Media Systems: Lessons Learned

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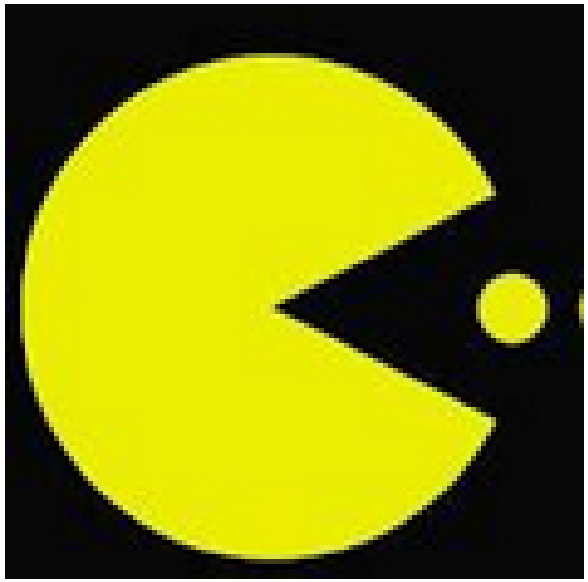
Lessons Learned: Girls can program

IBM Time-Life Center

Lessons refused

- “Literature is Man’s Greatest Output” and reducible to quantitative analysis

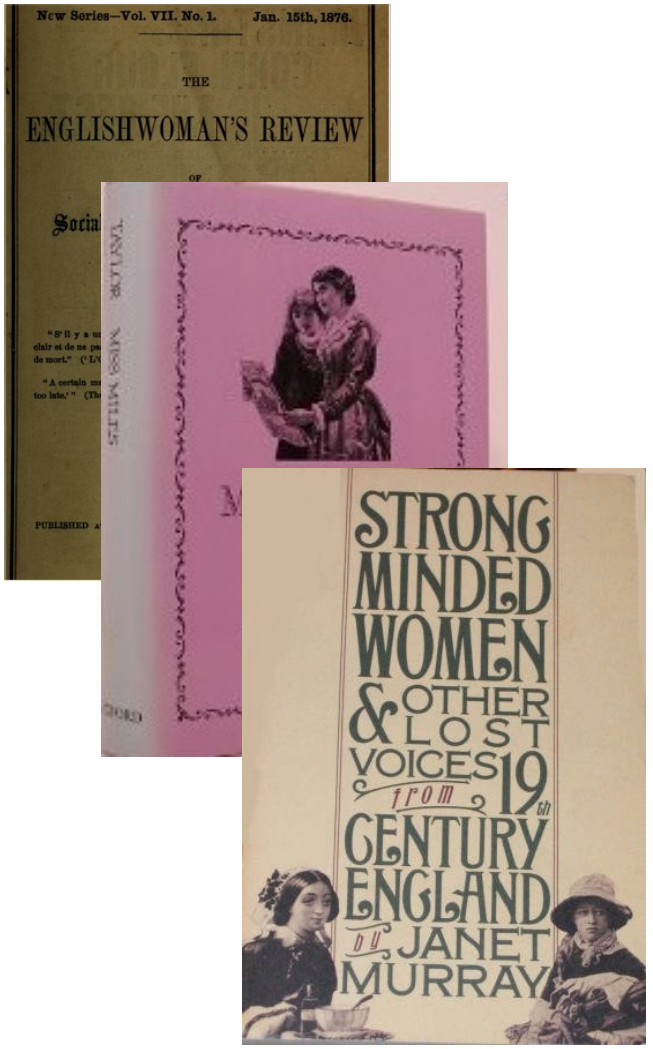
  (IBM Researcher ~1967)



Disciplinary Background: Narrative

Social, cultural, psychological, and cognitive systems co-evolve with changes in narrative media forms.

