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**James A. Landay**  
 Professor  
 Computer Science  
 @jalanday

Tanja Aitamurto, PhD  
 Deputy Director  
 Brown Institute for Media Innovation  
 @TanjaAita

DESIGNING SOLUTIONS TO  
 GLOBAL GRAND CHALLENGES:  
 OR, DOUG ENGELBART'S  
 UNFINISHED LEGACY

CS377E  
 Spring 2015  
 March 31, 2015

Stanford  
 University

STANFORDLIVE LIVECONTEXT

**THE DEMO**  
 MAR 12 - APR 2

Is this the digital future  
 we imagined?

WORLD PREMIERE  
 PERFORMANCES  
 Wed & Thurs  
 April 1 & 2 | 7:50pm  
 Bing Concert Hall

GREAT SEATS STILL AVAILABLE!  
 BUY TICKETS >> LIVE.STANFORD.EDU

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**DOUGLAS ENGELBART**  
 AUGMENTING HUMAN INTELLECT

- Stanford Research Institute (SRI) in the 1960s
- 1962 Paper "Conceptual Model for Augmenting Human Intellect"
  - complexity of problems increasing → need new tools to solve
- Known for?
  - mouse
  - did so much more...

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**ENGELBART'S CRUSADE**

*"The complexity of a lot of the problems [in the world] and the means for solving them are just getting to be too much. The time available for solving a lot of the problems is getting shorter and shorter. So the urgency goes up... The complexity/urgency factor had transcended what humans can cope with. I suddenly flashed that if you could do something to improve human capability to cope with that, then you'd really contribute something basic."*

– Douglas Engelbart (1996)

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**STUDENTS:  
 TAKE UP THE LEGACY.  
 DESIGN TO ENHANCE  
 HUMANITY.**

“The better we  
 get at getting  
 better, the faster  
 we will get better.”  
 –Douglas Engelbart

**CS 377E**  
 Engelbart's Unfinished Legacy  
 Spring 2015 | T/TH: 1:15 PM – 3:05 PM  
 Huddle Rooms 1 and 2  
 4 Units | Letter Grade

