



asking again

Mark Bernstein
Eastgate Systems, Inc.

EVERYTHING IS INTERTWINGLED

Theodor Holm Nelson

Is hypertext....



UNNATURAL?



MALDEN,
MASSACHUSSETS, USA

H. H. RICHARDSON
MALDEN PUBLIC
LIBRARY

CHICAGO,
ILLINOIS,
USA





ART NOUVEAU HYPERTEXT

Honest materials

Organic forms

Curves (resisting the line)

Form follows function

Gender-aware

domestic space (women as patrons)

Furnishing the salon

Literary machines

Links

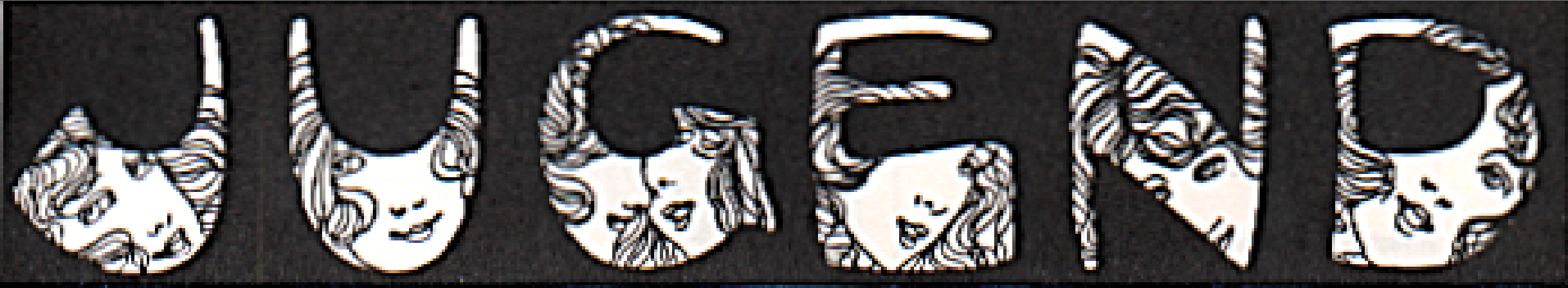
Nonlinear reading

Form follows function

Gender-aware

see Wendy Morgans paper

Demolishing the Master's House



Jugend was an influential and stylish magazine — The **WIRED** of its era.



DARMSTADT

A center of
Jugendstihl



Jugendstihl was the the German
movement corresponding to the
French Art Nouveau



*"This is the eleventh hour of the human race,
and there is a deadly urgency about
everything we do"*

— TED NELSON, LITERARY
MACHINES, 1981

“Where Are The Hypertexts?”



I first asked this about ten years ago.
After **TWO** hypertext conferences, why
weren't hypertexts everywhere?

Was this youthful impatience?

Or a sign that something was wrong?

“Where Are The Hypertexts?”

HERE!

PAPERS

PANELS

WORKSHOPS

READINGS

DEMOS

POSTERS

THE HT
CONFERENCE IS
VERY OPEN, BUT
EXTREMELY
SELECTIVE.



Hypertext triumphant



- 🔗 The Web is everywhere.
- 🔗 Literary hypertext is flourishing.
- 🔗 Hypertext is triumphant.
- 🔗 But where are the hypertexts?

Many Web pages are barely hypertextual

Hypertext publishing often seems marginal or worse

We've come a long way....

...but why haven't we come farther?

“Where Are The Hypertexts?”

TELL ME A STORY

... ABOUT HYPERTEXTS WITH CHARACTERS

... ABOUT THE BUSINESS OF ART

AND THE ART OF BUSINESS

... ABOUT THE FAILURE OF THE TWO CULTURES

Narratives abound

History awaits

The stories and characters described here are imaginary. Any resemblance to actual persons, living or dead, or to actual events, is purely coincidental.

DRAMATIS PERSONAE

Chieko

Brand-new degree., brand-new job (yes!)
in QA & Usability at a growing Internet
company

Avid reader

Personal Web memoir gets ~10K readers
per month



DRAMATIS PERSONAE



Steven Johnson,
Interface Culture



Esther Dyson,
Release 2.0



Gamma et al,
Design Patterns

DRAMATIS PERSONAE

Prof. Morris Weiss (emeritus)

A student of history

Hasn't been back to Germany since WW2

Loves books

Mistrusts the Disneyfication of publishing

Still finds ballpoint pens unsettling

(but loves Web surfing)



DRAMATIS PERSONAE

Anthony Grafton

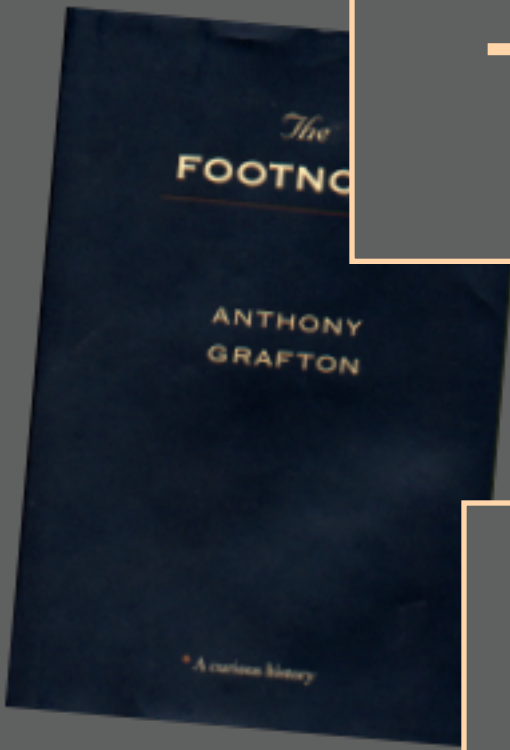
The Footnote:

A curious history



Bolter and Grusin

Remediation



DRAMATIS PERSONAE



Ted

A student of engineering (and life)

Loves computers, writing, books

A visionary, a dreamer

Never satisfied with her work

If she's not filming, she's taking notes...

DRAMATIS PERSONAE



Hypertext '98 Proceedings

Deena Larsen
Samplers

Stephanie Strickland
True North



DRAMATIS PERSONAE

Jan

A student of film

Loves movies, MUDs, games, VR

Searching for media that transcend text

Looking beyond the end of books



DRAMATIS PERSONAE

Scott McCloud

Understanding Comics

Espen Aarseth

Cybertext

Akira Kurosawa

Rashomon

Stacy Taylor

Fallout



“Where Are The Hypertexts?”

YOU SAY YOU WANT A
REVOLUTION?

We all want to change the world.

Five silly
objections to
hypertext.



“You say you want a revolution?”



E. A. Proulx

TWITCHY SCREENS

Essentially all professional writers now write on screens. We all spend our days in front of screens. They're good enough.

Getting better, too. (HT98: Price, Xlibris; also Zellweger's Fluid Links)



“You say you want a revolution?”

Sven Birkerts,
The Gutenberg
Elegies

BUT I LOVE BOOKS!

Morris Weiss, age 8
Warsaw



“You say you want a revolution?”

2

Sven Birkerts,
The Gutenberg
Elegies

BUT I LOVE BOOKS!

Of course.

We all do.

Don't confuse the spirit
with the body,
or the soul with the
machine.



“You say you want a revolution?”

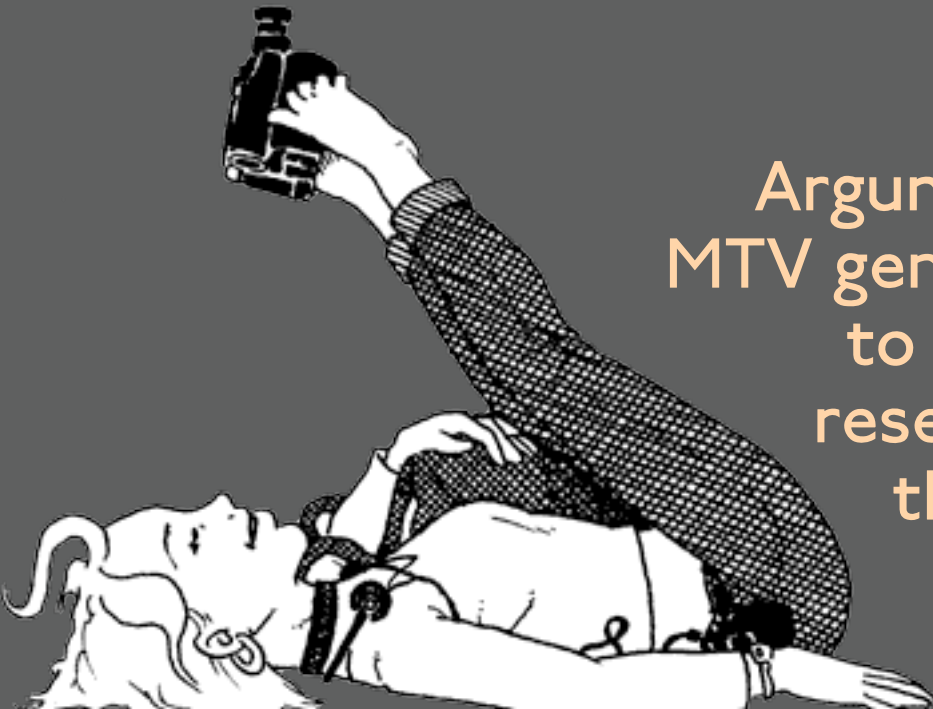
2

Sven Birkerts,
The Gutenberg
Elegies

BUT I LOVE BOOKS!