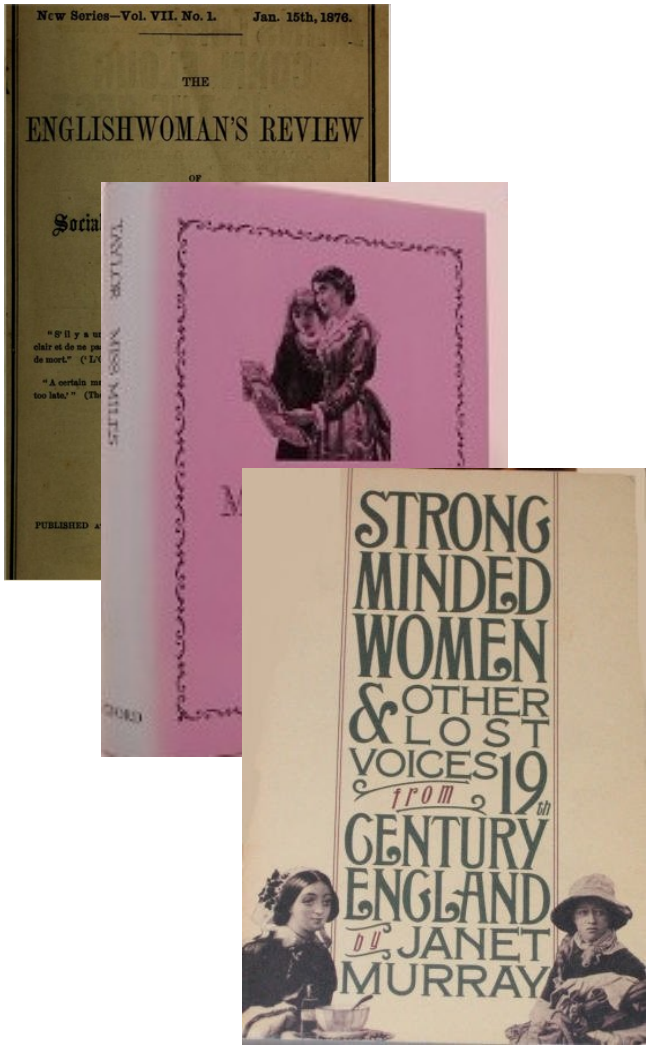
Narrative patterns can be seen changing over centuries within a tradition of practice.



Disciplinary Background: Narrative

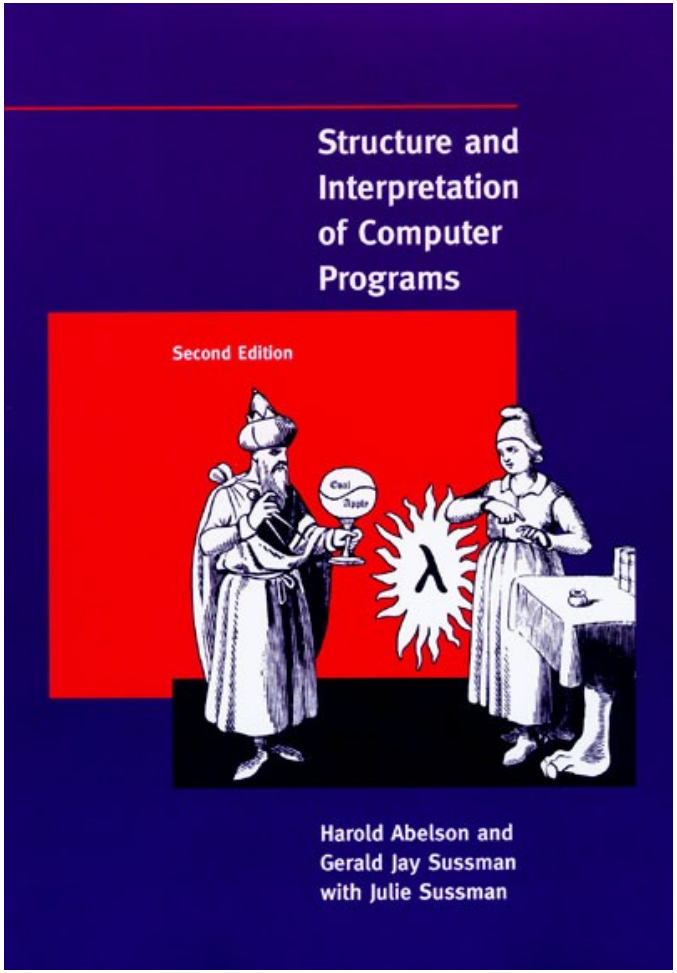
For example, conventions of Victorian novels constrain what can be represented of women's lives (**ending is happy marriage**)

As women began to tell new truths, they had to invent new story conventions (**ending is autonomy despite marriage**)



Religious Background: LISP

Alan Kay's Smalltalk and Seymour Papert's LOGO language and the new OO programming in MIT's 6001's Scheme make it possible **to represent anything as an abstract executable pattern.**



Lesson Learned: **Abstraction**

Powerful computing systems build **complexity**, much like narrative traditions, as **encapsulated systems of abstraction**.

