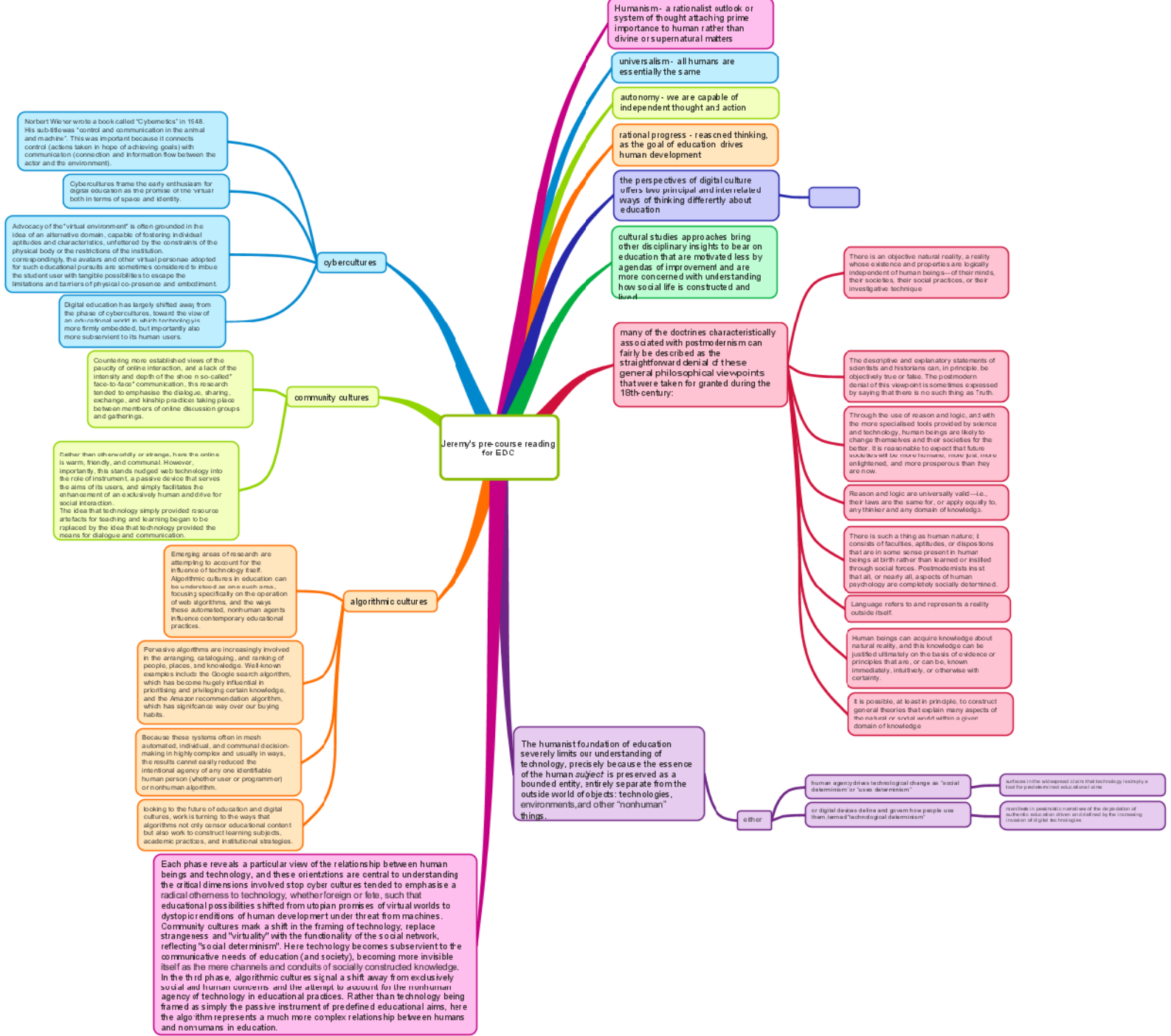


Jeremy's pre-course reading for EDC



Norbert Wiener wrote a book called "Cybernetics" in 1948. His subtitle was "control and communication in the animal and machine". This was important because it connects control (actions taken in hope of achieving goals) with communication (connection and information flow between the actor and the environment).

