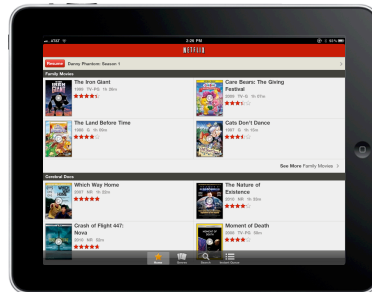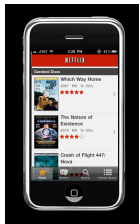# Designing for Mice & Men

Bill Scott, Netflix

Netflix Across Devices (in-house products)

Netflix Across Devices (in-house products)

Web   Tablet

Mobile   TV

3

Netflix Across Devices (in-house products)

HTML5   HTML5

HTML5   HTML5

4

Common Platform Across Devices

Web Browser   **iOS Webkit**

iOS Webkit   **QT Webkit &
                         Skia Webkit**

Why?

Server-driven dynamic UI

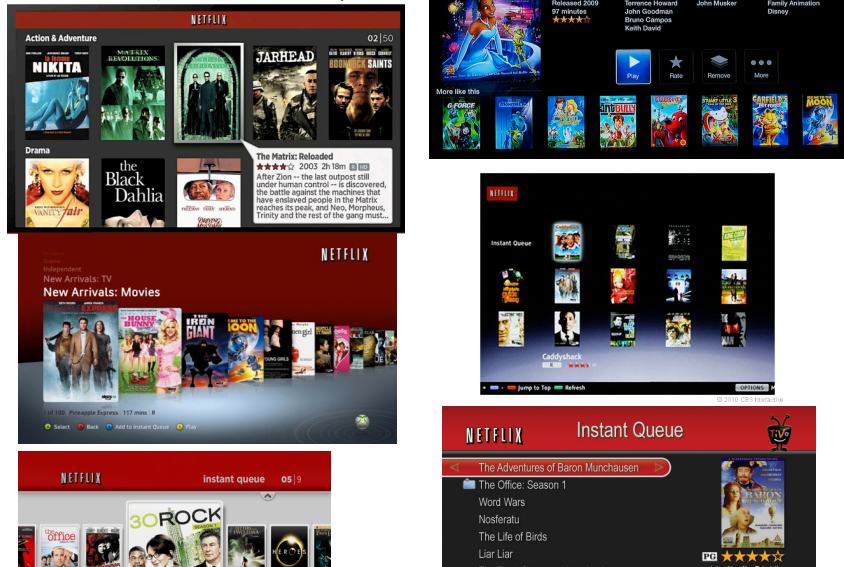**Web-style release vs CE firmware updates**