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(happy-ending (marriage
   (courtship
      hero, heroine, obstacle) ) ) )
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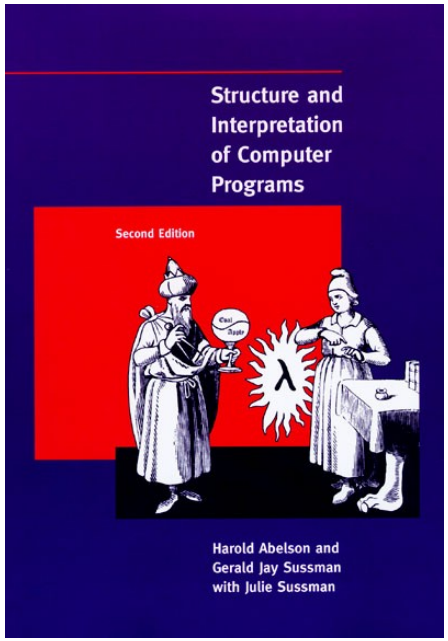
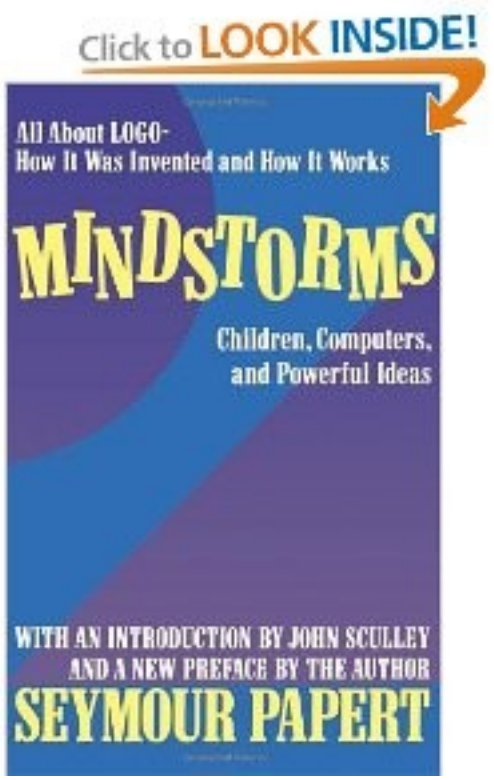


Lesson Learned: Microworlds

Learner-centered education in exploratory interactive environments

Why not do it for the humanities?



Material Background 1982 - $$

Humanists get access to resources

Large gifts to universities from major computer companies – DEC, IBM, Apple

Foundation founding for humanities applications from A/CPB, NEH, Mellon, and later NSF for digital libraries

MIT Media Lab (not Laboratory for Computer Science) attracts investors with over-the-horizon prototypes that reconfigure media genres

Lessons learned: Why not hand out cellos? (Joe Weizenbaum ~1982)

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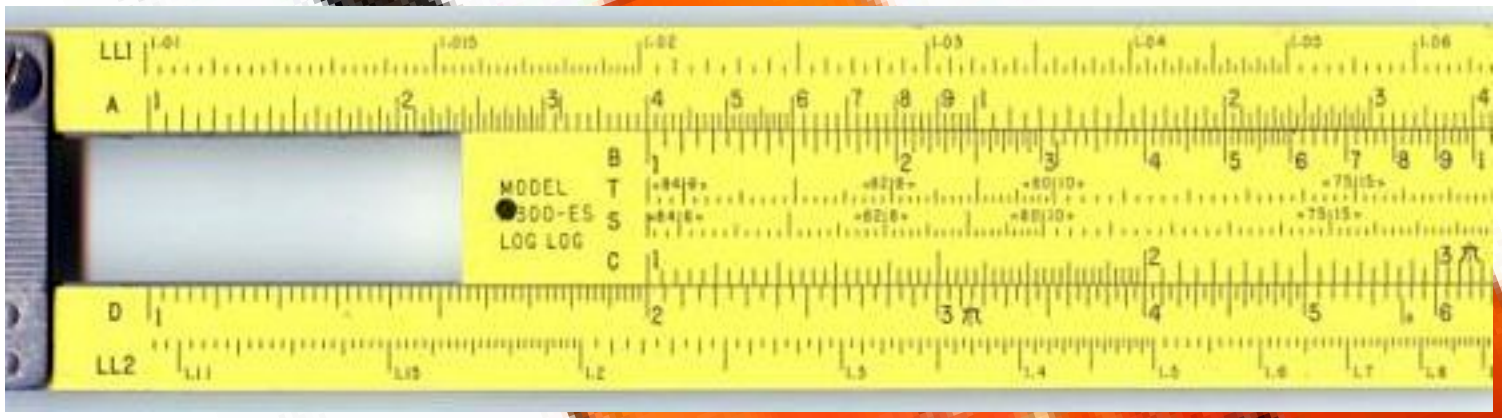
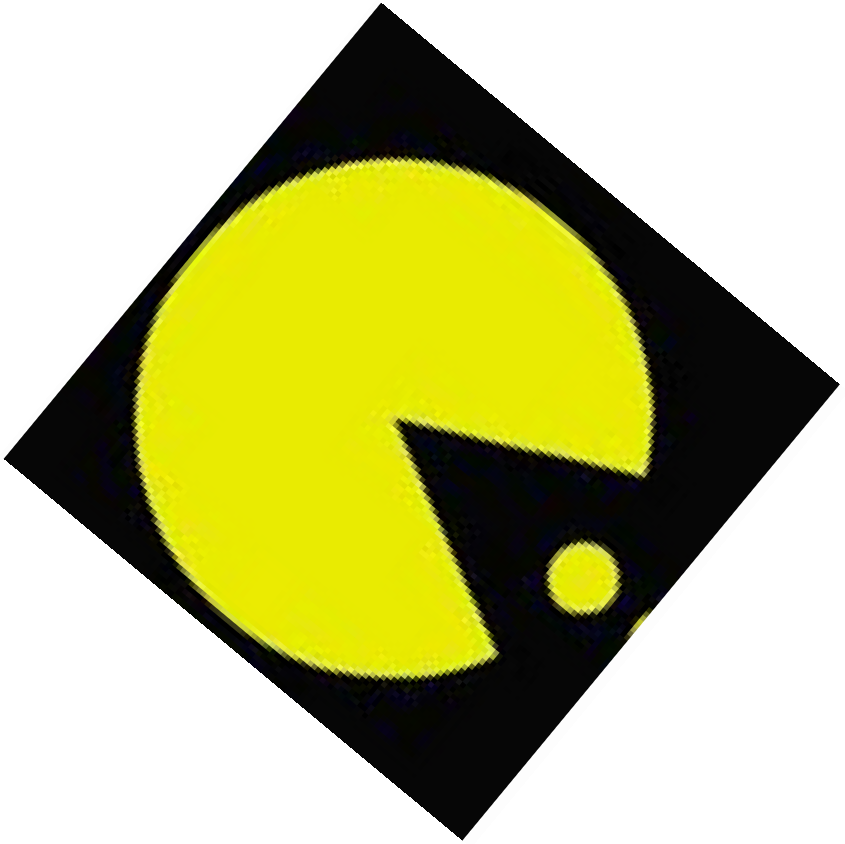


