1006: Ideas in Geography

Virtual Geographies

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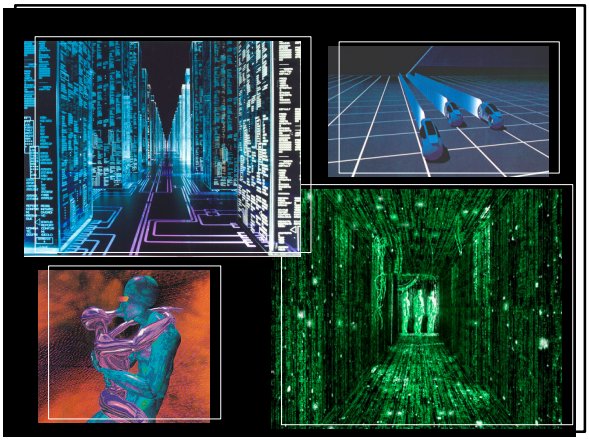
Lecture 9, Tuesday 8th February 2005



Banal reality of cyberspace

Buzz words, Jargon & confusion

- so what is cyberspace? (famous 7 blind-folded men trying to describe an elephant)
- confused with a wealth of competing terms
- the net, the matrix, virtual worlds, virtual reality, the Web, digital space, information society, network age, noosphere, e-worlds…..
- ICTs (information and communication technologies)
- CMC (computer mediated communications)
- virtual geography > 'cybergeography'

- William Gibson coined the term in his cyberpunk novel *Neuromancer* (1984)

"Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts…A graphical representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding..."

- term cyberspace literally means 'navigable space'
- derived from the Greek word *Kyber* (to navigate)

Defining cyberspace

- cyberspace
  - the conceptual spaces of information and communications flows within the digital infrastructure of computing hardware, software code, high-speed telecommunications networks and human minds
  - it is not the technology or infrastructure itself, but the virtual spaces that this enables
- it is a complex convergence of computing, communications and people
- it is heterogeneous and fast changing
- it is contingent in time and place (e.g.role of the mobile telephone)

Cyberspace and you

- today,
  - who checked email? who used their mobile?
  - who got some cash out of an ATM?
  - who paid for something with a card?
  - listening to an mp3? downloaded a paper?
  - who was scanned by CCTV camera networks?
- how are cyberspatial technologies changing your behaviour and your social life, your movement patterns and perception of distance and knowledge of places?
- cyberspace is not separate, but intertwined into daily life
- can you remember life before them? could you live without them?

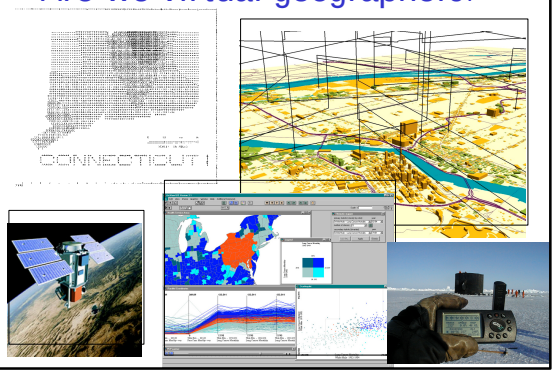
Geographies of Cyberspace

How can geographers study cyberspace:

1. examining how cyberspace is being conceived in spatial terms
2. examining the geography of the material and social production of cyberspace itself (where are the wires; where are workers and capital; where are the users)
3. examining how cyberspace is changing society and economy
   - think about impact of digitisation on geography as a discipline, changing methods of research, mode of communication & teaching

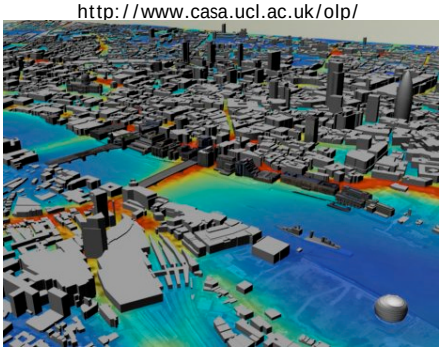
- part of a critical approach to thinking about technology and society more generally

Are we virtual geographers?



