

# Who are the Crowdworkers? Shifting Demographics in Amazon Mechanical Turk

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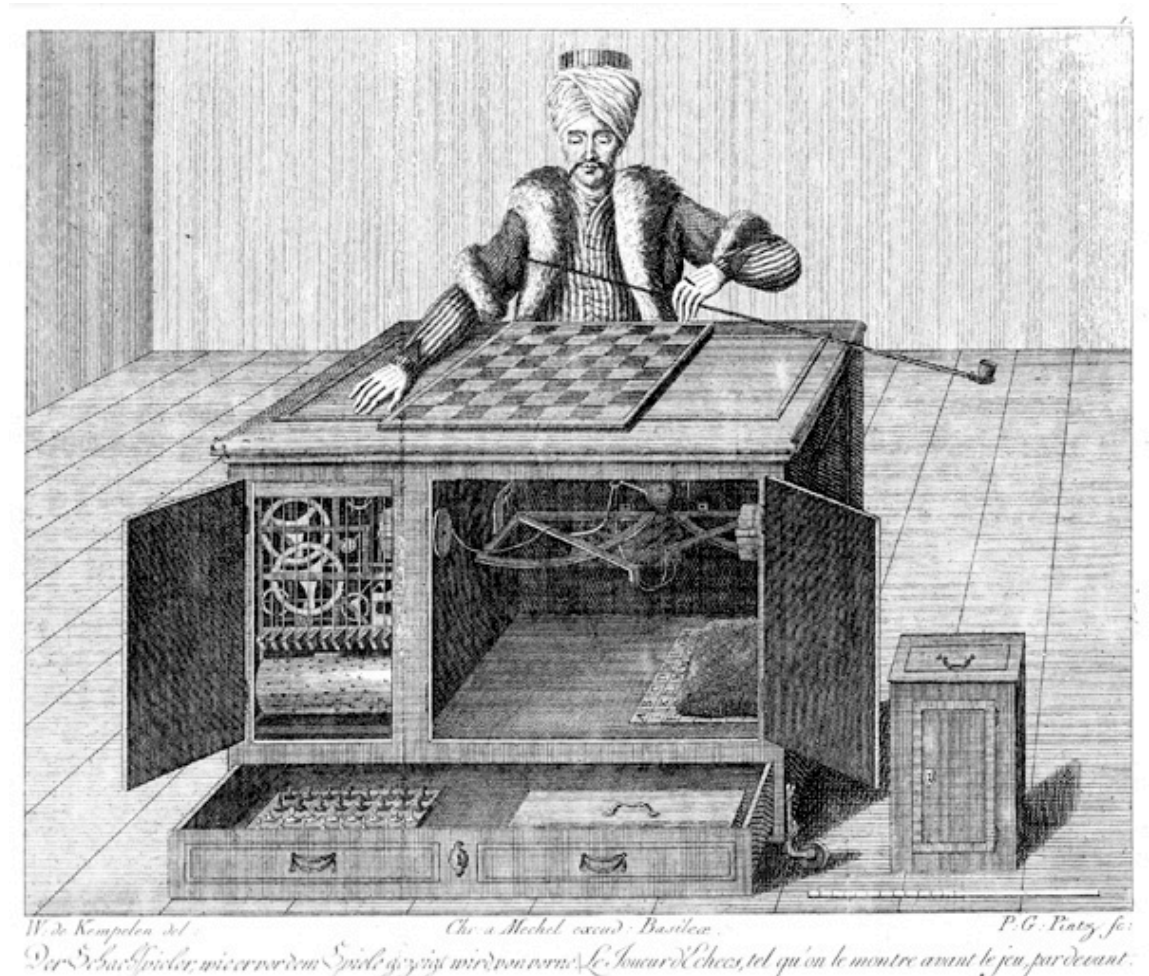
alt.CHI 2010  
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## An online marketplace for the crowdsourcing of human computation

