Why?

The way we FEEL about SOFTWARE is IMPORTANT
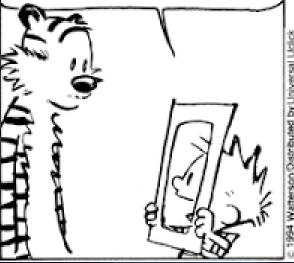
Agenda

- Quotations
- Purpose of Software
- Research
- Requirements
- Emotional Requirements
- Placebos

Quotations

Quotations

"When dealing with people, remember you are not dealing with creatures of LOGIC, but with creatures of EMOTION."
-Dale Carnegie, American writer

Quotations

"I've learned that people will forget what you **SAID**, people will forget what you **DID**, but people will never forget how you made them **FEEL**."

-Maya Angelou, American poet

Quotations

"Customers shouldn´t think
of your business as a place to
BUY a product or **USE** a service.
It should be a **FUN** place to be !"
-Richard Branson, Virgin Group founder

Quotations

"Starbucks has a role and a meaningful **RELATIONSHIP** with people that is not only about the **COFFEE** ! Success is very shallow if it doesn't have **EMOTIONAL** meaning."

-Howard Schultz, CEO Starbucks

Quotations

"We're **NOT SELLING** you anything.
We want you to **FEEL** differently
when you leave the store.
EMOTIONALLY engage customers,
Don't **TRANSACTIONALLY** engage them."
-George Blankenship, former Apple and Tesla executive

Quotations

"I've never felt like I was in the COOKIE business.
I've always been in a feel good FEELING business.
My job is to sell JOY.
My job is to sell HAPPINESS.
My job is to sell an EXPERIENCE."

-Debbie Fields, Mrs. Fields Cookies founder

Successful businesses and people recognize the **IMPORTANCE** of **EMOTIONS**.

Purpose of Software

Purpose of Software

Specifically...

Purpose of Software

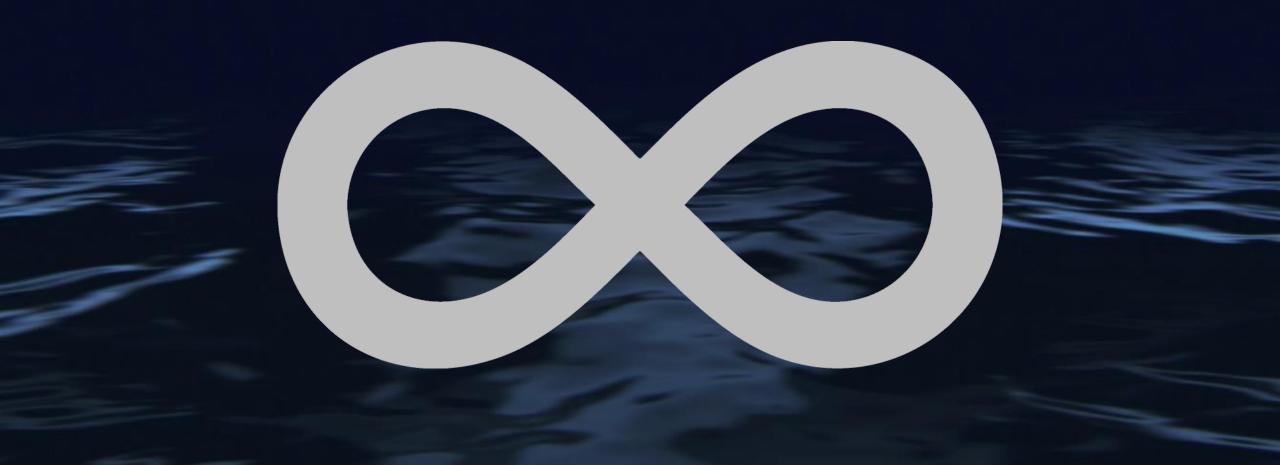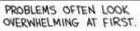## Generally...

to organize INFORMATION
to collect and process DATA
to simplify/automate WORKLOAD
to maximize SHAREHOLDER PROFIT

Purpose of Software

to be USEFUL
to help PEOPLE
to solve PROBLEMS

What is a PROBLEM?
What is a SOLUTION?