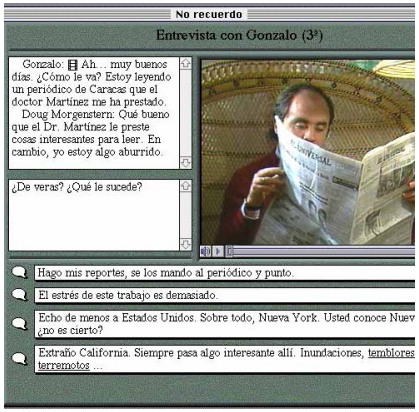
Lessons refused

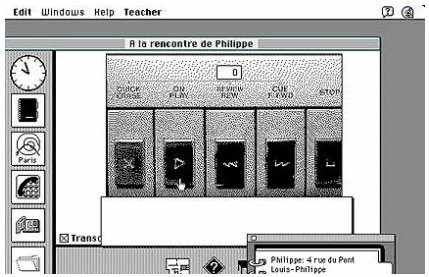
- MIT Dean of Engineering: “Word processing is a waste of CPU time.” (~1983)



Lessons refused: Why not hand out cellos? (Joe Weizenbaum ~1982)

Lessons Learned: MIT Project Athena





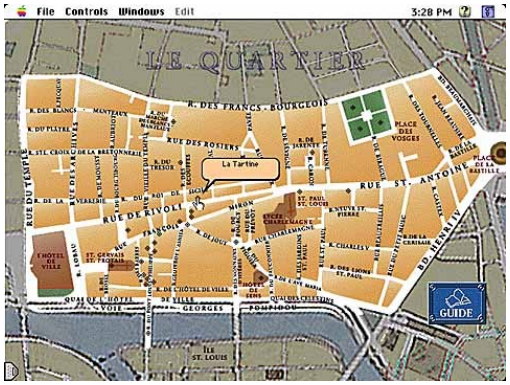
Humanists created one of the largest and most computationally ambitious projects

