

Media Aesthetics

03 Approaches to New Media

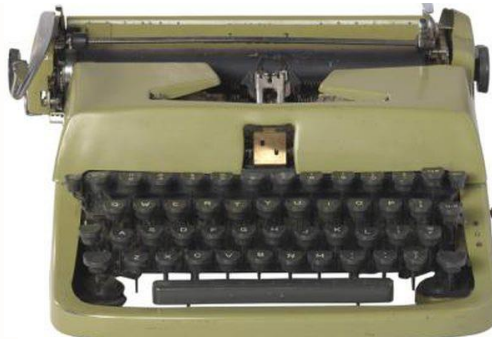
01: Introduction: Beyond Hype

- ‘Cyberbole’ and ‘the polarization between narrow suspicion and uncritical enthusiasm’
- 1) technology as being inherently socially progressive; ‘the “new “ is the “cutting edge”, the “avant-garde”, the place for forward thinking people to be’.
- 2) a hype cycle in public debate, where innovations triggers positive hype up to a ‘peak of inflated expectations’,

02: the social shaping of technology

- **Technological determinism:** 'research and development have been assumed as self-generating. ... in an independent sphere, and then create new societies or new human conditions' (Robin Williams 1996)
 - 1) unproblematic or pre-determined
 - 2) necessary and determinate 'impacts': changes everything
- **Social shaping of technology approach:**
 - 1) 'technology ... is a social product, patterned by the conditions of its creation and use'
 - 2) 'the "black box" of technology must be opened, to allow the socio-economic patterns embedded in both the content of technologies and the process of innovation to be exposed and analysed' (Williams and David Edge 1996)
 - 3) Hardware need to be extended to a consideration of the uses
- *La technique, die Technik*: a meaning of technology that involves the tools, their uses and associated forms of knowledge.
- Ancient Greek, *techne*-practical or applied arts and skills, *logos*-systematic reason, knowledge or discourse
- New media as artefacts, practices and social arrangements

- **Historical case studies in the social shaping of technology**
 - 1) The failure of the gas refrigerator
 - 2) The success of the QWERTY typewriter (technology lock-in)
- **Social determinism:** 'drawing simple relationships between technologies and large-scale economic interests'



Technological Determinism v. Social Constructivism

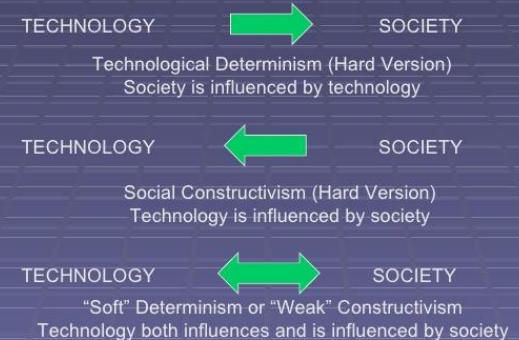
Technological Determinism

- Technology influences society, but society does not influence society
- Only technological factors, not social ones, determine the success or failure of a technology
- Successful technologies are inherently superior, and their success is evidence of that; failed technologies are inherently inferior, even if we can't see how
- Technology develops linearly—technologies are conceived, developed, and implemented

Social Constructivism

- Society influences technology
- Social factors contribute to the success or failure of a technology
- Successful technologies may be technologically superior and failed ones technologically inferior, but even if so, that's only part of the story of their success or failure
- Technological development occurs recursively

The Relationship Between Technology and Society



- **Modified technological determinism:** a feature of capitalist societies (Robert Heilbroner 2003)
 - 1) reflecting on Karl Marx's 'The hand-mill with the feudal lord, the steam-mill with the industrial capitalist'
 - 2) Marx was a technological determinist : capitalism as a catalyst for technological development.
 - 3) 'technological changes must be compatible with existing social conditions', and it is both acted upon by and acting on the body of society
- **Evolutionary perspective** on the development of technologies (Brian Arthur 2009)
 - 1) technologies develop out of combinations of other technologies, much like the genealogical structure of a tree
 - 2) existing primitive technologies as components. These new technologies become possible components-building blocks-for the construction of further new technologies. Slowly over time.
 - 3) recombination of technological elements: more like chemistry than like Lego

