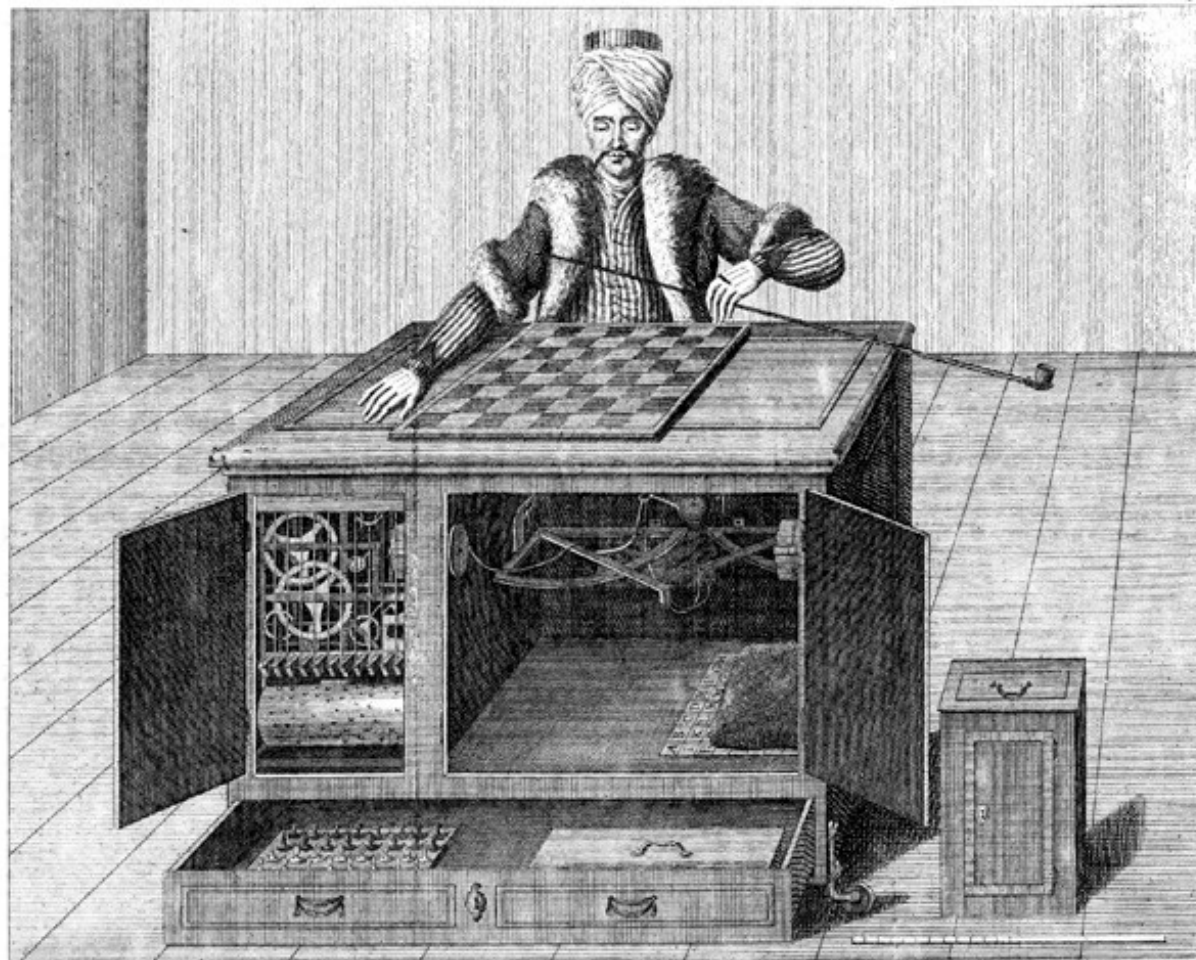


Mechanical Turk and IRB

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*W. de Kempelen del. Che. a Mechel exaud. Basilea. P.G. Piatz, fecit.
Der Schachspieler, wie er vor dem Spiel zu sehn wird von vorne. Le Joueur d'Échecs, tel qu'on le montre avant le jeu, par devant.*

Original Mechanical Turk

- Chess-playing machine constructed in 1770, unveiled as a hoax in 1820s

Mechanical Turk

- Wikipedia says:

The Amazon Mechanical Turk (MTurk) is one of the suite of Amazon Web Services, a crowdsourcing marketplace that enables computer programs to co-ordinate the use of human intelligence to perform tasks which computers are unable to do.
- Two parties
 - Requesters – Create and manage Human Intelligence Tasks (HITs), small units of work, for money.
 - Workers – Select and complete HITs for money.
- Amazon takes a small percentage of every transaction

Mechanical Turk is a marketplace for work.

We give businesses and developers access to an on-demand, scalable workforce. Workers select from thousands of tasks and work whenever it's convenient.