**Apply by March 20th**

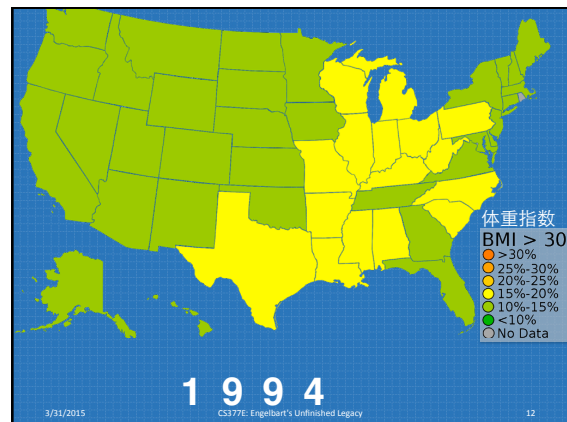
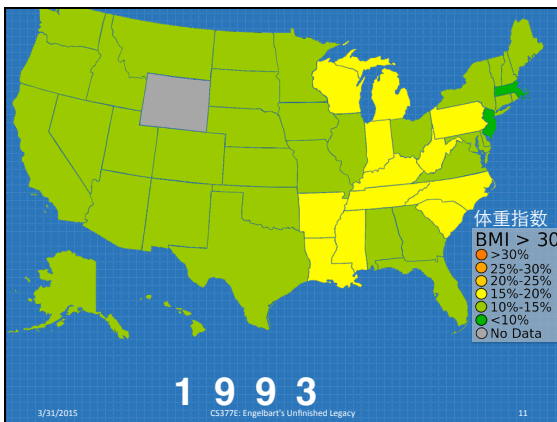
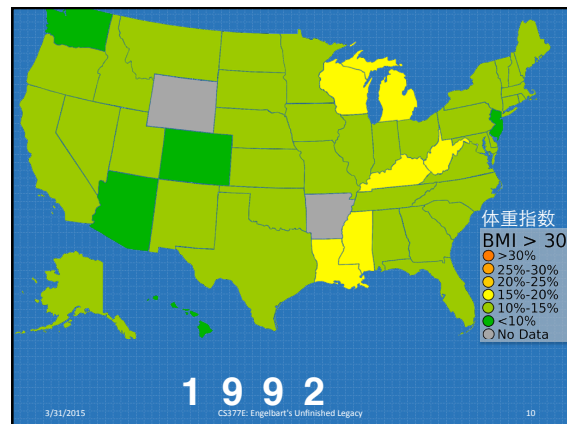
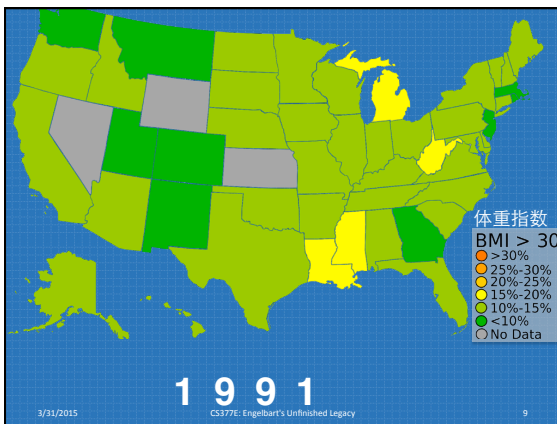
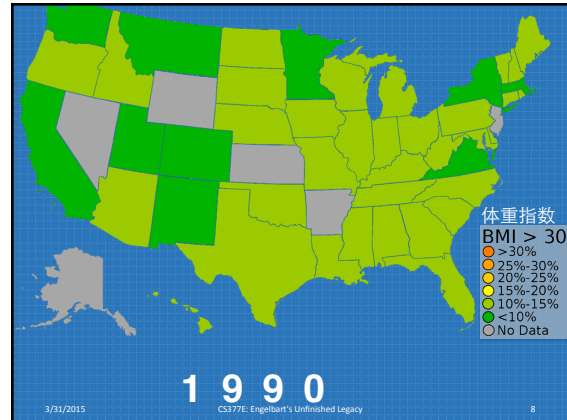
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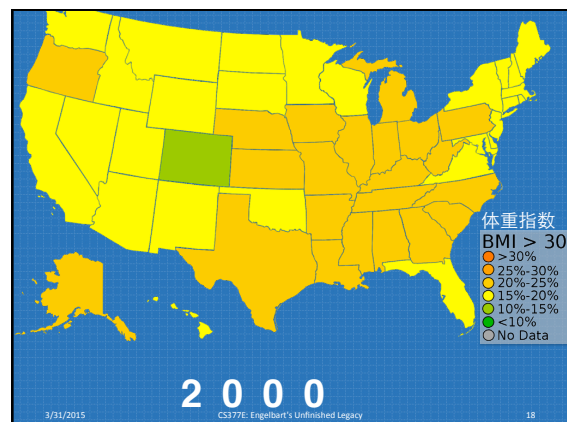
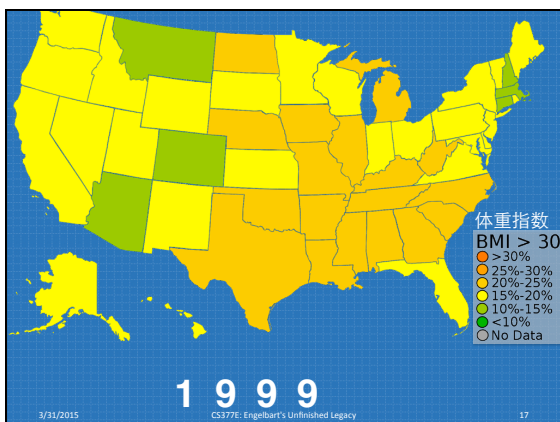
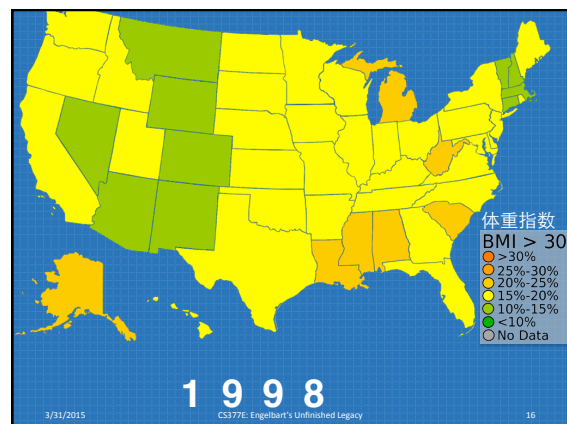
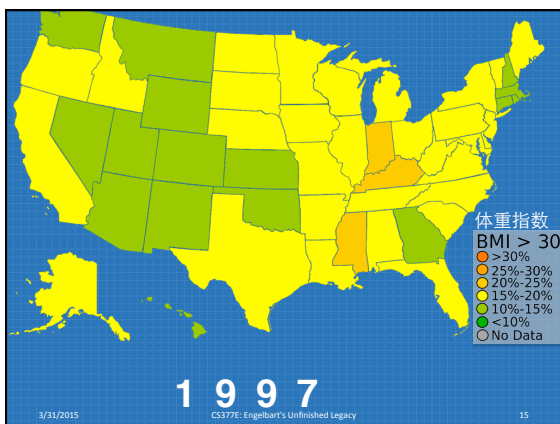
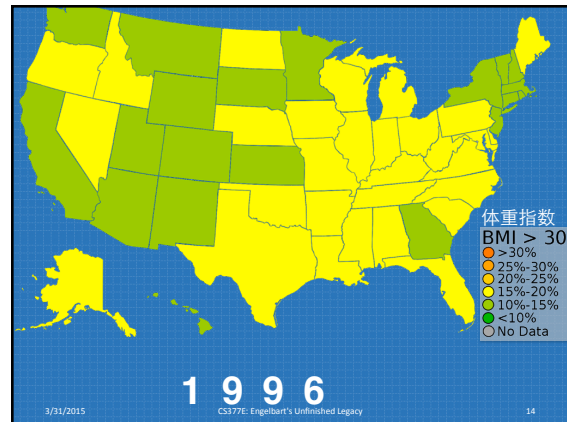
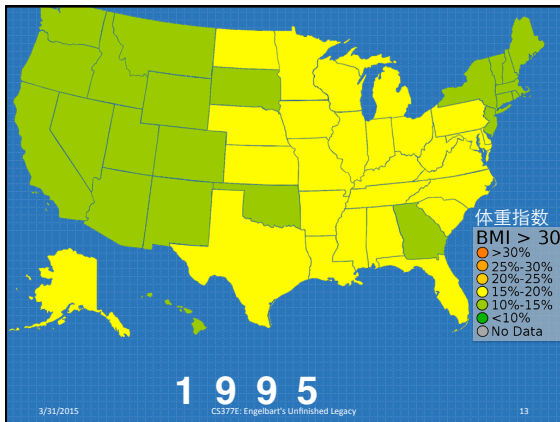
**ENVIRONMENT 环境**