Explored AI/ NLP, Speech recognition

Pushed the university into interactive video, beyond funders' vision

Interactive Genres 1990s

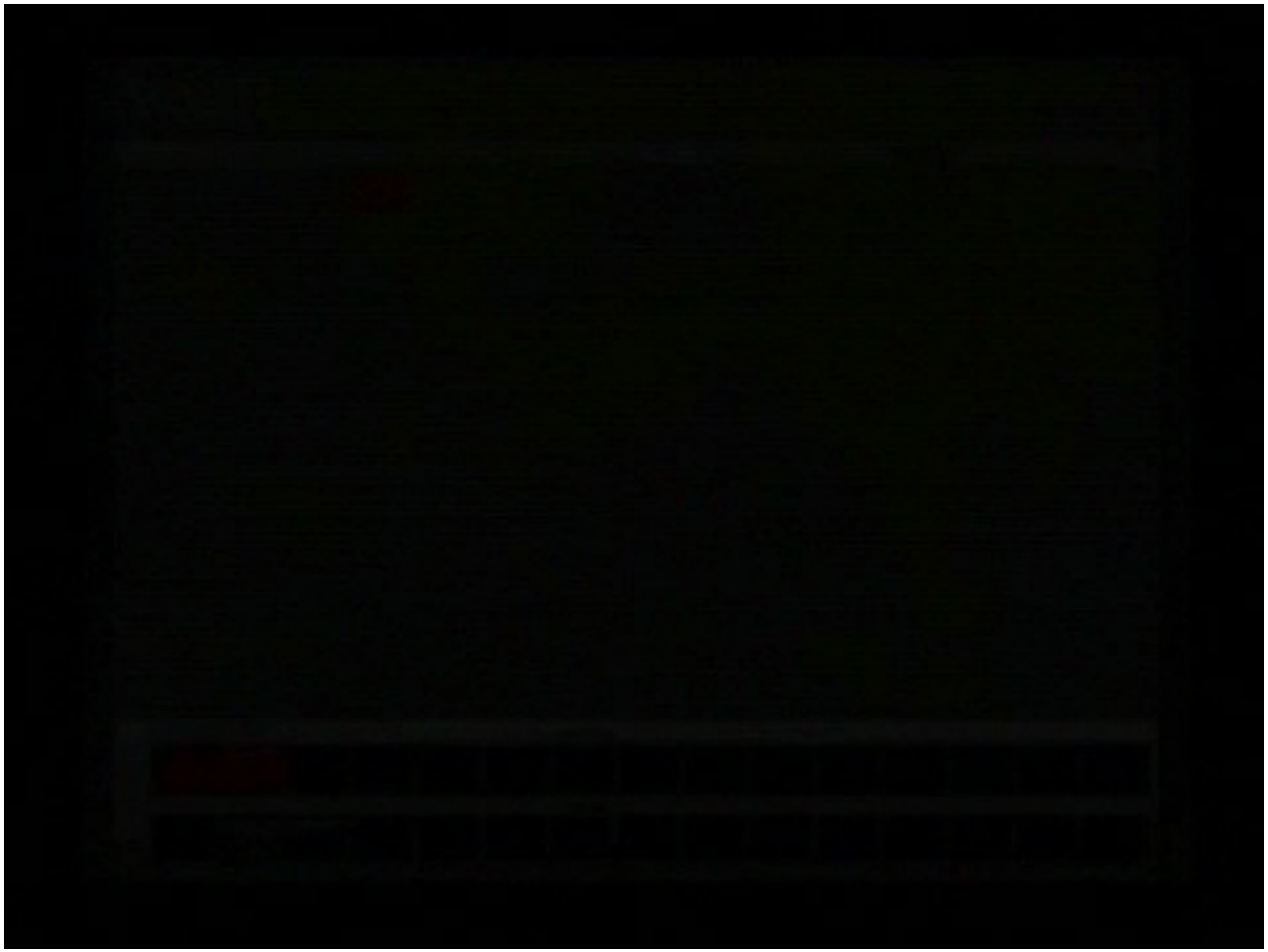
Interactive Documentary



Digital Editions/Archives

Digital Textbooks

Lessons Learned: *Casablanca* Digital Edition (2006)



Lessons Learned: Digital Texts

- **Semantic segmentation** has to be rethought across media formats and at multiple granularities
- **Juxtaposition** creates new knowledge and new critical discourse
- **Core humanistic focus,** not legacy form (Variorum is scholarship not book)

Lessons Learned: **Casablanca Digital Edition**

- Industry needs to solve the same problems – how to “unlock movie assets” and protect their proprietary right
- They may not be ready for the solution:
  - Looking at ebook currently
- That’s what university research is for – taking the **long view**
  - asking the larger questions
  - modeling lasting solutions.

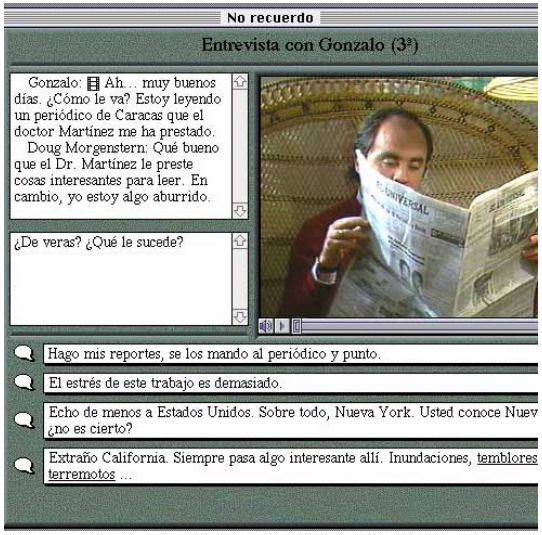
Lessons Learned: Digital Texts

- Proprietary rights are an obstacle to distribution, but not to **design**, and not forever.
- Take the **long view** and look for **partners**.
- Focus on the abstract design insights
- Design for the core humanist activities

