

The Power of Negative Thinking

How to Plot, Scheme, and Cackle Your Way to a Better
Design

despair

pain

frustration

malice

Two Flavors of Negativity

Debbie Downer

What's the worst thing
that can happen to us?



Debbie Downer

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that can happen to us?



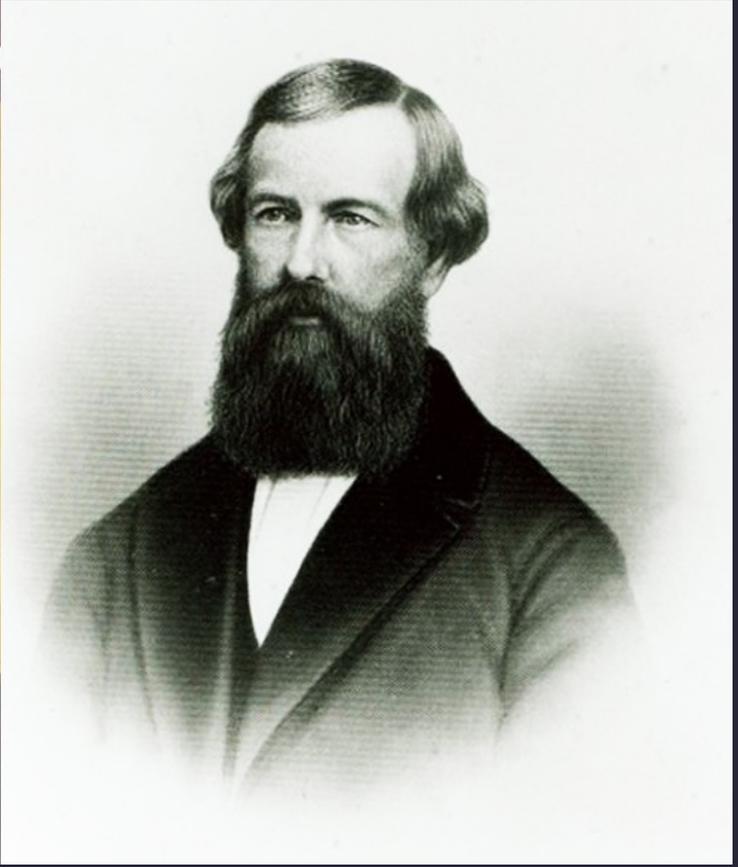
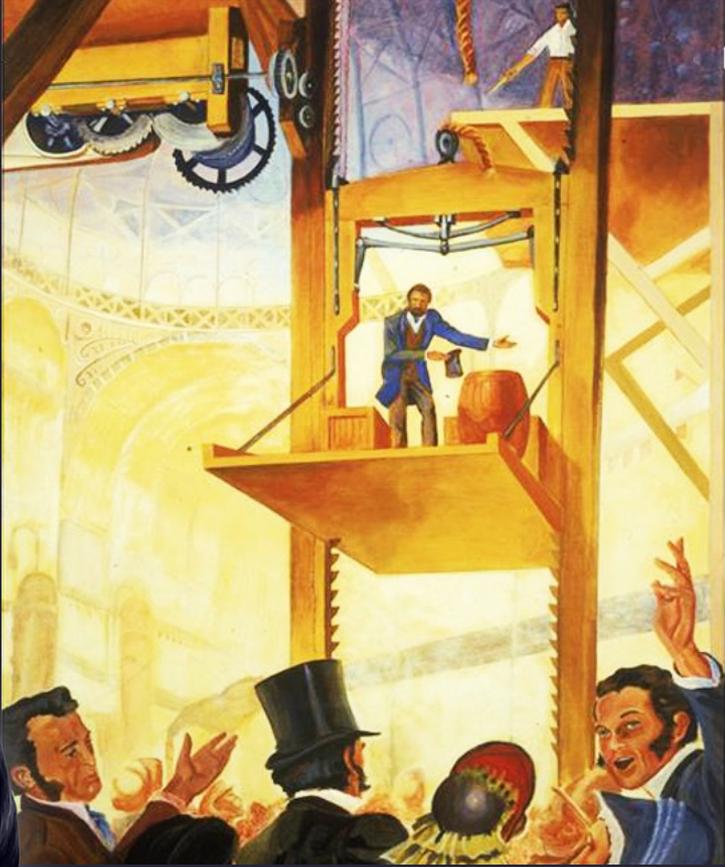
Molly Malicious

What's the worst thing
that we can do to others?



