CSC104 fall 2012
Why and how of computing
week 10

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Text: Picturing Programs
who’s got the better deal?

life with, or without, computers — which works better?

How many hours per week do you expect to work? What about your parents/grandparents? Explain labour-saving devices
previous experience
does technological change automatically improve lives?

- division of labour
- steam, water power (other than muscle power)

land cleared of people provides wool and hands for emerging factories

Some economists report that production actually dropped for the first few decades of the Industrial Revolution. The working day certainly lengthened — to 12 or even 14 hours!
automation/computerization
what has the effect been?

Ford assembly, then and now where’d everybody go?

In 1940s, a car “cost” 35 hours. Now it’s 19 hours.
hardware effects

storing information gets smaller, cheaper, faster by the decade...

What’s the effect on working lives?
do long hours matter?

...if you have an ergonomic chair and a fuzzball table?

some "natural" balance to 40 hours over 5 days.

Check out why crunch mode doesn't work. Chart productivity/hour over a long day.
don’t operate heavy machinery... after working (too much)

prolonged sleeplessness affects motor skills and judgement

increasing working hours increase productivity in short term

mental abilities decline even faster than physical abilities with overwork.

study of artillery 36 hours.
utopia, dystopia?

new jobs, flying cars, or no jobs, or retirement?
not just how long, but where

flexibility?
- time + place shift
- wasted time

trade traffic for flexibility and time?

staring at computer screen after dark is pretty.
broken telephone, solid tree

mnemonic: apt, capped, gapped, tapped

A G T C T A G
C A G +
K A C
G A T C T A

C B A C
C A T C
C B A C
A C G + T G

G A T A A A A c t
G A C T A T T A C
A T C C
Notes