

# Aristotle: Three Classical Laws of Thought

Aristotelian Logic

## 1. Law of Identity

A is A

Everything is the same as itself

## 2. The Law of Non-Contradiction

Not (A and not-A)

Nothing can both exist and not exist at the same time

No proposition is both true and false

## 3. The Law of the Excluded Middle

Either (A or not-A)

Something either exists or does not exist

Every proposition is either true or false

# Newton: Three Laws of Motion

Newtonian Physics

## Newton's First Law of Motion

Every object in a state of uniform motion tends to remain in that state of motion unless an external force is applied to it.

## Newton's Second Law of Motion

The relationship between an object's mass  $m$ , its acceleration  $a$ , and the applied force  $F$  is  $F = ma$ .

## Newton's Third Law of Motion

For every action there is an equal and opposite reaction.