

## On Being

In this article, both being and nothingness are objects. Being expresses objects that exist, nothingness expresses objects that do not exist.

1. 1. The language that can express being is consistent.
  2. Therefore, a language that is not consistent cannot express being.
2. 1. If being cannot be expressed in a consistent language, therefore, some being is objects that cannot be expressed in this consistent language.
  2. If a language can define 'the objects this language can express', which means the language is categorical<sup>[1]</sup>, so the language can also define 'the objects this language cannot express'<sup>[2]</sup>, and some being is objects that cannot be expressed in this consistent language (2.1.), therefore, 'the objects this language cannot express' expresses some being in the language, this is not consistent. So the objects the language can express are nothingness.
  3. A language that is not consistent cannot express being, therefore, the objects this language cannot express do not exist, which means being can be expressed in a consistent, categorical language.
3. 1. Nothingness expresses objects that do not exist. The objects that nothingness express do not exist, therefore, nothingness does not express any object. This is not consistent.
  2. Therefore, nothingness cannot be expressed in a consistent language.
  3. Therefore, nothingness cannot be expressed in a consistent, categorical language.
4. Being can be expressed in a consistent, categorical language (2.3.), nothingness cannot be expressed in a consistent, categorical language (3.3), therefore, being equals an object can be expressed in a consistent, categorical language.
5. Being is an object can be expressed in a consistent, categorical language (4.), therefore, being is isomorphic to any consistent and categorical language and language model, and every consistent and categorical language is isomorphic to each other.
6. Being is isomorphic to any consistent and categorical language model (5.), the information of being equals the information of any consistent and categorical language, which can be set to be true. The information we perceive cannot be false. This can be regarded as a foundation of empiricism.

Proof:

[1] If a language L can define 'the objects this language can express', any element in any model of language L can be expressed in language L, the elements in different models expressed by the same elements in language L is isomorphic to each other. So a language L can define 'the objects this language can express' is categorical. If a language is categorical, the objects the language can express can be characterized uniquely in language L, which means that language L can define 'the objects this language can express'.

[2] Assume m is a model of language L, a is an element of m. If a can be defined, there exists a formula A(x) in language L, a is the only element suitable for A(x). So  $\neg a$  is the only element suitable for A( $\neg x$ ), therefore,  $\neg a$  can be defined in language L.