Better Know a Worst Case Scenario











Every bad design
decision made
sense to
someone



Tech plus society
equals a mess

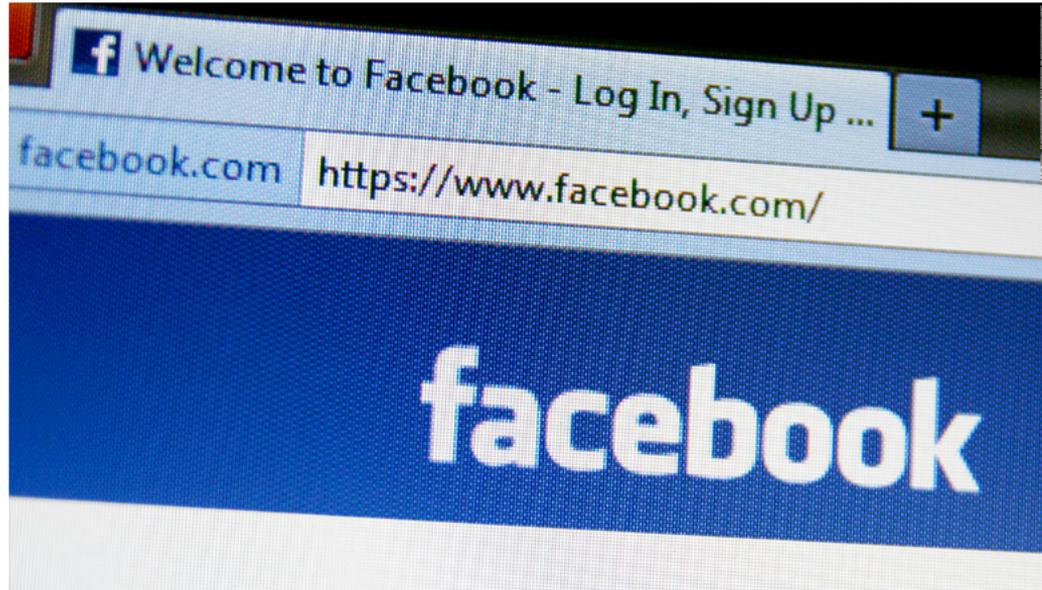


Tech30

Facebook profit soars

by Steve Hargreaves @hargreavesCNN

🕒 January 30, 2014: 8:05 AM ET



Facebook reported a 61% jump in sales and a 16% increase in users; stock jumps after hours.



ISSIE LAPOWSKY BUSINESS 04.04.18 05:43 PM

FACEBOOK EXPOSED 87 MILLION USERS TO CAMBRIDGE ANALYTICA



On Wednesday, Facebook revealed that Cambridge Analytica could have accessed the data of as many as 87 million people, much higher than the 50 million initially reported.

 GUILLERMO GUTIERREZ/BLOOMBERG/GETTY IMAGES



BUY > SOFTWARE & APPS

The 13 Best iPad Games for Kids

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by [Daniel Nations](#) 

Updated October 23, 2018

The iPad can be the ultimate family entertainment system with tons of games and entertaining apps that are perfect for kids of various ages. Every game on the iPad has an age-based rating, so you can tell if a game is right for your child. And



A Dark Consensus About Screens and Kids Begins to Emerge in Silicon Valley

"I am convinced the devil lives in our phones."



Former social computing researcher married to a Facebook engineer in Menlo Park, whose two daughters, ages 5 and 3, have no screen time "budget," no regular hours they are allowed to use screens. Peter Prato for The New York Times

"On the scale between candy and crack cocaine, it's closer to crack cocaine," Mr. Anderson said of screens.

Technologists building these products and writers observing the tech revolution were naïve, he said.

