"Good Enough" IS Good Enough!

http://www.aleax.it/europ13_geige.pdf

Some Cultural Assumptions...:

- everybody should always be striving for perfection at all times!
  - settling for a software release that's anywhere below "perfect!" is thus a most regrettable compromise.
- do you mostly agree with these...? OR...:
- keep-it-simple, just-good-enough
  - launch early, launch often!
  - get plenty feedback & LISTEN to it
  - iteratively improve, enhance, refactor...

"Worse is Better"

- Richard Gabriel, 1989, a Lisp conference
  - "New Jersey" approach, AKA "WiB"
    - vs
  - "MIT/Stanford" approach, AKA "The Right Thing"
- years of debate afterwards (plenty of it by RG, sometimes as "Nickieben Bourbaki")...
  - on BOTH sides of the issue!-)

Worse-is-better (e.g: Unix)

- simplicity
  - implementation (esp!) AND interface
  - most important consideration in design
- correctness
  - (slightly) better be simple than correct
- consistency
  - "not overly inconsistent"
- completeness
  - can be sacrificed to any of the top 3
  - MUST be, if simplicity's threatened

"The Right Thing" ("MIT")

- simplicity
  - esp. interface
- correctness
  - absolute-must, top priority
- consistency
  - just as important as correctness
- completeness
  - roughly as important as simplicity

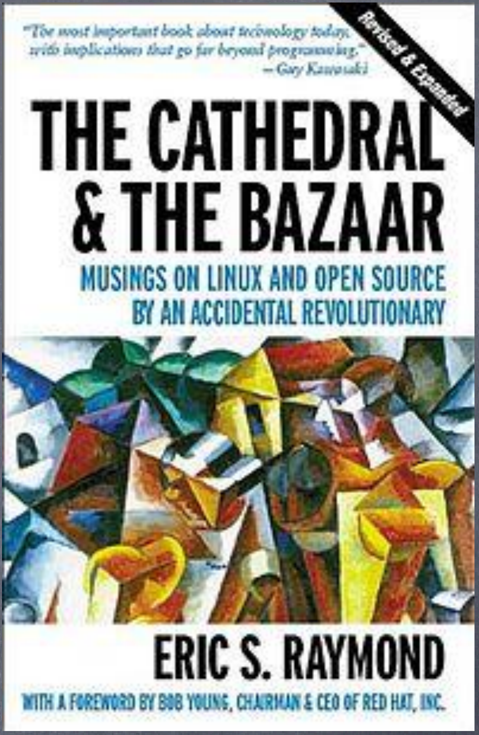
Quoting RG himself...:

- The right-thing philosophy is based on letting the experts do their expert thing all the way to the end before users get their hands on it.
- Worse-is-better takes advantage of the natural advantages of incremental development. Incremental improvement satisfies some human needs...

G.K. Chesterton

- Anything worth doing...
  - ...is worth doing badly!

Cathedral, Bazaar...?


"The most important book about technology today, with implications that go far beyond programming." — Guy Kawasaki
Revised & Expanded
THE CATHEDRAL & THE BAZAAR
MUSINGS ON LINUX AND OPEN SOURCE BY AN ACCIDENTAL REVOLUTIONARY
ERIC S. RAYMOND
WITH A FOREWORD BY BOB YOUNG, CHAIRMAN & CEO OF RED HAT, INC.

- Eric Raymond, 1997
- focus: two diverging models of software development
  - Cathedral: close to RG's "right-thing" MIT/Stanford
    - experts in charge
  - Bazaar: chaotic, launch-and-iterate NJ-like models -- crowd in charge
- The core Bazaar idea: "given enough eyeballs, all bugs are shallow"

BUGS?! I don't DO bugs!