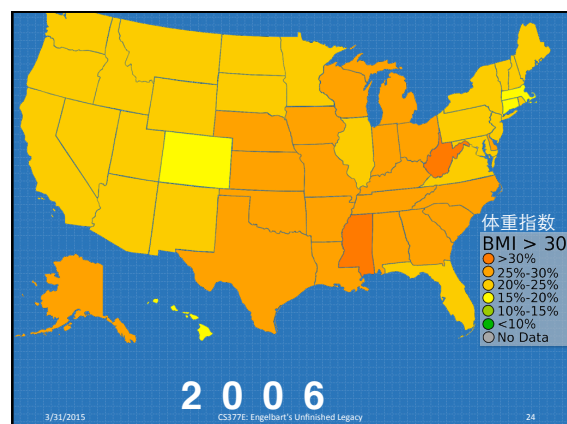
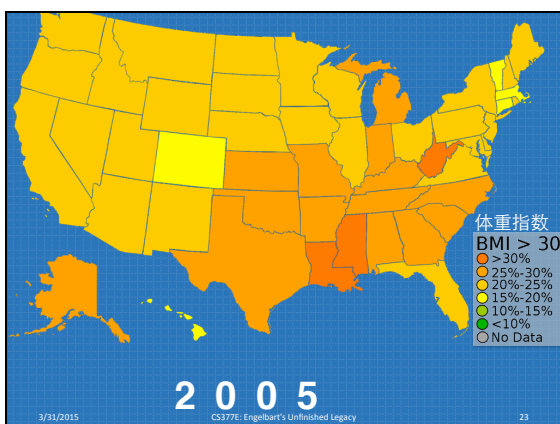
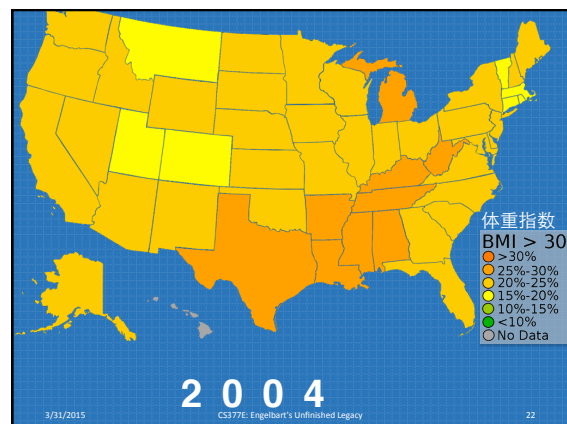
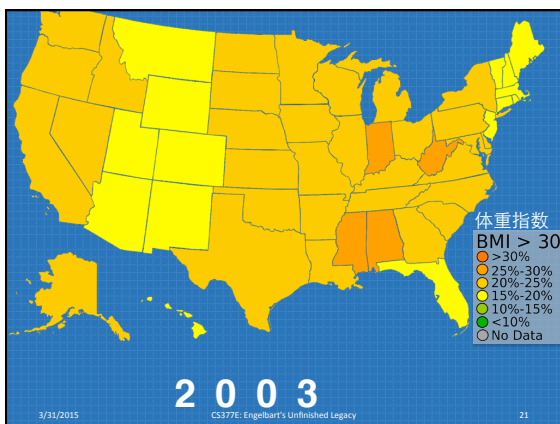
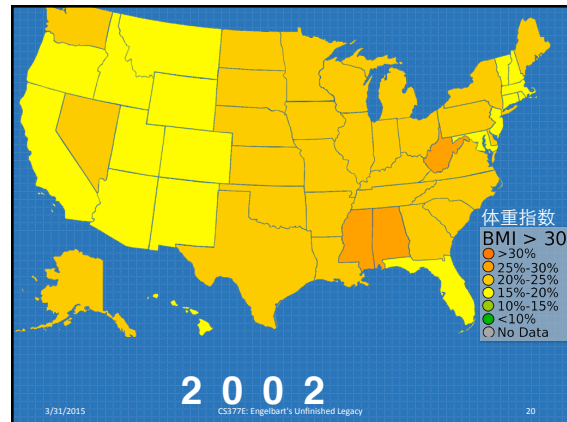
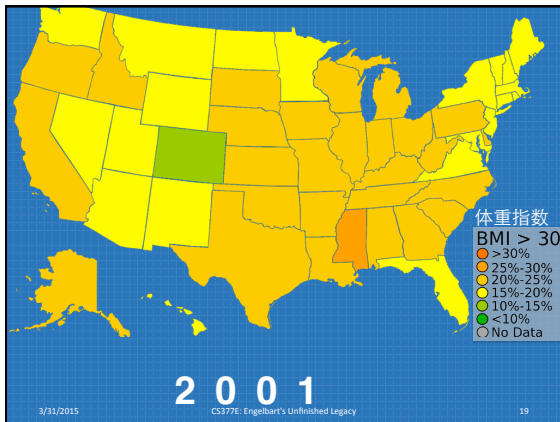
las vegas water district has paid residents  
 nearly \$200 million to remove grass

