'Net Gain? The Social In Play

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Theme

◆ What differences are being made by the "social" in networked applications, including games?

◆ What are the relationships between virtual communication and real-life communication?

ACE on people and interaction

◆ SUI "Straw-Like User Interface"
◆ Prosopopeia, Backseat, and other mixed reality games.
◆ Unlimited "undo"s in SNES games: Will the users still enjoy playing the game, or does it just create an [unwanted] relationship between the user and the undo function)?
◆ "Computers are a new way of telling stories, and we are now in the state of exploring the state space" -- Alex Lightman.

Being Human

◆ Lips have favoured status in mental maps.
◆ Mental maps determine the kinds of stories we make.
◆ Social interaction takes a major portion of focus.

A Question For You

Differences in Thought

◆ Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic vs. analytic cognition. *Psychological Review*, 108, 291-310

◆ Thoroughly recommended for understanding cognitive differences in culture

Massively Multiplayer Online Role-Playing Games (MMORPGs)

- Hundreds of thousands of players online at the same time.
- World is always online.
- Chat, voice communication, party-based play.

- Computing and Internet technology is now offering experiences qualitatively different to what has gone before.
- Large-scale, social environment.
- Cross-disciplinary research area.

Longitudinal Study

| Subjects	12 University students (10 male, 2 female)
	No control group
Experiment Period	1 month+
Play Time	50 hrs: 9 subjects
	100 hrs: 3 subjects
Game	Nobunaga no Yabou Online
Play Location	Free: *e.g.*, subjects' houses

Subjects tested before and after play (also, subjects complete play logs)

Main Conclusions of Study

- ◆ MMORPGs can have measurable positive effects on skills and knowledge of players.
- ◆ Correlation with Internet experience suggests overlap between skills needed for MMORPG and using Internet.
- ◆ Communication online does not translate into real-world feeling.

Nobunaga no Yabou Online (Online)

Good chat functionality, meaningful historical setting, large number of players, party play essential, players also belong to a historical "faction", encouraging cooperation.

From ign.com:
http://ps2.ign.com/objects/481/481041.html
(c)
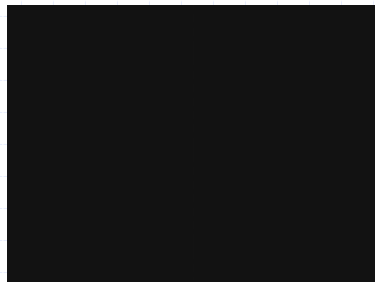
Tests Used Before and After Play

- <u>We tested the following:</u>

- <u>1. Internet, online game, and historical knowledge (paper test)</u>
- <u>2. Typing (typing software)</u>
- <u>3. Chat ability (MSN Messenger)</u>
- <u>4. State of Mind (UCLA Loneliness scale, Social Reticence Scale, Interpersonal Trust Scales).</u>

1. Knowledge

- Example question (choose one answer)
  - A protocol that can be used to send files over a network. Cookie, Proxy, SSL, FTP, PHP
- Tests cover Internet knowledge, online games, historical knowledge
  - 30 questions Homepage:10, Internet slang:15, historical knowledge:5
  - Relatively easy for intermediate Internet users.
  - Benchmark with ten volunteers (not subjects in the study),1-4 years Internet experience: Test1 average:21.6, Test2 average: 21.
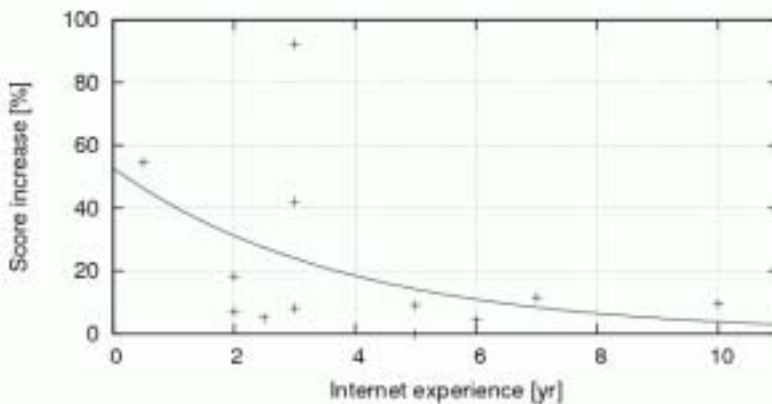
Test1 Correlation with Internet Experience