- my very first program ever WAS bug-free
  - 1974: 3 freshmen HW design majors and a Fortran program to compute conditional probabilities of suit-division in bridge
  - we had to punch it into punched cards
  - we got one-&-only-one chance to run it...!
- it ran perfectly that first-and-only-time...!
- ...never ever happened again in my life.
- ...don't count on it, buddy...!-)

"Perfection" -> BDUF

- If you want to only release "Perfection",
  - you clearly need "Big Design Up Front"
- everything must proceed top-down,
  - perfect identification of requirements,
  - begets perfect architecture,
  - begets perfect design,
  - begets perfect implementations,
- **(it takes...)** forever and ever, A-MEN!
- alas! real life doesn't tend to co-operate...
  - stakeholders resent the "forever" part!-)

BDUF vs the real world

- requirements change all the time
  - you ain't ever gonna nail them perfectly!
- architecture varies with design choices
- design varies with implementation techs
- implementation _always_ has some bugs
  - only discovered in real-world deployment

-->

- ITERATIVE development's the only way to go!
  - deploy SOMEthing, fix bugs, improve, ...
  - solve SOME user problems, win mindshare

"Perfect": verb, ¬adjective!

- **perfecting** your work is great
  - keep doing it -- based on real data!
- **perfection** is a process, NOT a state
  - you never "reach" it
  - goalposts keep shifting
  - no laurels to rest on!

What **not** to skimp on

- light-weight, agile **process** and its steps
  - revision control, code reviews, testing...
  - proper release-engineering practices
- code style, clarity, elegance
- documentation

no cowboy coding!

Must be in from the start

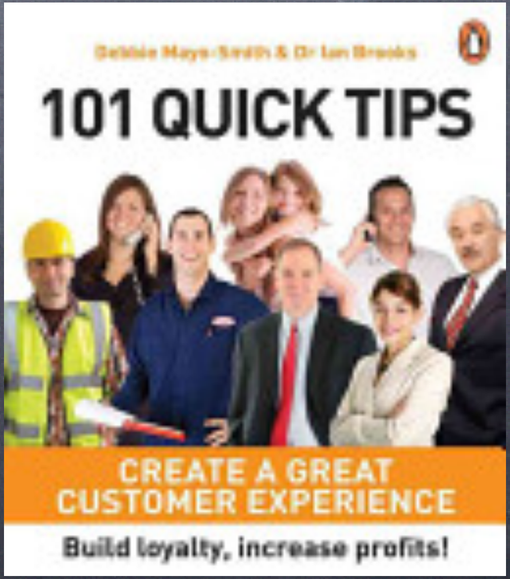
- security, in the most general sense, incl.:
  - privacy
  - auditability
- many other things would be `best` to have at the start, BUT you CAN refactor later...:
  - modularity, `plug-ins`
  - an API
  - scalability,
- you CAN incur technical debt, _with care_

Recoverable or not?

- focus on potential errors that could cause irrecoverable losses
  - as long as one can/does recover, it's OK...
  - ...in a `beta`, at least!-)
- is the reputational damage to yourself recoverable...?
  - it depends! but, most usually, YES
    - esp. w courteous, speedy response to issues that get reported (=="service")
  - "get it right the 2nd time" is usually OK

Customer service secret

- "Customers with the highest levels of satisfaction tend to be those who have had a problem resolved" -- even better than those who never had any problem at all!
- it's the Service Recovery Paradox
    - http://jsr.sagepub.com/content/10/1/60.abstract


Debbie Mayo-Smith & Dr Ian Brooks
101 QUICK TIPS
CREATE A GREAT CUSTOMER EXPERIENCE
Build loyalty, increase profits!