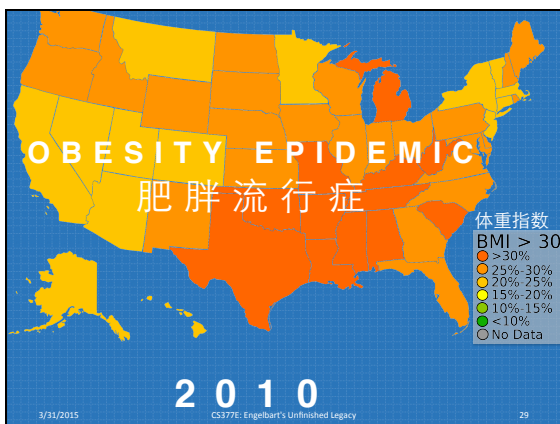
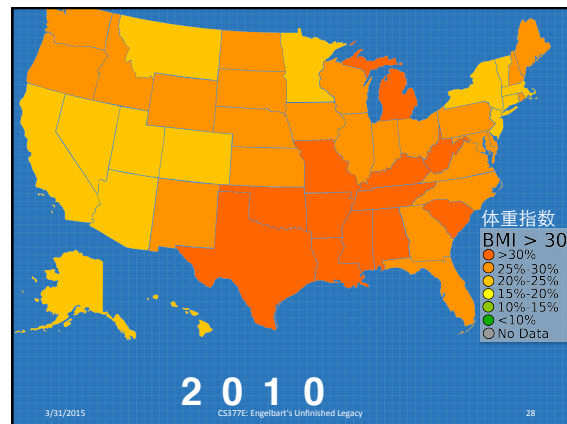
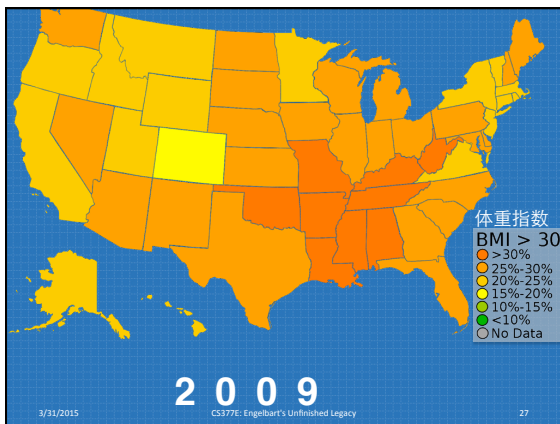
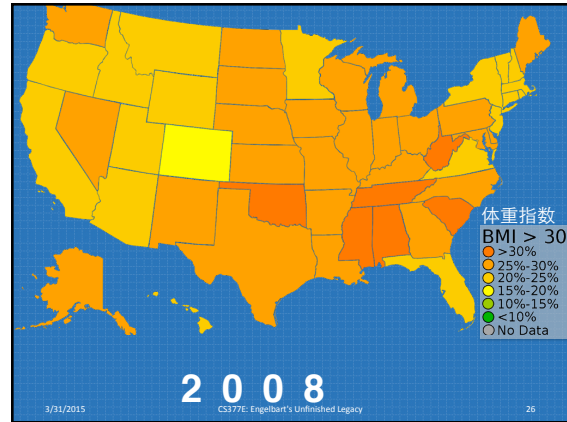
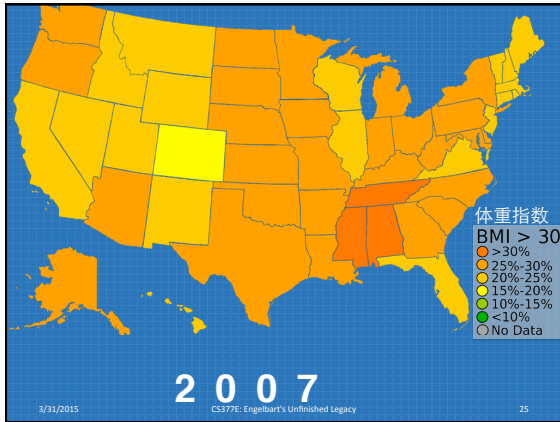
[NY Times, Aug 11, 2013]

