

PHILOSOPHY  
OF COMPUTER SCIENCE

CD5650



COMPUTERS AND SOCIETY

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CONTENT

- COMPUTER ETHICS

- **COMPUTER-MEDIATED COMMUNICATION**

- INTERNET CULTURE

- DIGITAL ART

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Computer-mediated Communication  
(CMC)

- Communication is fundamental for what makes us *human* - both as individuals and as society.
- ICT (Information and Computing Technology):  
tool to investigate what defines/delimits human being

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The discussion in terms of *worldview*

- Ontology
- Epistemology (including semiotics, hypertext and logic)
- The meaning of identity and personhood (including gender and embodiment)
- Ethics
- Politics (global democratization vs. commercialization and a “computer-mediated colonization”)

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What is CMC?

CMC – an interactive communication between two or more intelligent agents that relies on ICT – usually personal computers and networks – as its primary medium.

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What is CMC?

E-mail  
Newsgroups  
Discussion forums  
Chartrooms

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### What is CMC?

A **MUD** or *Multi-User Dungeon* is managed by a computer program and often involving a specific context or theme, such as e.g. a rambling old castle with many rooms.

Some MUDs are ongoing adventure games; others are educational in purpose; and yet others are simply social.

MUD participants adopt a character or *avatar* when they join or log in to a MUD. Typically, you can describe your avatar to the other participants. Each MUD has its own name, special character and ambience, and set of rules. MUDs are run by advanced participants or programmers called wizards.

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### What is CMC?

**MOO** is an object-oriented MUD. According to Canton Becker, author of "The Unofficial Moo Guide Tutorial," a MOO is: "...just a programming language in which you design objects. Everything is an object. Rooms are objects, exits are objects, possessions are objects, even your MOO alter-ego/avatar is an object. "

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### What is CMC?

Instant messaging

- ICQ
- AOL
- Instant Messenger
- ...

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### What is CMC?

Audio and video-teleconferencing

Shared virtual reality systems

Other ways of sharing files and information via networks and the internet

...

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### What is HCI?

HCI is in a sense a subset of CMC dealing with the design of communication interfaces and investigation into human and machine capacities, cognitive abilities, and possible ways of interacting with the world and one another.

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### Ontology

Questions about the nature of the real, including both internal (self, mind) and external realities, transcendental realities (mathematics, ethics, religion), causal and other relationships.

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### Mind-Body Relation

**Enlightenment /Cartesian ideal:** technology as a slave.  
Mind is a reason independent of body. Mode of knowledge mathematical and symbolic. Mind is divorced from its own body and nature that is seen as inferior and dependent.

The environmental crises make clear that humans as embodied beings are totally interwoven with a complex natural order.

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### Mind-Body Relation

**Strong AI ideal:** build superior technological replacements of the human mind.  
The human “interface” with the world leads to the *embodied* mind.

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### Mind-Body Relation

#### Human-machine symbiosis – **Cyborg**

**Borg in Star Trek:** The Next Generation – the machinery takes control, destroying the nature.

**Donna Haraway:** “Cyborg Manifesto”: women and men can find genuine equality and liberation as disembodied minds in cyberspace.

Echoes **Gnostic idea** that salvation can come only through the liberation of the soul from the body.

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### Communication

Cartesian view: autonomous minds transfer information across a transparent medium.

vs.

Intersubjectivity (dialogue, multilogue)

C S Peirce’s semiotics with emergence of meaning out of *objects, signs* and *persons* (interpretants)

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### New Style of Multitasking in Communication

- Partial attention
- Does not favor deep sustained intellectual attention
- Selves de-centered and fragmented

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### Ethics and politics: democratization vs. the panopticon

Importance of realizing the democratic potentials of CMC require conscious attention to the social context of use, including education.

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Globalization, commercialization, and commodification vs. individual, local identity

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## Interdisciplinary dialogue

CMC and HCI researchers do not usually study so much of history of ideas so they can get useful insights from philosophers in questions about ontology, epistemology, and definition of some key concepts such as culture.

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## Global dialogue Consequences

Internet communication forces users to articulate the most basic assumptions about identity, time, space and helps us recognize *the contingent* (i.e. non-universal) character of these most basic presumptions.

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## Education for an intercultural global village

“Socratic education” – critical thinking, also about the risks of ICT

Culture of dialogue necessary for democratic process

Reasoning through the own positions and justify preferences

Reflect on the choices that optimally serve the common interest

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