Virtual London

http://www.casa.ucl.ac.uk/olp/

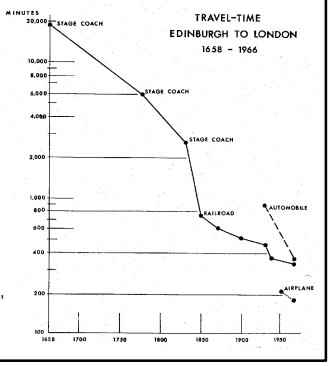


Cyberspace and changing socio-economic structures

- for us, as geographers, how does the digitisation of information and instantaneous telecommunication make things different? do they change spatial relationships, activity patterns, social organisation, the daily social reproduction. are they creating new patterns of accessibility and social difference?
- new urban morphology. de-concentration of people?
- Is geography becoming less important?

Time-space compression

- canals, railways, steam ships trams & buses, automobiles, jet airliners
- evolution of human settlement patterns under new layers of transportation
- generally got cheaper and/or faster
- result is rapid change in cost-distance, time-distance
- shrinking world. but time-space compression does not happen evenly
- telecommunications - telegraph, telephone, satellites. Not movement but instantaneous transmission of information



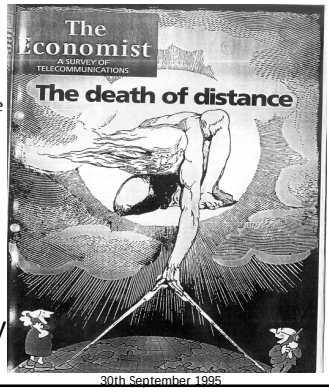
"It will become possible to site any screen-based activity anywhere"

Bits, not atoms

Spaceless space

anything, anytime, anywhere

End of Geography



30th September 1995

Cyberspace is everywhere and nowhere

friction-free economy

Cities dissolve

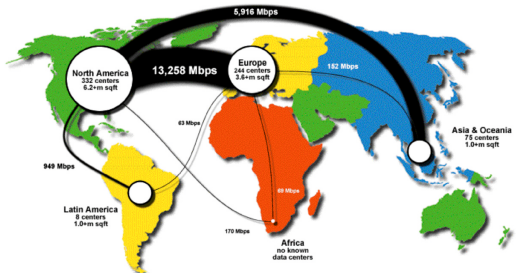
Weightless World

Internet arrives in the 1990s

- "In fact, one of the most remarkable aspects of this new communications technology is that it will eliminate distance. It won't matter if someone you're contacting is in the next room or on another continent because this highly mediated network will be unconstrained by miles and kilometers." (Bill Gates, 1995)

- "The digital planet will look and feel like the head of a pin… We will socialize in digital neighbourhoods in which physical space will be irrelevant and time will play a different role." (Nicholas Negroponte, 1995)

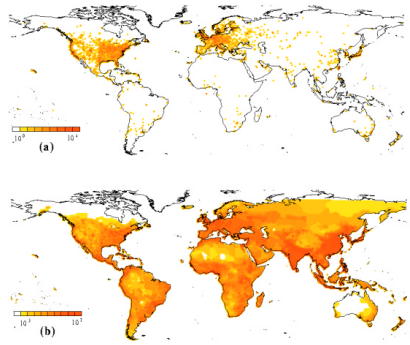
An uneven world



Townsend A (2003), *Wired / Unwired: The Urban Geography of Digital Networks* (Unpublished PhD Thesis, Department of Urban & Regional Planning, MIT)

Router density

Population density



Yook S-H, Jeong H, Barabási A-L (2002), "Modeling the Internet's large-scale topology" *Proceedings of the National Academy of Sciences*, 99(21)

Cyberspace: 'death of distance' or 'persistence of place' ???

- cyberspatial technologies commonly assumed that enabling communication and organisation through computers will (logically) replace the need face-to-face interaction and thus physical proximity
- physical movement is a burden to be overcome and (hopefully) eliminated
- the 'death of distance' theory true

- following Gillespie and Richardson (2000)
- debunk three interrelated cyberspace myths regarding 'disappearance through redundancy'

1. the unnecessary workplace
2. the unnecessary city
3. unnecessary travelling

[Andy Gillespie and Ronald Richardson, "Teleworking and the city: Myths of workplace transcendence and travel reduction"]

1. The strength of workplaces

- ***Rationale***: work*places* replaced by virtual teams in online work*spaces* and *mobile* offices
- ***But***: workplaces are going strong, e.g. thousands commuting daily into central London this morning!
- teleworking has stubbornly remained very low level
- 'work' firmly embedded in its social and material context of particular places
- loss of F2F is much more significant than often thought. people are sociable more than rational
- much work is done socially, networking contacts
- management problem of control and motivation. much is informal level, e.g. reproduction of organisation's culture/ethos and sharing tacit knowledge