03: technoculture



- 'A technology such as the computer is a product of social processes from the beginning' (David Sholle 2002)
- 'Technological development is constrained by cultural norms originating in economics, ideology, religion and tradition' ... 'technology crosses the ... line between artefacts and social relations assumed by common sense and philosophers alike' (Andrew Feenberg 2009)
: 'technical code' - not merely a belief, an ideology, but is effectively incorporated into the structure of machines
- **Critical theories of technology:** technologies shape not only how the social world is structured, but also how it is seen by those within society.
 - 1) technoculture as 'an enquiry into the relationship between technology and culture and the expression of that relationship in patterns of social life, economic structures, politics, art, literature and popular culture' (Debra Benita Shaw 2008)
 - 2) communication technologies in technoculture, from electricity to the motor vehicle to synchronized swimming. (Lelia Green 2002)
- 'the communication of cultural material in technological contexts', culture as 'the pattern of meanings embedded in symbolic forms'

04: theories of the information society

- **The social impact of new media technologies**

- 1) the potential impact of computing in the 1970s and 1980s (Daniel Bell 1973)

- 2) futures research and social forecasting: Alvin Toffler 1970, Barry Jones 1982, Yoneji Masuda 1981,5), John Naisbett (1984): to advise governments, policy-makers and businesses

- **Daniel Bell**: the rise of the service economy and the growing use of computer-driven knowledge technologies as the 'post-industrial society' (1973): 'information society' (1980): 'Third Industrial Revolution' in the resource of knowledge and information

- : **information society**

- 1) the occupational shift of workforce in the US, towards services and information-related employment

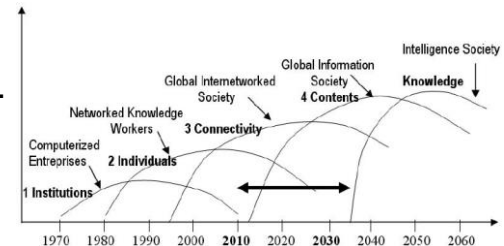
- 2) the growing role played by knowledge and information in the US and other post-industrial economies.

- : A post-industrial society is based on services and information.

- : services of interacting with one another rather than with abstract machines.

- **Alvin Toffler**: 'Third Wave' (1981): 'de-massified media'

- **Yoneji Masuda**: 'computopia' 'classless society' (1985)



– **Critiques of information society theories**

1) does not consider the extent to which services work can be industrialized and mechanized using computers, as of manufacturing

2) confusion in the terms 'knowledge' and 'information': information as the processing data, forms of knowledge

3) the category of 'knowledge worker' is ambiguous: ICTs eliminate a lot of management and knowledge worker roles through offshoring and outsourcing

05: political economy of new media

- Focusing on 'media ownership and control ... and other factors that bring together media industries with other industries, and with political, economic and social elites' (Oliver Boyd-Barrett 1995)
- Focusing on the effects of media on individuals with insufficient regard to social context, but also from mainstream media and cultural economics
- Political economy first developed by Karl Marx, critiquing media arrangements under capitalism with an eye to alternative means of organizing and distributing the means of cultural production.
- **Political economy approach to media and communication**
 - 1) to study the social totality, or the interconnection between systems of economic, political, coercive and symbolic power
 - 2) for a historical perspective, unfolding history of economic formations and the systems of rule
 - 3) relations between the commercial and government sectors
 - 4) moral philosophy, cultural citizenship
 - 5) global dimension of international inequalities
- A transformation to a **new form of capitalist economy**
 - 1) from industrial capitalism to informational capitalism and a network society
 - 2) dramatical changed aspects of personal and social life



- **'Digital capitalism'** (Dan Schiller 2000, 2006)
 - 1) evolution of corporate communication networks (intranets) in the US: a global scale, ITU, WTO
 - 2) integrating global information infrastructure: 'transnational corporate-commercial communication system': a global new-liberal policy
 - 3) reduction in government funding to public-sector information institutions, increasingly reliant on corporate support → strengthens corporate control over information provision.
 - 4) the expansion of claims to intellectual property rights: to contrive scarcity in relation to information access for maximizing profits
- **Transnational informational capitalism** (Christian Fuchs (2008, 2011): furthering capitalist production and circulation and capital accumulation, through
 - 1) ICTs in the workplace: enabling the rationalization of production and increasing the productivity of labour
 - 2) the concentration of ownership with other branches of capitalist production
 - 3) the production and sale of 'immaterial' commodities
 - 4) using media and ICTs in enhancing the efficiency of intra-organizational corporate communication
 - 5) accelerating the speed of transmission and circulation of information and communication
 - 6) advertising, reducing the costs, the globalization of trade in service

o6: theories of the network society

- **Informational capitalism** (Manuel Castells 1996, 1998, 2000)
 - 1) information becoming the raw material of economic activity
 - 2) the pervasive impacts of new ICTs
 - 3) the logic of networking being applied to all social processes and organizational forms
 - 4) processes, organizational structures and institutional forms needing to be flexible: uncertainty and unplanned changes
 - 5) the growing convergence of specific technologies into a highly integrated system: Cisco, Apple, Microsoft, Google
- **A new network economy** (Castells)
 - 1) informational
 - 2) global: a planetary scale in real time or chosen time
 - 3) the network enterprise
- **The space of flows** (Castells 1989)
 - 1) global cities (New York, London, Tokyo, Paris ...) → 'spatial nodes' (geographical centers)
 - 2) technopoles (Silicon Valley, Bangalore, Guangzhou/Shenzhen) : nodes and hubs → central in global network