Does hypertext, like TV,
corrupt us?

Arguments about the
MTV generation amount
to little more than
resenting youth for
their nice bodies.



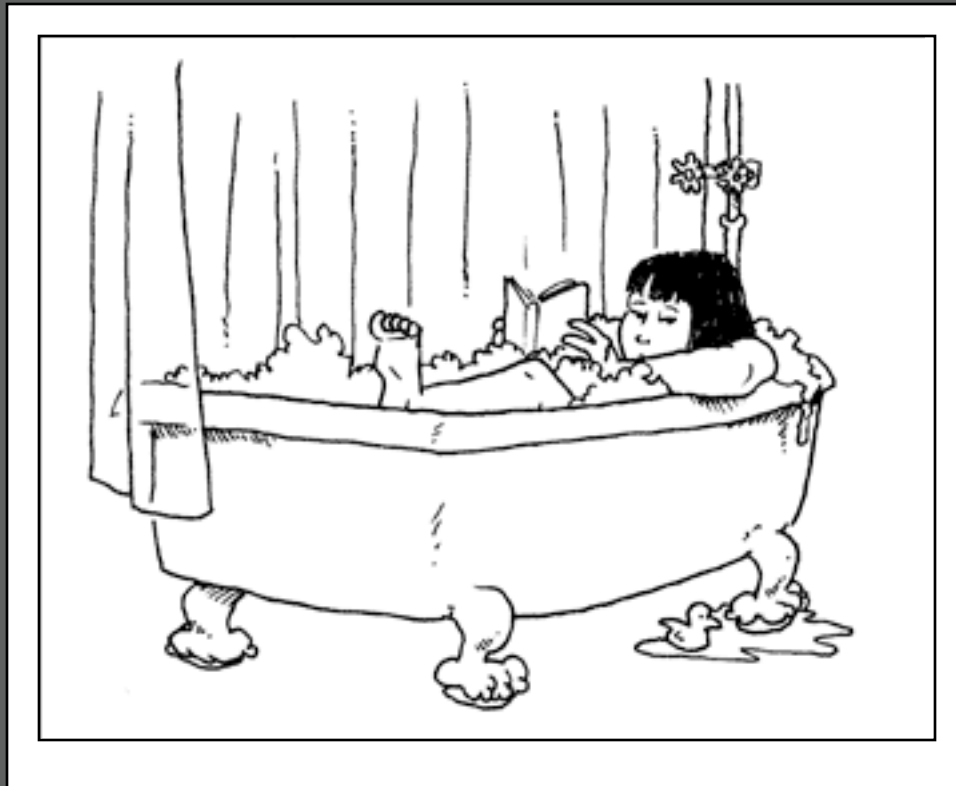
“Parental fears of what children might see on the Internet are very peculiar, considering what children can see on the walls in public restrooms.”

—THEDOR HOLM NELSON

“You say you want a revolution?
you **CAN'T READ**
them **IN THE**
BATHTUB”

3

Ubiquitous



The
Bolter
Test

“You say you want a revolution?”

WHAT? YOU HAVE TO PAY?

Columbia,
Postmodern
Culture

The tools are cheap. And getting cheaper.

A good book has ALWAYS cost as much as a good dinner. We're still subject to the ills of capitalism.

FOR SCHOLARS TO BLAME ARTISTS FOR THESE ILLS IS EITHER DISINGENUOUS OR DISHONEST.



“You say you want a revolution?”

See Kendall,
SIGWeb Bulletin 99

It Won't LAsT

NEITHER WILL YOU.

& Hypertexts won't be lost because formats go obsolete or media decays.

& Hypertexts (and texts) are lost when nobody reads them.

Books, like Tinkerbell, survive as long as their audience cares.



“You say you want a revolution?”

WHY do people fall for the
silly reasons?

It's always easier to assume it can't work
than to do the work.

People really believe
that Art and Science
are incompatible.



PEOPLE REALLY
BELIEVE THAT
ART AND
SCIENCE ARE
INCOMPATIBLE.

MYTHS OF ART & SCIENCE



PEOPLE REALLY BELIEVE THAT
ART AND SCIENCE ARE
INCOMPATIBLE.

MYTHS OF ART & SCIENCE

Hypertext research has been exceptionally open to contributions from both sides of the great cultural divide.

But we still think the camps are separate.

(Legget HT98)

Is hypertext



UNNATURAL?

MYTHS OF ART & SCIENCE



Clarity, brevity, sincerity

Many people suppose that writing is either “artistic” or “practical”.

They assume that all good technical writing is concise, brief, and sincere.

They equate “rhetoric” with affectation.

see Lanham,
**THE
ELECTRONIC
WORD**

MYTHS OF ART & SCIENCE



EXPrESSION is eAsY

Which is easiest to explain?

- ⌘ NP-Completeness
- ⌘ Saving Kirtland's Warbler
- ⌘ Reading Dante's Italian
- ⌘ Reading your lover's body
- ⌘ Mortality

"for whom are you judging that things will be easy, or natural, or friendly?"

— DOUGLAS ENGELBART, 1984

MYTHS OF ART & SCIENCE

Narrative
is for kids



MYTHS OF ART & SCIENCE

SCIENCE AND NARRATIVE

How do we explain algorithms?

They're stories!

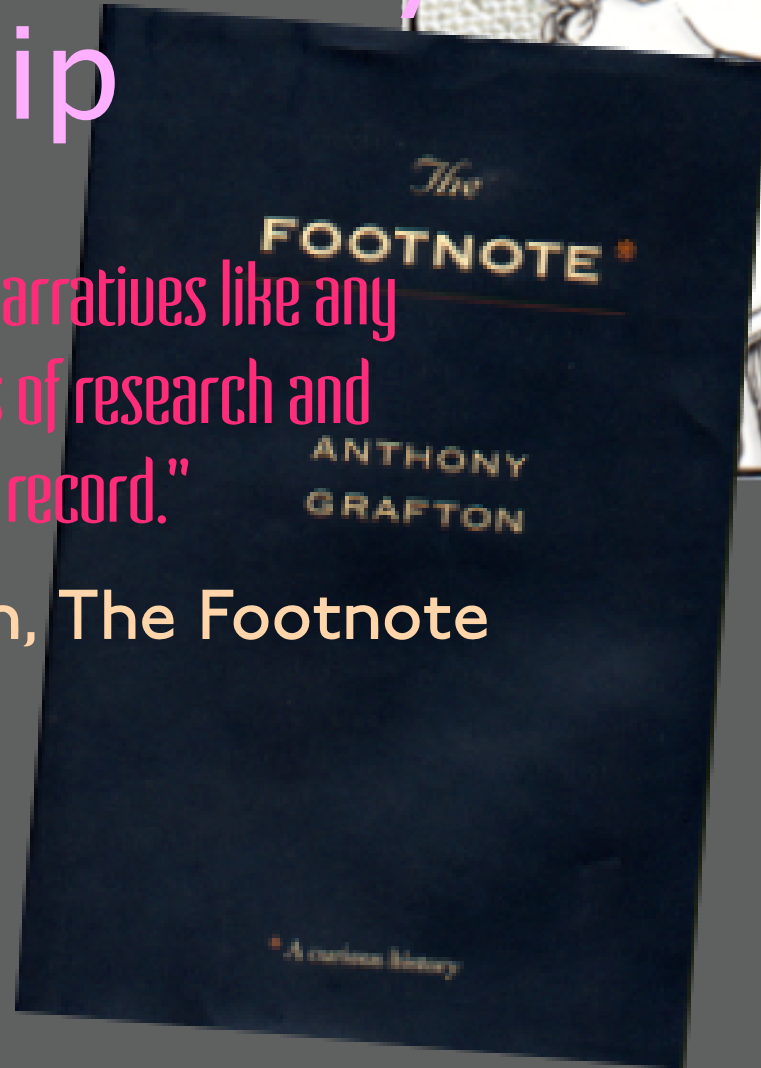


MYTHS OF ART & SCIENCE

The hypertextuality of scholarship

“Historical texts are not simply narratives like any other; they result from the forms of research and critical arguments the footnotes record.”

