

# Inconsistent and Unreliable Maturity Ratings on Mobile Platforms

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## Background

Smartphones, tablets, and mobile apps, they are increasingly becoming part of children's daily life. However, there is a rising concern among parents who have experienced unreliable content maturity ratings for mobile apps that result in inappropriate risk exposure for children.

## Project Goals

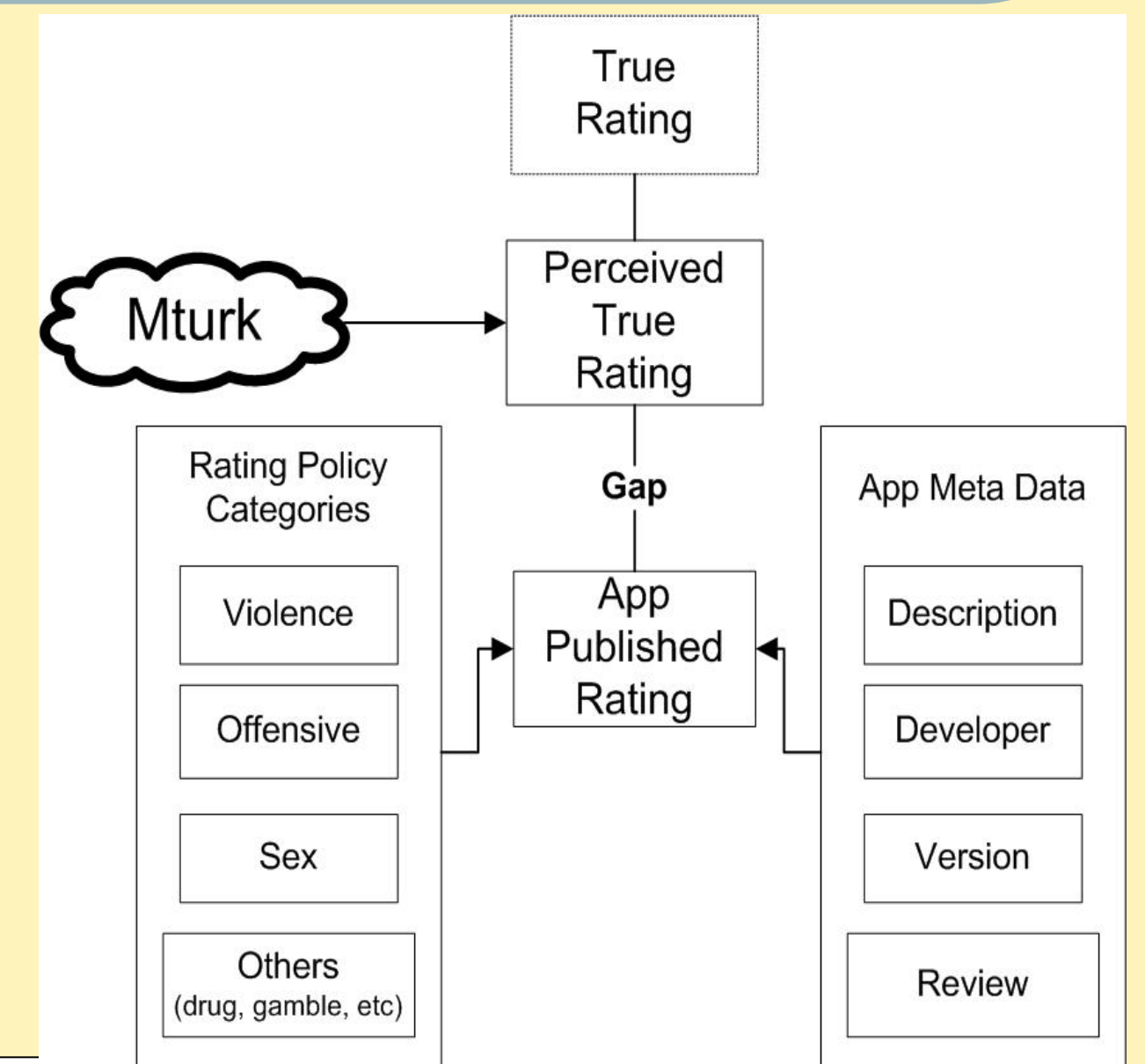
To examine the reliability of Apps' maturity rating, we

- 1) design an experiment to understand the gap between app users' perceived maturing rating of apps and the published maturity rating on iOS platform.
- 2) analyze app maturity rating policy and extract maturity rating related ontology.
- 3) investigates the possible reasons behind the inaccurate ratings.

