

The **Hidden** Requirements

About Me



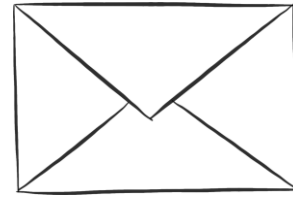
Damian Synadinos



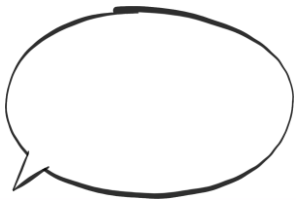
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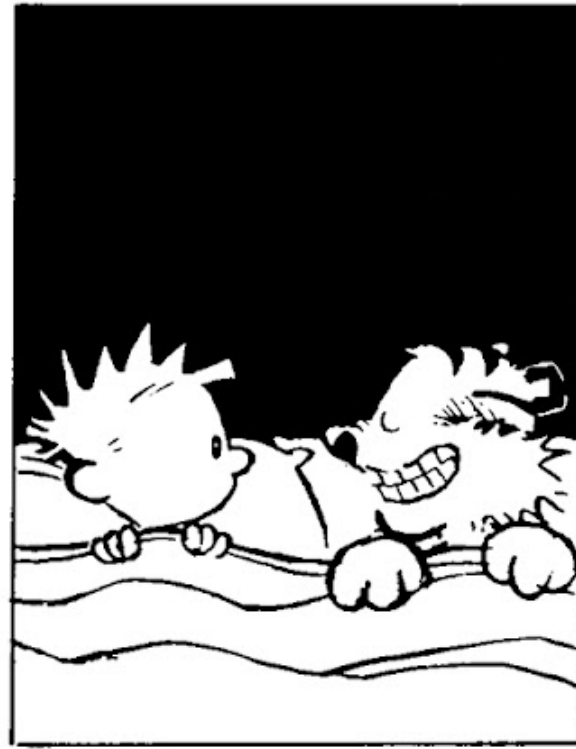


"Hey, Damian!"



<https://www.linkedin.com/in/damiansynadinos>

Why?



The way we **FEEL**
about **SOFTWARE**
is important!

Agenda

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

Exercise!

RRGGGH.... 125



OOF



RRRGGH... 5,200!



EXERCISE IS A LOT MORE
GRATIFYING IF YOU COUNT
WHAT IT *FEELS* LIKE.



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WEEBEN 3-18

Quotations



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“When dealing with people,
remember you are not dealing
with creatures of LOGIC,
but with creatures of EMOTION.”

-Dale Carnegie, American writer

"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

"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



"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

"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



"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**."

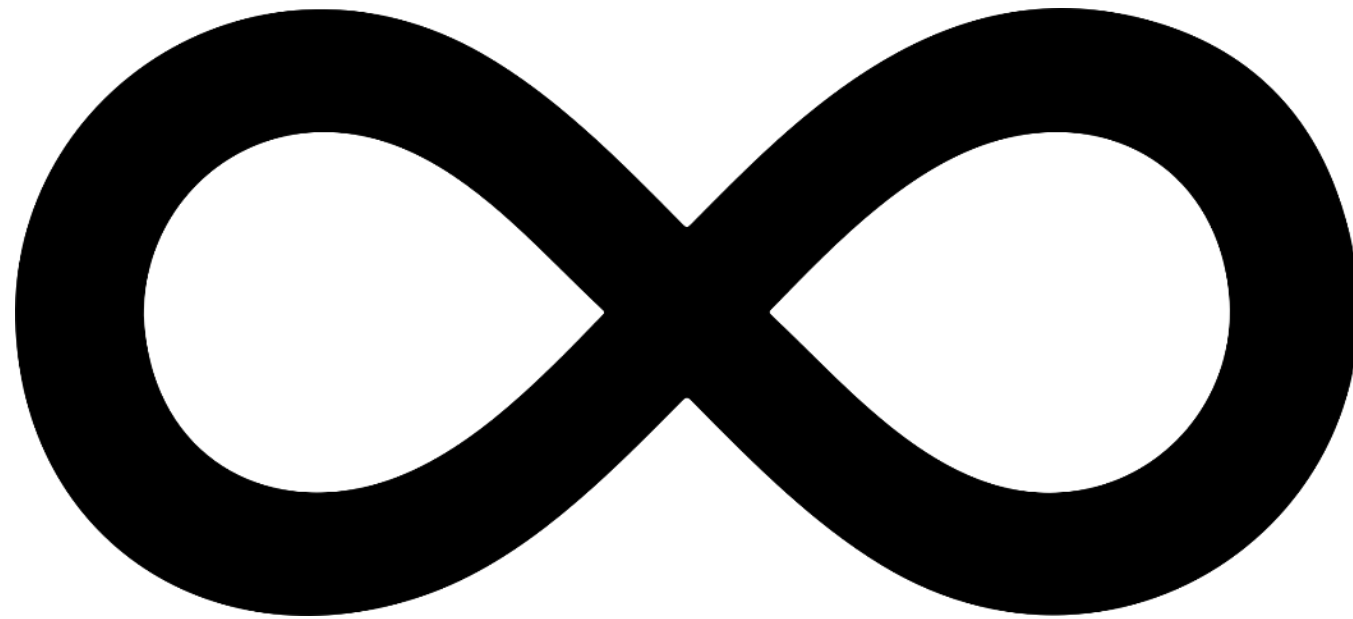
-Debbie Fields, Mrs. Fields Cookies founder