General vs ad-hoc solution

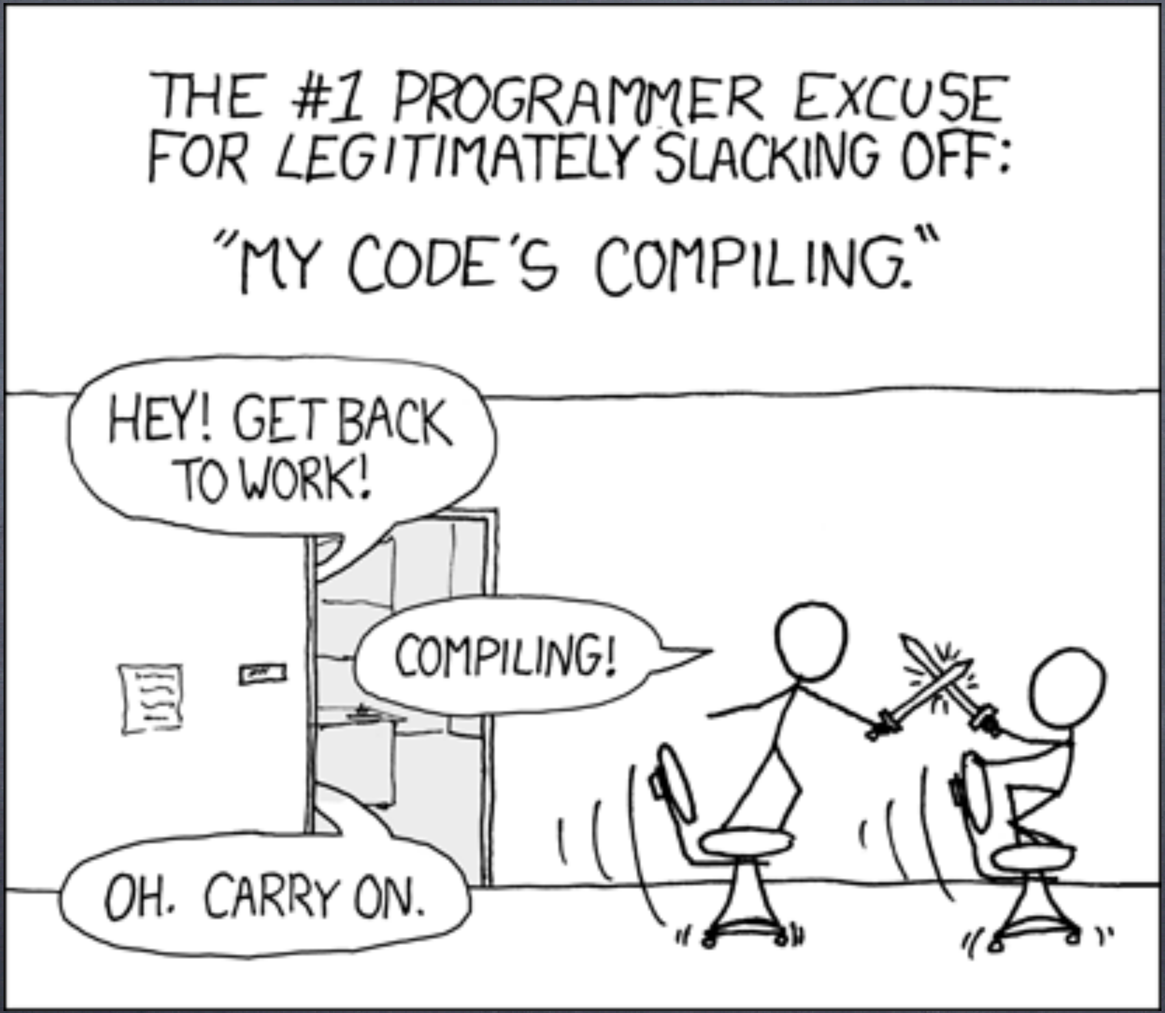
- intuition may tell us ad-hoc easier, faster
- reality: sometimes, but NOT always (DRY!)

```
def find_by_col(root, color):
  if root.color == color: yield root
  yield from (find_by_col(c, color) for c in root.cs)
def find_by_sha(root, shape):
  if root.shape == shape: yield root
  yield from (find_by_sha(c, shape) for c in root.cs)
```