36,161 HITs available. [View them now.](#)

Make Money by working on HITs

HITs - *Human Intelligence Tasks* - are individual tasks that you work on. [Find HITs now.](#)

As a Mechanical Turk Worker you:

- Can work from home
- Choose your own work hours
- Get paid for doing good work



or [learn more about being a Worker](#)

Get Results from Mechanical Turk Workers

Ask workers to complete HITs - *Human Intelligence Tasks* - and get results using Mechanical Turk. [Register Now](#)

As a Mechanical Turk Requester you:

- Have access to a global, on-demand, 24 x 7 workforce
- Get thousands of HITs completed in minutes
- Pay only when you're satisfied with the results



or [learn more about being a Requester](#)

Sample HIT Templates

HIT Template Name	HIT Title	
Blank Template	Default Title See an example	Start with this template
Data Collection	Find the Website Address for Restaurants See an example	Start with this template
Data Correction	Provide the correct spelling of search terms See an example	Start with this template
Data Extraction	Get Product Name from Image See an example	Start with this template
Image Filtering	Flag offensive content images (WARNING: This HIT may contain offensive content. Worker discretion is advised.) See an example	Start with this template
Image Tagging	Tag an image See an example	Start with this template
Policy Compliance - Text	Does this forum post violate the forum policies? (WARNING: This HIT may contain offensive content. Worker discretion is advised.) See an example	Start with this template
Product Categorization	Choose the best category for this product See an example	Start with this template
Product Comparison - Duplicates	Are these products the same? See an example	Start with this template
Search Relevance	Evaluate the Effectiveness of Search Results See an example	Start with this template
Site filtering	Is this an adult porn site? (WARNING: This HIT may contain offensive content. Worker discretion is advised.) See an example	Start with this template
Survey	Answer a Short Survey See an example	Start with this template

Turker Demographics

- Turkers compared to the general US Internet population:
 - **Turkers are younger.** 54% of Turkers are between 21-35 years old, compared to 22% of the general population.
 - **Turkers are mainly female.** 70% of the Turkers are female, compared to 50% of the general population.
 - **Turkers have lower income.** 65% of Turkers have household income less than 60K, compared to 45% of the general population.
 - **Turkers have smaller families.** 55% of Turkers do not have children, compared to 40% of the general population.
 - Geographical distribution of Turkers and Internet users is similar.
 - Racial distribution of Turkers and Internet users is similar, although there are slightly more Asians on Mechanical Turk.

Panos Ipeirotis (2009) "Turker Demographics vs Internet Demographics"
<http://behind-the-enemy-lines.blogspot.com/2009/03/turker-demographics-vs-internet.html>

Research Experiences

- **PARC – WikiDashboard**
 - Conducted user studies to compare expertise assessments of Wikipedia editors
- **SILS – Later Button**
 - Conducted user studies to determine the online disclosure behaviors of different types of information
- **IRB**
 - Successfully navigated UNC IRB, with extra back and forth around the definition and then the merits of a system like Mechanical Turk

Demo

- Source files
 - properties, question, input
- Rendered HIT
 - html, sandbox, production
- Data/Result files
 - csv
- Approval/Rejection process
 - web or API (command line)

- Total cost of \$35
 - 2030 results from 278 “turkers”

Study Design Considerations

- Pros
 - Lots of people
 - Little money
- Cons
 - Careful of bad data
 - Malicious (CAPTCHA)
 - Lazy entry (pay more)
 - Careful of duplicate users
 - Qualifications system in place

IRB Considerations

- Users are anonymous?
 - Yes, but it's still human interaction, so it's not exempt.
- Amazon can serve as 'honest broker'
 - 2.10.2. Will any of the personnel involved in this study (this includes collaborators providing data or specimens, personnel listed on grants, co-authors, and faculty advisors) have access to a key that deciphers the code, enabling linkage of identifying information to private information or samples? ___ yes ___ no
 - 2.10.2.3. Honest broker (centralized custodian who controls data and will not release codes or IDs)?

Future Work

- Novel internet research methods? Hybrids?
- Validity / Efficiency / Appropriateness / Generalizability
- Convenience / Cost / Technical Overhead
- Better to beg forgiveness than ask permission?
- Crowdsourcing
 - micropayments
 - community
 - games

Other studies to be done with Mechanical Turk?

Mechanical Turk Prior Work

- PARC post on user studies and Mechanical Turk
 - <http://asc-parc.blogspot.com/2008/03/how-to-reduce-cost-of-doing-user.html>
- Demographics post by Panos Ipeirotis
 - <http://behind-the-enemy-lines.blogspot.com/2008/03/mechanical-turk-demographics.html>
- PARC post on Panos's post
 - <http://asc-parc.blogspot.com/2008/07/mechanical-turk-demographics.html>
- Panos again - Turkers self-report how good they are - and do it well
 - <http://behind-the-enemy-lines.blogspot.com/2009/01/how-good-are-you-turker.html>
- Follow up demographics post by Panos
 - <http://behind-the-enemy-lines.blogspot.com/2009/03/turker-demographics-vs-internet.html>
- PARC's Markus Jakobsson - 5 How Tos
 - <http://blogs.parc.com/blog/2009/07/experimenting-on-mechanical-turk-5-how-tos/>

Supporting Materials

- Aniket Kittur, Ed H. Chi and Bongwon Suh (2008) Crowdsourcing user studies with Mechanical Turk. CHI 2008. Florence, Italy. <http://portal.acm.org/citation.cfm?id=1357054.1357127>
- Terrell Russell and Jacob Kramer-Duffield (2009) *Disclosure and Timeliness: Do users need a Later Button?* iConference 2009. UNC-Chapel Hill. Feb 2009. <http://dlist.sir.arizona.edu/2551/>
- Successful “Later Button, part 2” UNC IRB Process
 - Unsuccessful Exemption Submission
 - Full IRB Submission
 - Follow-Up and Part B