**Marketplace** -- Paying people to complete work

**Crowdsourcing** -- Distributing tasks to an anonymous crowd

**Human Computation** -- Human Intelligence Tasks (HITs)  
(Used in HCI, e.g., Kittur et al. 2008)



# Anonymous Turkers

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A210L0D2J4NARH

A361NTFGICM88M

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ATFYFF1G524HC

# Working on HITs

## 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

**Find an  
interesting task**



**Work**



**Earn  
money**





# Demographics in Mechanical Turk

Extending prior work by **Panos Ipeirotis**<sup>1,2</sup>

- ~75% US residents
- ~40% younger than 30
- ~60% female
- ~70% Bachelor degree or higher
- ~60% have annual income > \$25,000/year

Surveying Turkers through a HIT

Take a short research survey about Mechanical Turk workers

**Requester:** Social Code Group

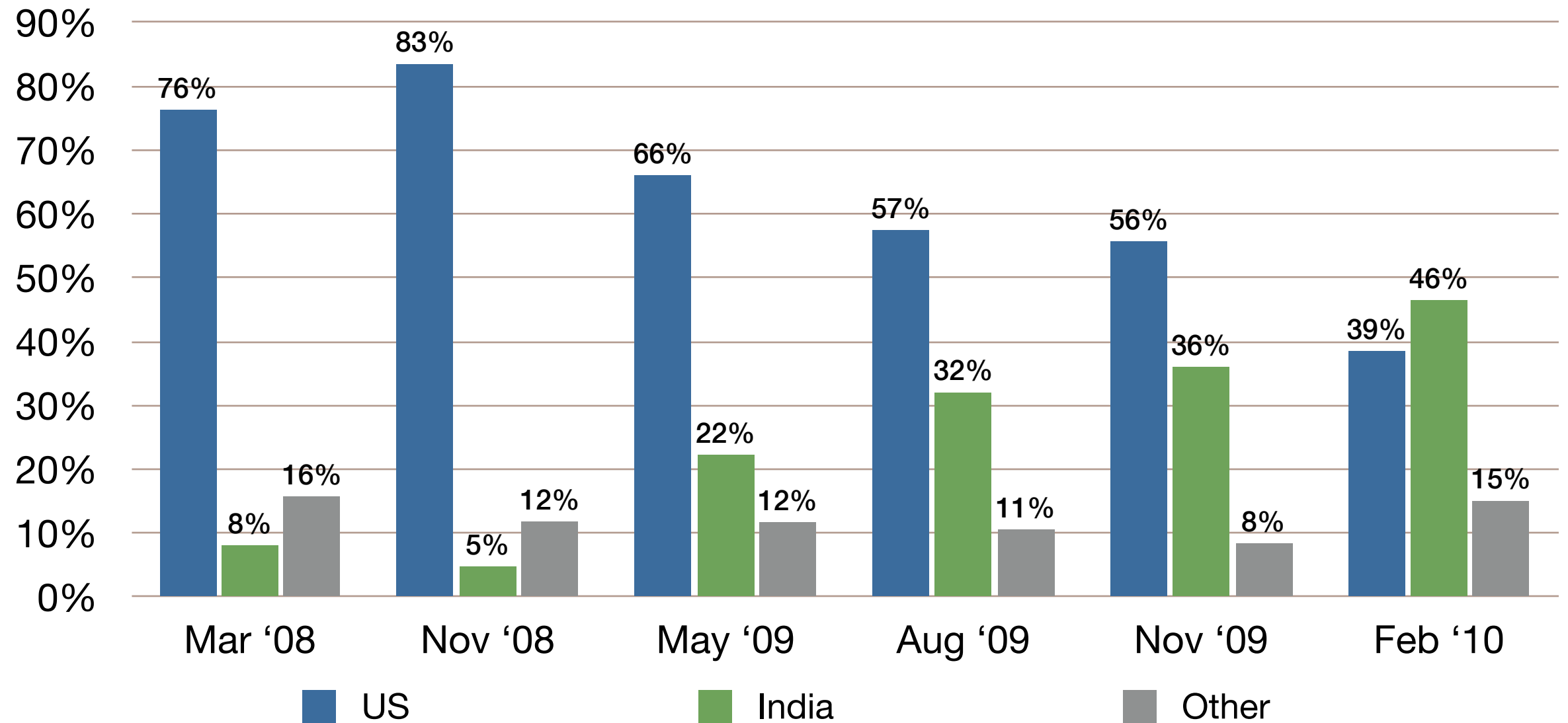
**Qualifications Required:** None

<b>Mar 2008</b> <sup>1</sup>	$n = 300$
<b>Nov 2008</b> <sup>2</sup>	$n = 1010$
<b>Feb 2009</b>	$n = 878$
<b>May 2009</b>	$n = 512$
<b>Aug 2009</b>	$n = 578$
<b>Nov 2009</b>	$n = 733$
<b>Feb 2010</b>	$n = 984$

1. Ipeirotis, P. "Mechanical Turk: The Demographics" <http://behind-the-enemy-lines.blogspot.com/2008/03/mechanical-turk-demographics.html>. 2008.

2. Ipeirotis, P. "Turker Demographics vs. Internet Demographics". <http://behind-the-enemy-lines.blogspot.com/2009/03/turker-demographics-vs-internet.html>. 2008.

