

# Digital Divide

Slide 1

# Agenda

- Quiz
- Discussion: Quiz Format
- Review
- Digital Divide
- Census
- Break
- Designing for Tiers of the Pyramid
- Panel

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# Questions

- Winner vs. “everything is political”
- Why India?

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# Course Learning Outcomes

- Reading analyses of competing agendas of computers and society
- Perform analyses of the competing agendas of computers and society
- Identify one’s own position regarding competing agendas of computers and society
- Recall or reconstruct analyses of the digital divide, personal data, identity and privacy, and intellectual property

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# Analytic Lenses

- Power
- Privilege
- Autonomy
- Democratization
- Circulation
  
- Built Social Relation
  - Embodied/Exogenous/Interactional
- Normative Human Values of Ethical Import
  - Human welfare, ownership and property, privacy, freedom from bias, universal usability, trust, autonomy, informed consent, accountability, identity, calmness, environmental sustainability

# Power

- Authority
- Opposite: the Authored
  
- Can make decisions on behalf of others, with limited consequence to self
  
- Databases
- Census

# Privilege

- “Normal” groups have advantages
- Opposite: Subaltern
- Social status conferred to groups, not individuals
  - Contrast with legal privilege
  
- Databases
- Census

# Autonomy

- Can plan, decide, and act to achieve one’s own goals
- Sometimes called self determination
- Opposite: Heteronomous, dependent, colonized
  
- Databases
- Census

# Democratization

- Available to not just a few, but the many
- Subject to input from the many
- Opposite: Centralization
  
- Databases
- Census

# Circulation

- Ideas travel from core to periphery and from periphery to core
- Core expands to incorporate periphery.
  - Examples: open source and tattoos
- At the periphery, a bricolage is created.
  - Examples: Canada
- Opposite: Isolation, divinely inspired genius
  
- Databases
- Census

# Today's Learning Outcomes

- Identify types of digital divides.
- Apply all the analytic lenses to digital divides.
- Apply the circulation and built social relation lenses to the economic pyramid

# Four Digital Divides

1. Rich, educated, powerful individuals (or sub-groups)
2. Linguistic and cultural
3. Rich and poor nations
4. Digerati

## Hans Rosling's Statistics

- Check what you think you know against data
  - Previously: industrialized = long life, small families; developing = short life, large families
- As much income variability within countries/regions as there is between regions
- Implication: Digital divide is here.
- Corollary: Don't need to go overseas to find humanitarian projects.

## Canadian Census

- About 2/3 complete the census online
- Low income households (below poverty line) and very high income households (>\$1 million annual)
  - Poverty line for individual in 2009 was \$18 421

## Non-Response Bias

- Non-response bias
  - Systemic differences between those who complete the survey and those who don't
  - To the extent that it affects the reliability of the data
- Question: What divides affect participation? How can we overcome them?



Abercrombie & Fitch

# Designing for Tiers of the Pyramid

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# Today's Learning Outcomes

- Identify types of digital divides.
- Apply all the analytic lenses to digital divides.
- Apply the circulation and built social relation lenses to the economic pyramid

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Exhibit 1: The World Economic Pyramid

| Annual Per Capita Income* | Tiers | Population in Millions |
|---------------------------|-------|------------------------|
| More Than \$20,000        | 1     | 75-100                 |
| \$1,500-\$20,000          | 2 & 3 | 1,500-1,750            |
| Less Than \$1,500         | 4     | 4,000                  |

\* Based on purchasing power parity in U.S.\$  
Source: U.N. World Development Reports

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**GOAL 1** Eradicate extreme poverty and hunger

- TARGETS**
1. Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day\*
  2. Achieve full and productive employment and decent work for all, including women and young people
  3. Halve, between 1990 and 2015, the proportion of people who suffer from hunger

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**GOAL 2** Achieve universal primary education

- TARGET** Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

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**GOAL 3** Promote gender equality and empower women

- TARGET** Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education, no later than 2015