◆ Test is reasonable measure of Internet experience
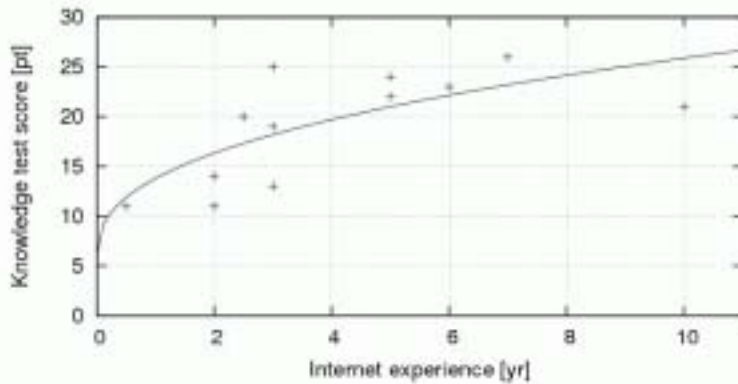
Percentage Increase: Test1 → Test2

◆ Rise in score also correlated with Internet experience.

2. Typing Skill

◆ Keyboard Master 6 software was used to test subjects.

- Typing ability measured automatically based on the number of input characters per minute and the number of mis-typed characters.
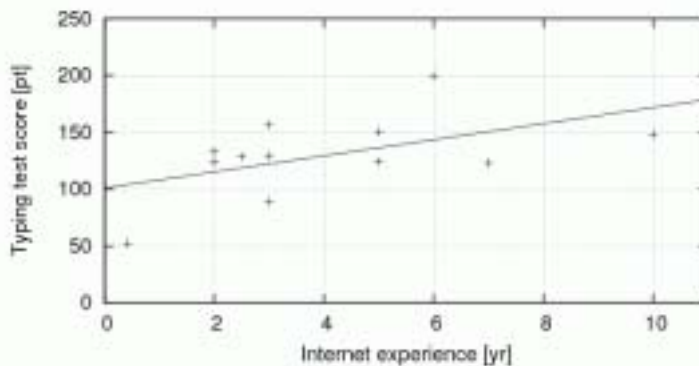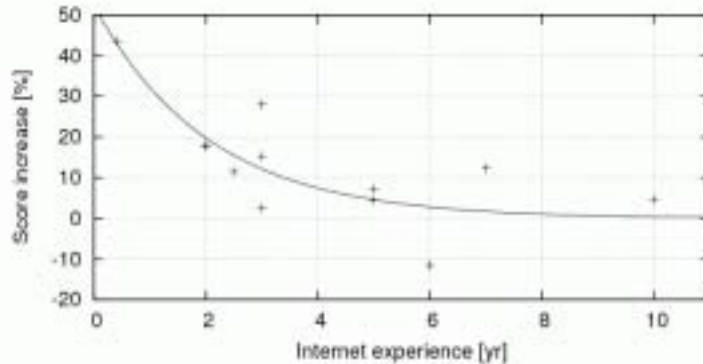

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Typing Correlation with Internet Experience

◆ Again correlation between pre-play test and Internet experience.

Increase in Typing Skill vs 'Net Experience

- Largest increase for subjects with least Internet experience. All but one subject improved.

# 3. Communication

- Two subjects chosen randomly to chat with an 'outsider', all subjects in different rooms.
- Count the number of distinct MSN Messages
- Corrections of previous utterances also counted.
- Subjects are not told the criteria for judging logs.
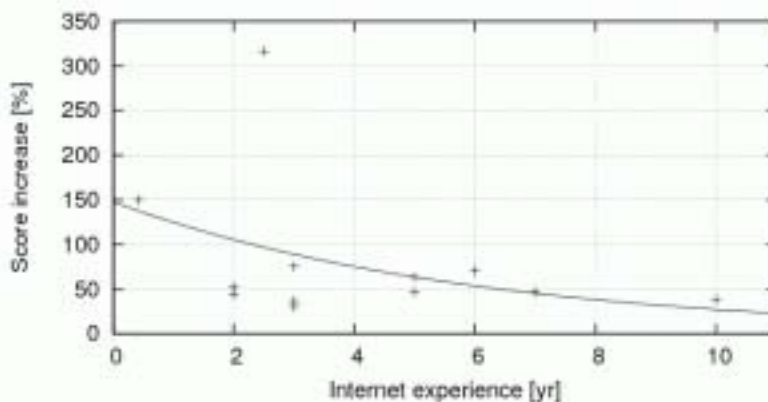- Genuine metric for "communication" requires work.