Support A/B Testing

Learn Fast/Fail Quickly
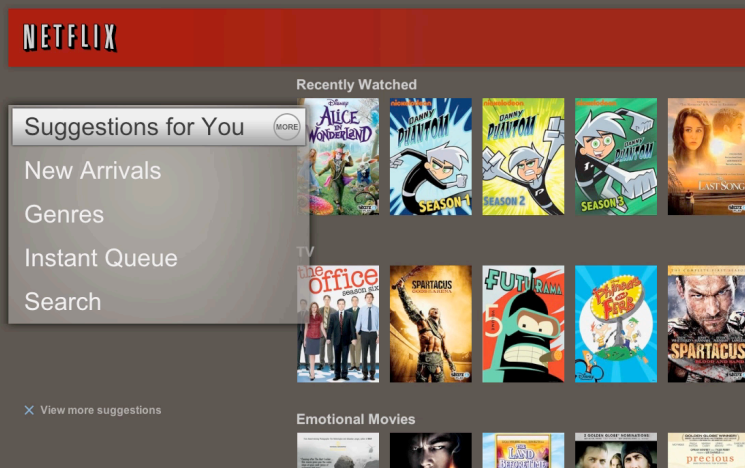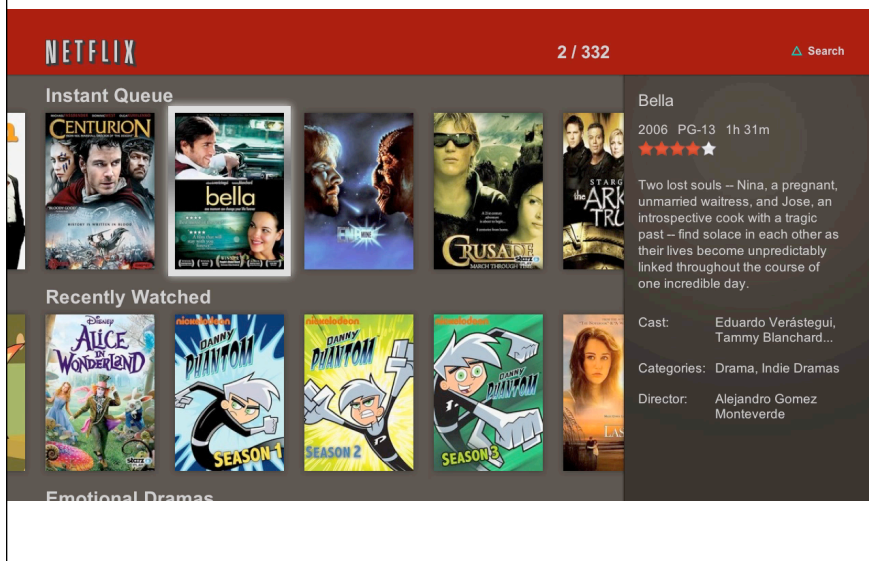
Chaos Otherwise

Chaos (400 SKUs)

Controlled Variances

Controlled Variances

Managing Across Platforms

We chose a portability layer (html5)

However, we vary the user experience across platforms (web, tv, mobile, tablet)

We design for user posture, input capabilities, navigation styles and display capabilities

Try to embrace the constraints (design for mobile first!)

Designing for Mice & Men

Web

Input
Indirect. Pointer/keyboard
Navigation
Controls & windows
Posture
Stationary
Display
Hi-Rez, large, near

TV

Input
Indirect. LRUD/OSK
Navigation
Panes
Posture
Lean Back
Display
Hi-Rez, far-away

Mobile

Input
Direct. Gesture/OSK
Navigation
Panes
Posture
On-the-go
Display
Hi-Rez, small, near

Tablet

Input
Direct. Gesture/OSK
Navigation
Panes
Posture
On-the-go, lean back shared
Display
Hi-Rez, medium, near

So what's common?

design principles
fundamental, universal ideas
that underpin good design
across different input methods,
display capabilities and user
posture

but the application of principles
varies across **input, posture,
navigation & display**

Three Principles

common design principles for
multiple platform design

#1 Get Physical

The Illusion of Physicality

"Finger painting"   "Paint on Paper"

"My finger is out of Purple!?"

Design for Physicality

Whenever possible, add a realistic, physical dimension to your application.

The more true to life your application looks and behaves, the easier it is for people to understand how it works and the more they enjoy using it.
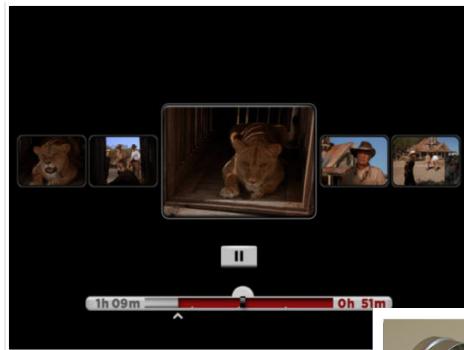
- Apple HIG