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**GOAL 4** Reduce child mortality

- TARGET** Reduce by two-thirds, between 1990 and 2015, the mortality rate of children under five

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## GOAL 5 Improve maternal health

- TARGETS**
1. Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio
  2. Achieve, by 2015, universal access to reproductive health

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## GOAL 6 Combat HIV/AIDS, malaria and other diseases

- TARGETS**
1. Halt and begin to reverse, by 2015, the spread of HIV/AIDS
  2. Achieve universal access to treatment for HIV/AIDS for all those who need it
  3. Halt and begin to reverse, by 2015, the incidence of malaria and other major diseases

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## GOAL 7 Ensure environmental sustainability

- TARGETS**
1. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources
  2. Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss
  3. Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation
  4. Achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers

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## GOAL 8 Develop a global partnership for development

- TARGETS**
1. Develop further an open, rules-based, predictable, non-discriminatory trading and financial system
  2. Address the special needs of least developed countries, landlocked countries and small island developing states
  3. Deal comprehensively with developing countries' debt
  4. In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries
  5. In cooperation with the private sector, make available benefits of new technologies, especially ICTs

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# What would you make?



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# Problems

- Don't know any users
  - How to gather requirements?
  - How to obtain feedback?
- Don't know the setting
  - Deployment constraints
- What problem is being solved?
- Contest encourages poor design

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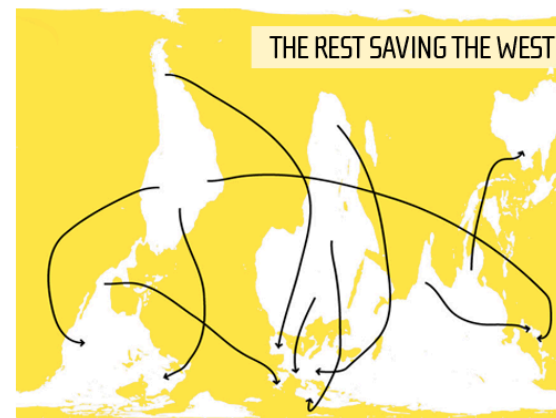
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## DESIGN FOR THE FIRST WORLD THE REST SAVING THE WEST

> about > the competition > rules > jury > apply > blog > sponsors



◀ Back

Picture 1 of 5

Next ▶

Deadline extended! Entry by July 1<sup>st</sup>, 2010 11:59 EST.

We live in a complex world, one full of inequities and wonderful things. Our fellows in the First World have been concerned for a while with us having the major share of the

What? How much?

Our fellows in the first world often come to visit and give us their well intentioned but often very problematic "solutions". We thought, why don't we pay back? Dx1W is a competition for designers, artists, scientists, makers and thinkers in developing countries to provide solutions for First World problems.

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- Not #firstworldproblems



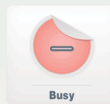
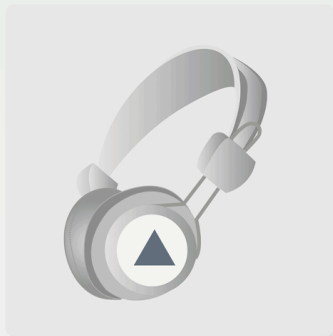
# Target Problems

- Reducing obesity
- Addressing aging population and low birth rate
- Reducing consumption of mass produced goods.
- Integrating the immigrant population.

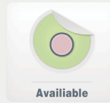
## REAL - TIME CHAT

### Integration to society

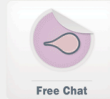
In first world countries we often see people with headphones - not interacting with each other. How can we transform this habit into a social activity?



Busy



Available



Free Chat



# Panel: How to overcome the digital divide?



## Panel



- We are the digerati. How do we reduce the digital divide(s)?
  - What, if anything, can be done to reduce the size of the gap? Here? Globally?
- Take a minute to think in silence.
- Discuss with your neighbours.