—Grafton, *The Footnote*



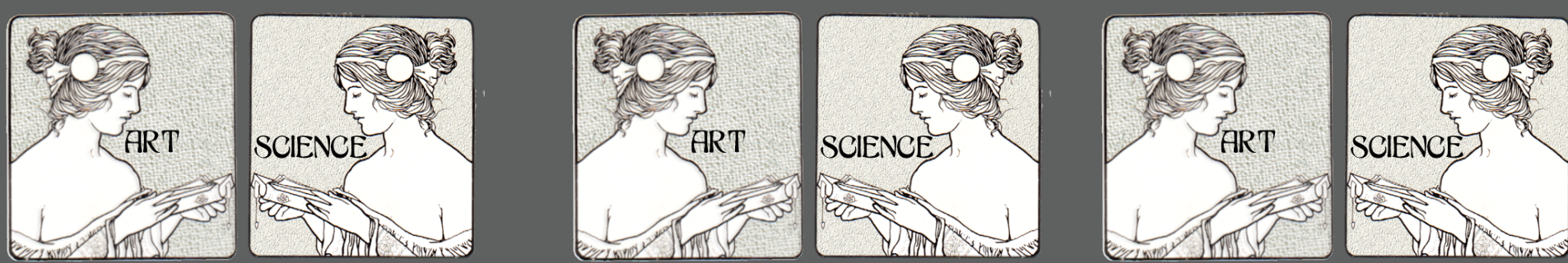
MYTHS OF ART & SCIENCE

Doing the work

Science sometimes forgets Art.

But Art seems often to expect
Science to use the servants'
entrance.





Doing the work

We may be working on the easy part of the problem.

ACCESS IS NOT ENOUGH

Where will we ever find time to read it all?

MYTHS OF ART & SCIENCE

Better than books?

Literature is wonderful.

We have to do better.

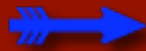
To believe otherwise condemns us
all to misery, inequity, hunger,
and oblivion.



The book world is in trouble.



The book world is ALWAYS in trouble



This is different.

It ALWAYS is.



Scribners
Bantam
Doubleday
Longman
Harper Collins
Dell
Chapman & Hall
Little, Brown & Co.
Alfred A. Knopf
Random House
Basic Books



Publishers have been
swallowed by
competitors,
broadcasters, and
movie studios.



You mean that amazon.com is going to have to buy its books from Barnes & Noble?



Barnes & Noble is buying the largest book wholesaler.

Yep.

Borders, too.

And your local store, if it's still in business



Well, there's still my college bookstore.

It's probably run by Barnes & Noble, too.

Or maybe another chain.



OK.

But, face it,
publishing is a
business.



A weird
one, though.
For example,
bookstores
operate on
consignment
—like used
clothes shops.



Now that we have the Web, who
needs publishers anyway?



Now that we have the Web, who
needs publishers anyway?



MULTIVALENC
E IS NOT A
VICE



Now that we have the Web, who
needs publishers anyway?

Well, Bernstein
isn't exactly
disinterested,
you know.



Now that we have the Web, who
needs publishers anyway?

But it's not just
production...
publishers and
booksellers
match books
and readers.



Now that we have the Web, who
needs publishers anyway?

But it's not just
production...
publishers and
booksellers
match books
and readers.



It's nice to
have the
publisher
do your
bragging for
you



Now that we have the Web, who
needs publishers anyway?



It must be
great to be
published.



Now that we have the Web, who
needs publishers anyway?



It's not MY site — I'm not THAT
Chieko!

Published,
shmublished.

Chieko's Web site gets
more readers than my
last 3 books
combined.



It must be
great to be
published.



In the entire US, fewer than 1000 people make their living primarily from royalties on trade book sales.



Now that we have the Web, who needs publishers anyway?



It must be great to be published.



Mid-list novelists — people with a consistent audiences of 30–60,000 readers — are being orphaned by publishers who need best-sellers.



Now that we have the Web, who needs publishers anyway?



It must be great to be published.



Many college students no longer buy the books required for their courses.



It must be great to be published.



Do critics really read the work they review?

“How [do] I explain the enormous popular success of Robert James Waller’s Madison County books? Although I haven’t read either **THE BRIDGES OF MADISON COUNTY** or **SLOW WALTZ IN CEDAR BEND**, I answer with full confidence: . . .

— Sven Birkerts, *Gutenberg Elegies*, 203



It must be
great to be
published.





What a mess.

What a mess.



What a mess.



What a mess.





PUBLIC FUNDING?
CORPORATE SPONSORS?
GRANTS?
ROYAL PATRONAGE?
JUST GIVE COPIES TO YOUR FRIENDS?

Revolutionary
struggle?



Destroy the
channel. Then
rebuild
it right?



Go *direct*?



We CAN (AND MUST) build a new literary world

Technological change always transform literary worlds.

- & Clay tablets and scribes
- & Scrolls and copyists
- & Codices and printers
- & Literary machines and . . .

We can (and must) build a new literary world

We can choose, now.

Or we can let economics and politics choose for us.

(See Whitehead's paper on economic consumption networks and their impact on hypertext system design)

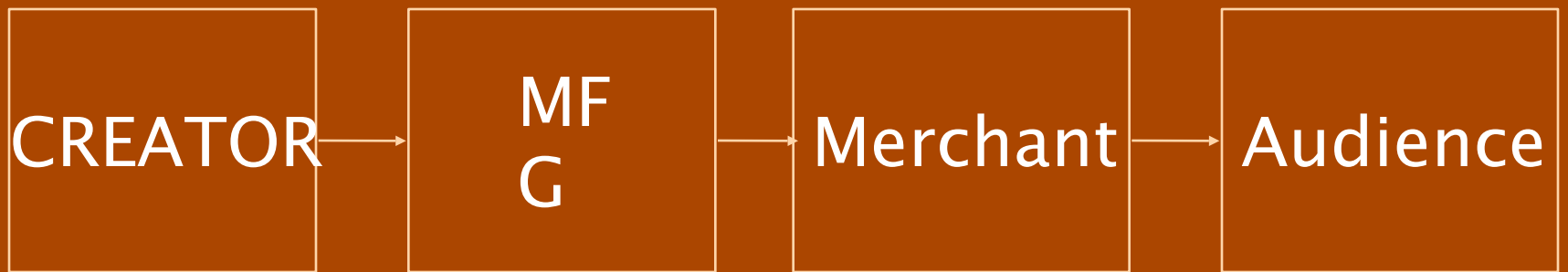
COMPUTERS FOR THE PEOPLE



YOU CAN AND MUST
UNDERSTAND COMPUTERS
NOW!

—Theodor Holm Nelson,
Computer Lib

DISTRIBUTION



The channel shapes all that passes through it



HYPertext ISN'T Theater

Some firms
expected New
Media to
resemble
Hollywood

WHY DO MOVIES COST MILLIONS?

Movies need movie theaters

- ↳ Expensive projectors (low volume tech)
- ↳ Real estate
- ↳ Overhead (seats, advertising, PR)
 - ↳ network effects are vital

Consequences of A capital-intensive channel

Less need to conserve production costs

Blockbusters use resources efficiently

Massive audience

Only mass audiences can justify the investment tied up in theaters

Studios and Production Companies

Creation requires many hands and varied talents.