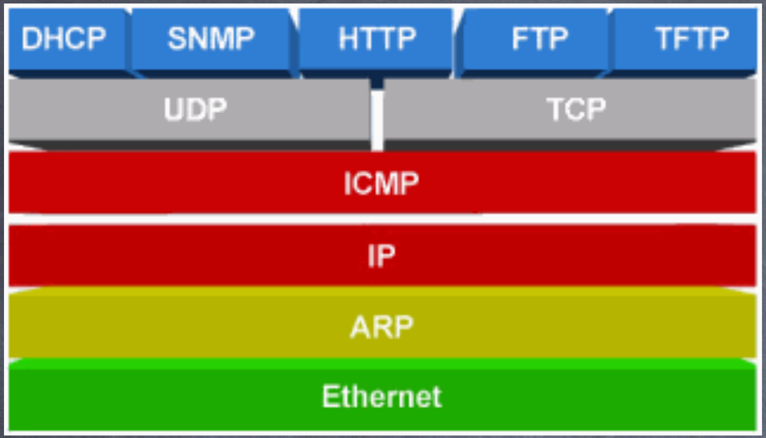
vs

```
def find(root, n, v):
  if getattr(root, n) == v: yield root
  yield from (find(c, n, v) for c in root.cs)
```

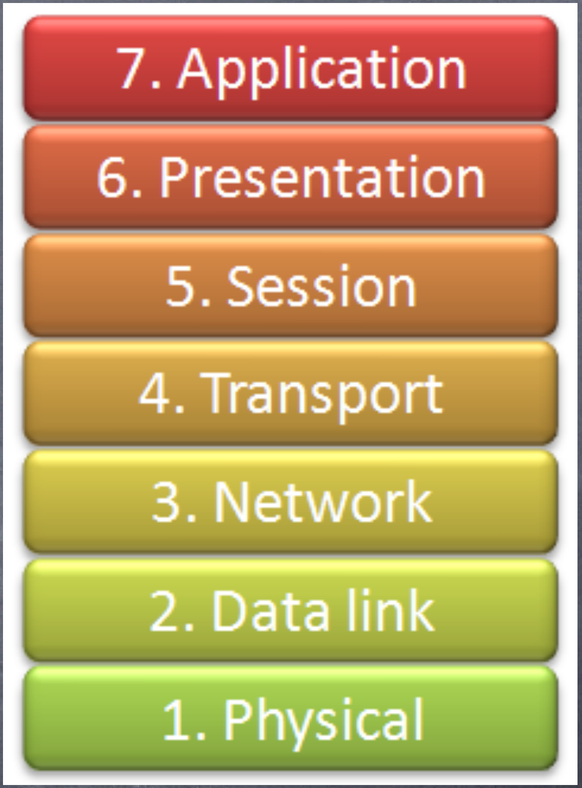
WIB vs TRT: programming



TCP/IP vs ISO/OSI

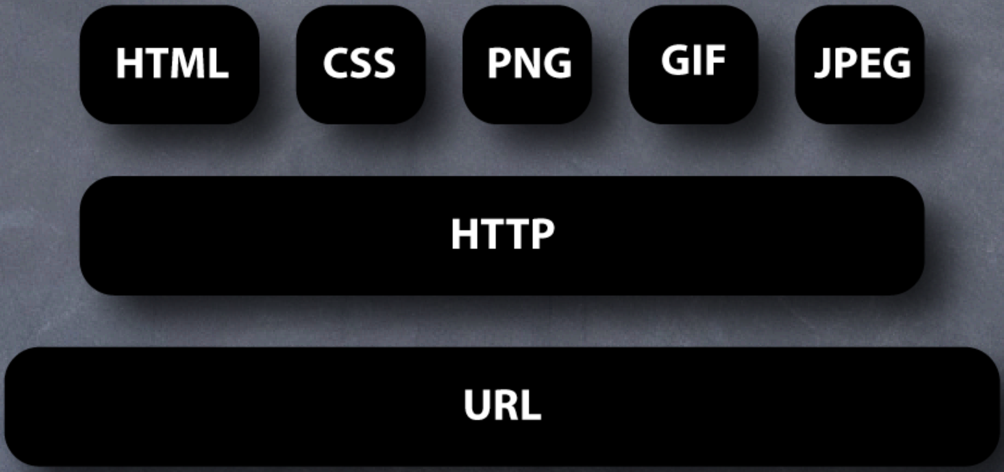


- rough consensus...
  - ...and RUNNING CODE (David Clark: MIT, but... IETF front and center!)



Xanadu vs the WWW

Perfect, ideal hypertext



Hackish, incrementally improved hypertext

Guess which one conquered the world...?-)

Intr syscall: ITS vs Unix

- MIT AI Lab's ITS:
  - every long-running syscall needs to be quasi-atomic AND interruptible...
    - so: every syscall must be able to...:
      - unwind state changes at ANY point
      - resume user-mode for intr. service
      - restart kernel-mode syscall again
- early Unix:
