

Truth Inference in Crowdsourcing: Is the Problem Solved?



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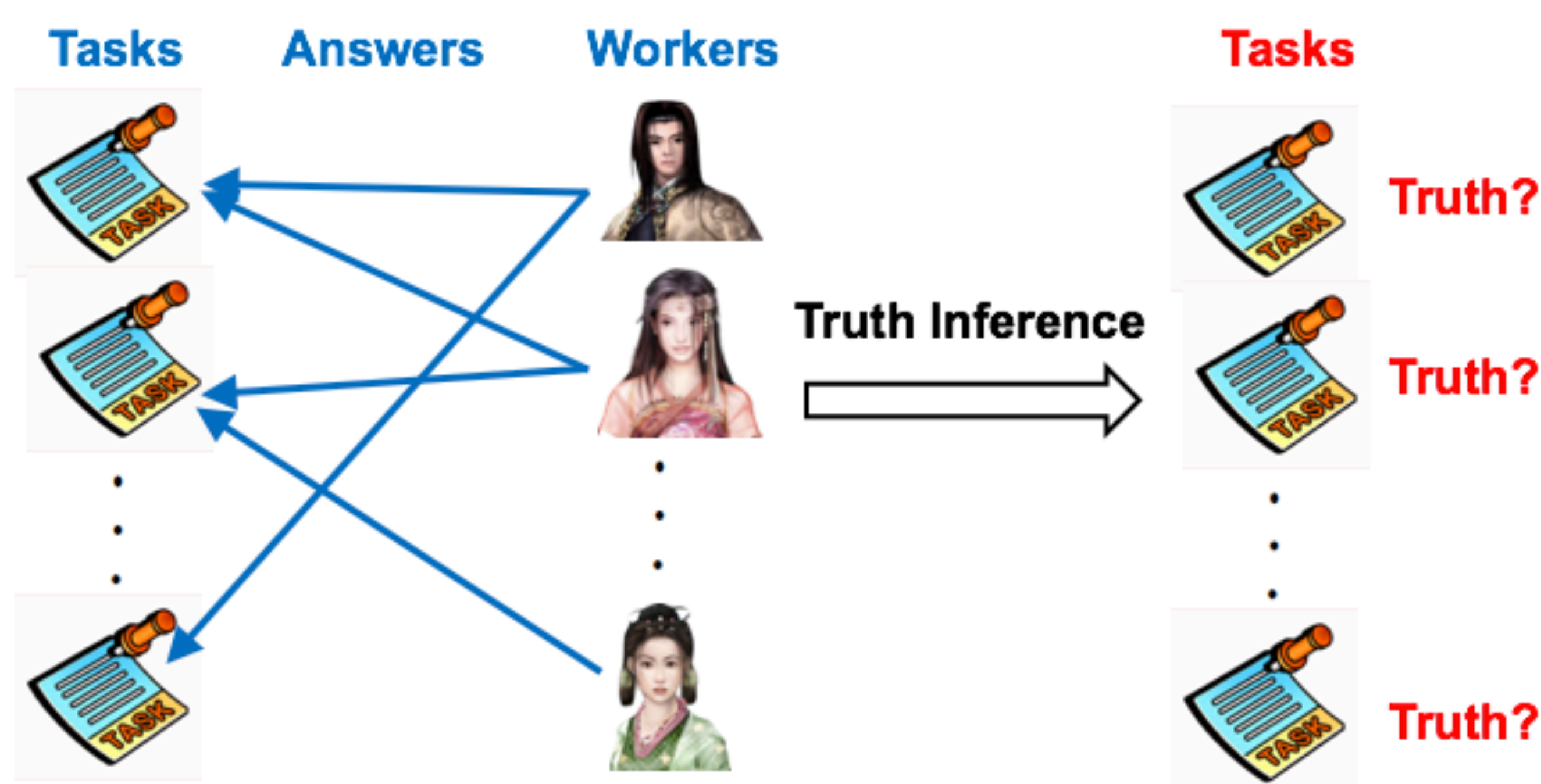
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Motivating Example



Truth Inference Definition

Given **different tasks' answers collected from workers**, the target is to **infer the truth of each task**.



