The Communication Network Within the Crowd

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WWW’16, Montreal, Canada, April 11-15, 2016
A Classical View of Crowdsourcing

Before Crowdsourcing

After Crowdsourcing

Crowd

Microsoft’s UHRS

man

guitar

thank you
What exactly is this crowd?

Independent “contractors” from all over the world?
Actually, Crowdworkers Talk and Collaborate!

Ethnographic field study results show that, crowdworkers...

Help each other with administrative overhead
Share tasks and reputable employers
Recreate social connections and support

M.L. Gray, S. Suri, S.S. Ali and D. Kulkarni. The Crowd is a Collaborative Network. CSCW 2016
“Edges” Exist between Crowdworkers

Scale?  Topological structure?  How workers use the network?
Let’s Map the Network of Turkers!

• Designed a network mapping HIT to visualize the communication network where Turkers **self-report** their connections

• We provided **value back** to the Turkers such that it’s to their best interest to report as many true connections as possible

Create a nickname for yourself  Complete a brief demographic survey (9 questions)  Tell us a little about your personal experience with MTurk (2 questions)  Swap nicknames with Turkers you know  Explore the global Turker network!
Create a Nickname

Great! We are excited that you decided to participate!

Now, please create a unique nickname for yourself. To preserve your privacy, please don’t use your real name. Here is why you need a nickname:

- You will give your nickname to Turkers you know so they can add a link to you.
- You will get the nicknames of Turkers you know so you can add links to them.
- Your nickname will also be used for later logins if you want to explore the global Turker network as it grows.

It is very important to remember your nickname. Take a moment to write it down or take a screenshot.

Your nickname: ___________

Check if this nickname is available

Create a nickname for yourself
Complete a brief demographic survey (9 questions)
Tell us a little about your personal experience with MTurk (2 questions)
Swap nicknames with Turkers you know
Explore the global Turker network!
Q1: Which country do you currently live in?

---Select---

When we display the global Turker network, other Turkers will be able to see your country’s flag if you agree to share this information.

- I'm comfortable sharing this information with ALL other Turkers who do this HIT.
- I'm comfortable sharing this information ONLY with Turkers who have my nickname.
- I'm NOT comfortable sharing this information with any other Turkers.

Create a nickname for yourself
Complete a brief demographic survey (9 questions)
Tell us a little about your personal experience with MTurk (2 questions)
Swap nicknames with Turkers you know
Explore the global Turker network!
• Q2 (Age): What year were you born in?
• Q3 (Gender): What is your gender?
• Q4 (Education): What is the highest degree or level of school you have completed?
• Q5 (Master): Are you a Mechanical Turk Master?
• Q6 (Approval Rate): What’s your approval rate on Mechanical Turk?
• Q7 (Experience): How long have you been Turking?
• Q8 (Tasks): What types of MTurk tasks do you typically do?
Q9: What online MTurk forums do you regularly use?

- MTurkGrind
- TurkerNation
- MTurk Forum
- Reddit HITsWorthTurkingFor
- CloudMeBaby
- Facebook groups
- Other forums
- I don't use any MTurk forums.

Please select all that apply.
If you select "Other forums", please specify the names of the forums in the blank.

- I'm comfortable sharing this information with ALL other Turkers who do this HIT.
- I'm comfortable sharing this information ONLY with Turkers who have my nickname.
- I'm NOT comfortable sharing this information with any other Turkers.

Create a nickname for yourself
Complete a brief demographic survey (9 questions)
Tell us a little about your personal experience with MTurk (2 questions)
Swap nicknames with Turkers you know
Explore the global Turker network!
Q9: What online MTurk forums do you regularly use?

Value Back: Who your fellow Turkers are?
Why did you start Turking?

Do you remember what attracted you to Mechanical Turk? How did you first learn about Mechanical Turk and what made you start Turking? Share your story with your fellow Turkers.:)
What motivates you to keep Turkimg?

What keeps you motivated to do HIT after HIT? Do you have any "secret" motivation for Turkimg? How do you cheer yourself up when you get tired on Mechanical Turk? Share your story with your fellow Turkers.:)
What motivates you to keep Turkining?

What keeps you motivated to do HIT after HIT? Do you have any "secret" motivation for Turkining? How do you feel about sharing your story of Turkining? Do you have any "secret" motivation for Turkining? Share your story with your fellow Turkers.

Value Back: Why your fellow Turkers Turk?
Swap Nicknames Any Way You Want!