  - errno←EINTR, return -1 -- that's it!-)

Metaclass vs Decorator

```
class Meta(type):
  def __new__(m, n, b, d):
    cls = type.__new__(m, n, b, d)
    cls.foo = 'bar'
    return cls
class X:
  __metaclass__ = Meta
```

...vs...

```
def Deco(cls):
    cls.foo = 'bar'
    return cls
@Deco
class Y(object): pass
```

WIB vs TRT: other fields

Good enough never is (or is it?)

- Eric Ries, http://www.linkedin.com/today/post/article/20121008194203-2157554-good-enough-never-is-or-is-it
- "Lean Startups" use the "middle way" to...:
- **minimum viable product**: that version of a new product which allows a team to collect the maximum amount of validated learning with the least effort
- 37signals' Hansson disagrees: "just build something awesome and ship it";-)

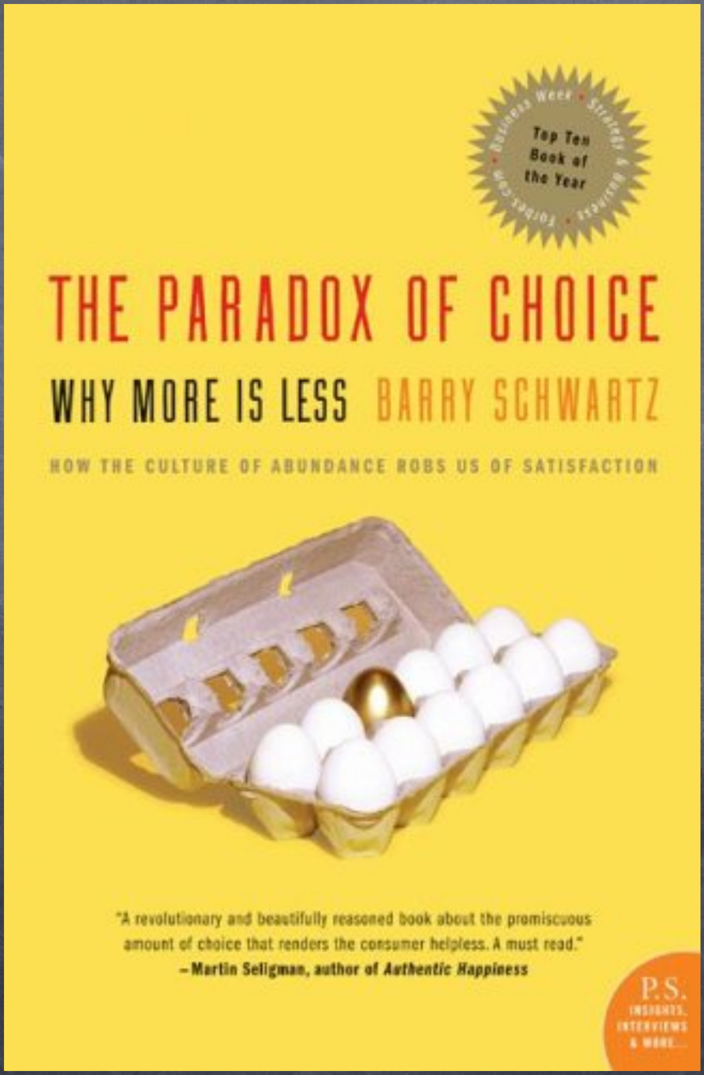
Pick a Perfect Employee...?