Use Metaphors
to Embody
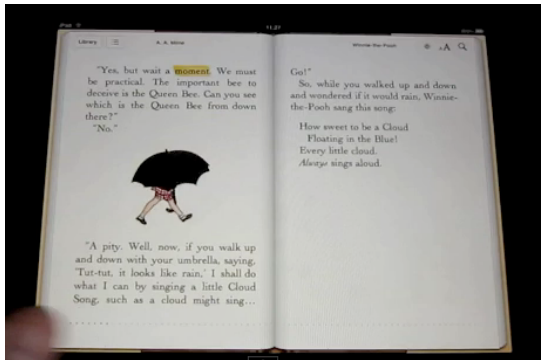# Physicality

17

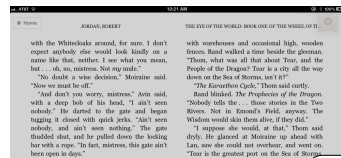## Physicality as Metaphor

Film Strip

18

Physicality as Metaphor

ook

"Books have pages"

"Pages turn"

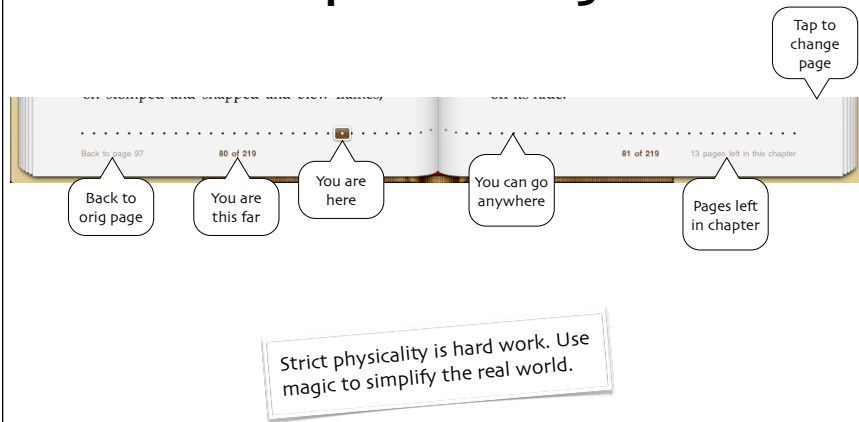# Anti-Pattern: Broken Metaphor

Location??