HYPertext ISN'T hollywood

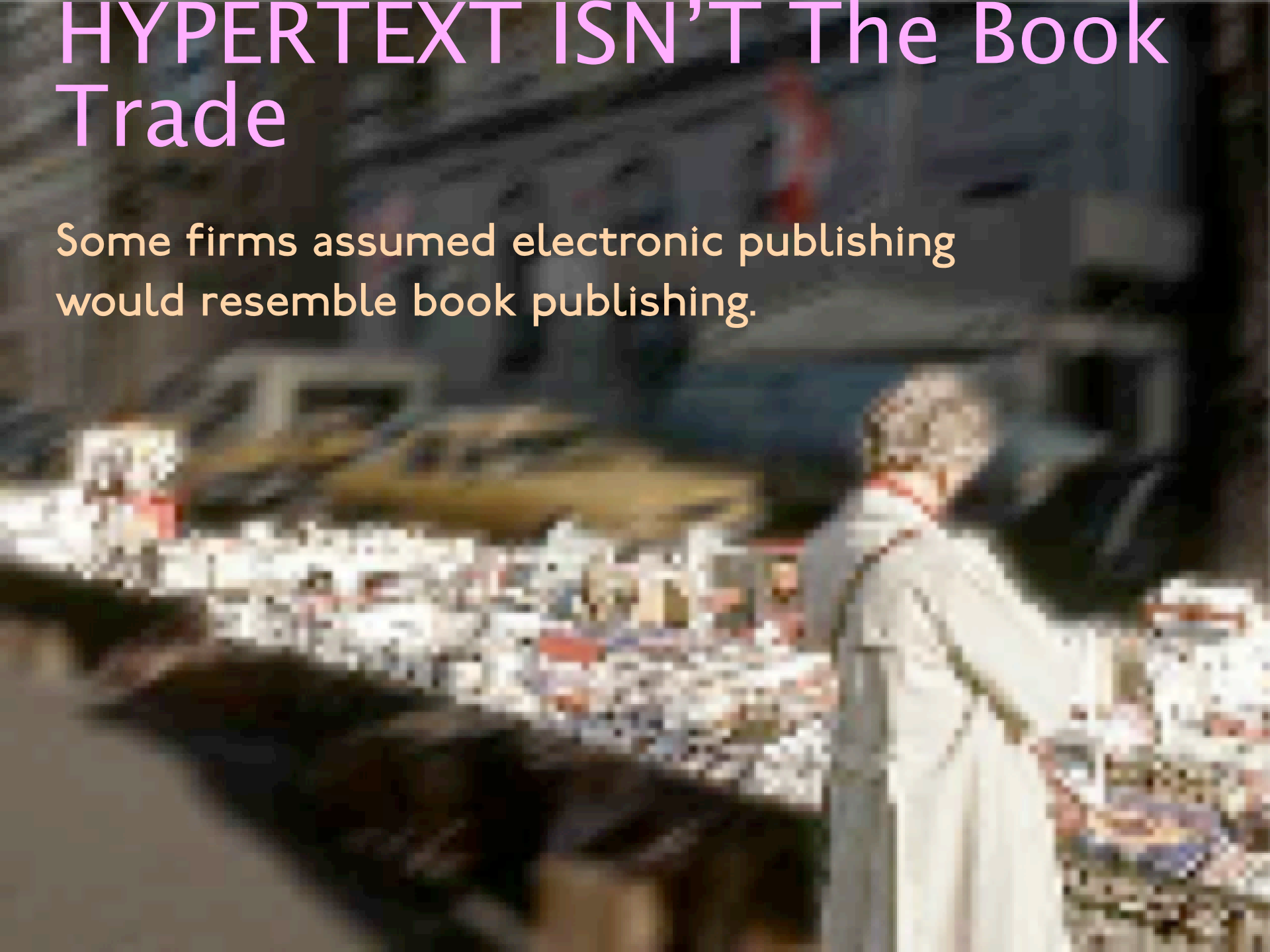
Inexpensive projectors (ubiquitous tech)

Negligible real estate required

(Even movies may become less like movies, as
direct-to-video becomes a viable market)

HYPERTEXT ISN'T The Book Trade

Some firms assumed electronic publishing would resemble book publishing.



Consequences of a crowded channel

Millions of SKUs, each a distinct business

Many small retailers (plus a few big chains)

Every title clamors for attention

Powerful gatekeepers

Hypertext isn't like the book trade



**PEOPLE WON'T BUY SOFTWARE FROM
BOOKSELLERS**

CHRISTMAS CD DISASTER OF 1996

BOOKSELLERS DON'T LOVE COMPUTERS

...AND DON'T HAVE TIME ANYWAY

HYPertext ISN'T A GAME

The image features three overlapping CD-ROMs against a dark background. The top-left CD is 'Tycoon' by Popsoft, showing a grid pattern. The bottom-left CD is 'CodeWarrior Professional Release 3' by Borland, featuring a character in a suit and the text 'CodeWarrior Professional RELEASE 3'. The right CD is 'Fallout', showing a character in a yellow jumpsuit. The text 'HYPertext ISN'T A GAME' is overlaid in pink across the top of the CDs.

**SOME FIRMS
ASSUMED THAT
HYPertextS COULD
BE REGARDED AS
COMPUTER GAMES
FOR GROWNUPS.**

WHY ARE COMPUTER GAMES SO VIOLENT?

A stack of several CD-ROMs is shown against a dark background. The top disc features a grid pattern with the word 'POP' visible. Below it, another disc shows a character in a green suit. The bottom-most disc is the most prominent, displaying the 'CodeWarrior' logo in orange and the word 'RIPPER' in white. The discs are slightly offset, creating a sense of depth.

PEOPLE HAVE LONG OBSERVED THAT MOST COMPUTER GAMES SEEM TO APPEAL TO PRE-ADOLESCENT BOYS.

THEY ASSUME THAT THIS HAPPENS BECAUSE THEY THINK PROGRAMMERS ARE LIKE PRE-ADOLESCENT BOYS

Consequences of a narrow channel

The background of the slide features three overlapping CD-ROMs. The top-left CD is partially obscured and shows a grid pattern. The top-right CD is the most prominent, displaying the 'Fallout' logo in a stylized font. The bottom CD is 'CodeWarrior Professional RELEASE 3', with the text in orange and white. The overall aesthetic is that of early 2000s computer software packaging.

Age-specific

Focus on literal realism

Issues of independence, separation

Brilliant color palettes

Careful avoidance of gender questions

Hypertext is not a game

Textuality doesn't fit the channel

Introspection doesn't fit the channel



ART OUTSIDE THE ECONOMY

Some suggest that hypertexts should be distributed outside the capitalist economy

Internet -> “free” distribution

Everyone can contribute -> a world of writers

WWW + Search Engines -> why advertise?

ART OUTSIDE THE ECONOMY

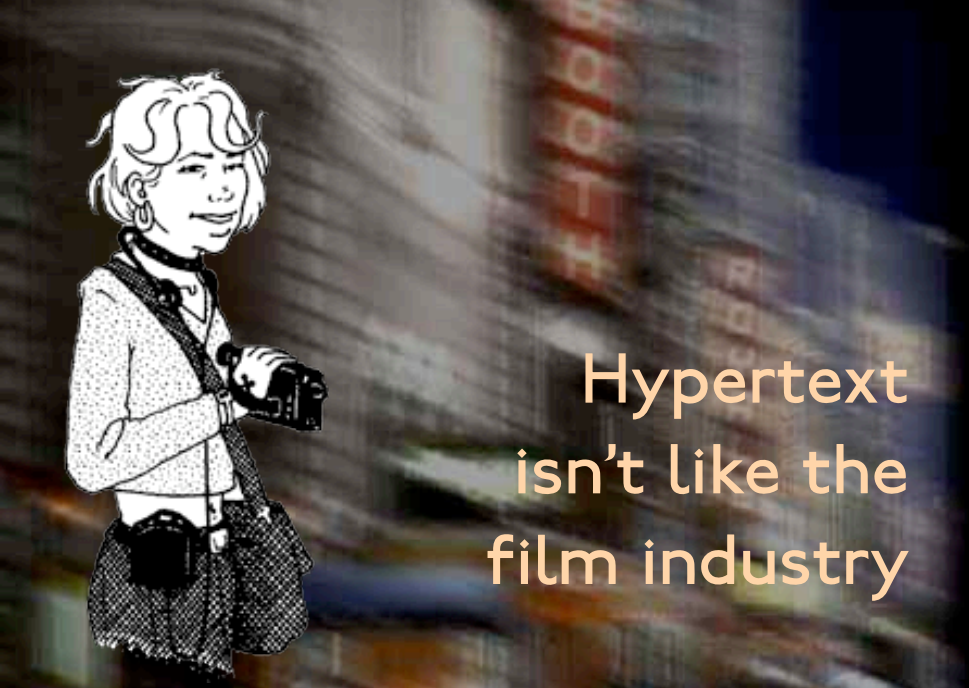
Disadvantages:

The graffiti effect

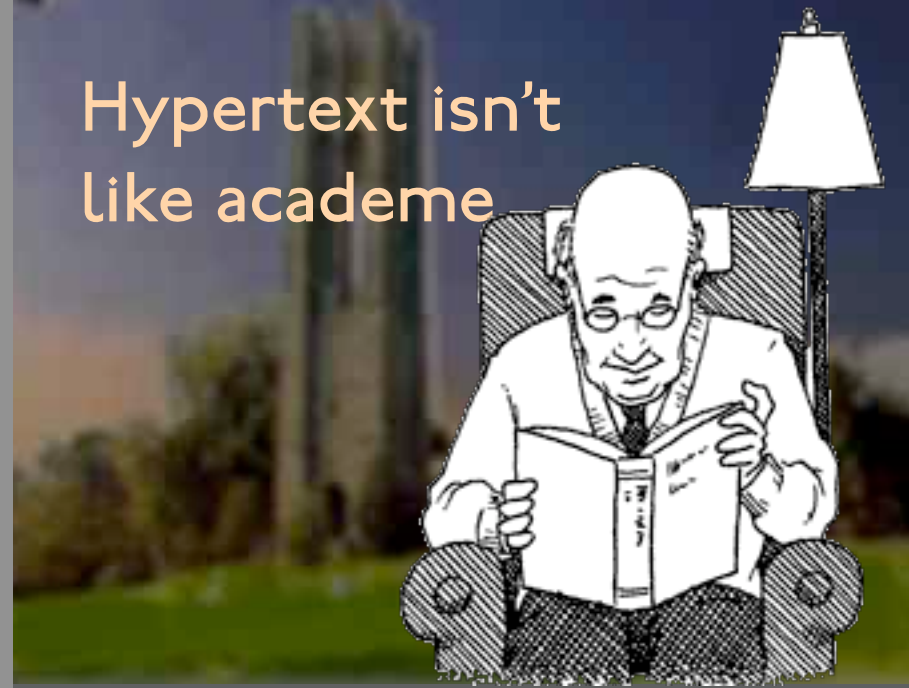
Who will match readers with writers?