- http://theundercoverrecruiter.com/find-perfect-employee/ : DON'T!
  - you'll delay by months, miss opportunities
  - he/she might not be out there looking!
  - you'd likely be over budget
- rather:
  - pick a GOOD (not PERFECT!) fit
  - focus on personality & culture match
  - provide TRAINING on missing skills

Satisficer vs Maximizer

Satisficer:
90% is just fine,
take it, move on!

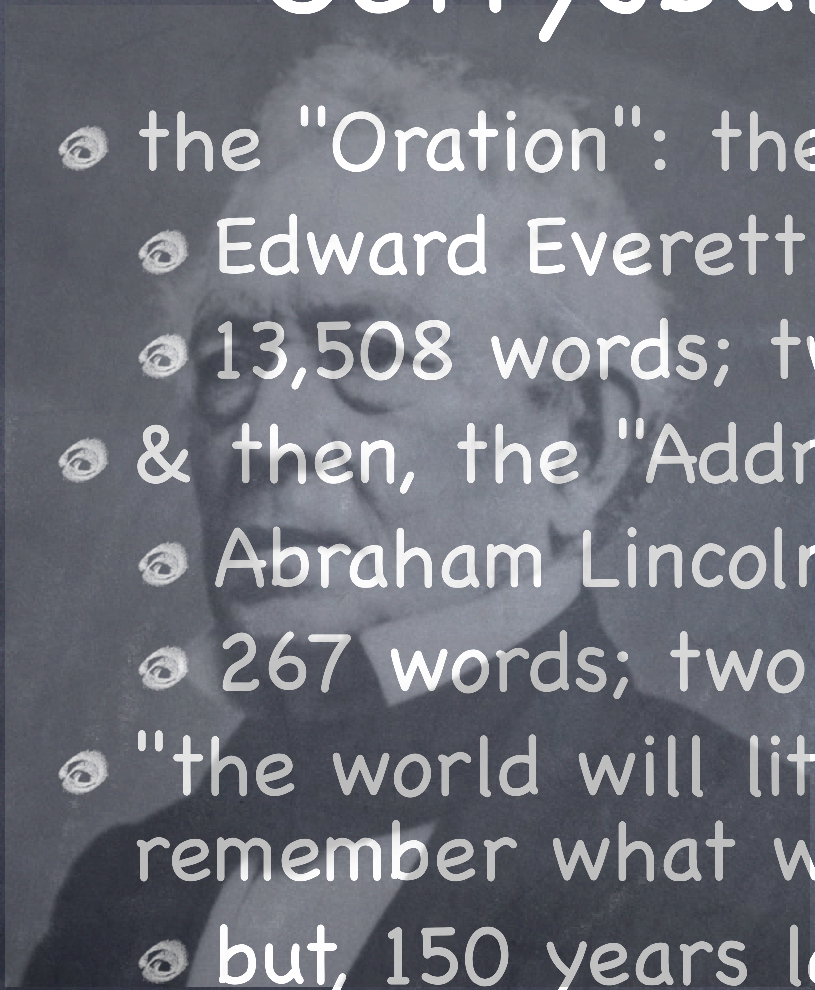
80% may be OK
(20% of effort:
Pareto's Law)