Three Goals

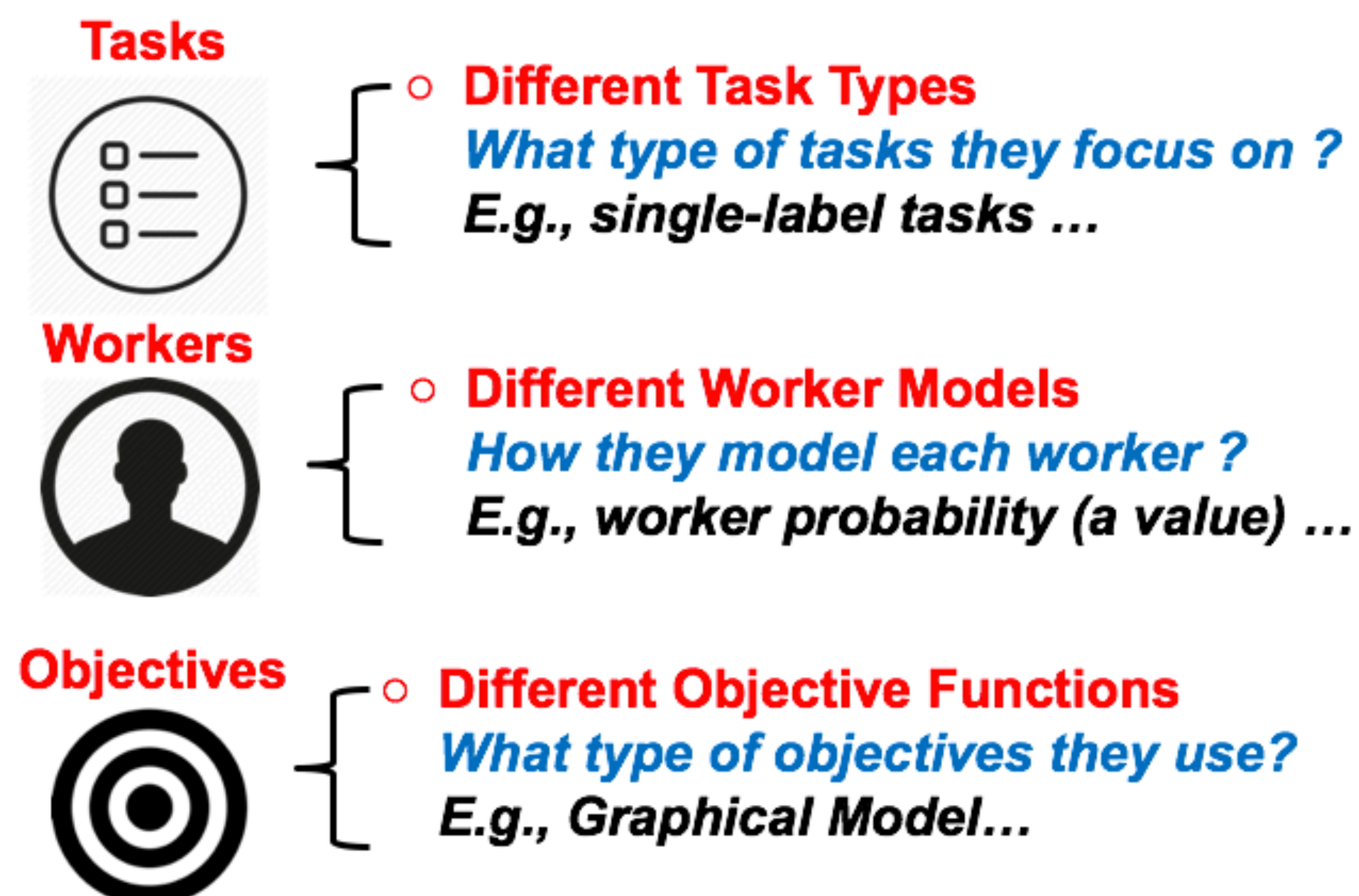
- What are the similarities in existing works?
- What are the differences in existing works?
- Any suggestions to use in practice?