Location 4244 - 4265 ··· 24%

Don't break the metaphor for the underlying implementation model. **The user's mental model is the experience cushion.**
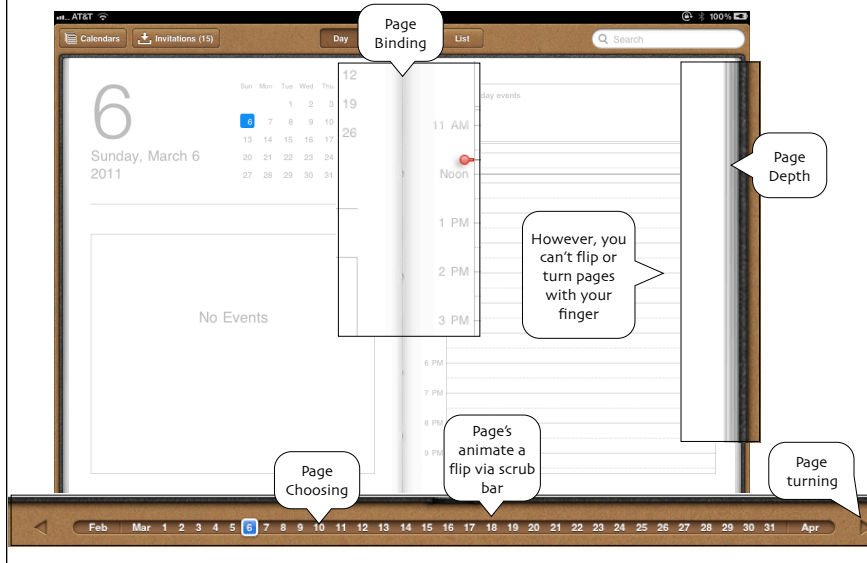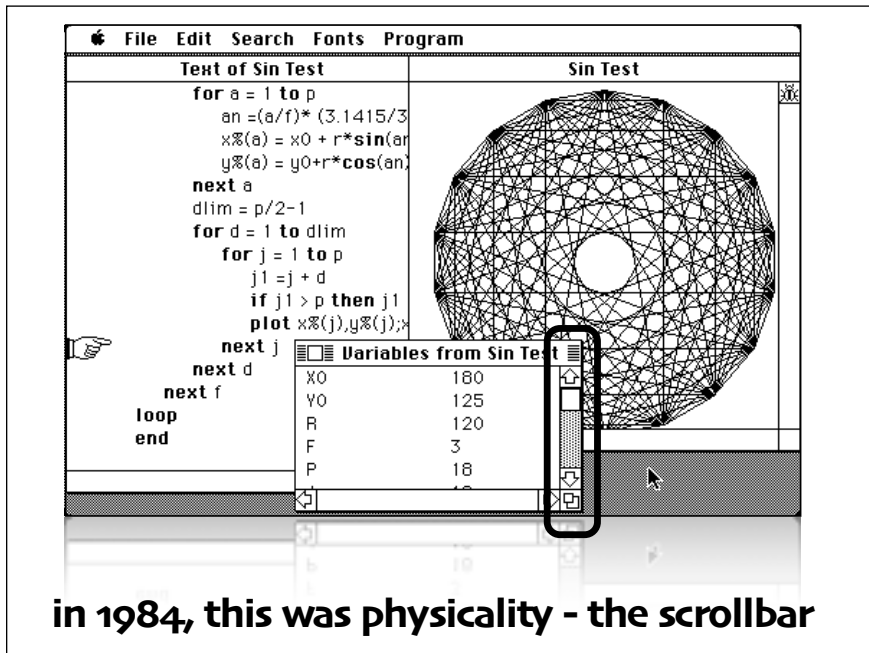
"Books have pages"

Page!!

Back to page 97   80 of 219   81 of 219   13 pages left in this chapter

Break the Metaphor with Magic

Tap to
change
page

Back to
orig page

You are
this far

You are
here

You can go
anywhere

Pages left
in chapter

Strict physicality is hard work. Use
magic to simplify the real world.

To Flick or not to Flick

Page
Binding

Page
Depth

However, you
can't flip or
turn pages
with your
finger

Page
Choosing

Page's
animate a
flip via scrub
bar

Page
turning

No Events

Use Directness
to Simulate
Physicality

in 1984, this was physicality - the scrollbar

Scrollbar Evolution

From Controller to Indicator
Content is scrolled instead of scrollbar

Thumbwheel is an evolution as well
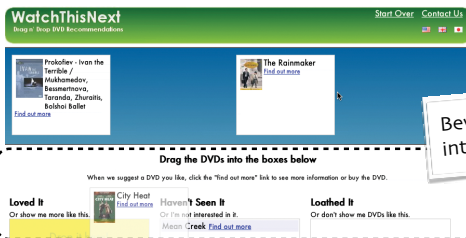
It must feel real

Make sure event handling is consistent

Remember fingers are fat. Real estate is limited

Anti-Pattern: Mismatched Metaphor
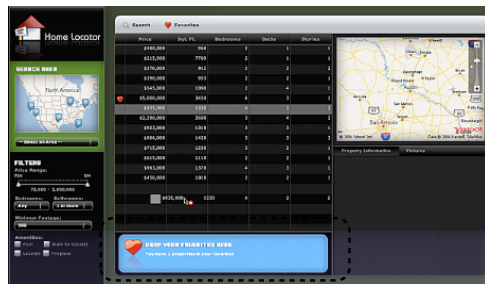
anti-pattern: artificial construct   netflix. rate an object. KISS.