Square

A figure with **four equal straight sides** and **four right angles**

Problem

An **undesirable state** that differs from some **desirable state**

Solution

A **desirable state** that differs from some **undesirable state**
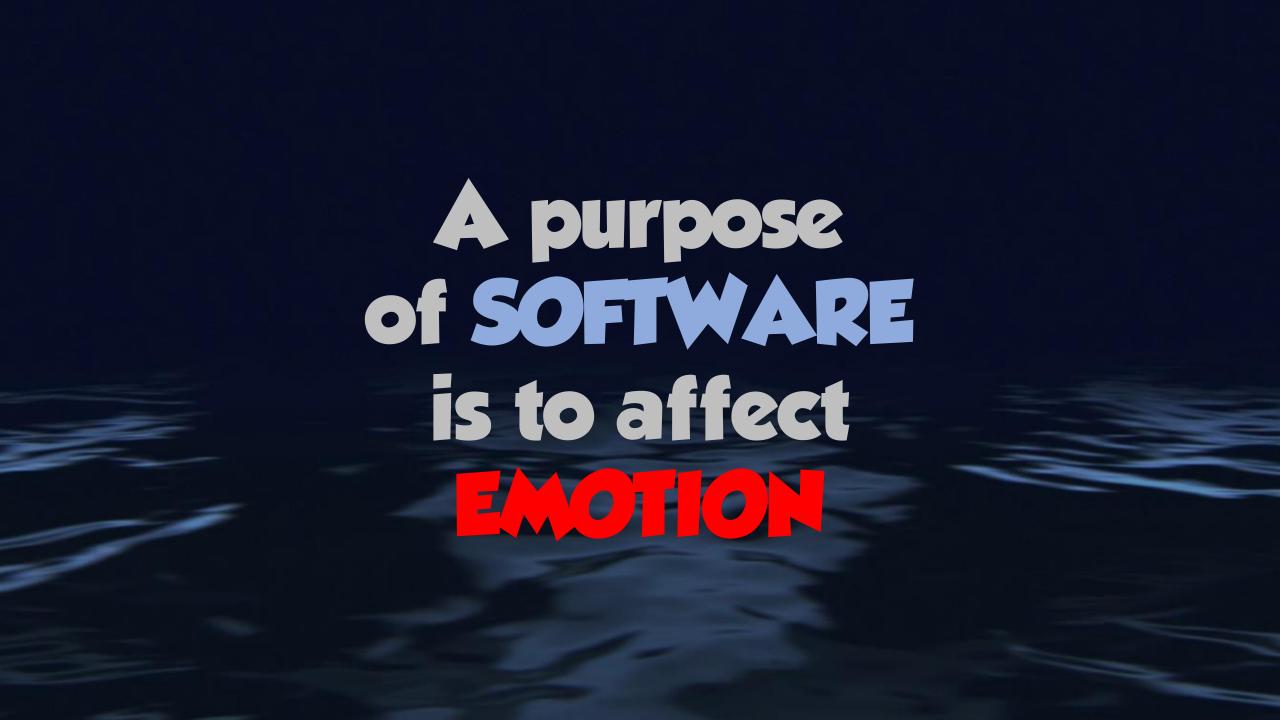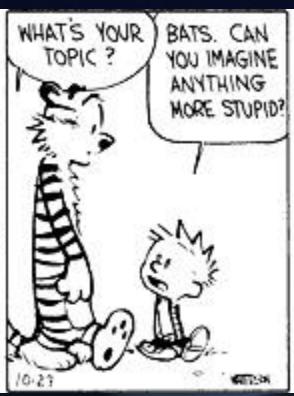
Purpose of Software
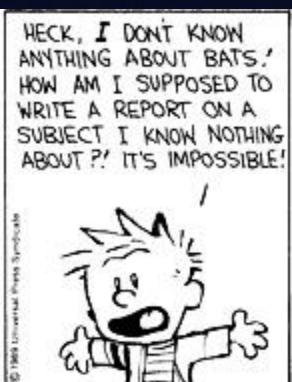
to be USEFUL
to help PEOPLE
to solve PROBLEMS
to affect EMOTION
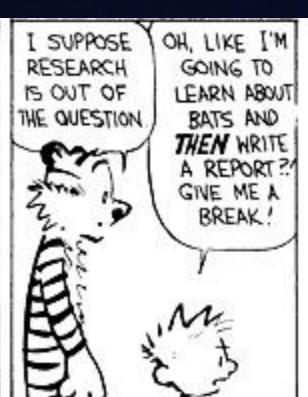
Purpose of Software

to affect **EMOTION**

...unless...

MONOPOLY

&

NECESSITY

A purpose
of SOFTWARE
is to affect
EMOTION

Research

Research

"There are few studies in the literature that specifically address the relation between EMOTIONS and SOFTWARE."