Meeting in person  
Talking over the phone  
Sending emails  
Text messaging  
Instant messaging  
Video chatting

Create a nickname for yourself
Complete a brief demographic survey (9 questions)
Tell us a little about your personal experience with MTurk (2 questions)
Swap nicknames with Turkers you know
Explore the global Turker network!
Welcome to the Global Turker Network!

11 Turkers have participated in this HIT so far!

- Each circle represents a Turker. Your circle is outlined in yellow. Try the "Find myself" button!
- Click on a Turker to read his or her story!
- To explore different parts of the network, drag the background with the mouse.
- Get connected to Turkers you know by clicking on the "Add link" button and entering their names!

You don't have connections yet!
Click the "Add link" button above and start to connect to other Turkers!

Also, feel free to invite Turkers you know to take this HIT and connect to them!
Nickname: N/A

With an approval rate of 97.2% on MTurk.
Tasks mostly done on MTurk: Data entry; Survey

Why did you start Turking: My sister found out about it on reddit.com and told me about it. I like doing turks to build up my amazon gift card balance. I like how you can transfer the money you earn immediately to amazon whenever you want.

What motivates you to keep Turking: My motivation is money! I buy a lot of stuff off of amazon so I use the extra money to buy myself books and other stuff that I want.
Welcome to the Global Turker Network!

11 Turkers have participated in this HIT so far!

Your connections

You don’t have connections yet!
Click the "Add link" button above and start to connect to other Turkers!

Also, feel free to invite Turkers you know to take this HIT and connect to them!

- Each circle represents a Turker. Your circle is outlined in yellow. Try the "Find myself" button!
- Click on a Turker to read his or her story!
- To explore different parts of the network, drag the background with the mouse.
- Get connected to Turkers you know by clicking on the "Add link" button and entering their names!
Welcome to the Global Turker Network!

11 Turkers have participated in this HIT so far!

What's the nickname of this Turker?

Nickname: ChromeTesting02

How do you usually talk to this Turker?

Please check all that apply.

☑ On forums ☐ In person ☐ Phone ☐ Email ☐ Text messages
☐ IM/Online chatting ☐ Video chatting ☐ Other

What do you usually talk about with this Turker?

Please check all that apply.

☑ Share HITs ☑ Discuss requesters ☐ Share Turking tools/scripts
☐ Chat about day-to-day life ☐ Other

We will add a link from you to this Turker, and you'll find out which circle represents this Turker!

Submit
Each Turker got a personalized URL to come back to the network!
**Nickname:** ChromeTesting02
27 years old; female; living in Canada; with an approval rate of 97.2% on MTurk.
Tasks mostly done on MTurk: Data entry; Survey

**Why did you start Turking:** My sister found out about it on reddit.com and told me about it. I like doing turks to build up my amazon gift card balance. I like how you can transfer the money you earn immediately to amazon whenever you want.

**What motivates you to keep Turking:** My motivation is money! I buy a lot of stuff off of amazon so I use the extra money to buy myself books and other stuff that I want.
After 18 Days...

A Network
Within
the Crowd

(of 10,354 Turkers!)
A Network Enabled By Forums

1,389 (13.4%) connected workers!

89.9% of all edges are between workers who communicate via forums!

86.2% of all edges are between pairs communicate exclusively through forums!
Forums Create Subcommunities

- Reddit HWTF
- MTurkGrind
- TurkerNation
- Facebook
- MTurkForum
Discussion Topics Vary in Subcommunities!

Bar chart showing the percentage of edges in different subcommunities:

- **HITs**: High percentage of edges, particularly in MTurkGrind, TurkerNation, and Facebook.
- **Requesters**: Moderate percentage of edges across all platforms.
- **Scripts/Tools**: Lower percentage of edges with a focus on MTurkGrind and TurkerNation.
- **Life**: Low percentage of edges, with a slight increase in MTurkGrind.
- **Other**: Minimal percentage of edges.

Reddi HWTF vs. TurkerNation Facebook

HITs Broadcasting Platform vs. Social-oriented Community
Network Position and Finding HITs

Connected workers also seem to be workers who can find out good HITs earlier!
Concluding Remarks

• The crowd is not a collection of independent workers.
• It is a network.

Requesters
Approach a subnetwork of workers bounded with communication ties

Workers
Potential informational advantages of being connected

Platforms
Perhaps provide more social interactions that workers clearly value
Thank you!