

## 1.2. What is said: possibilities of truth and falsity

### 1.2.0. Overview

In 1.1.3, we noted two closely related properties of a deductive inference: it is a transition from premises to conclusion that is free of any new risk of error, and the information provided by its conclusion is already present in its premises. The second of these properties points to the general idea of the information content of a sentence. This provides a useful perspective from which to consider many aspects of deductive reasoning, and we will explore it further in this section.

#### 1.2.1. Truth values and possible worlds

First we look more closely at the concepts of risk and error involved in the idea of risk-free inference.

#### 1.2.2. Truth conditions and propositions

We can use these ideas to characterize the semantic content of a sentence, to give an account of what it says.

#### 1.2.3. Logical space and the algebra of propositions

Deductive logic can be seen as the theory of propositions in the way that arithmetic is the theory of numbers.

#### 1.2.4. A model of language

One simple picture of language sees it as a device for communicating semantic content, for sharing propositions.