"Modelling Emotional Requirements", 2014

Research

- Boehm, B.W. and Ross, R., 1989, "Theory W Software Project Management: Principles and Examples"
- Goguen, J.A., 1994, "Requirements Engineering as the Reconciliation of Technical and Social Issues"
- Santos, I. and Carvalho, J.A., 1998, "Computer-Based Systems that Support the Structural, Social, Political and Symbolic Dimensions of Work"
- Clarisse S. de Souza, Raquel O. Prates, Simone D. J. Barbosa, 2003, "Adopting Information Technology as a First Step in Design: Lessons Learned from Working with Brazilian Social Volunteers"
- Johann Rost, 2004, "Political Reasons for Failed Software Projects"
- Isabel Ramos, Daniel M. Berry, 2005, "Is Emotion Relevant to Requirements Engineering?"
- Isabel Ramos, Daniel M. Berry, Joao A. Carvalho, 2005, "Requirements engineering for organizational transformation"
- David Callele, Eric Neufeld, Kevin Schneider, 2006, "Emotional Requirements in Video Games"
- R. Proynova, B. Paech, S. H. Koch, A. Wicht, and T. Wetter, 2011, "Investigating the influence of personal values on requirements for health care information systems"
- Antonio A. Lopez-Lorca, Tim Miller, Sonja Pedell, Leon Sterling, Maheswaree Kissoon Curumsing, 2014, "Modelling Emotional Requirements"

Research

" "...[we argue] that EMOTIONS are just as important and valid as factors affecting requirements as are any other traditional FACTOR..."

"Is Emotion Relevant to Requirements Engineering?", 2005

Research

"...the induced **EMOTIONAL** state is the most important deliverable requirement. Any **FUNCTIONALITY** that exists, exists only to further that **EMOTIONAL** goal..."

"Emotional Requirements in Video Games", 2006

Research

"...one way to produce better systems is to explore the users' **EMOTIONS** to uncover those **HIDDEN REQUIREMENTS** that may otherwise be ignored."

"Modelling Emotional Requirements", 2014

Research
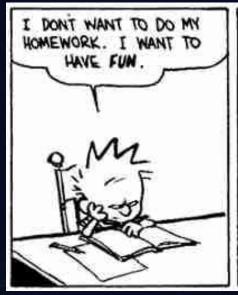
"" "...developers recognized that volunteers are **MOTIVATED** not for **MONEY** or **ADVANCEMENT**, but for their own **SATISFACTION**.""
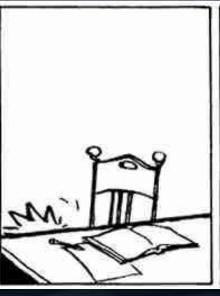
"Adopting Information Technology as a First Step in Design: Lessons Learned from Working with Brazilian Social Volunteers", 2003

Research

"The way people **FEEL** about a **TECHNOLOGY** can determine whether the technology is **EMBRACED** or **REJECTED** by its intended users."

"Modelling Emotional Requirements", 2014
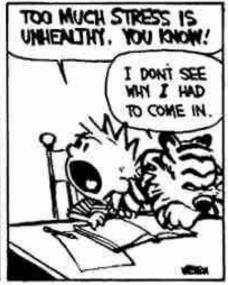
Research suggests that **EMOTIONAL** requirements can influence **SOFTWARE** acceptance and should be considered.

Requirements

Requirements

Requirement (Software)
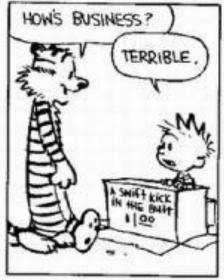
A particular thing or goal that a system should be or do

Formats

- System should be/do ‹thing›
- As a ‹role›, I want ‹goal›, So that ‹benefit›

Requirements

STRUCTURAL
ARCHITECTURAL
NON-FUNCTIONAL
DESIGN MARKET
SYSTEM
BUSINESS
FUNCTIONAL
CUSTOMER
BEHAVIORAL UI/UX
PERFORMANCE

Requirements

Requirement
A thing that is **wanted** or **needed**.

Want
Something that is **desired**.

Need
Something that is **necessary**.

Requirements

Requirements

Requirement
   A thing that is wanted or needed.