Beware of constructing artificial visual interfaces to support drag and drop

How Fat is Your Input?

	Targeting Size
Web (Pointer)	16 pixels (but accurate as 1 pixel)
Mobile/Tablet (Finger)	44 pixels*
Remote (LRUD)	44 pixels
Remote (Pointer)	44 pixels

* Joe Clark's recommendation - Tapworthy

Physicality Across Platforms

	Input
Web	Pointer Indirect Fine-grained (pixel)
Tablet	Finger Direct Course-grained (finger)
Mobile	Finger Direct Course-grained (finger)
TV	Remote Control Indirect Course-grained (1 object at a time)

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#2 Maintain Flow

30

Exploratorium Exhibit

31

Spot the differences

32

Now try again...

Change blindness

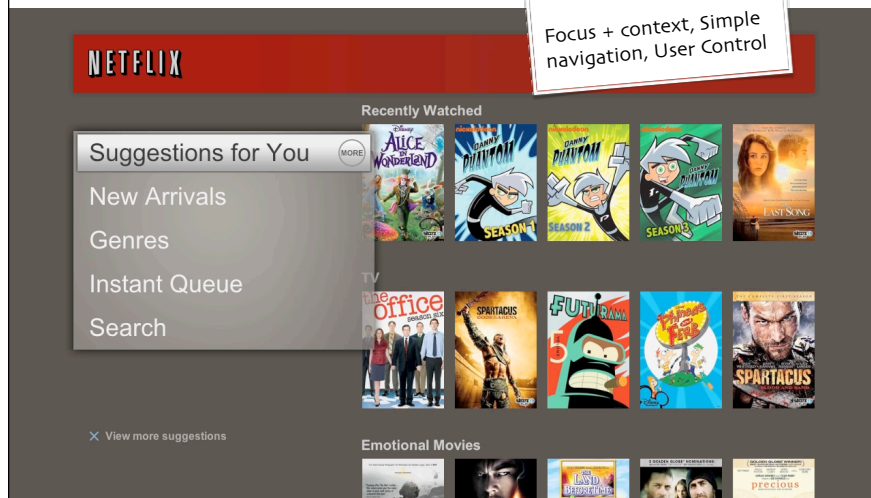# Reduce Page Switching to Maintain Flow

"Special" Experience

Principles followed:
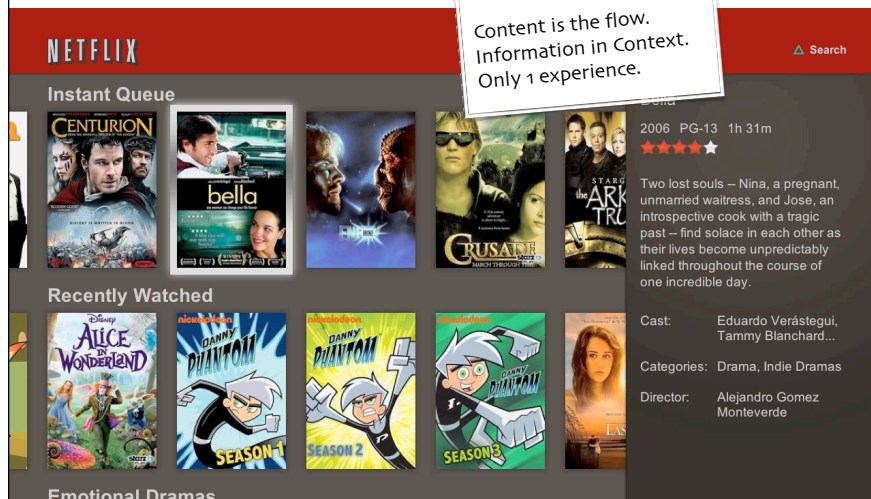
Focus + context, Simple navigation, User Control

NETFLIX

Recently Watched

Suggestions for You   MORE
New Arrivals
Genres
Instant Queue
Search

TV

× View more suggestions

Emotional Movies

"Plus" Experience

Principles followed:

Content is the flow. Information in Context. Only 1 experience.