Successful businesses
and people
recognize the
importance of **EMOTIONS!**

Purpose of Software



Specifically...



Generally...

to organize **INFORMATION**

to collect and process **DATA**

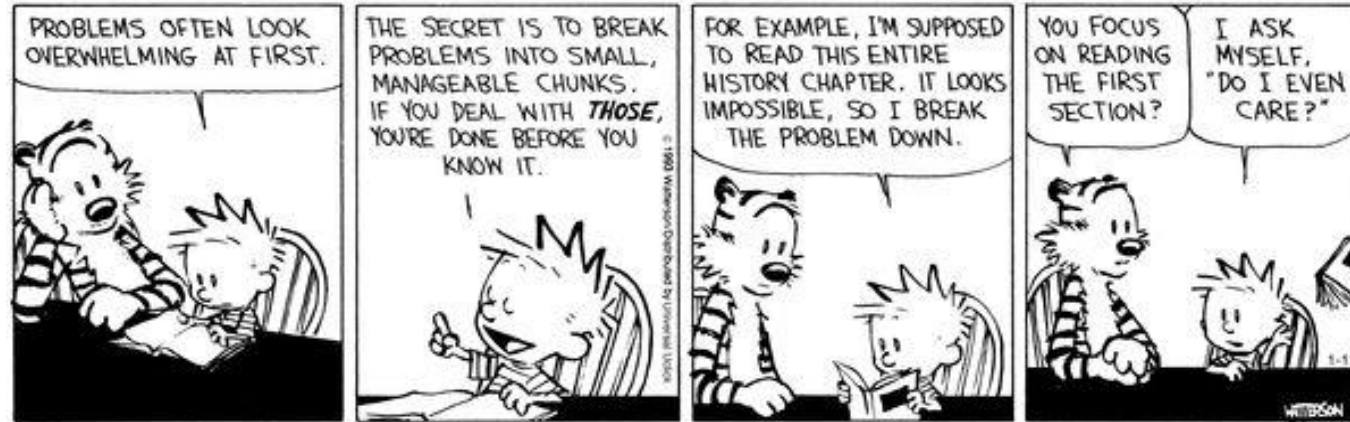
to simplify/automate **WORKLOAD**

to maximize **SHAREHOLDER PROFIT**

More generally...