# Change in Nationality Over Time



# Further Demographics

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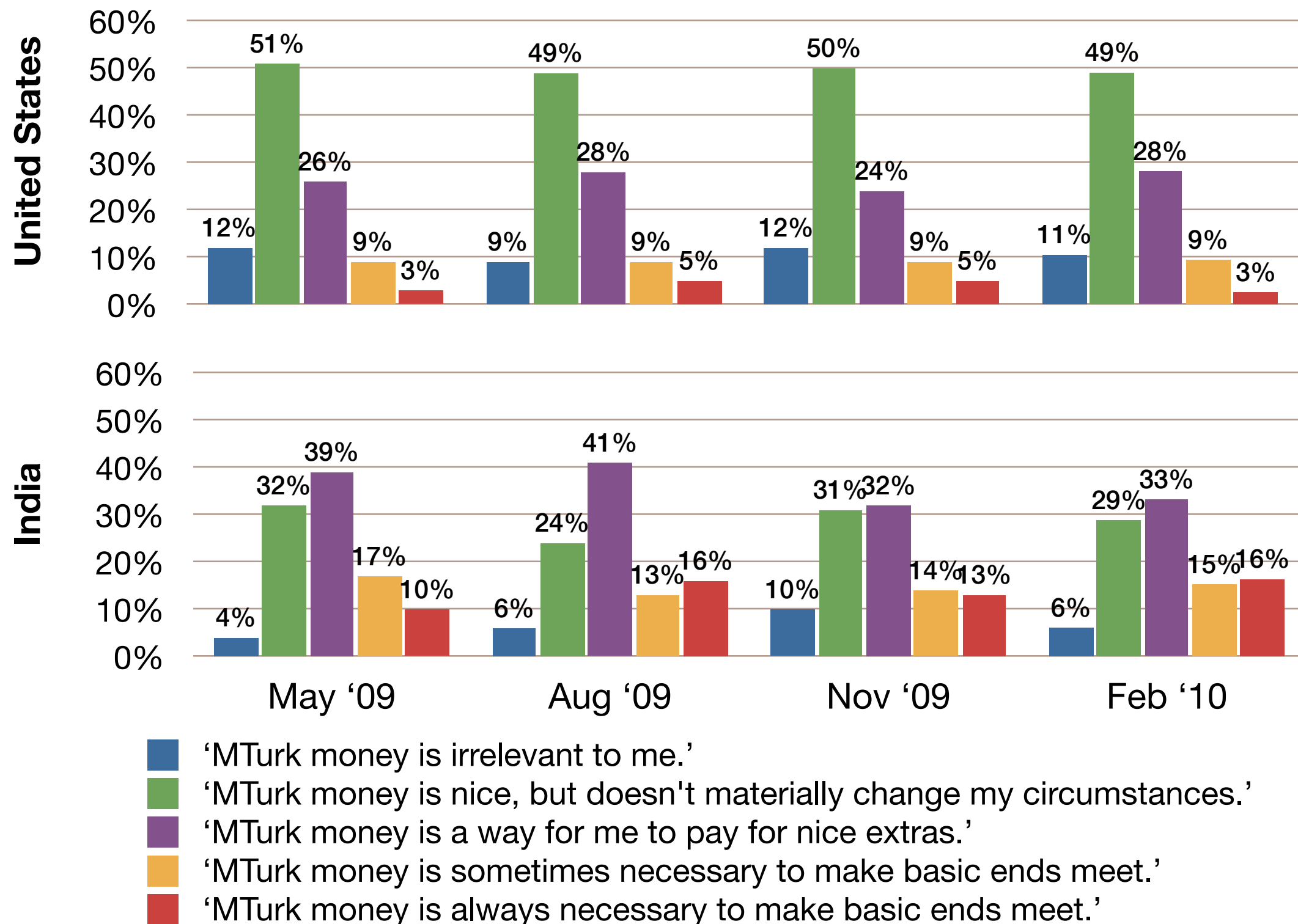
		Nov '08	Feb '09	May '09	Aug '09	Nov '09	Feb '10
<b>Age</b> (average)	Overall	32.9	33.0	32.5	31.0	31.7	30.4
	US	33.6		34.3	33.2	35.4	34.3
	India	28.5		28.8	27.6	26.4	27.8
<b>Gender</b> (male/female)	Overall	34% / 66%	40% / 60%	42% / 58%	45% / 55%	48% / 52%	55% / 45%
	US	28% / 72%		34% / 66%	31% / 69%	37% / 63%	41% / 59%
	India	75% / 25%		61% / 39%	69% / 31%	66% / 34%	66% / 34%
<b>Education</b> (Bachelors or higher)	Overall	47%	52%	54%	58%	59%	58%
	US	43%		48%	53%	55%	52%
	India	96%		74%	69%	66%	63%
<b>Income</b> (<\$10k/yr.)	Overall	10%	22%	No data	27%	32%	39%
	US	8%			12%	10%	15%
	India	35%			54%	65%	61%

