Phil/LPS 31 Introduction to Inductive Logic
Lecture 10

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May 5th 2023

Topics

- The logic of sets

- Fields

- Kolmogorov Axioms

- Sample space and Events

The logic of sets

A presence table will be like a truth table, except we will use it to study the algebra of sets. Recall $A \subset B$ if whenever $x \in A$, then $x \in B$. Think of the conditional $\rightarrow$. We can then construct the presence table for $A \subset B$ as follows:

A	B	$(A \subset B)$
P	P	1
P	A	0
A	P	1
A	A	1

In the first two columns, P means some x is present in A and A (for absent) means x is not in A. 1 under the column for $A \subset B$) means the sentence "A is a subset of B" is true. 0 under the column for $A \subset B$ means that on that row the sentence "A is a subset of B" is false.

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