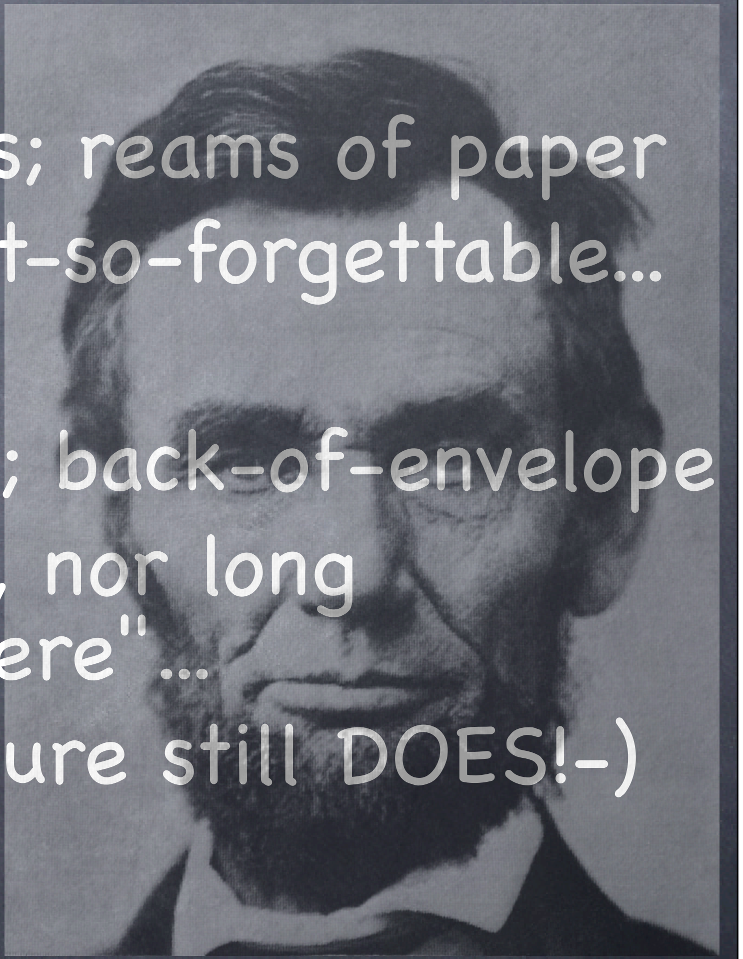

Business Week • Strategy & Business • Forbes.com
Top Ten Book of the Year
THE PARADOX OF CHOICE
WHY MORE IS LESS
BARRY SCHWARTZ
HOW THE CULTURE OF ABUNDANCE ROBS US OF SATISFACTION
P.S. INSIGHTS, INTERVIEWS & MORE...

"A revolutionary and beautifully reasoned book about the promiscuous amount of choice that renders the consumer helpless. A must read."
—Martin Seligman, author of *Authentic Happiness*

Maximizer:
99.99% is NOT
100%,
so it's A FAIL!

