CSC 484 Lecture Notes Week 5

Social and Affective Aspects
of Interaction Design

I. **Relevant reading**

Textbook chs 4 and 5.

A. **Next two research readings.**

1. *Formal Mental Models of Users*
        by John Rushby

2. *Studying User Gratifications*
        by Adam Joinson

Next two research readings, cont'd

B. About the readings.

1. *Not a pair*

a. Rushby relevant to Ch 3.

b. Joinson relevant to Chs 4 and 5.

Next two research readings, cont'd

2. **Rushby paper:**

a. Defines very formal mental model.

b. Focuses on very specific problem
    -- airline pilot performance.

c. Gets tangible results.

Next two research readings, cont'd

3. **Joinson paper:**

   a. Presents a very general social study.

   b. Studies very general issue
      -- web user gratification.

   c. Gets qualitative results.

Next two research readings, cont'd

4. Relevance to 484 is

- primarily on *research methodologies*

- not on subject matter

II. **Intro to Ch 4 (Sec 4.1).**

A. Focus on collaboration and communication.

B. Social factors relevant to these.

C. Also emerging social phenomena.

III. **Social Mechanisms (Sec 4.2)**

A. Understanding these helps us
    design better interactive systems.

B. Core mechanisms:

Social Mechanisms, cont'd

1. ***conversational*** -- the flow of talking

2. ***coordination*** -- people working together

3. ***awareness*** -- who's doing what, where

IV. Conversational mechanisms (Sec 4.2.1,2).

A. Human-to-human communication.

B. Many intricate social rules.

C. New rules emerge with new technology.

Conversational mechanisms, cont'd

D. Designers of systems that support conversation must understand these rules.

E. Occasionally they invent new ones.

V. Coordination mechanisms (Sec 4.2.3,4).

A. Primary forms:

  1. Verbal, non-verbal communication.

  2. Schedules, rules, conventions.

  3. Shared external support.

Coordination mechanisms, cont'd

B. Again, designers of systems that support col-
laboration must understand the mechanisms.

C. Entire conferences and journals devoted to it:

Coordination mechanisms, cont'd

1. ***ACM CSCW*** conference, since 1986

2. ***CSCW*** journal, since 1992

3. ***IEEE CSCWD*** conference, since 1996

Coordination mechanisms, cont'd

D. Technological hits:

1. Electronic whiteboards and cocktail napkins
    (SIGCHI, 1996).

2. Multi-author shared documents
    (CSCW, 1990).

E. Go Google!

VI. **Awareness (Sec 4.2.5,6)**

A. Immensely complex cognitive and social mechanisms.

B. Support for human-to-human awareness.

C. Also, computer-to-human awareness, e.g., "smart rooms".

VII. **Techno-mediated society (Sec. 4.3).**

A. The book seems a bit overwhelmed here.

   1. Mentions myriad new technologies.

   2. E.g., cell phones, PDAs, web stuff.

B. Check out the Week 6 research reading.

VIII. **Intro to Ch 5 (Sec 5.1).**

A. *Expressive* interfaces **:)** [†]

B. *Frustrating* interfaces **:(**

C. Persuasive technologies.

_____

[†] Recently turned 25

Intro to Ch 5, cont'd

D. Anthropomorphism.

E. Agents.

F. Theoretical models of emotion.

IX. **What are affective aspects? (Sec 5.2)**

A. Generate an emotional response.

B. Focus is computer-provoked human emotion.

C. AI works on computer-expressed emotion.

X. **Expressive interfaces (Sec 5.3)**

A. Icons, animations, and such like.

B. Ostensibly reassuring, positively affective.

C. There's always a however, however
-- one person's cute is another's annoying.

Expressive interfaces, research, cont'd

D. And there's always research:

- *"Emoticons convey emotions without cognition of faces: An fMRI study"*

- *"Extraction and classification of facemarks"*

- *"HIM: A Framework for haptic IM"*

XI. **Frustrating interfaces (Sec 5.4).**

A. Avoid by

1. *obeying principle of least astonishment;*

2. *following decent guidelines,* e.g., Nielson's;

3. *studying flops* -- Microsoft Bob and Clippy.

Frustrating interfaces, cont'd

B. The book's favorite frustrations:

1. "Under construction" gimmicks.

2. Bad error messages.

3. Too much waiting.

4. Ill-designed software upgrades.

5. Clutter.

XII. **Dealing with frustration (Sec 5.4.1)**

A. Contextualized help.

B. Apologetic computers

"Im sorry Dave, ...".

XIII. Persuasive technologies (Sec 5.5)

A. E.g., Amazon's 1-click.

B. In general -- persuasion is *very hard.*

C. Check out Bob Sutton's class at Stanford.

XIV. Anthropomorphic interfaces (Sec 5.6)

A. Much debated.

B. *Pros:* enjoyable and motivational.

C. *Cons:* misleading or deceptive.

XV. **Interface agents (Sec 5.7)**

A. Attempts to embody animate characteristics.

    1. Interesting work at MIT.

    2. Shameless commerce online, e.g.,
        `adoptme.com`.

    3. Check out *"pets as passwords"* article.

Interface agents, cont'd

B. Much R&D yet to do.

XVI. Models of affective aspects (Sec 5.8)

A. Norman's emotional design model.

    1. Three levels -- *visceral*, *behavior*, *reflective*.

    2. Understanding *may* promote better design.

Models of affective aspects, cont'd

B. Jordan's pleasure model.

1. 4 types -- *physio*, *socio*, *psycho*, *cognitive*.

2. May help frame designer's thinking.

Models of affective aspects, cont'd

C. McCarthy, Wright's experiential framework.

   1. 4 threads -- *sensual*, *emotional*, *compositional*, *spatio-temporal*.

   2. May help designers think holistically.