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**EDUCATION** 教育

Conformity and efficiency rather than innovation?  
 填鸭式教育，还是创新？


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**EDUCATION** 教育


68% of US 8<sup>th</sup> graders can't read at grade level, & most will never catch up [the broad foundation]  
 68%的美国8年级学生不能达到——且他们之中大部分未来也难以达到——  
 教学期望水平

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Who are We?

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**JAMES LANDAY**

- Professor in Computer Science at Stanford
  - formerly professor in Information Science at Cornell NYC Tech, CSE at the University of Washington & EECS at UC Berkeley
  - spent 3 years as Director of Intel Labs Seattle
- PhD in CS from Carnegie Mellon '96
- HCI w/ focus on informal input (pens, speech, etc.), crowdwork, web design (tools, patterns, etc.), & Ubiquitous Computing (UbiComp)
- Office Hours: Mon. 2-3 PM & Wed. 10-11 AM in 390 Gates
- Email: landay@[insert usual stanford email domain]


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**TANJA AITAMURTO**

- PhD in Communication 2014
- Collective intelligence in journalism & democratic processes: crowdsourcing & co-creation
- Award-winning journalist
- Office hours: By appt tanjaa@stanford.edu

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**MAKIKO FUJIMOTO**

- BS in SymSys, MS in CS (HCI)
- Needfinding, rapid ideation and prototyping, user testing, ed-tech
- I went to school in 3 different countries!
- Office hours
  - TBD in TBD

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# BALANCE

DESIGN TECHNOLOGY

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# DESIGN THINKING

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# DESIGN DOING TIMELINE

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# GRADING

- A combination of
  - individual assignments & presentation (10%)
  - class/studio participation (30%)
  - group project (60%)
    - demos/presentations/poster (group component)
    - project write-ups, exercises, videos & other deliverables
- No Exams
  - must present at project fair at end of quarter

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# TIDBITS

- Late Policy
  - no lates on group assignments
  - individual assignments lose one letter grade/day
- Web site online tomorrow

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# NEXT TIME

- Fill out this survey by tonight (letting us know whether you want in the class still)
  - <http://goo.gl/forms/CrOrry41vr>
- Lecture
  - Doug Engelbart and the Mother of All Demos
- Read
  - [Tools For Thought Ch 9 \(Engelbart Demo\)](http://www.rheingold.com/texts/tft/9.html) (<http://www.rheingold.com/texts/tft/9.html>)

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