A world of literary beggars?

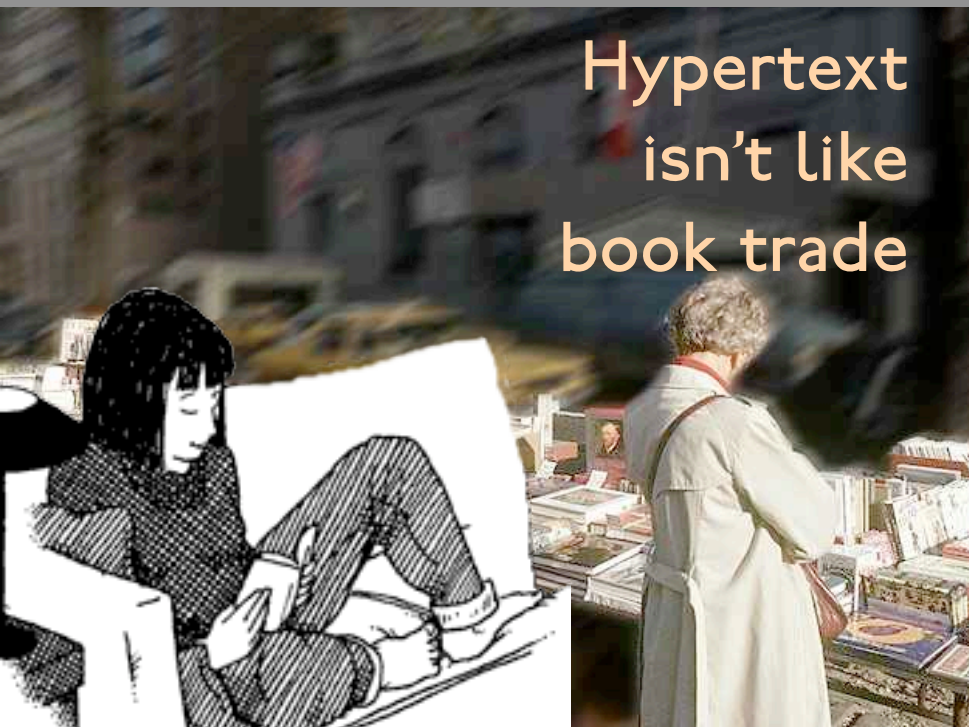
THERE IS NO OUTSIDE



Hypertext
isn't like the
film industry



Hypertext isn't
like academe



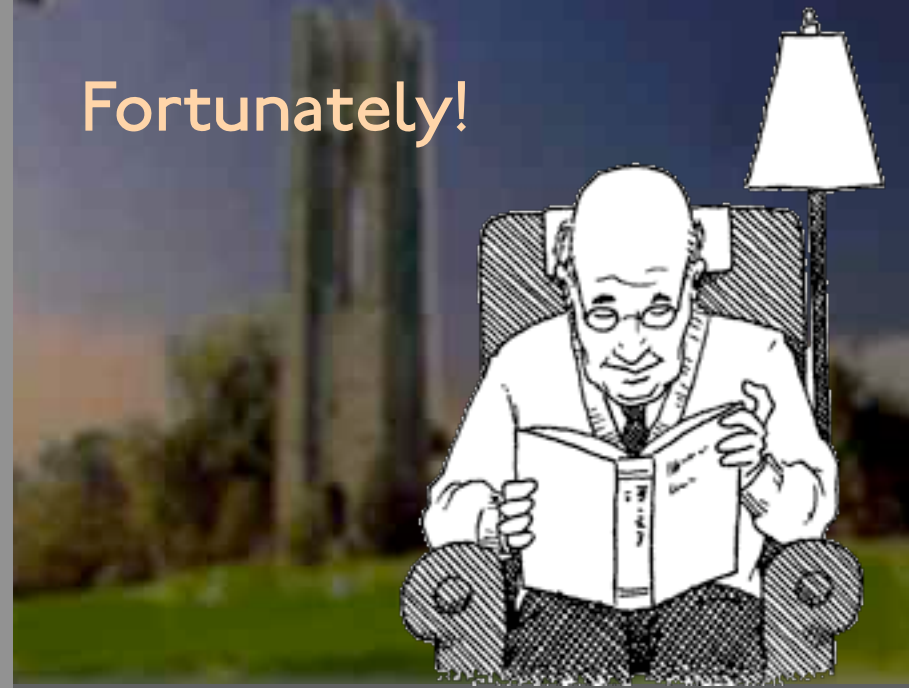
Hypertext
isn't like
book trade



Hypertext isn't
like the game biz



Fortunately!



Fortunately!



Fortunately!



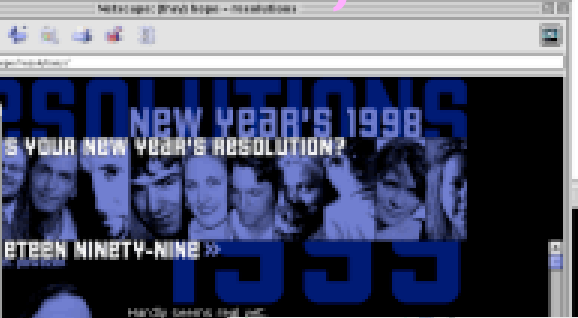
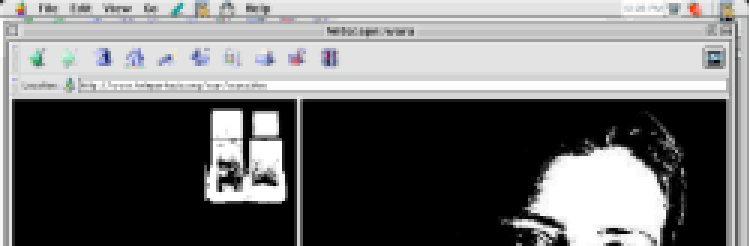
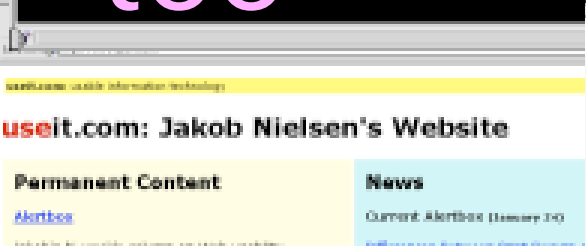
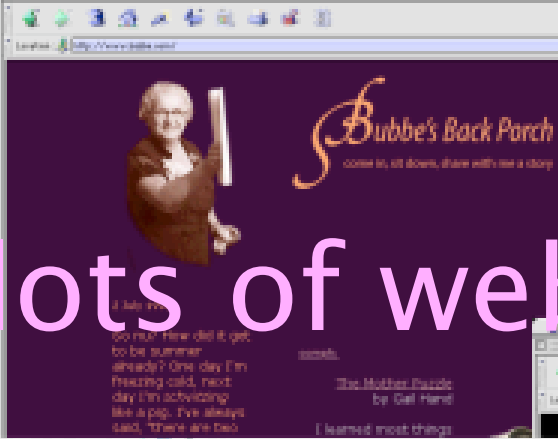
Fortunately!