NETFLIX   △ Search

Instant Queue

Recently Watched

Emotional Dramas

2006 PG-13 1h 31m
★★★★☆

Two lost souls -- Nina, a pregnant, unmarried waitress, and Jose, an introspective cook with a tragic past -- find solace in each other as their lives become unpredictably linked throughout the course of one incredible day.

Cast: Eduardo Verástegui, Tammy Blanchard...

Categories: Drama, Indie Dramas

Director: Alejandro Gomez Monteverde

Which Won?

"Plus" experience.

Maintains Flow

NETFLIX   2 / 332   △ Search

Instant Queue

Bella

2006 PG-13 1h 31m
★★★★★

Two lost souls -- Nina, a pregnant,
unmarried waitress, and Jose, an
introspective cook with a tragic
past -- find solace in each other as
their lives become unpredictably
linked throughout the course of
one incredible day.

Cast: Eduardo Verástegui,
              Tammy Blanchard...

Categories: Drama, Indie Dramas

Director: Alejandro Gomez
              Monteverde

Recently Watched

Emotional Dramas

37

Twitter as iPad App

Minimize page transitions
with Page Slide pattern

Open, close & refresh
panels with swipe gestures

Scroll the content directly

Open web content &
media in place

38

Twitter as Mac App

Navigate to other areas using smooth transitions (make flow visible)

Anti-Pattern: breaking the flow with menus & popouts.

Rethink desktop apps to use real estate more creatively

39

Twitter as Web App

Minimize page transitions with Page Slide pattern

Find myself annoyed with web pages opening in another window

Find myself wanting to substitute a drag for a swipe

40

Vs Hover & Cover

Where possible replace annoying hover details with dedicated detail panes
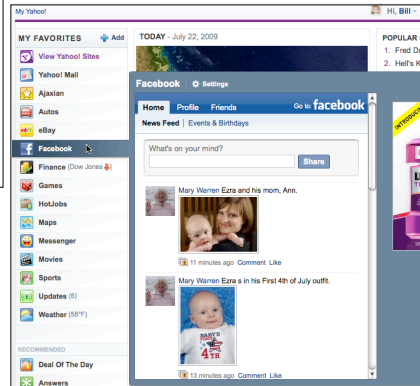
Keep Navigation
Simple
to Maintain Flow

Mobile Navigation
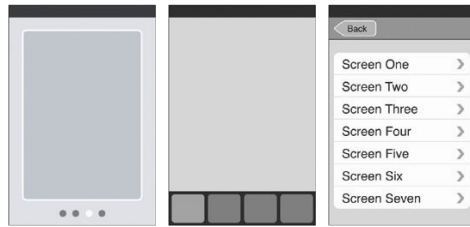
Three types of iPhone navigation: Flat, Tab, Tree

- Jeff Clark (Tapworthy)

Gowalla: Tab + Flat

- Jeff Clark (Tapworthy)

Pulse & Flipboard iPad Apps
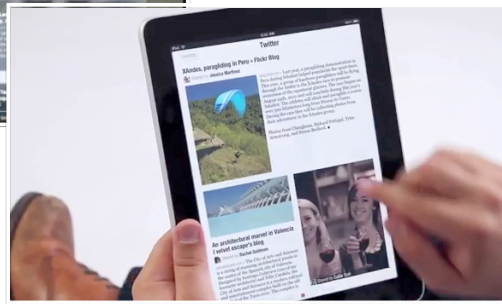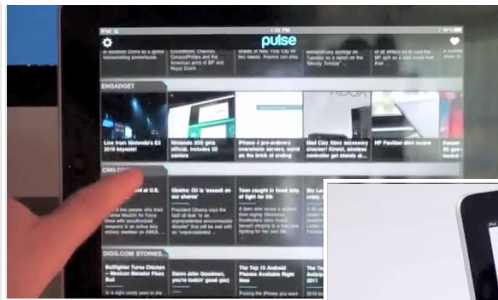
Maintaining Flow Across Platforms