Chat Score Correlation With Internet Experience

◆ Slight negative correlation in pre-test (Internet has uses other than communication).
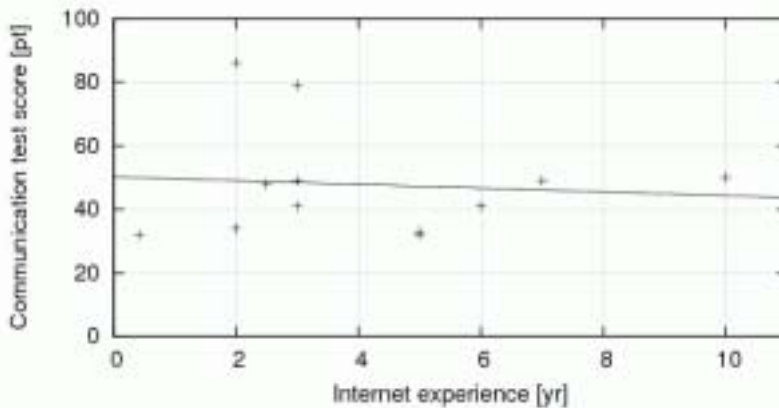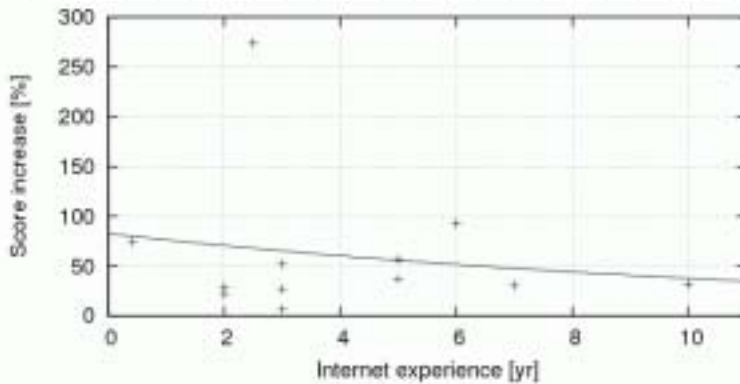

Rise in Chat Scores vs 'Net Experience

◆ Although metric is simple, measurable increase, correlated to Internet experience.

Scaling Rise in Chat Scores to Account for Typing Increase

◆ Still a measurable increase, correlated to experience.

Changes in Communication: Play Logs

Question	+ trend
Did you behave with responsibility?	12
Were you able to initiate unique acts or communications?	10
Could you tell other players your opinion clearly?	10
Did your play attach importance to maintaining harmony?	10
Did you communicate with players who were not friends?	10
Did you act and talk with emotion?	10
What percentage of your time was spent outside towns?	10
Did you think and progress rationally?	9
Could you make deep relations with others?	9
Did you cooperate with others without selfishness?	9

4. State of Mind

- T-test shows no significant changes in loneliness, reticence, trust scales.
- This is *despite* positive trends in communication.
- Understanding the real-world feelings engendered by online communication seems to be important for our society.

Main Conclusions of Study

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What are Effects of Games?

- 2005 Nature paper by Green & Bavelier found positive effects in reaction time and peripheral awareness.
- Emotive area: consensus difficult to find.
- There *could be* links between media and real violence.
- Jonathan Friedman (2002) 'Media Violence and its Effect on Aggression: Assessing the Scientific Evidence' finds around 200 studies, and that 'the scientific evidence does not support' the view that 'media violence causes aggression'.

Effects of the Internet

- "Researchers Find Sad, Lonely World in Cyberspace" New York Times, (1998) A. Harmon.
- Two year , $1.5m, CMU study, 169 subjects.
- On average, for those who used the Internet the most, things got worse.
- More lonely and more depressed subjects not more likely to use Net.
- Internet use itself caused a decline in wellbeing.
- Also, larger Stanford study reported in 2000.

Rationale

- Friendships not supported by phsysical proximity.
- Contexts difficult to establish.
- Support less applicable.
- Body's sensitivity to mood makes people and things matter to us.
- Direct engagement with other bodies underlies trust, sustains interpersonal world.

Education and Risk

- There have been many predictions about technology and education.
- Dreyfus "On the Internet" argues for embodiment (2001)
- Kierkegaard claim: a the learner must pass through the aesthetic, the ethical and the religious spheres of existence
- Only in the religious sphere is nihilism overcome by making a risky, unconditional commitment.

