A Proof from PROTEIN*

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Abstract

This is just an experiment.

We assume that the reader is acquainted with the elementary theory described in the appendix.

Axiom 0.1 (The eating habits of animals) *A is an animal* $\wedge$ *B is a plant* $\wedge$ *C is an animal* $\wedge$ *D is a plant* $\wedge$ *C is much smaller than A* $\wedge$ *C eats D* $\rightarrow$ (*A eats B* $\vee$ *A eats C*).

Axiom 0.2 (The fact that caterpillar food is a plant) *A is a caterpillar* $\rightarrow$ *food of the caterpillar A is a plant.*

Axiom 0.3 (The fact that snail food is a plant) *A is a snail* $\rightarrow$ *food of the snail A is a plant.*

Axiom 0.4 (The fact that snails eat snail food) *A is a snail* $\rightarrow$ *A eats food of the snail A.*

Theorem 0.1 $\exists(x_1, x_2, x_3)$ (x_1 *is an animal* $\wedge$ x_2 *is an animal* $\wedge$ x_3 *is a grain* $\wedge$ x_1 *eats* $x_2 \wedge x_2$ *eats* x_3).

Proof[1]. We show directly that

$$\exists(x_1, x_2, x_3)\ (x_1 \text{ is an animal} \wedge x_2 \text{ is an animal} \wedge x_3 \text{ is a grain} \wedge x_1 \text{ eats } x_2 \wedge x_2 \text{ eats } x_3). \tag{1}$$

Because of the fact that caterpillar food is a plant

$$\text{food of the caterpillar Kathy is a plant.} \tag{2}$$

Hence by the eating habits of animals

$$\text{Reinecke does not eat food of the caterpillar Kathy.} \tag{3}$$

Because of the fact that snail food is a plant

$$\text{food of the snail Snaily is a plant.} \tag{4}$$

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[1] PROTEIN

Because of the fact that snails eat snail food Snaily eats food of the snail Snaily. Therefore by the eating habits of animals and by (2) Daffy Duck eats food of the caterpillar Kathy. Hence by the eating habits of animals, (3), and by (2)

Reinecke eats Daffy Duck. (5)

Therefore by the eating habits of animals and by (4) Daffy Duck eats corn. Hence by (5) we have completed the proof of (1).

q.e.d.

Appendix

- A is a wolf $\rightarrow$ A is an animal
- A is a fox $\rightarrow$ A is an animal
- A is a bird $\rightarrow$ A is an animal
- A is a snail $\rightarrow$ A is an animal
- A is a grain $\rightarrow$ A is a plant
- A is a snail $\rightarrow$ A is much smaller than Daffy Duck
- A is a bird $\rightarrow$ A is much smaller than Reinecke
- A is a fox $\rightarrow$ A is much smaller than Isegrim
- Isegrim does not eat Reinecke
- Isegrim does not eat corn
- Daffy Duck does not eat Snaily
- Daffy Duck is a bird
- Kathy is a caterpillar
- Reinecke is a fox
- corn is a grain
- Snaily is a snail
- Isegrim is a wolf