Lessons Learned: Educational Projects

Work with people who distrust computers

New affordances of representation disrupt the epistemology of a field



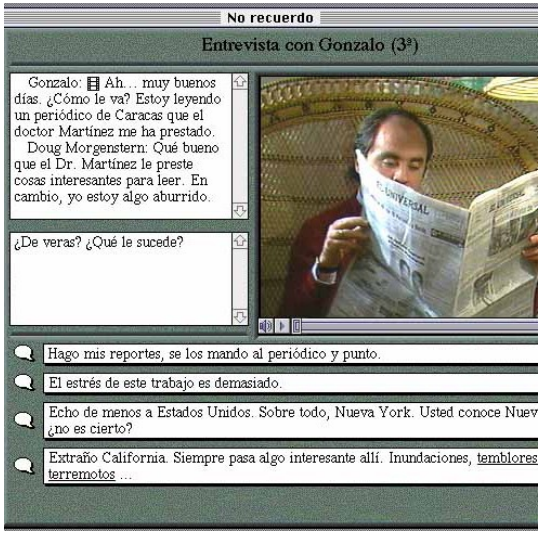
New affordances of representation disrupt the epistemology of a field

What is knowledge of a language?

Why is Statics taught separately from Dynamics?

How do you learn to be a language learner?

How do you learn to think like an engineer?



Lessons refused: Robot of Death

[Author X]:

[Literary Hypertext] [Videogames] [Google]…

will put an end to

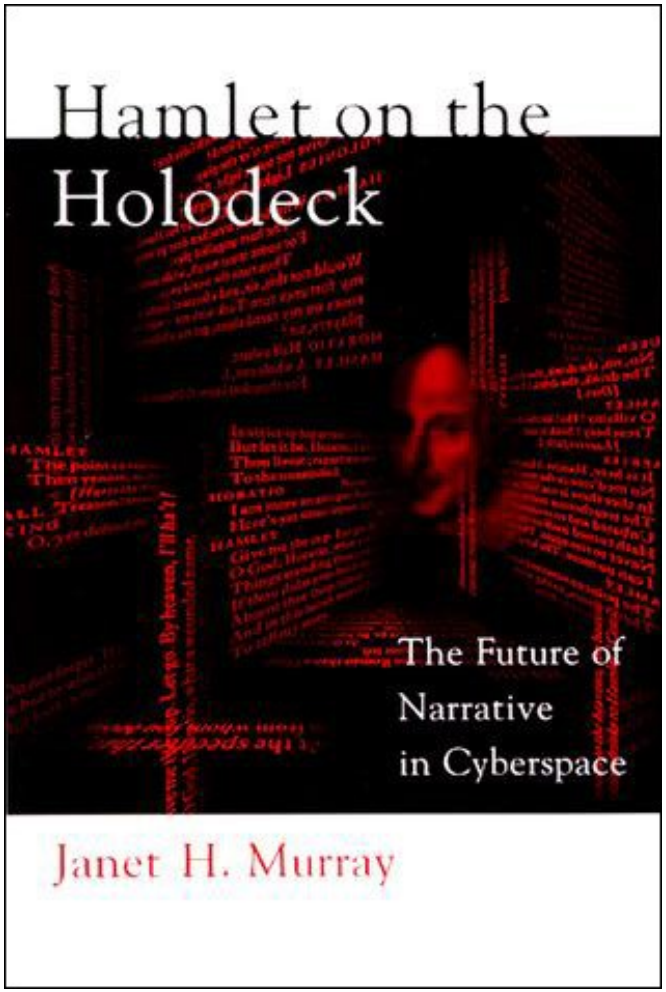
[thinking] [evil hegemony]...

therefore

[HOORAY] [BOOHOO] !

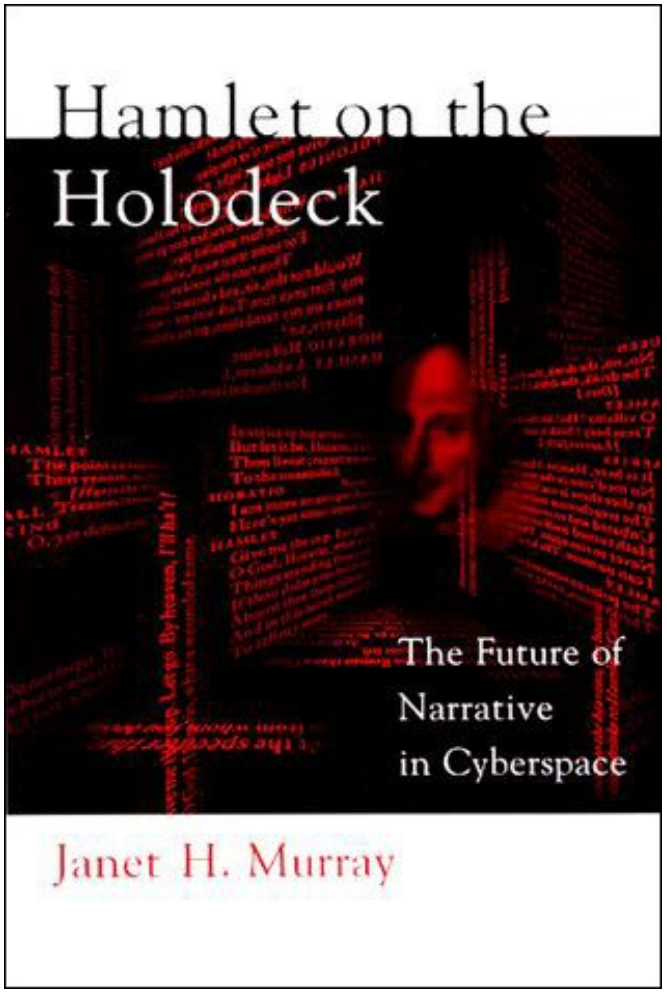
Lessons Learned: Teaching and making Interactive Narrative