Part I. Unified Framework

- Input: Workers' Answers for all tasks
- Algorithm Framework

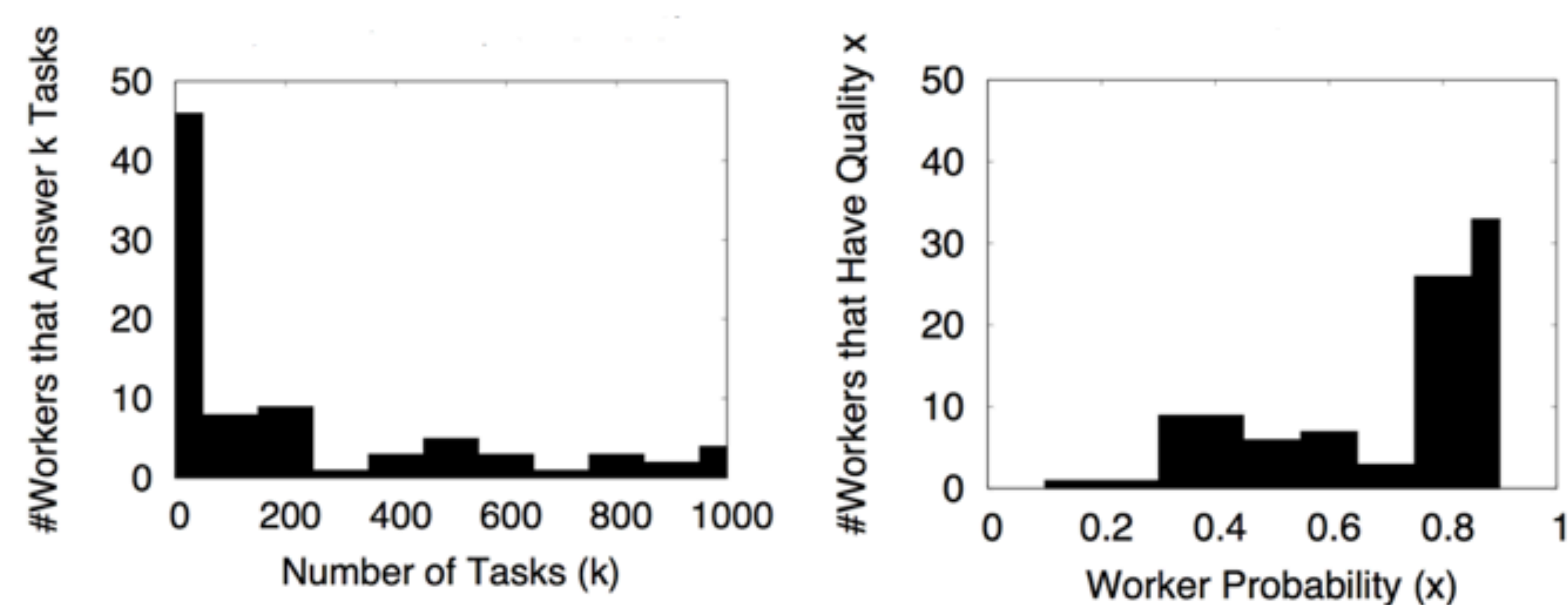
```
Initialize Quality for each worker
While (not converged) {
    Quality for each worker → Truth for each task ;
    Truth for each task → Quality for each worker ;
}
```