ABSENT FRIENDS

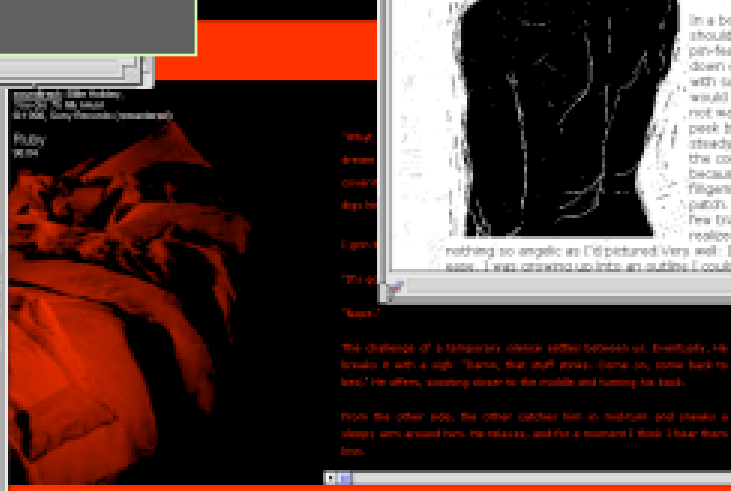
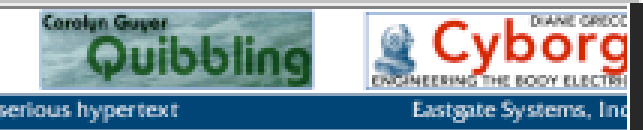
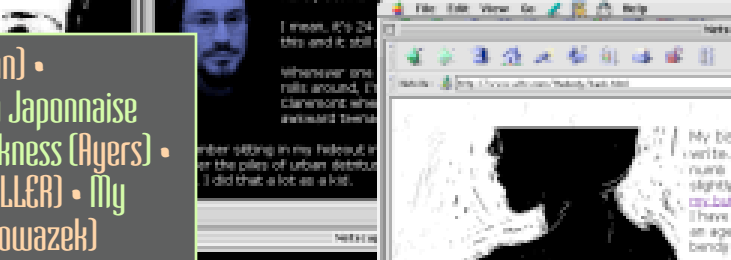
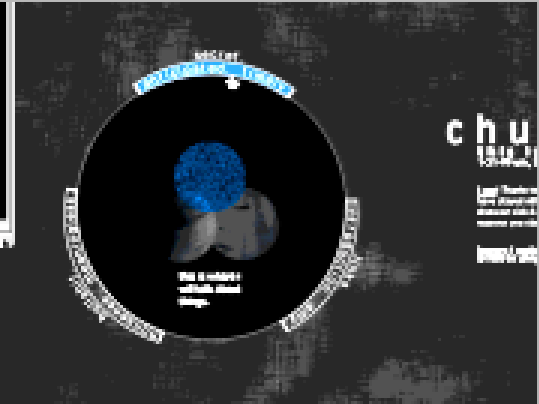
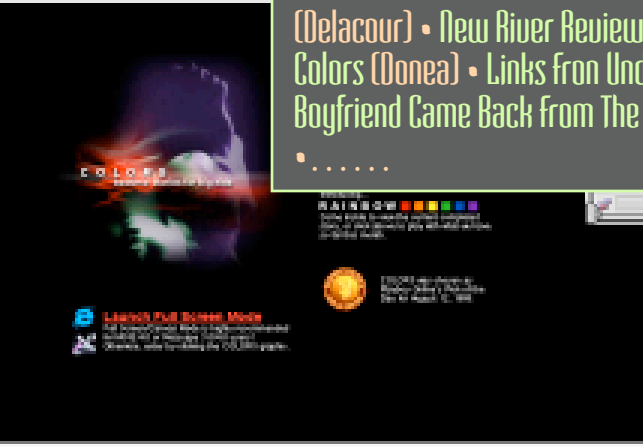
Where are our stories?



ABSENT FRIENDS
 We have lots of web
 Stories too



Twelve Blue (Joyce) • Hegirascope (Moulthrop) • Bubbe's Back Porch (Abbe Don) •
 Grammatron (Amerika) • Six Sex Scenes (Greenheart) • LSD-50 (Arellano) • La Japonnaise
 (Delacour) • New River Review (FALCO, ed) • Love One (Malloy) • Valley of Darkness (Ayers) •
 Colors (Donea) • Links from Underground (Hall) • suck (Steadman) • Chunk (MILLER) • My
 Boyfriend Came Back from The War (Lialina) • Stitch Bitch (Jackson) • fray (Powazek)



ABSENT FRIENDS

For this world, which seems
To lie before us like a land of dreams,
So various, so beautiful, so new,
Hath really neither joy, nor love, nor light,
Nor certitude, nor peace, nor help for pain;
And we are here as on a darkling plain

ABSENT FRIENDS

LOVE

Which characters would you fall in love with?

Whom could you imagine loving?

ABSENT FRIENDS

J O Y



Our hypertexts are
relentlessly serious

**“THE AVANTE-GARDE IS TO
THE LEFT WHAT JINGOISM IS
TO THE RIGHT. BOTH ARE A
REFUGE IN NONSENSE.”**

—David Mamet, 3 Uses Of the Knife

ABSENT FRIENDS

SIMPLICITY

You must lie upon the daisies
And discourse in idle phrases
Of your complicated state of mind,

The meaning doesn't matter
If it's only idle chatter
Of a transcendental kind.



ABSENT FRIENDS

SCIENCE. HISTORY. ENGINEERING.

“Every historical event has two stories about it. . . Every massacre did or did not happen.”

“What I fear is a world of tomorrow’s information in which nothing is known anymore and everything is hoaxes and lies.”

—THEODOR HOLM
NELSON

ABSENT FRIENDS



ABSENT FRIENDS

Mystery stories

ABSENT FRIENDS

• • • • •

committees

ABSENT FRIENDS

of the novel

ABSENT FRIENDS

THE  PARADOX
play

ABSENT FRIENDS

So much to do:
world enough
and time



POT BY JANET
WALKER, PROGRAM
CHAIR, HYPERTEXT '91

ABSENT FRIENDS

DREAMTIME

The most important single notion in the theory of fiction ...is that of the

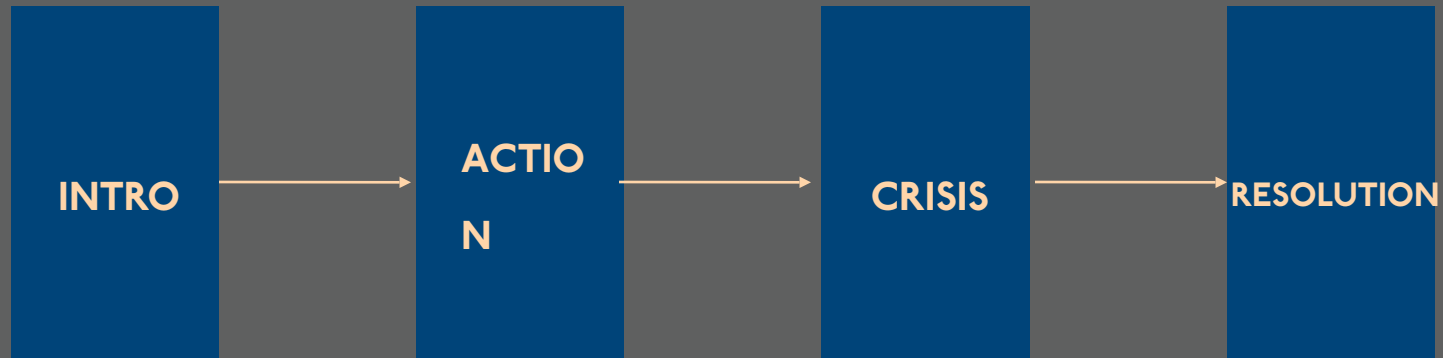
vivid and **continuous**
dream.