# Further Demographics

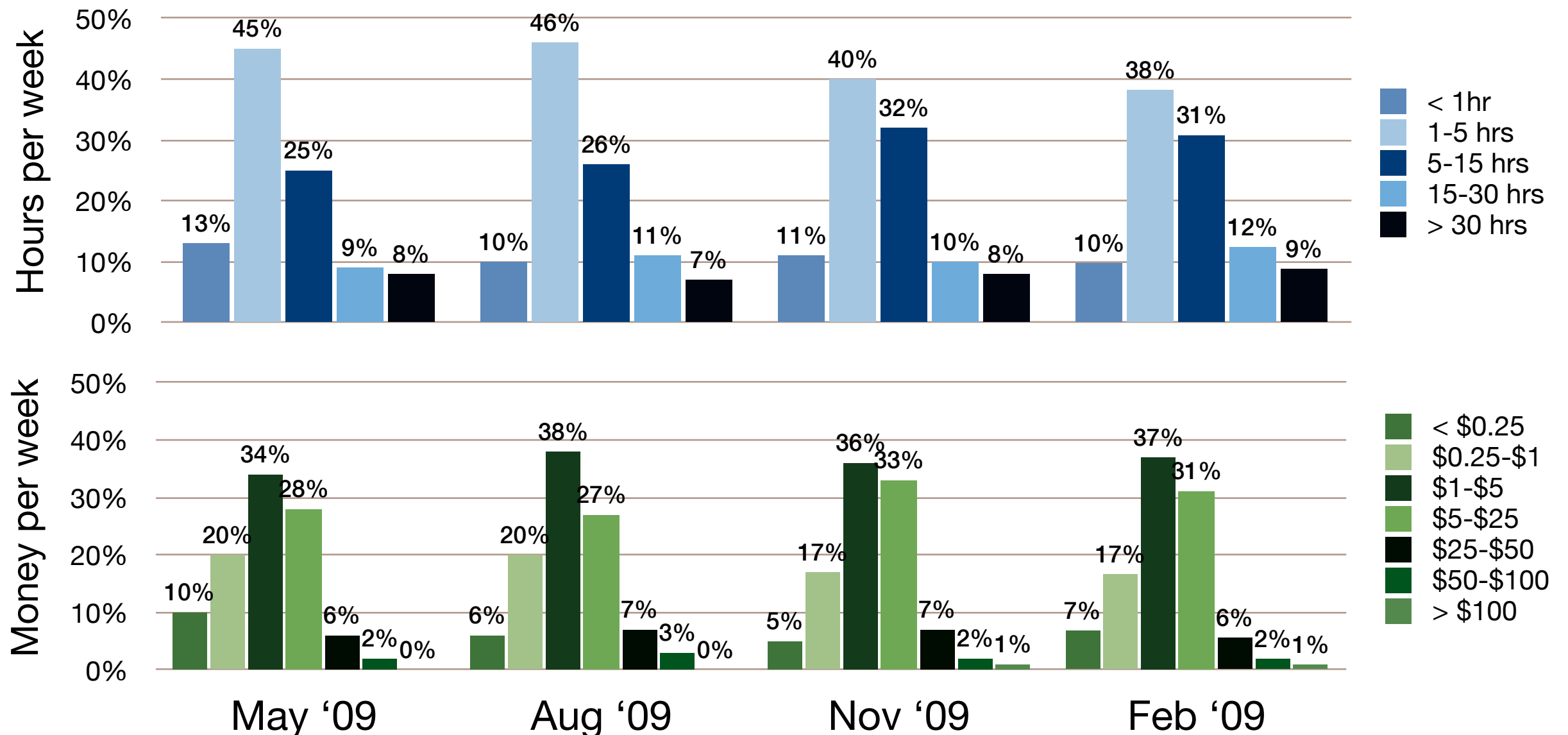
		Nov '08	Feb '09	May '09	Aug '09	Nov '09	Feb '10
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	US	8%		No data	12%	10%	<b>15%</b>
	India	35%			54%	65%	<b>61%</b>



# Reliance on MTurk Income



# Payment Rate for Turking



Estimated  
Average  
Wage:

May '09  
**\$1.67/hr.**

Aug '09  
**\$1.92/hr.**

Nov '09  
**\$1.97/hr.**

Feb '09  
**\$1.53/hr.**

# Labor and Livelihood in Mechanical Turk

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## Paid Evaluation as an Occupation

*What effects might a crowd of paid, habitual research subjects have on the validity of experimental results?*

*How might the ethics of designing user studies and experiments change when the subjects rely on those studies to make a living?*

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## Human Computation in HCI Systems

*How do we deal with human computation as “labor” in designing systems?*

*What are the short and long-term effects of working as a human computer?*

# Summary: Who are the Crowdworkers?

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Turker population has shifted to be **mostly from India**

Many Turk as a **part- or full-time job** for \$2.00/hr.

Question: how does HCI deal with the **labor and livelihood of anonymous workers** as research subjects?

## Acknowledgments

Panos Ipeirotis, Gloria Mark, Paul Dourish, Irina Shklovski, the Social Code Group, the alt.CHI reviewers. Research supported by a Sloan Research Fellowship, the Donald Bren School of Information and Computer Sciences, and the California Institute for Telecommunications and Information Technology (Calit2).

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