Part II. Comparisons



Part III. Experiments and Analysis

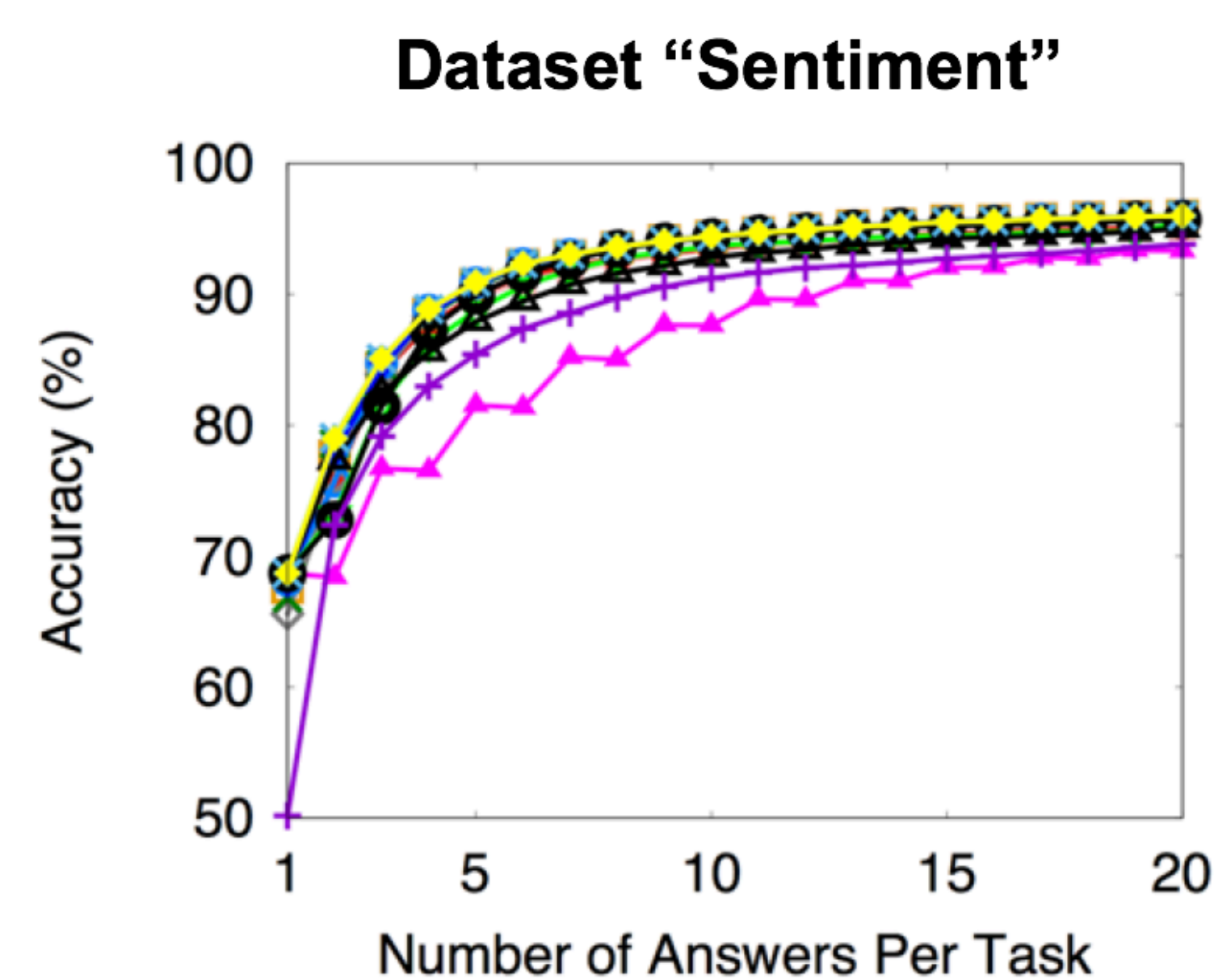
Observations



#workers' answers conform to **long-tail phenomenon**

Not all workers are of very high quality

Change of Quality with the #Answers



Observations:

- The quality **increases** with **#answers**;
- The quality improvement is **significant with few answers**, and is **marginal with more answers**;
- Most methods are similar, except for **Majority Voting** (in pink color).