- There is no moral hierarchy of media
- The digital medium has specific affordances that can be maximized
- Digital affordances can support more complex stories making us smarter and increasing understanding



Lessons Learned: Teaching and making Interactive Narrative

- How do we abstract them?
- How do we navigate them?
- How do we author them?



Prototyping Interactive Narrative

Smartphone & Tablet EPG and Story Navigator
2010

Widgets for Interactive Television
2009

Avatar Theater
2008-2009

Ben 10 - Sync Game
2007

Reliving Last Night (Flash Version)
2007

mtvU Video Slivers
2006-2007

The Virtual TV Couch
Master's Project 2007 - Sergio Goldenberg

Tagging for TV
Master's Project 2007 - Annie Lausier

The World War II Experience: D-Day
2005

Toward more complex story systems

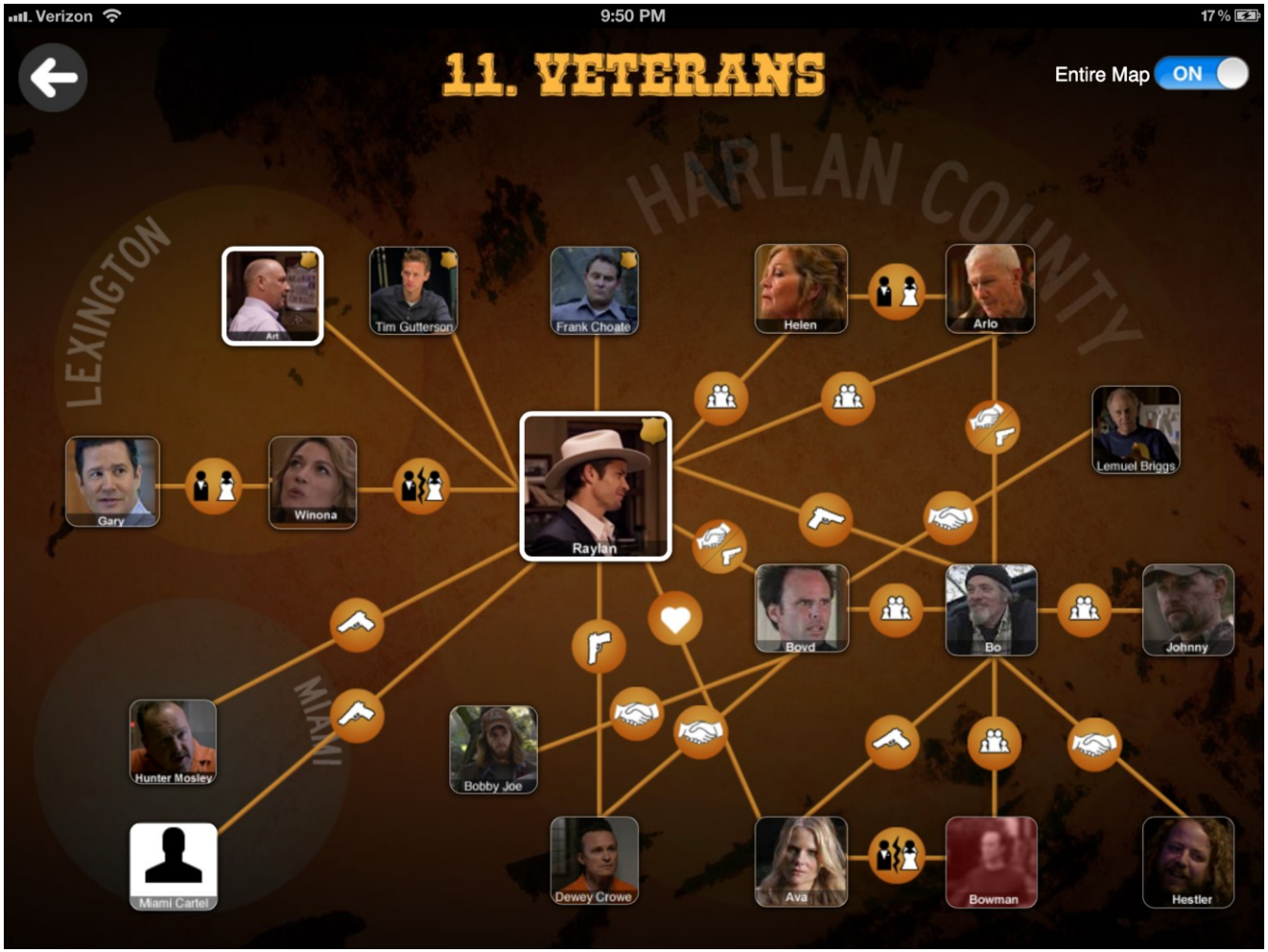
Assume networked archive, addressable at multiple levels of granularity, full computing affordances