- even low level teleservice type jobs also still grouped physically into call centres
- misreading the workplace as just an inert physical 'container' in space-time
- "What these approaches fail to recognize is that the work*place* is a highly functional device for facilitating activities of collaborative work groups, which is how nearly all work is accomplished." (Gillespie and Richardson, 2000, p. 232)

2. Death of the city - not likely!

- ***Rationale***: spatial 'glue' that binds the city together is dissolving. the city is an anachronism of the industrial age
- ***But***: empirical evidence is that cities are not disappearing. percentage of urbanised population is increasing rapidly
- far from dissolving cities, cyberspatial technologies are actually strengthening role of certain major urban centres
- morphology of cities is changing - rise of megacities and edge cities
- mutually reinforcing demand for and ability to supply advanced telecommunications facilities and services are concentrated points

- Castells (2001) argues "… the Internet is in fact the technological medium that allows metropolitan concentration and global networking to proceed simultaneously. The networked economy, tooled by the Internet, is an economy made up of very large, interconnected metropolitan regions." (page 225)
- territorial complexes of innovation. concentration of talent, ideas and power
- webs of power depend on F2F, social networks of decision-makers in cities
- economy of presence is an urban phenomena

- compulsion for proximity is enhanced in a 'speeded up' economy. easy F2F is vital to make sense of risky, unstable and fluid situations.
- cyberspace increases risk and thus increases need for place-based social networks to handle this
- thus cities are needed even more

3. Teleworking and the need to travel

- ***Rationale***: technology means people don't have to move so far or so often
- ***But***: four possible interactions between travel and cyberspace
  - substitution (decreases travel)
  - enhancement (generate new travel)
  - largely static (operational efficiency,intelligent transportation)
  - indirect, long-term impacts (land use and business location decisions)
- not simple substitution. complex and contradictory implications

- even for classic teleworking scenarios it is likely not to reduce the need for travel
- cyberspatial technologies tend to expand 'activity spaces' in which work takes place and leading to longer distances
- hot-desking, mobile nomadic workers. fragmented lives
- new ways of working get more diffuse and less nodal - more complex journeys (often can not be done on mass public transport, like the 2-way daily commute)
- not reduced mobility, but the rise of hypermobility
- "Far from contributing to more sustainable urban ways of life and travel behavior, therefore, teleworking and teleservices seem to be developing hand in hand with lower-density, less nodal urban forms and with travel behavior that is more car-dependent than before." (Gillespie & Richardson, 2000, pages 242-243)

Conclusions

- cyberspace is beginning to 'disappear' - we take the Internet for granted now. but it is also becoming more influential in structuring daily life
- cyberspace is not erasing geography but is creating new geographies, new activity patterns of its own
- cyberspace is not universally accessible socially or evenly distributed across space
- as an area of research
  - virtual geographies are a novel and interesting domain for geographers to do both quantitative and qualitative research
  - can do virtual fieldwork from your own PC

Reading for this lecture

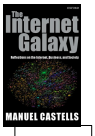
- key articles:
- available from http://www.casa.ucl.ac.uk/martin/1006/

- Gillespie A, Richardson R (2000), "Teleworking and the city: Myths of workplace transcendence and travel reduction", in Wheeler J, Aoyama Y and Warf B (eds.), *Cities in the Telecommunications Age: The Fracturing of Geographies*, (Routledge, New York) pages 228-248.

- Morgan K (2004), "The exaggerated death of geography: learning, proximity and territorial innovation systems" *Journal of Economic Geography*, 4, 3-21.

- some good books for background. copies available in the DMS Watson library

- Cairncross F (1997), *The Death of Distance* (Harvard Business School Press, Boston)



- Castells M (2001), *Internet Galaxy: Reflections on the Internet, Business and Society*, (Oxford University Press, Oxford)

- Kitchin R (1998), *Cyberspace: The World in Wires*, (John Wiley and Sons, Chichester, UK)

Some examples of geographers working on cybergeography

- all available at http://www.casa.ucl.ac.uk/martin/1006

- Kwan M-P (2002), "Time, information technologies and the geographies of everyday life", *Urban Geography*, 23, 471-482.

- Townsend AM (2001), "The Internet and the rise of the new network cities, 1969-1999", *Environment and Planning B*, 28, 39-58.

- Warf B (2001), "Sequeways into cyberspace: Multiple geographies of the digital divide", *Environment and Planning B*, 28, 3-20.

- Zook MA (2003), "Underground globalization: Mapping the space of flows of the Internet adult industry", *Environment and Planning A*, 35, 1261-1286.

www.casa.ucl.ac.uk/cyberspace