"We thought we could control it," Mr. Anderson said. "And this is beyond our power to control. This is going straight to the pleasure centers of the developing brain. This is beyond our capacity as regular parents to understand"

<https://www.nytimes.com/2013/10/06/style/phones-childhood-in-silicon-valley.html>

TOXIC TWITTER - A TOXIC PLACE

FOR WOMEN

Chapter 1

The 5 Worst Examples of IoT Hacking and Vulnerabilities in Recorded History

IoT hacking can be extremely effective, producing DDoS attacks that can cripple our infrastructure, systems, and way of life.

BUSINESS

Facebook Takes Down Accounts Engaged in Misinformation on Eve of Midterms

Social-media website acts after tip from U.S. law enforcement officials

Foul play: tackling toxicity and abuse in online video games

Too many gamers have come to expect and accept offensive behaviour online but, as recent tweaks to some games demonstrate, players' behaviour can be modified

TECHNOLOGY

Confronting My Cyberbully, 13 Years Later

Between ages 13 and 16, she sent me emails, from my own account, "reminding" me to kill myself. Well, I didn't—I grew up, and so did she.

These problems
emerged because
designers were too
optimistic

Debbie Downer Toolkit



Nielsen heuristic number 5

Error Prevention



Premortems



User Testing Gone Wild



Prioritizing Issues

Malicious Design 101



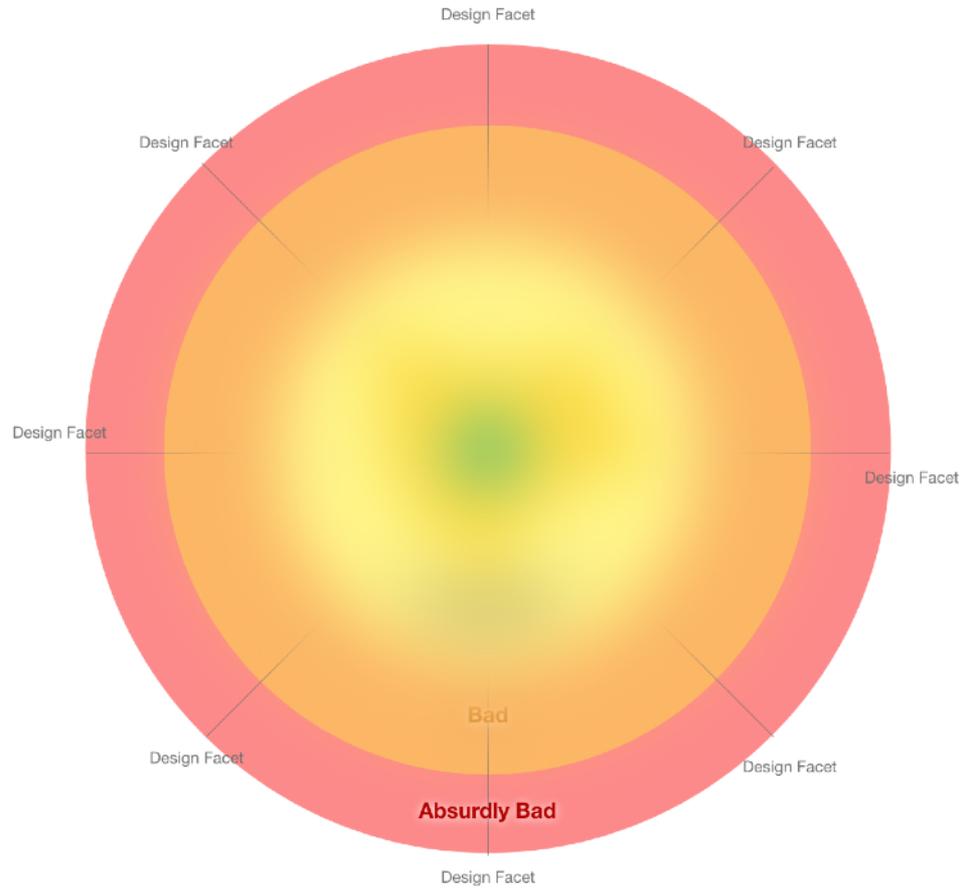
Painstorming

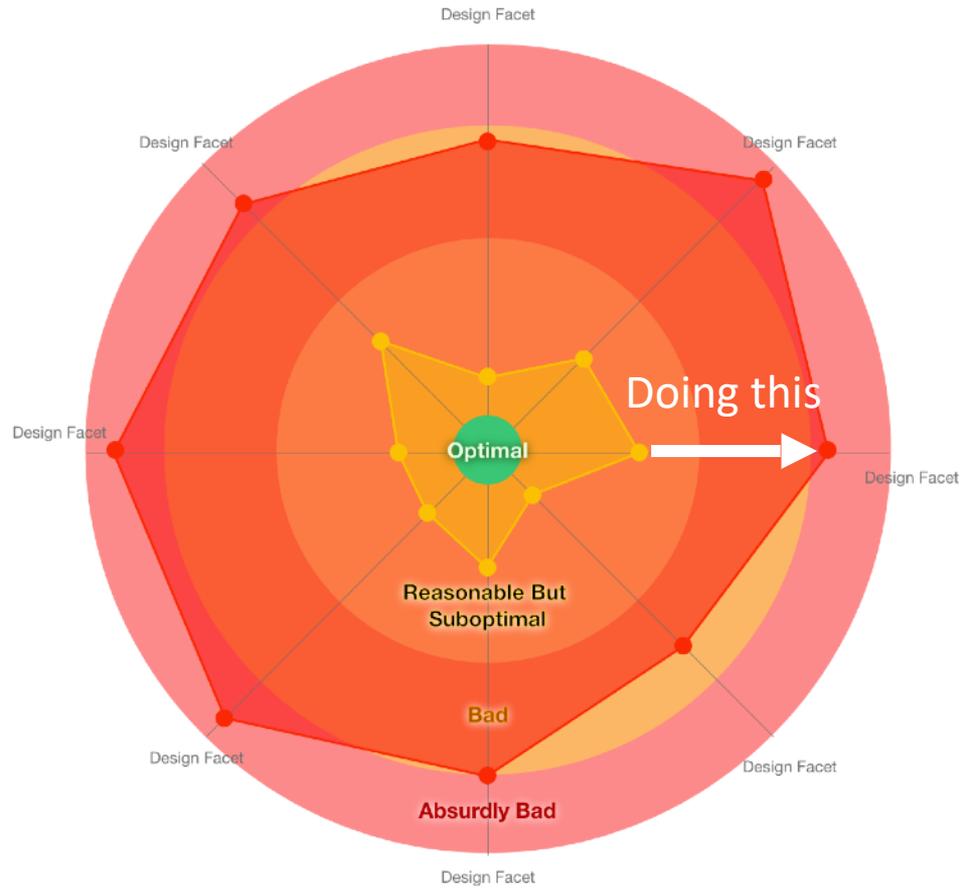


- A term I coined last week
- But probably someone's used it before
- Bullet points illustrate specific concepts
- People who look at this graphic see a blue brain
- One human child is born every day











HOW LONG IS YOUR TIMELINE?



Months, Weeks



Hours

Low Fidelity

Medium Fidelity

High Fidelity

Variation and Range of Solutions



- Brand New Approach
- Complete Redesign



- Big Change to Existing Workflow
- UI Overhaul

- Small Tweak
- Specific Fix



HOW MANY QUESTIONS DO YOU HAVE?

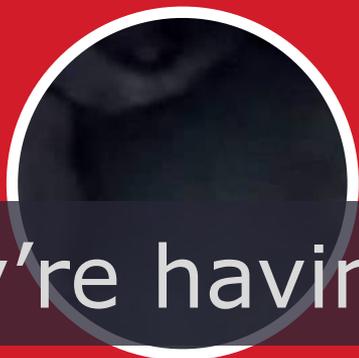
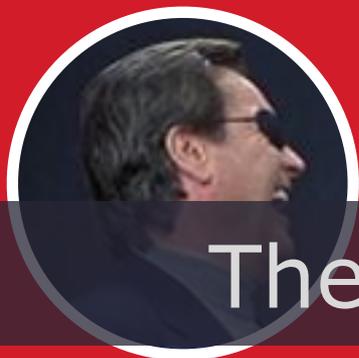


Many

Few



What do these people have in common



They're having a great time



Two of them are Jack Nicholson

Your Evil Toolkit

True Affordance vs Perceived Affordance



"The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill [...] It implies the complementarity of the animal and the environment."

