Investigating the "Wisdom of Crowds" at Scale

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Background

The "wisdom of the crowd" phenomenon has been documented in a variety of contexts and domains.

Surprisingly, we still have little understanding of why, or even when, the phenomenon holds. The diversity of experimental designs, subject pools, and analytic methods employed, have led to inconclusive and often contradictory results.

To date, there has been no comprehensive, unified study of the phenomenon.

Research Questions

• Speed of convergence of crowd answer as a function of the crowd size

• Susceptibility to social influence

• Statistical aggregation methods by domain

• Efficient expert identification

Experimental Design

• Participants on Mechanical Turk complete 1,000 questions on 50 domains

• Test 2 social conditions

• Crowdsource the construction of domains to over 60 students from 18 institutions (listed as authors)

• Ongoing work to analyse results

We develop a modular online platform to investigate the largest-study of wisdom of the crowds to date.

Platform Design

< wisdomofcrowds.stanford.edu >

20 questions
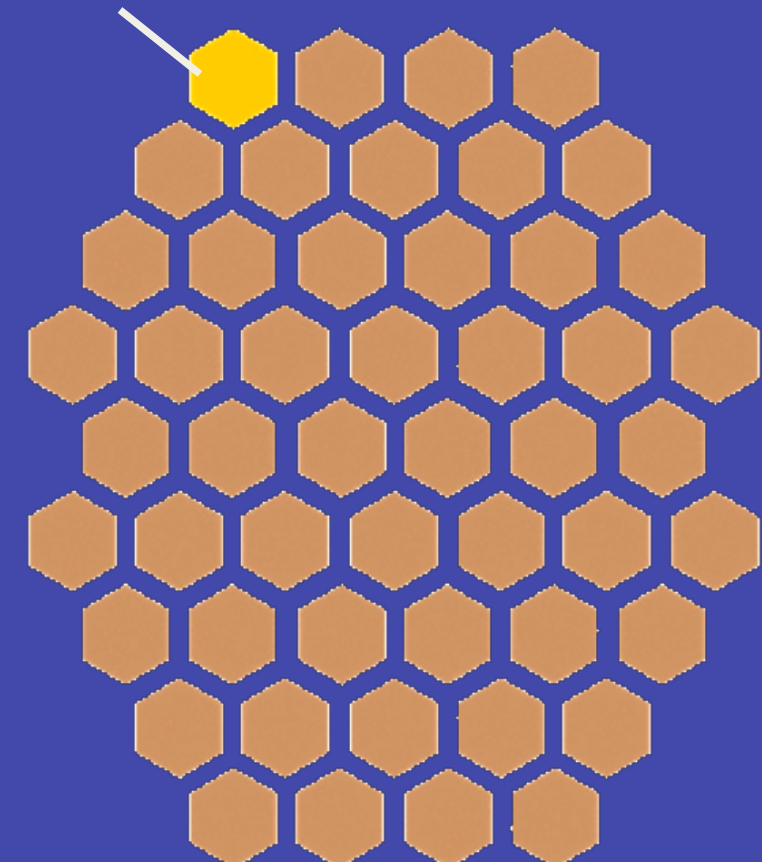
50 domains

Multiple media
• Text
• Image
• Audio
• Video

Social conditions
• Previous 5 answers
• Previous 5 most confident answers

What is the name of this constellation?

Answers from last 5 troopers
Leo   2
Apus   2
Lupus   0
Columba 1
Gemini   0

Answer
Leo   Apus
Lupus Columba
Gemini

How confident are you?
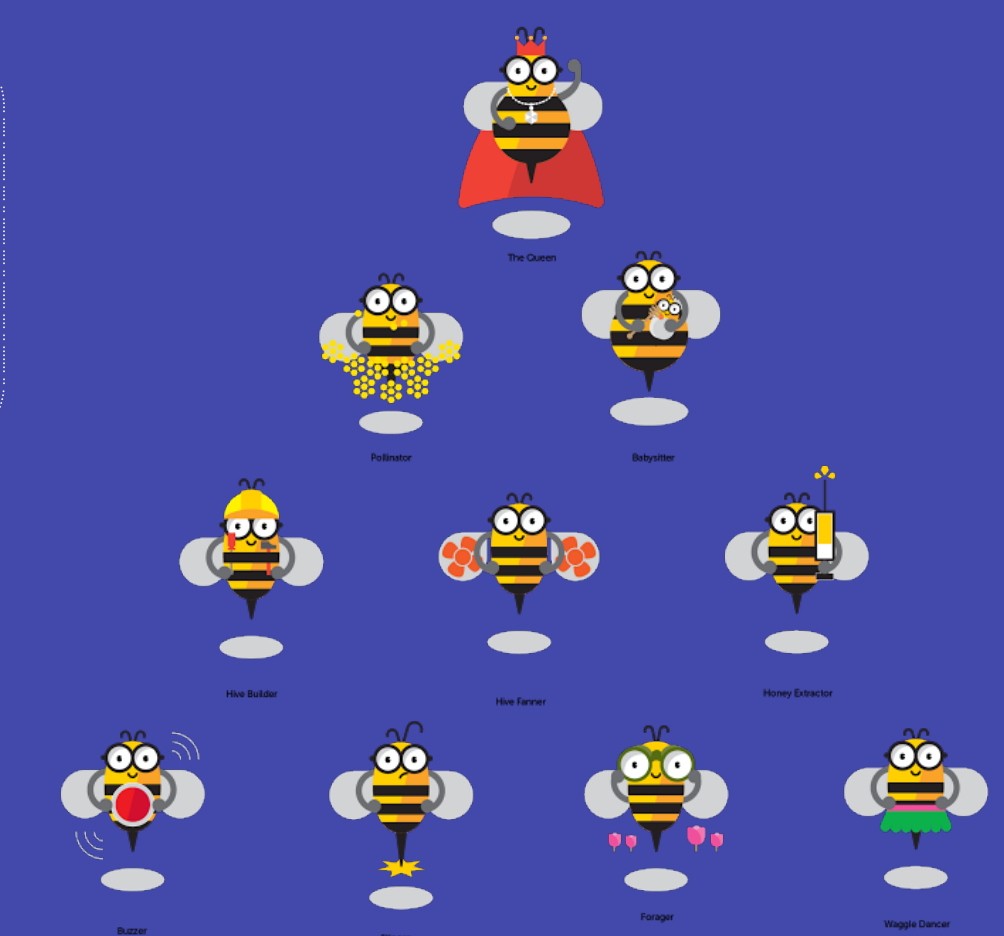Clueless   Certain

Next question

Question types
• Point estimate,
• Multiple choice / binary
• Ordering

Confidence prompt
• Beginning of each domain
• Every question

Knowledge types
• Explicit
• Tacit
• Prediction

Users progress through a hierarchy of avatars as they complete domains.