '┬ ℕ*u*⌒(ℕ*u*⌒**f**)', we can not here make any use of (68); rather we need the proposition



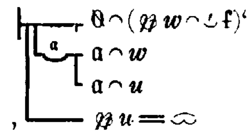
(475)

which we derive first.

c) Proof of the Propositions

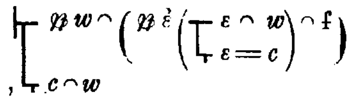


and



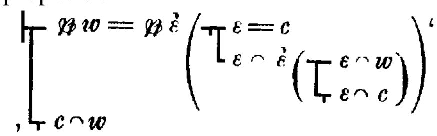
§51. Analysis

As is stated in §45, in order to use (476), we need the proposition



(α,479)

which is derivable from (103). For this we need the proposition



(β,478)

§53. Analysis

We further derive from the proposition (476), with (145) and (165), the consequence that no finite number belongs to a concept if the number Endlos belongs to a concept subordinate to it.