Work with **specific** narrative content (long-form TV works well)

Focus on new conventions for navigation, authoring, creating dramatic agency

etv
etv.gatech.edu

Lessons Learned: eTV Story-Map



Obstacles to remaking knowledge

Computing can radically expand human cognition, but not just by throwing code or devices at a problem

Knowledge can be locked in proprietary, closed formats (rights, platforms)

Innovation can be trapped by premature monetization schemes (e.g for university courses)

Obstacles to remaking knowledge

Professions protect their epistemologies

Professions protect their disciplinary boundaries

Institutions protect legacy rituals based on print (texbook, course, lecture, test)

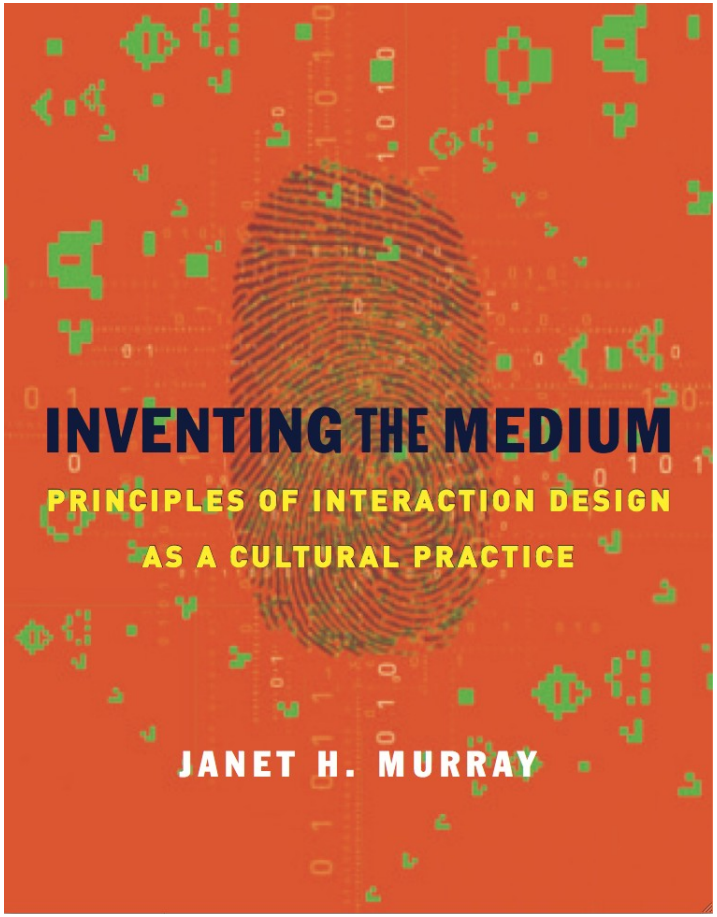
Experts may **fetishize legacy artifacts** like the slide rule or the book instead of honoring the core activity like a variorum edition of Shakespeare

Lessons Learned: Focus on Genre

- **Art** is crucial – genre expanding
- **Radical epistemology** separates knowledge-making from legacy conventions
- Sense of collective activity of inventing the **medium**
- Universities crucial because we can take the **long view**

Design Lessons Learned

- Bits are bits – it's all 1 medium with the same potential affordances for every digital artifact
- Technological innovation co-evolves with the development of expressive genres



Lessons Learned: Humanists should teach design

Media systems Opportunities

Digital editions/archives radically reconfiguring the Work and the discourse around the Work

Narrative systems for authoring and navigating/replaying complex causal scenarios to encourage a practice of sharing knowledge in the form of interactive scenarios

Thank you

Please tell your students about Georgia Tech's Digital Media Graduate Program for MS & PhD

(http://dm.gatech.edu)

Ali Mazalek, Director

Jay Bolter
Ian Bogost
Carl DiSalvo
Chris LeDantec
Brian Magerko
Janet Murray
Michael Nitsche
Celia Pearce