	Navigation
Web	Page, Tab, Back Button
Mobile	Flat, Tab & Tree. 1 level back.
Tablet	Flat, Tab, Master/Detail. 1 level-back
TV	Flat, Tab, Tree, Master/Detail

#3 Be Responsive

Use Transitions/
Animations
to Create
Responsiveness

Animation Can...

Be really, really annoying

What can be done with less is done in vain with more.

- Occam

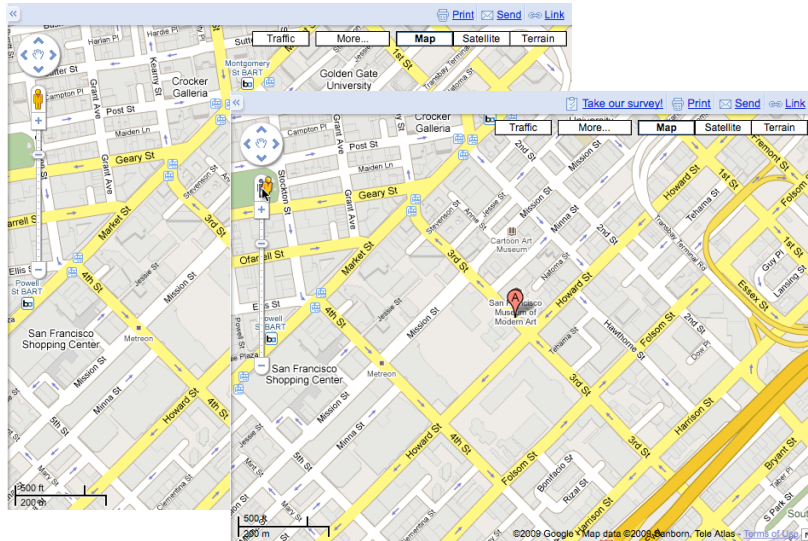Make all visual distinctions as subtle as possible, but still clear and effective.

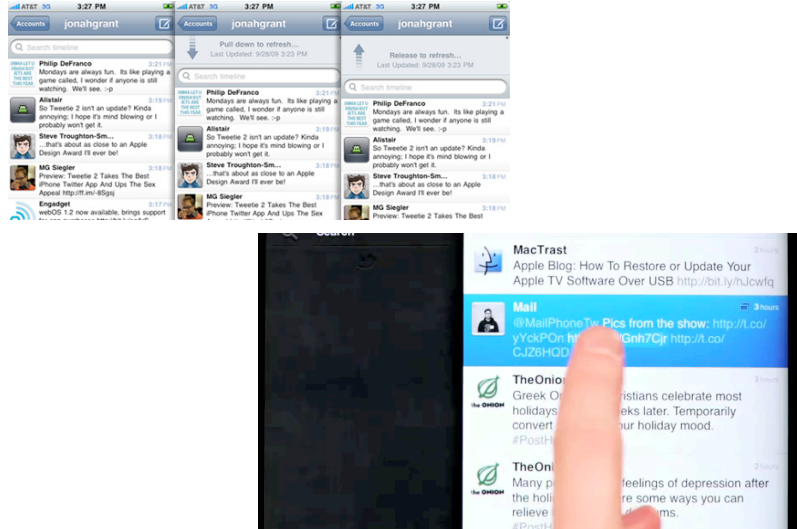- Tufte "Smallest Effective Difference"

Web Apps Seem Prone to This

Snarky answer: Blame it on Flash :-)

Most likely answer: Indirectness of Input

On touch devices animation and input are synchronized

However, slow transitions can still be a problem

49

Animation Can...