Gettysburg Dedication



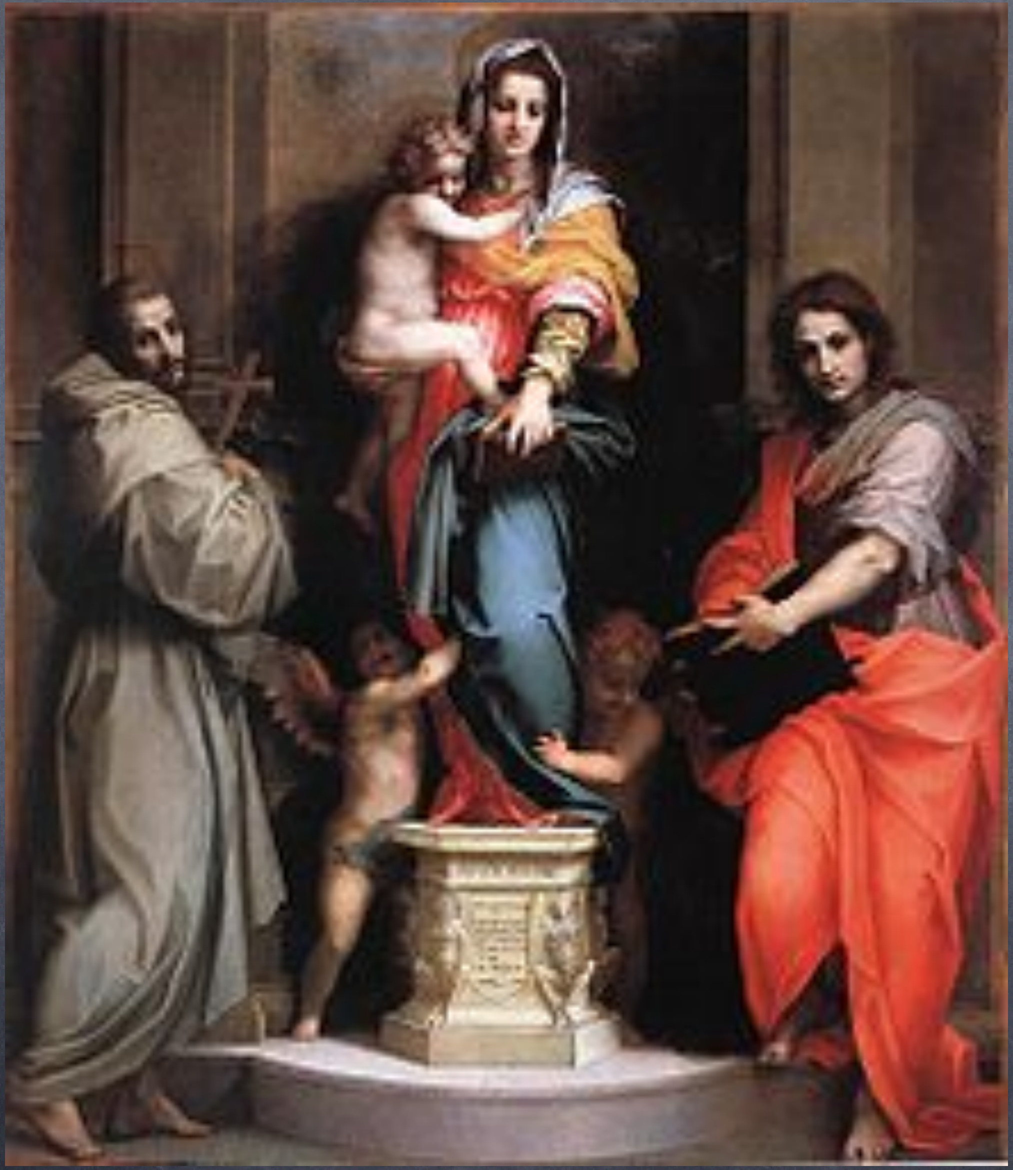


- the "Oration": the soon-forgotten one...
  - Edward Everett
  - 13,508 words; two hours; reams of paper
- & then, the "Address": not-so-forgettable...
  - Abraham Lincoln
  - 267 words; two minutes; back-of-envelope
- "the world will little note, nor long remember what we say here"...
  - but, 150 years later, it sure still DOES!-)

"Lowering expectations"?

- NO! our dreams **must** stay big! **BHAG!**
  - Rightly traced and well ordered: what of that? // Speak as they please, what does the mountain care?
- **however**: the best way **TO** those dreams remains "release early, release often"
  - **learn** from real users' interactions
- Ah, but a man's reach should exceed his grasp // Or what's a heaven for?
- Browning's Andrea del Sarto: **less is more**!

Madonna delle Arpie



Q & A

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