John Gardner, *The Art of Fiction*

ABSENT FRIENDS

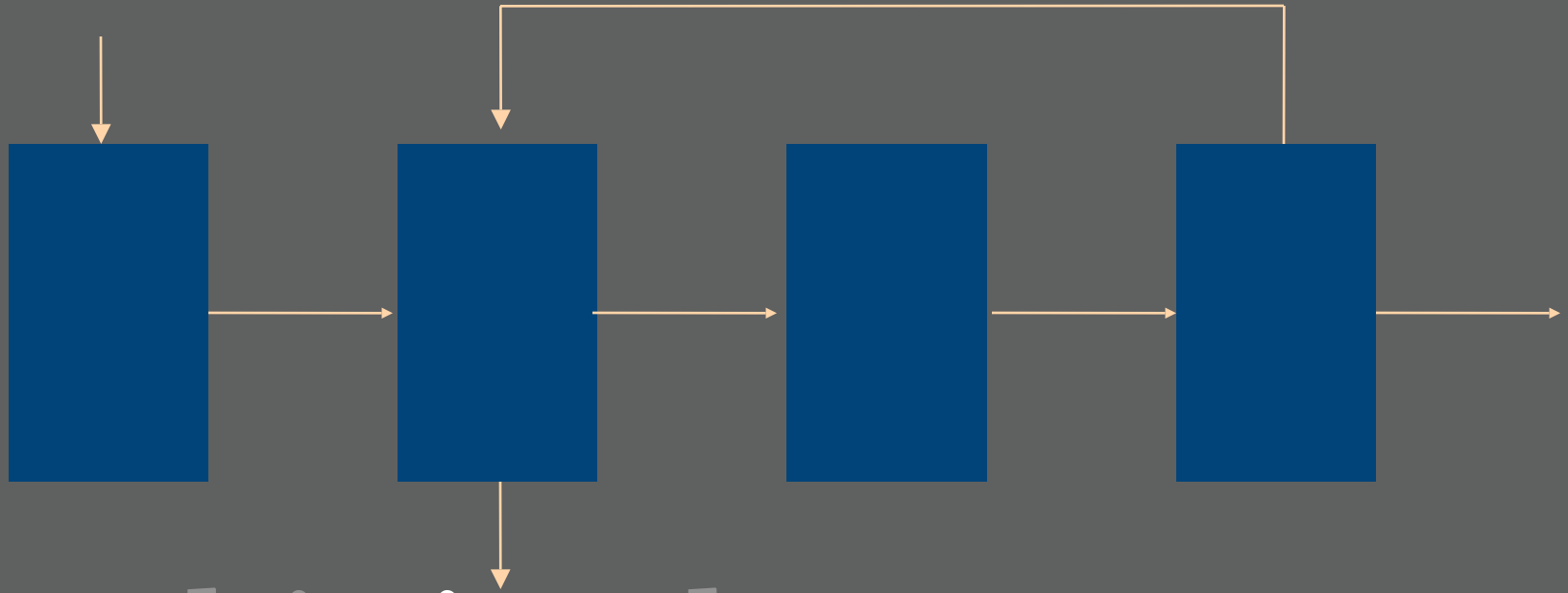
This is not a hypertext.

ABSENT FRIENDS



This is not a hypertext.

ABSENT FRIENDS



This is a hypertext.

ABSENT FRIENDS

*“Travelling through
Europe is hard.”*

CHIEKO

*“Travelling through
Europe is hard.”*



CHIEKO

*"I lost my
wallet."*



CHIEKO

"I lost my password."



JAN

"Travel through Europe is hard"

SOME NOTABLE WEBSITES

CHIEKO YOSHIMURA

MAGGY DONEA (MOMENTS)

AMY MILLER (CHUNK)



FLASHBACK

JAN



Page Jokey

GUIDE

SEPIA

HOSS

HYPERDISCO

NAVIGAT

Microcosm

Augment

OLE

XANADU VIK

EXPLORER

Tourist

MAPA

HYPERCARD

CHIMERA

Walden's Paths

WINHELP

WEB SQUIRREL

TRELLIX

TRELLIS

THEME & VARIATION

JAN

Lots of these systems explore navigation.

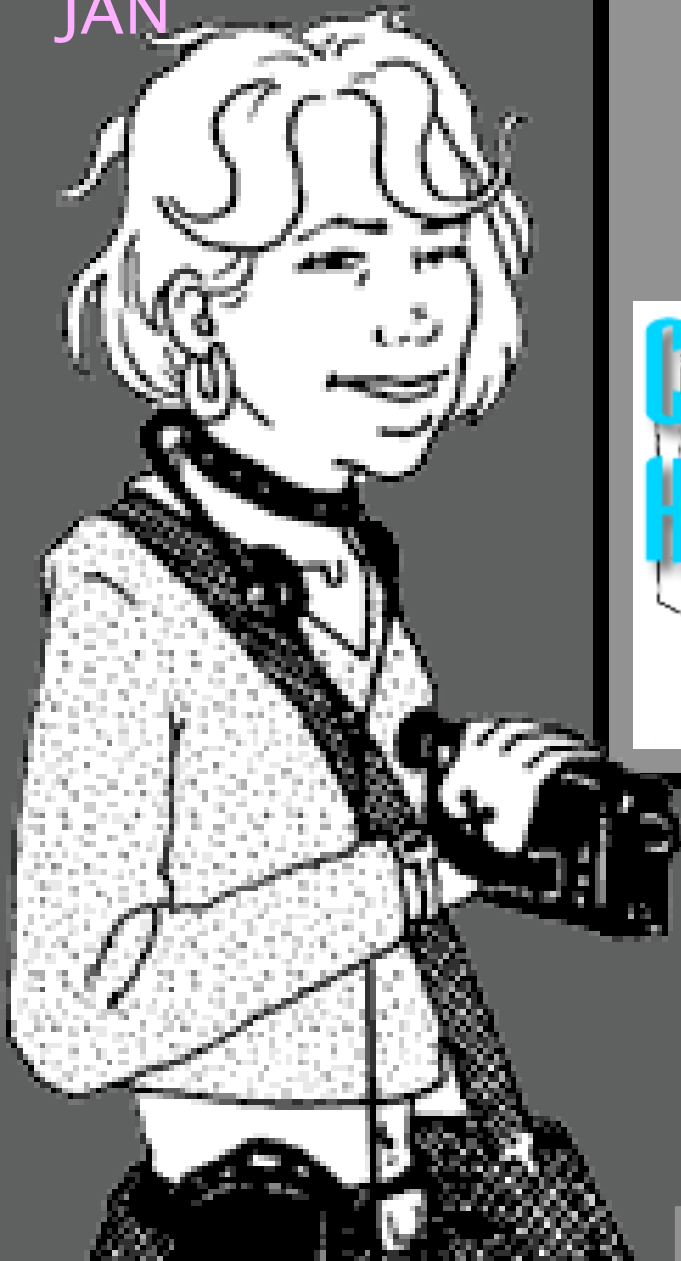


Do any of them help me find a hypertext I need to read, if I don't know I need it?

I want to say that I spent last night with a wonderful hypertext by a girl who lost

RECLIPSLIS

JAN



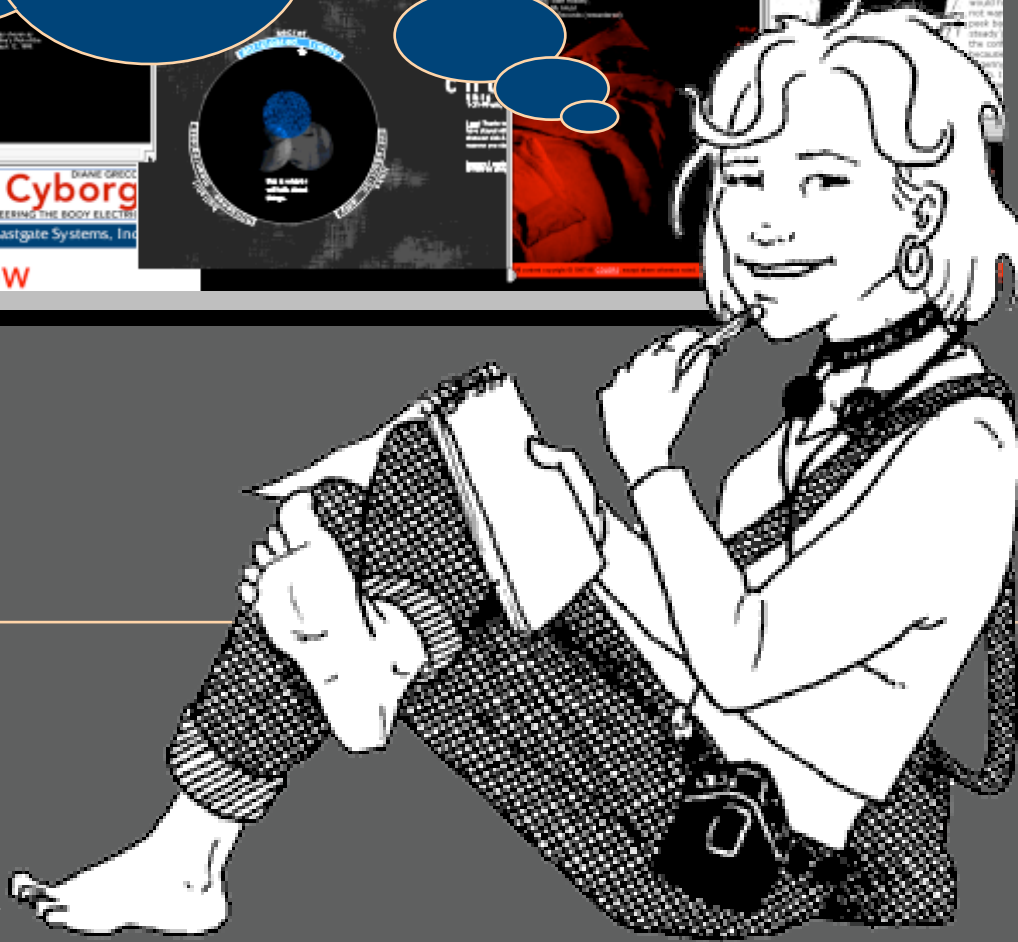
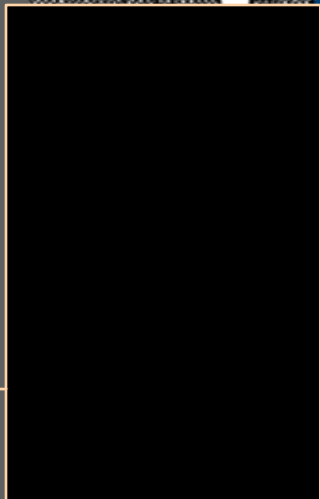
I want to say that I spent last night with a wonderful hypertext by a girl who lost her wallet.