Levels	Violence	Sex	Offensive language	Other
4+	-	-	-	-
9+	Mild/infrequent cartoon, fantasy (A1) or realistic violence (B1), or infrequent/mild horror themes (C1)	Infrequent/mild mature, suggestive themes (D1)	-	-
12+	Frequent/intense cartoon, fantasy (A2) or realistic violence (B2)	Mild/infrequent mature or suggestive themes (D1)	Infrequent mild language (F1)	Simulated gambling (H1,H2)
17+	Frequent/intense cartoon, fantasy (A2) or realistic violence (B2), Frequent/intense horror themes (C2)	Frequent/intense mature and suggestive themes (D2), Sexual content, nudity (E1,E2)	Frequent/intense offensive language (F2)	Alcohol, tobacco, drugs (G1,G2)

## Approach

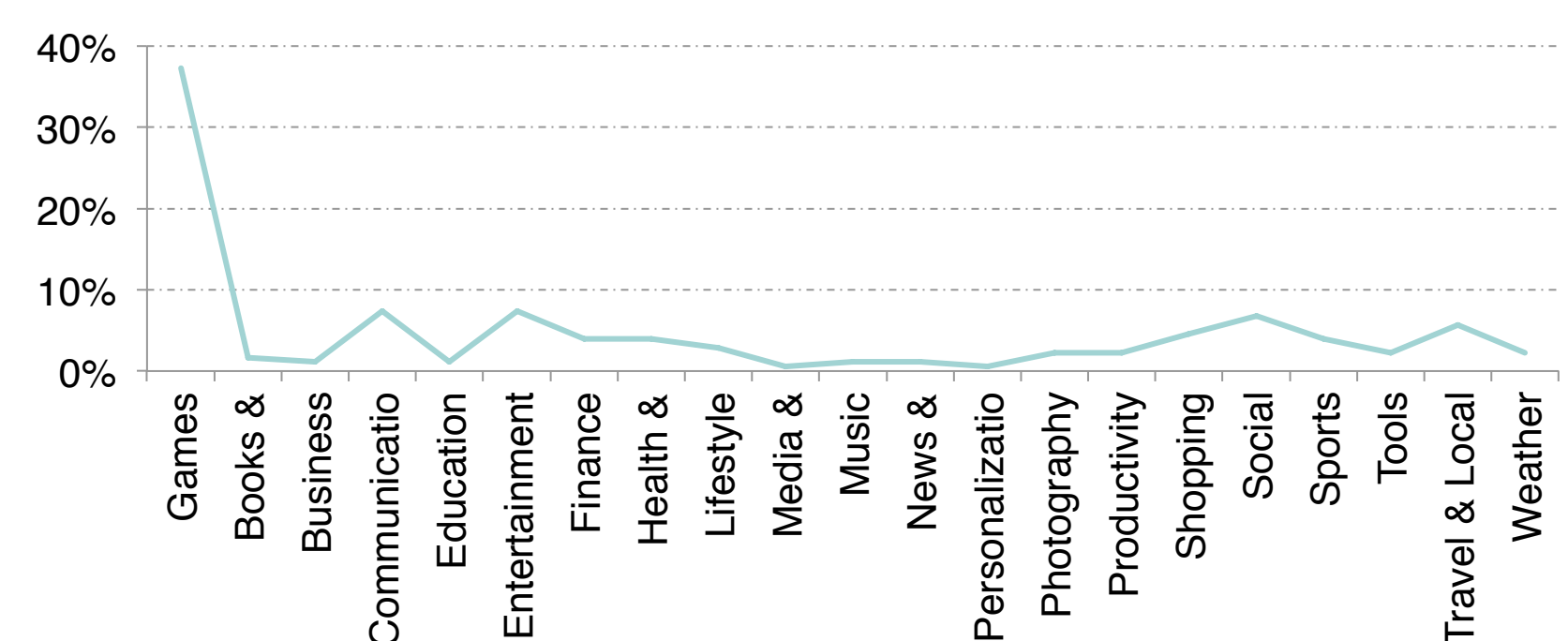
1. Policy coding and decomposing
2. App data collection and text analytics (policy, description, meta data, developer grouping)
3. Repeated experiments on MTurk with quality control to derive perceived *true ratings* from user perspective.
4. Discover the gap between app users' perceived maturing rating of apps and the published maturity rating on iOS platform.