Reveal relationships

Improve responsiveness

Show state change

Focus attention

Create delight

Simulate physicality

50

Use Invitations
to Create
Responsiveness

Just in Time Invitations at Drag Moments

Invitations at Touch-Hold Moments

53

Invitations at Reward Moments

Major source of obtaining ratings
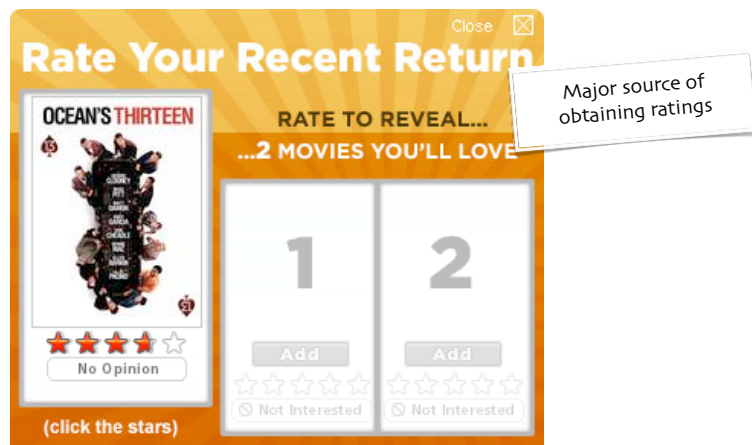
54

Be Snappy
to
Be Responsive

Performance is Not Always a Given

We had to perform magic to get our Webkit core to do this one transition

For Entry Price Point devices we have to turn off animation progressively

Responsiveness Across platforms

	Input
	Input
Web	Pointer Indirect
Tablet/ Mobile	Fingers Direct
TV	Remote Indirect

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TV Experiences...

58

Can Influence Website Experience
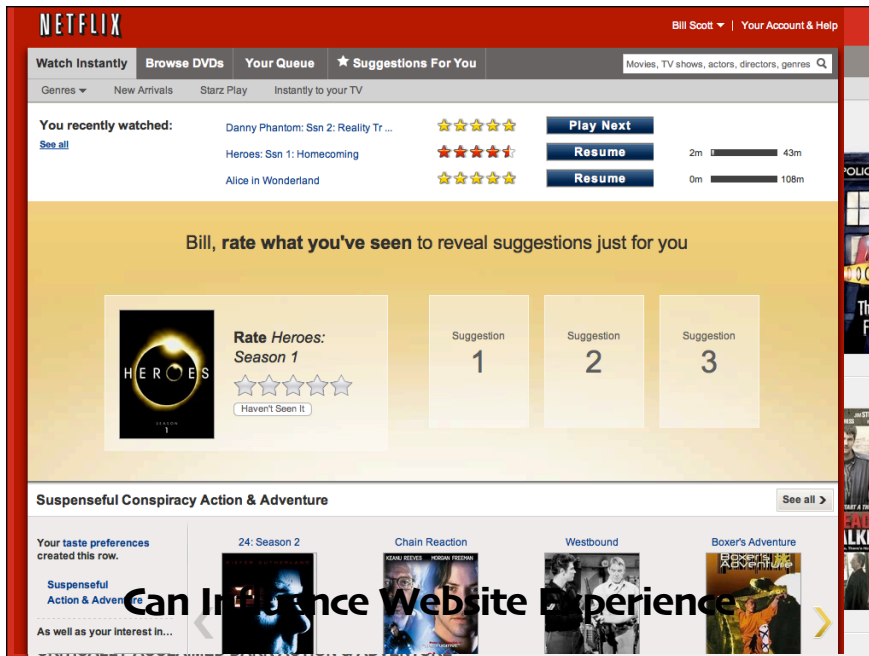
Presentation
billwscott.com/share/presentations/2011/dfmm

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