

## **UC Merced**

### **Proceedings of the Annual Meeting of the Cognitive Science Society**

#### **Title**

Intensional Probability Judgments and Inclusion Fallacies With Generics Momme von Sydow

#### **Permalink**

<https://escholarship.org/uc/item/5sx381dx>

#### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 38(0)

#### **Author**

Sydow, Momme von

#### **Publication Date**

2016

Peer reviewed

# Intensional Probability Judgments and Inclusion Fallacies With Generics

Momme von Sydow

University of Munich, Munich, Germany

**Abstract:** The discussion of conjunction fallacies or, more generally, inclusion fallacies (IFs) is usually limited to dyadic relationships. Bayesian logic formalizes a rational intensional probability, predicting IFs and supplementing standard extensional probabilities (von Sydow, 2011, 2016). They treat logical patterns as explanatory patterns (explanans) given some data (the explanandum). We here address the even more basic issue of nested hypotheses in a single polytomous dimension (von Sydow, 2015) and present a corresponding variant of Bayesian logic (BL). The experiments use materials from the Linda tasks (one concerned with jobs, the other with political attitude) and they explore the polysemous character of 'AND' (Hertwig, Benz & Krauss, 2008; von Sydow, 2014). BL stresses that pattern probabilities should depend on the representation of subclasses. As predicted, the results show substantial deviations from standard probability and here corroborate a pattern approach. They are also at odds with a confirmation account.