## Dataset

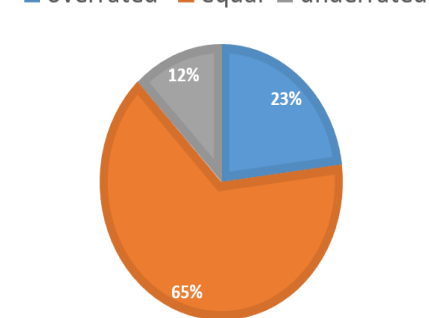
A total of over 100,000 app meta data were downloaded from iOS and Google Play. Information contain app name, description, version, developer, top reviews, icon, screenshot, and their published maturity rating.

## Distribution of Inconsistent App Rating

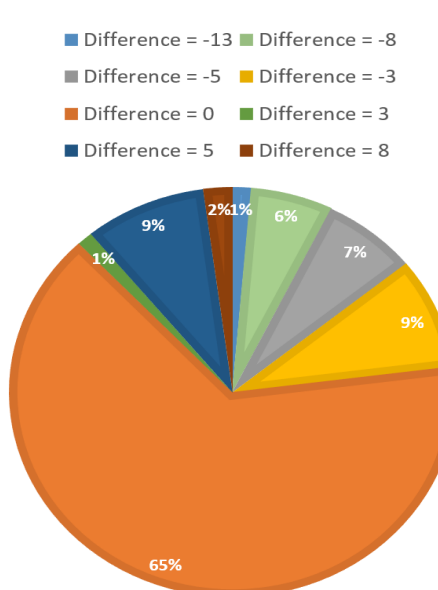