RECURSUS

TED

*“Travelling
through Europe
is hard”*



CONTOUR



Prof. Weiss

*Travelling
through Europe
is hard*



TIME SHIFT



Prof. Weiss



*Travelling
through Europe
was hard...*

RENEWAL

THIS IS NOT A STORY



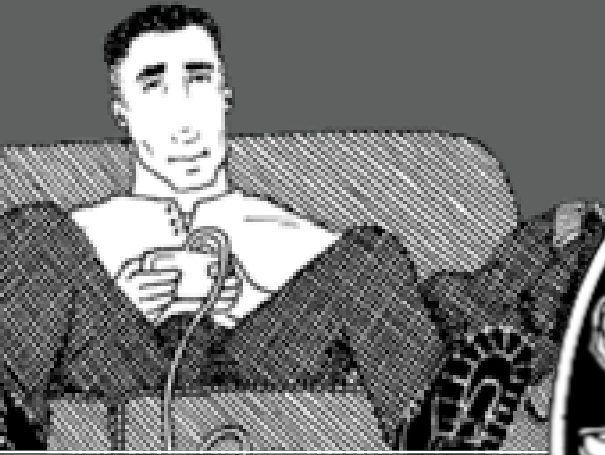
This is not a hypertext

THIS IS NOT
the one true way



This is not a story

DO IT CAN BE
DONE



AND WE NEED TO DO IT



RETURNING TO OUR ROOTS

Computer Lib

Literary Machines

Augment, Memex

...and beyond

THIS IS A CONSERVATIVE BUSINESS

Don't be discouraged

THE CRUSADE

THE QUEST FOR HYPERTEXT

EPISODE 10:

RETURNING TO OUR DIVERSE ROOTS

Starring Jörg Haake, Uffe Wiil, & John Leggett

1987: HALASZ & the 7 issues

1 Search and Query

2 Composites

3 Virtual Structures

4 Computation in/over hypertext networks

5 Versioning

6 Collaborative Work

7 Tailorability



VISUALIZATION

Ways to see (and manipulate) hypertext structures

Cycles • Counterpoint • Mirrorworld • Feint

Discovering emergent structure

ENACTMENT

Ways to see (and manipulate) HT dynamics

Link traversal (fluid links, link previews)

“Guard fields”

Changing hypertexts (time, collaborators)

COLLABORATION

Constructive hypertext

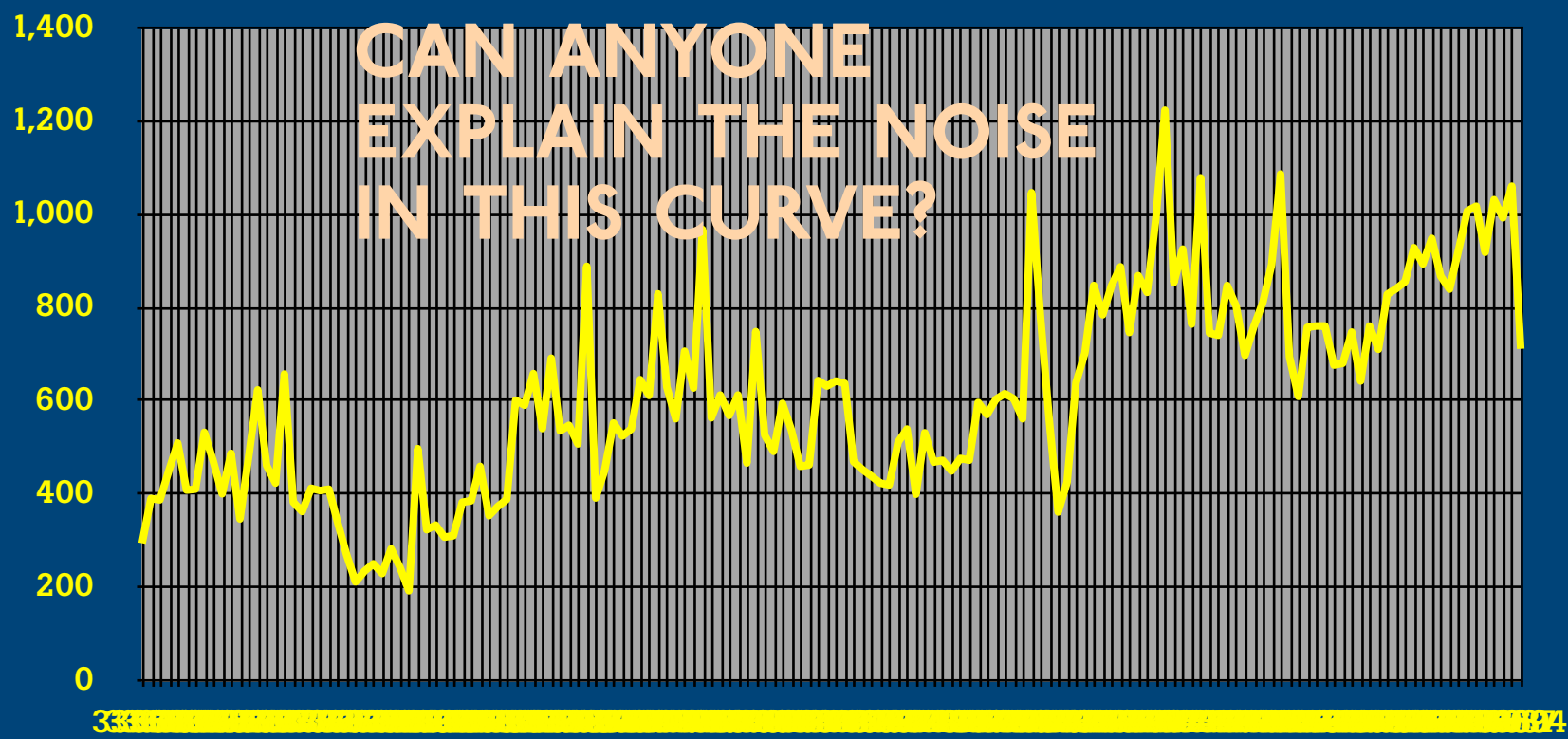
The graffiti effect is terribly important

COMPONENT SYSTEMS

(Open systems, Structural Computing)

Collaborative on-the-fly system design

LOG ANALYSIS AND USER MODELS



Tension and excitement

We need to demonstrate command of the medium.

Five finger exercises:

Thriller • Schlemiel • Villain • Bedroom farce • There and back

REAL CRITICISM OF REAL HYPertext

Usability is important

Usability usually asks the wrong questions

How do real hypertexts work?

How do they fail?

Real criticism, real hypertexts

Let such teach others, who themselves excel.
And censure freely who have written well.

REACTIVE HYPERTEXTS

Extremely volatile hypertexts

Constructive frameworks (MacWeb)

Literary machines that learn

Hypertext with characters

SPREAD THE WORD



HELP PEOPLE UNDERSTAND

The provost

Your students

My dad

Your head of state

The Times

Your bartender

Visitors to your Web site

WRITE HYPERTEXTS!

The hypertexts are coming.

Some are already here.

Some are still wandering outside.

Invite them in.



Where Are The Hypertexts?

THANKS

Where Are The
Hypertexts?

& **CHARACTER DEVELOPMENT AND
ARTWORK**

CHRISTOPHER BALDWIN

& **TYPE**

P-22 (LONDON UNDERGROUND, Vienna)

**BRIAN SOOEY (Verde) CHAOSIUM
(Phaeton)**

& **PRODUCTION**

**MACINTOSH, NIKON, PAINTER, POWERPOINT,
FIREWORKS, FLASH, COMMUNICATOR, STORYSPACE,
WINDOWS, POSER, ART TODAY, DOVER BOOKS,
PHOTOSHOP**



THANKS

Where Are The
Hypertexts?



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... AND MANY MORE TO COME