

# From Classification to Naming: Modeling Entry-Level Names for Objects in Images

Anonymous ACL submission

## Abstract

## 1 Introduction

- We're interested in modeling human naming behavior [motivate]
- names are sometimes used as labels for object classification in CV
- usually: single-label evaluation scheme
  1. if a single-label evaluation scheme is used, the target name should be the one that is most naturally used for the object. [Here we need a bit of background saying that it has been shown in Psycholing that people tend to agree in the name they give to objects.] To estimate this "natural name" (need better term), we need a reasonable sample.
  2. however, a single-label evaluation scheme assumes object names are unique (cf. evaluation; any other response is counted as incorrect). But alternative names are in fact possible.
- (thanks to ManyNames,) we train models on the task of providing natural names; existing models, fine-tuned models
- and we analyze the consequences of evaluating them on a single-label scheme vs. one that allows for naming variants
- (TBD: and we compare their errors/behavior to the human errors/behavior)

## 2 Related Work

## 3 Adequacy and Errors in ManyNames

- brief intro to manynames and the verification procedure

- limit the analysis to aspects that are clearly and strictly related to the goals of the paper: 1) quality of the verification data itself (inter-annotator agreement), 2) show that most objects do in fact have a "natural name" (such that it makes sense to do single-label classification with those), 3) show that we need for many annotations to establish "natural name". TBD: also show the distribution of human errors in the original ManyNames v.1 data?

## 4 Predicting Entry-Level Names

Largely same content, clarified. With one exception: I'd introduce two evaluation setups: 1) single label, 2) one that counts all valid names as correct.

## 5 Analysis of Model Naming Behavior

Probably largely same content; make sure that the analysis bears on the question, "to what extent do current L&V models account for human naming behavior?". And that it is cohesive.

## References