## Gaps between True Rating and Published Rating

IOS MTURK AND TRUE RATING COMPARISON

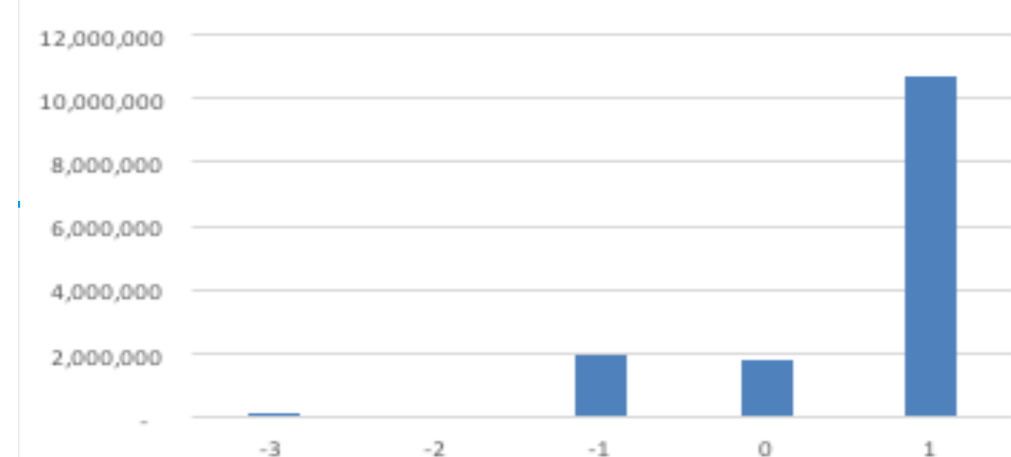


RATING GAPS BETWEEN WORKS AND IOS

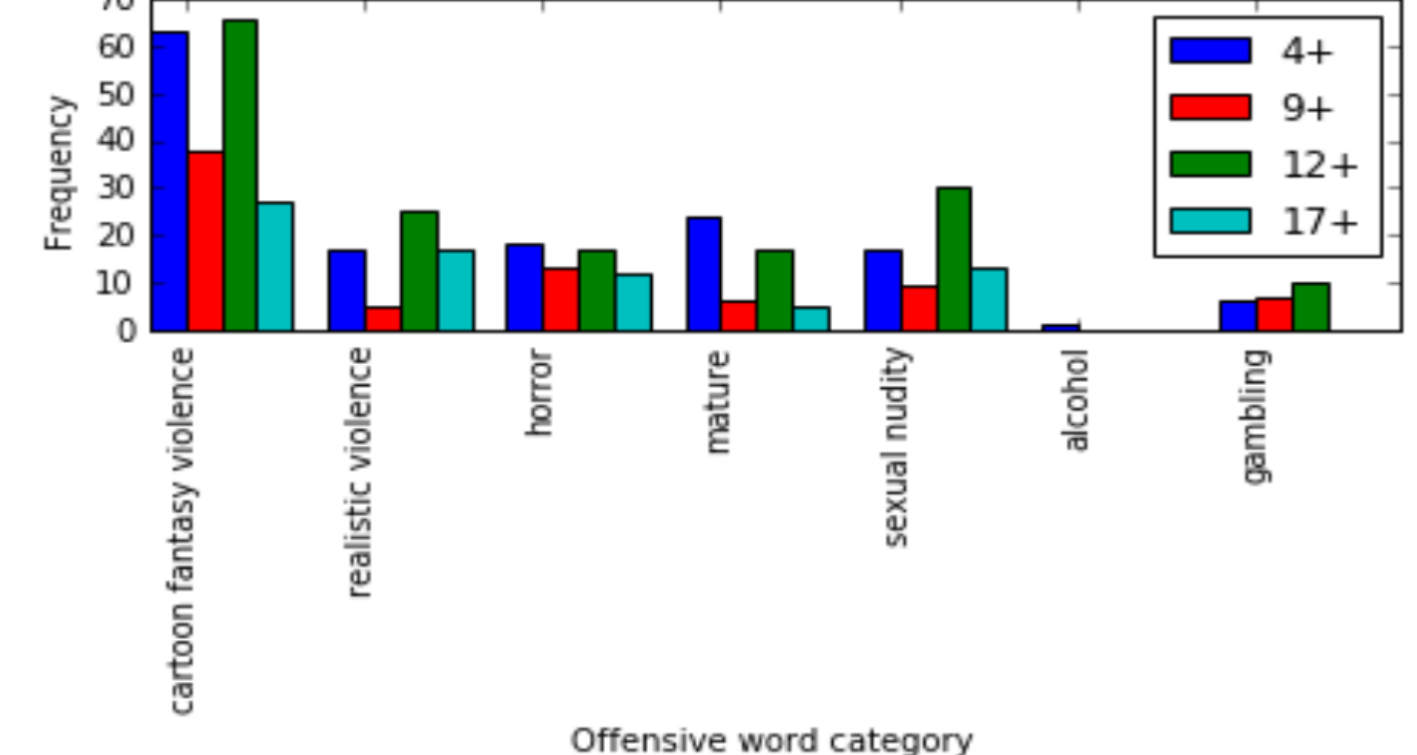


Popular games tend to overrate  
Unpopular games tend to underrate

Level difference v.s. Popularity



Offensive word frequency



Interested in meeting the PIs? Attach post-it note below!