- **Cosmopolitan managerial elites:** membership in the managerial circles of the informational economy across a global cultural spectrum
- Contradictory global logics: China and Vietnam's pivotal to the global market economy (production)
- **Political resistance:** 'counterpower' or 'countervailing processes'
 - 1) 'resistance to power ... takes place through and by networks'
 - 2) Al-Qaeda's extensive use of global communications networks to oppose global Western modernity
- Critical commentaries on Castells's
 - 1) conflation of culture as lived experience and culture as symbolic communication
 - 2) overstate the extent to which globalization has transformed culture, understood as lived experience and everyday life: incorporated into an already existing repertoire of socio-cultural activities and relationships

07: long waves and techno-economic paradigms

- Techno-economic paradigm as a cluster of interrelated technical, organizational and managerial innovations (Christopher Freeman 1988)
- **A new techno-economic paradigm** (Carlota Perez 2010)
 - 1) in the dynamics of relative cost structures of inputs to production, as new low/declining cost inputs for profitables
 - 2) in the perceived spaces for innovation by new entrepreneurial opportunities [startups]
 - 3) in the organizational criteria and principles for harnessing the benefits of the new technologies to maximize efficiency and profits
- The advances in microprocessing in the 1970s, PC in the 1980s, internet in the 1990s
- Long waves of capitalist development
 - 1) over 50 to 60 years
 - 2) Upwaves continue until the point at which they generate a speculative bubble in which financial investments are increasingly divorced from the real economy (stock market crash, downturn, recession)
 - 3) the history of capitalism as one for creative destruction (Joseph Schumpeter 1950)

- Techno-economic paradigms (Freeman 2007 and Perez 2010)
 1. Industrial Revolution (1780s-1830s)
 2. The Age of Steam and Railways (1840s-80s)
 3. The Age of Steel, Electricity and Heavy Engineering (1890s-1930s)
 4. The Age of Oil, the Automobile and Mass Production (1940s-80s)
 5. The Age of Information and Telecommunications (1990s-present)

Five Successive Technological Revolutions, 1770s to 2000s

<i>Technological revolution</i>	<i>Popular name for the period</i>	<i>Core country or countries</i>	<i>Big-bang initiating the revolution</i>	<i>Year</i>
FIRST 	The 'Industrial Revolution'	Britain	Arkwright's mill opens in Cromford	1771
SECOND 	Age of Steam and Railways	Britain (spreading to Continent and USA)	Test of the 'Rocket' steam engine for the Liverpool-Manchester railway	1829
THIRD 	Age of Steel, Electricity and Heavy Engineering	USA and Germany forging ahead and overtaking Britain	The Carnegie Bessemer steel plant opens in Pittsburgh, Pennsylvania	1875
FOURTH 	Age of Oil, the Automobile and Mass Production	USA (with Germany at first vying for world leadership), later spreading to Europe	First Model-T comes out of the Ford plant in Detroit, Michigan	1908
FIFTH 	Age of Information, Computing, and Telecommunications	USA (spreading to Europe and Asia)	The Intel microprocessor is announced in Santa Clara, California	1971

o8: actor-network theory

- **Bruno Latour's** term 2005, 2011
- The relationship between technologies and society
 - 1) an anthropology of science: 'the intricate ways in which scientific facts are produced ... and then extended beyond their original site of production
 - 2) do not exist independently of social reality
 - 3) bottom-up
- Latour's network: to map the actors and their interactions, SNA
 - 1) 'the work of connection and collection' 'reassemble the social by following the actors themselves'
 - 2) actors are both human and non-human: '**actants**'
- Rejects technological determinism: mediation and translation to capture how ideas and concepts can move from one domain to another ('information superhighway' 'surfing the internet')
- Rejects social determinism: technical object is not simply a mirror ... reflecting social distinctions
- 'Society' in sociology: too much/too high, across geographical boundaries limiting by particular national societies, only human actors : constructivist
- 'The more digital, the less virtual and the more material a given activity becomes'
- People and machines

Conclusion

- [Encyclopedia of New Media](#)
- [Voice of the Shuttle](#)