-James J. Gibson, *The Ecological Approach to Visual Perception*



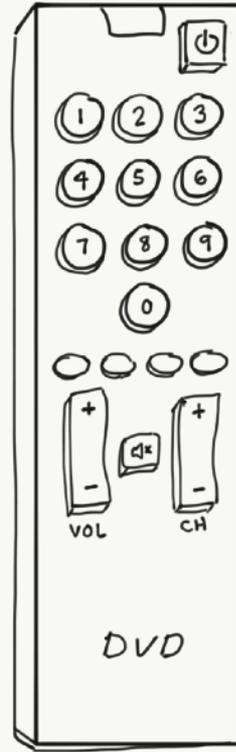
True Affordance

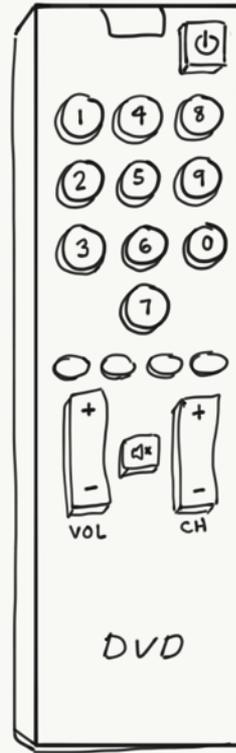


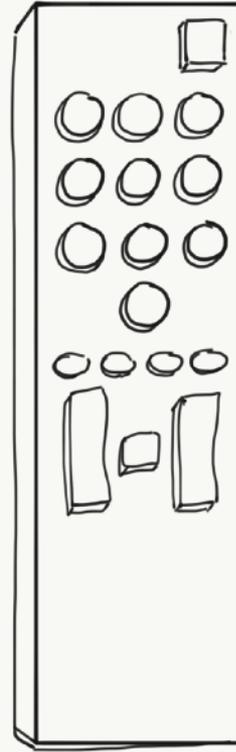
Perceived Affordance

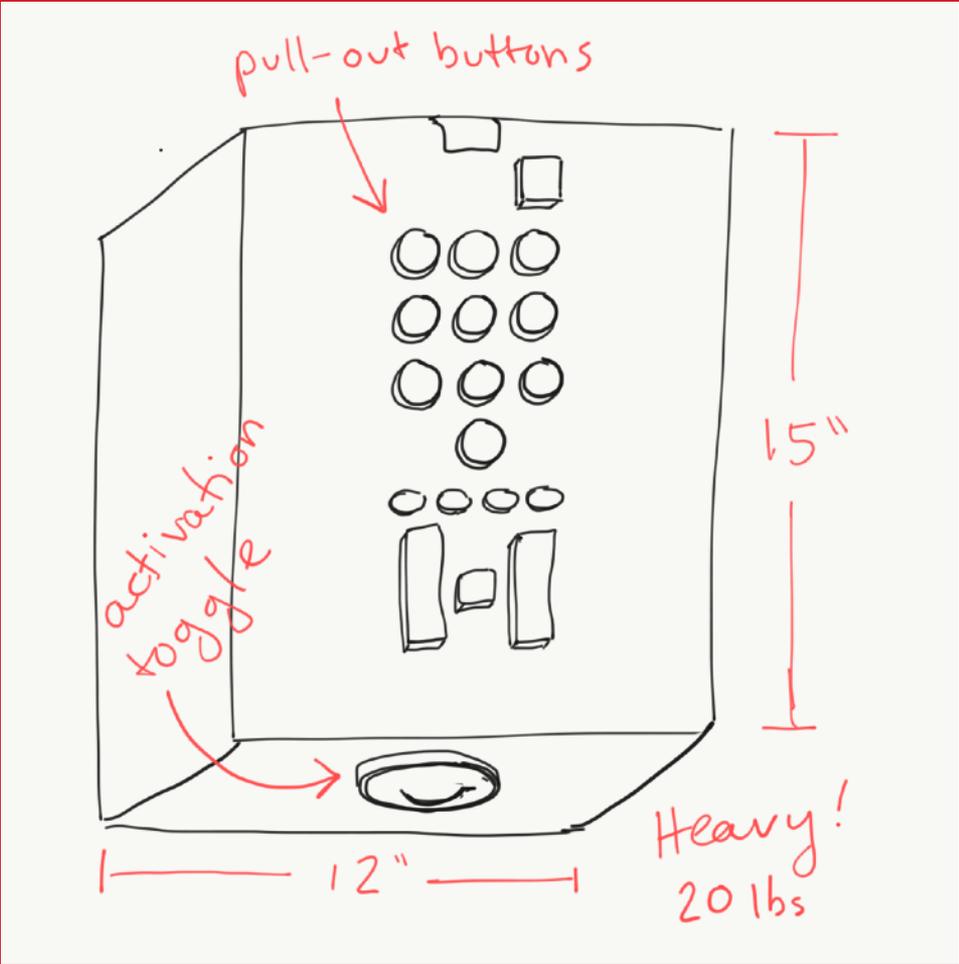












Remote Control Takeaways

- Clear branding and labeling is critical
- It should be optimized to be lifted easily and fit comfortably into a hand
- Modes can cause errors and confusion
- Respect your perceived affordances!



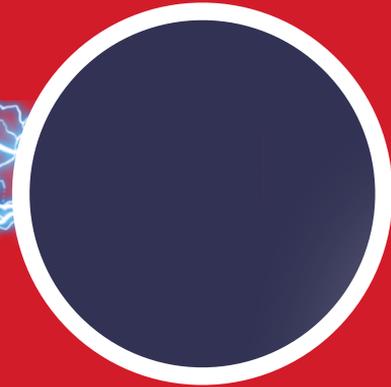
Know your
~~enemy~~
user



Nemeses



Dr. Martinez



Molly Malicious

“As a *[user type]*, I *[challenge user faces]*, so the worst thing a *[what you’re designing]* could do would be to *[thing that would exacerbate that problem]*.”



“As a physician, I have to rapidly understand and synthesize large amounts of data, so the worst thing a BPA could do would be to present irrelevant and untimely information.”



⚠ This patient has a documented metallic implant that may be unsafe for an MRI exam

Replace the following order?

📄 MRI brain without contrast STAT, 1 Time Imaging First occurrence Today at 1415

WITH

📄 CT head without contrast

Replace Order

Do Not Replace



✓ This patient has a documented metallic implant that may be unsafe for an MRI exam

Replace the following order?

📄 MRI brain without contrast STAT, 1 Time Imaging First occurrence Today at 1415

WITH

📄 CT head without contrast

Replace Order

Do Not Replace



✓ Dr. Richardson's birthday is today! Click [here](#) to send him a fun e-card via In Basket. Also, this patient has a documented metallic implant that may be unsafe for an MRI exam.

Replace the following order?

 MRI brain without contrast STAT, 1 Time Imaging First occurrence Today at 1415