Cybercultures frame the early enthusiasm for digital education as the promise of the virtual both in terms of space and identity.

Advocacy of the "virtual environment" is often grounded in the idea of an alternative domain, capable of fostering individual aptitudes and characteristics, unfettered by the constraints of the physical body or the restrictions of the institution. correspondingly, the avatars and other virtual personae adopted for such educational pursuits are sometimes considered to imbue the student user with tangible possibilities to escape the limitations and barriers of physical co-presence and embodiment.

Digital education has largely shifted away from the phase of cybercultures, toward the view of an instrumental service in which technology is more firmly embedded, but importantly also more subservient to its human users.

Countering more established views of the paucity of online interaction, and a lack of the intensity and depth of the so-called "face-to-face" communication, this research tended to emphasise the dialogic, sharing, exchange, and linking practices taking place between members of online discussion groups and gatherings.

Rather than otherworldly or strange, here the online is warm, friendly, and communal. However, importantly, this stands nudged web technology into the role of instrument, a passive device that serves the aims of its users, and simply facilitates the enhancement of an exclusively human and diverse for social interaction. The idea that technology simply provided resource artefacts for teaching and learning began to be replaced by the idea that technology provided the means for dialogue and communication.

Emerging areas of research are attempting to account for the influence of technology itself. Algorithmic cultures in education can be understood as one such area, focusing specifically on the operation of web algorithms, and the ways these automated, nonhuman agents influence contemporary educational practices.

Persuasive algorithms are increasingly involved in the arranging, cataloguing, and ranking of people, places, and knowledge. Well-known examples include the Google search algorithm, which has become hugely influential in prioritising and privileging certain knowledge, and the Amazon recommendation algorithm, which has significant way over our buying habits.

Because these systems often in mesh automated, individual, and communal decision-making in highly complex and usually in ways the results cannot easily reduced the intentional agency of any one identifiable human person (whether user or programmer) or nonhuman algorithm.

Looking to the future of education and digital cultures, work is turning to the ways that algorithms not only curate educational content but also work to construct learning subjects, academic practices, and institutional strategies.

Each phase reveals a particular view of the relationship between human beings and technology, and these orientations are central to understanding the critical dimensions involved. In the first phase, cybercultures tended to emphasise a radical otherness to technology, whether foreign or false, such that educational possibilities shifted from utopian promises of virtual worlds to dystopic renditions of human development under threat from machines. Community cultures mark a shift in the framing of technology, replacing strangeness and "virtuality" with the functionality of the social network, reflecting "social determinism". Here technology becomes subservient to the communicative needs of education (and society), becoming more invisible itself as the mere channels and conduits of socially constructed knowledge. In the third phase, algorithmic cultures signal a shift away from exclusively social and human concerns and the attempt to account for the nonhuman agency of technology in educational practices. Rather than technology being framed as simply the passive instrument of predefined educational aims, here the algorithm presents a much more complex relationship between humans and nonhumans in education.

Humanism - a rationalist outlook or system of thought attaching prime importance to human rather than divine or supernatural matters

universals - all humans are essentially the same

autonomy - we are capable of independent thought and action

rational progress - reasoned thinking, as the goal of education drives human development

the perspectives of digital culture offers less principal and interrelated ways of thinking differently about education

cultural studies approaches bring other disciplinary insights to bear on education that are motivated less by agendas of improvement and are more concerned with understanding how social life is constructed and lived

many of the doctrines characteristically associated with postmodernism can fairly be described as the straightforward denial of these general philosophical viewpoints that were taken for granted during the 18th century

human agency drives technological change as "social determinism" or "cultural determinism"

or digital devices define and govern how people use them, termed "technological determinism"

software is the well-known claim that technology (especially a tool for producing and/or distributing) is itself a tool for producing and/or distributing

hardware is possible insofar as the deployment of material resources is constrained by the increasing reuse of digital technologies