   1. Identify the requirement (X).
   2. Establish the purpose (Y) for X.
   3. Ask, "Can Y be achieved without X?"
      • If "Yes", then X is a want
      • If "No", then X is a need

Requirements

"\"I require a Library Card\"

1. Identify the requirement (a Library Card).
2. Establish the purpose for the Library Card (Checking out books from the library).
3. Ask, \"Can I check out books from the library without a]Library Card?\"\"
   • \"No\" (the Library Card is a need)

Requirements

Library Card | Need
to Check Out Books | Want
to Gain Knowledge | Need
to Learn to Cook | Want
to Impress Someone | Want
to Date Them | Want
to FEEL HAPPY | Want? Need?

Requirements are WANTS or NEEDS that can affect, and often originate from, EMOTIONS.

The way we **FEEL** about **SOFTWARE** is **IMPORTANT**

Emotional Requirements

Emotional Requirements

Requirement (Software)
A particular thing or goal that a system should be or do

Emotional Requirement (Software)
A particular feeling that a system should induce in a particular user

Emotional Requirements

Requirement Formats

- System should be/do <thing>
- As a <role>, I want <goal>, So that <benefit>
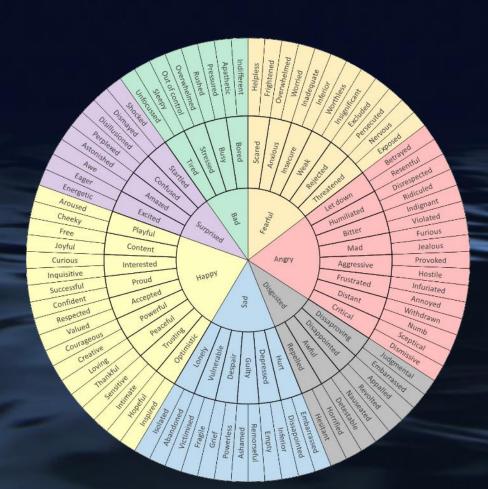
Emotional Requirement Formats

- System should be/do <thing> inducing <feeling> in <role>
- As a <role>, I want <goal>, So that <feeling>

Emotional Requirements

Feeling

What emotion do you want to induce?

anger, disgust,
fear, anticipation,
joy, sadness,
surprise, trust

Emotional Requirements

Feeling
What emotion do you want to induce?

Target (Role/User)
In whom do you want to induce this emotion?

Context
What is the set of circumstances?

Emotional Requirements

Getting Emotional Requirements

- Interviews, Discussions
- Surveys, Polls, Questionnaires
- Observation
- Personas
- Others (Ethnography, UDUM)
- Usability Matrix of Emotions

Emotional Requirements

Inducing Emotional Requirements
- Case-by-case

Emotional Requirements

Measuring Emotional Requirements

- Interviews, Discussions
- Surveys, Polls, Questionnaires
- Observation
- Role-Play
- Others (DEQ, Reiss Profile, PrEmo)
- Usability Matrix of Emotions

Placebos

Placebos

Placebo
Any thing or procedure that is intended solely for **mental effects**, but purports to also have (and may actually result in) physical effects, as well

Placebos

Placebo response
A **beneficial** physical effect seemingly caused by a placebo but cannot be attributed to the physical properties of the placebo

Nocebo response
A **detrimental** physical effect seemingly caused by a placebo but cannot be attributed to the physical properties of the placebo

Placebos

CLINICAL to placate
EXPERIMENTAL to control
CONDITIONING to appease

Placebos

CONDITIONING

"**Feeling** you have control over your world is a **desirable** state" —Ellen Langer, Harvard psychology professor

- Thermostats
- Street Crossing buttons
- Door Closing buttons
- Progress Bars
- Refresh & Save Buttons
- Boo-boo kiss

Placebos

Isolating Emotions
Imagine that some function or property is just a placebo to better consider the intended emotions that it should induce.

Bugs
Consider various scenarios to help determine intended and unintended results.

Placebos

Ethics
Consider intentionally deceiving users for their benefit.

Placebos

Thinking about SOFTWARE in terms of PLACEBOS can be useful.

Summary

- Successful businesses and people recognize the importance of **EMOTIONS**.
- A purpose of **SOFTWARE** is to affect **EMOTION**.
- Research indicates that **EMOTIONAL** requirements can influence **SOFTWARE** acceptance and should be considered.
- Requirements are **WANTS** or **NEEDS** that can affect, and often originate from, **EMOTIONS**.
- There are many methods to get and measure **EMOTIONAL** requirements.
- Thinking about **SOFTWARE** in terms of **PLACEBOS** can be useful.

The way we **FEEL** about **SOFTWARE** is **IMPORTANT**

Thank You !

The Hidden Requirements

Exploring
EMOTIONS
with
PLACEBOS

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