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 CT head without contrast

Replace Order

Do Not Replace



✓ Dr. Richardson's birthday is today! Click [here](#) to send him a fun e-card via In Basket. Also, this patient has a documented metallic implant that may be unsafe for an MRI exam.

Replace the following order?

🚗 MRI brain without contrast STAT, 1 Time Imaging First occurrence Today at 1415

WITH

🚗 CT head without contrast

OK

Don't

Don't Not



✓ Dr. Richardson's birthday is today! Click [here](#) to send him a fun e-card via In Basket. Also, this patient has a documented metallic implant that may be unsafe for an MRI exam. Please navigate to the appropriate ordering activity in order to revise your order to reflect this information. If you still think the order is appropriate, do nothing.

Please navigate to the appropriate ordering activity in order to revise your order to reflect this information. If you still think the order is appropriate, do nothing.

OK

No Thanks

An order is the prescription of a physician regarding treatment of a patient. A standing order is a physician's order that can be exercised by other health care workers when predetermined conditions have been met.



What does this tell us

- BPA color should raise the level of alarm proportionate to the amount of danger to the patient
- The problem should be summarized in the first few words of the header of the BPA
- Follow-up actions should be comprehensible at a glance and the recommended one should be pre-selected
- BPAs should not require the user to navigate away and remember information to resolve
- Information should be concise and relevant to the problem at hand

Conclusion



**Designing
with
positive
intent**



**Delineating
the solution
with negative
intent**

The Role of Optimism





Questions