PR: Koto-tsukuri Workshops

◆ Education for creativity, leadership, meta-skills

◆ 21, 22 Feb, Tokyo

ianlab.ddo.jp/koto-tsukuri

Rapid Change

◆ Young people now communicate more through social networking (SNS) sites than through email.

◆ Blogs instead of diaries, Flickr instead of albums

◆ First SNS born just three years ago.

◆ Friendster: 30 million, Bebo: 20 million, Myspace: 100 million (#1 website among US users, including google)

◆ Socialisation is the primary use of the Internet

Are 'Net Studies already old?

◆ The current social nature of Internet use is already qualitatively different from previous (>4 years ago) use.

◆ How can games understand or make use of these developments?

◆ Self-disclosure of "private" information is similar to the physical risks of real life, creating more "connection"?

Case Study: Games and Sex

For example, Second Life

◆ People interact using Avatars

◆ Programming interface lets players create own hairstyles, outfits, or objects like boat and aircraft.

◆ Or actions like dancing and swimming…

◆ … Or for other things…

For Non-Programmers

- Buy sexual positions or "toys" created by others.
- Game has evolved a red light district (Amsterdam ☺)
- Users report that they can "explore fantasies that may not always be as practical or as possible in real life".

New Styles of Game

- Programming is not straightforward.
- Can buy programs, but still need partner(s)!
- So, new games Red Light (May 2006), Naughty America (September 2006) result from collaboration between games industry and porn industry.
- Still social, but sex and flirtation are central, not peripheral.

Outstanding Questions

- There is much research to be done here (eg, Turkle looked at text-based cybersex)
- Naughty America will encourage Cybersex as a prelude to real-life dating! (They say this will attract daters as well as gamers…)
- Will eg, women feel safer online?
- Will people be interested in trying erotic goods with avatar before buying online?
- Is the "underground" nature in Second Life part of the appeal?
- "If you can get it right, you can make a fortune."

Ethnomethodology

- An idea from sociology
- "Studies in Ethnomethodology", Harold Garfinkel, 1967
- The meaning is "The study of the ways in which people make sense of their social world"

Ethnomethodology Concepts

◆ Order is illusory.
◆ Social life only *appears* to be orderly.
◆ It is potentially chaotic.
◆ Order is constructed in the mind of social actors on the basis of their experiences.

◆ One method that people use is the "documentary method".

Example Experiment

◆ Students talk with an "advisor" who they cannot see.
◆ Advisor gives them "yes" or "no" answer.
◆ But answers are *random*.

◆ Students use the documentary method to bring order to a chaotic situation.

Story-telling

◆ This brings us back to what it means to be human.

◆ Stories give things a *context*. They represent a pattern through time. They are ideas. Here is a favourite Gregory Bateson quote:

◆ If I am at all fundamentally right in what I am saying, then *thinking in terms of stories* must be shared by all mind or minds, whether ours or those of redwood forests and sea anenomies.

Computing and Culture Story

◆ 60s behaviourism in psychology was challenged by computer metaphor: if we can "look inside" computer, why not mind?

◆ Human minds not like 70s rule-bases.

◆ But new 80s and 90s emergent algorithms were more "opaque" – and so more comparable to human minds

◆ Now both computing and psychoanalysis have decentralised, distributed models of mind.

◆ Lacan: centralised ego an illusion

Postmodern Mind

◆ Newsweek: "The pysche is not a fixed objective entity, but a fluid social construct – a story that is subject to revision."

◆ Multiple viewpoints, opacity, playful experimentation, navigation of surface.

◆ Turkle: 'net now allows stories of multiple personalities, distributed parts of mind, to be explored?

◆ A "liminal moment"? (Victor Turner)

Conclusions

◆ We have seen that
  - Mental models determine stories
  - There can be positive links from online to offline
  - There can be negative effects (mismatch)
  - The types of communication online are evolving fast
  - Computing analogies in turn affect our view of mind

◆ Games may provide us with an exceptional way to investigate mind and its stories.

Future Work

◆ Better metrics for measuring effects
  ▪ Communication skill, knowledge
◆ How players' characters affect their play.
◆ Understanding the links between the online and the offline mind (*transfer*).
◆ How does the trend towards social network use affect the stories that people are telling for themselves?
◆ Get well soon, Seymour Papert.