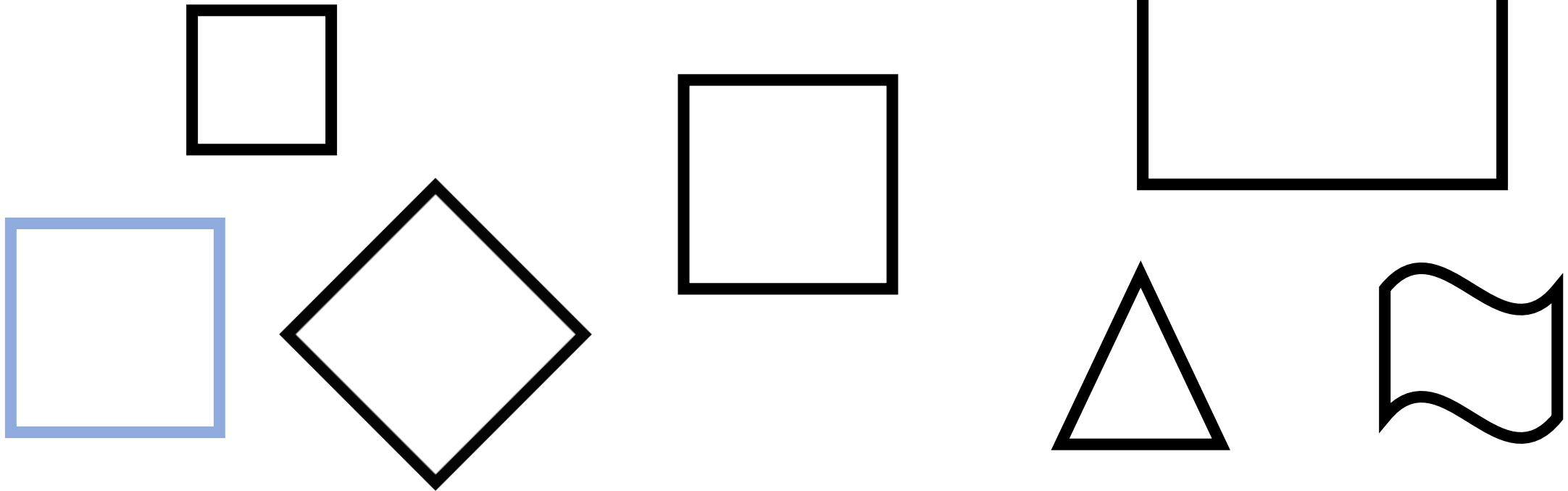
to be **USEFUL**
to help **PEOPLE**
to solve **PROBLEMS**

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**.



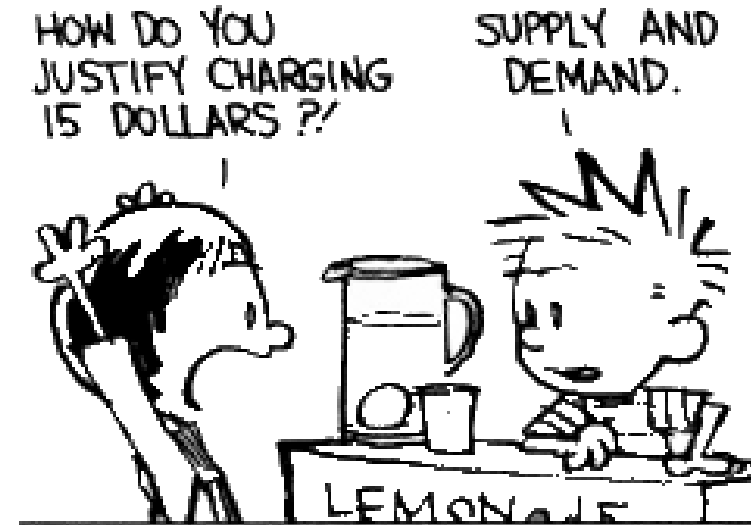
EMOTIONS are an
essential characteristic
of **problems** and **solutions!**

More generally...

to be **USEFUL**
to help **PEOPLE**
to solve **PROBLEMS**
to affect **EMOTION**

Unless...

Monopoly & Necessity



A purpose
of SOFTWARE
is to affect
EMOTION!

Exercise!

EIGHT HUNDRED AND SEVENTY-THREE MILLION...



... FOUR HUNDRED NINETY-ONE THOUSAND....

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... SIX HUNDRED AND THIRTY-TWO!



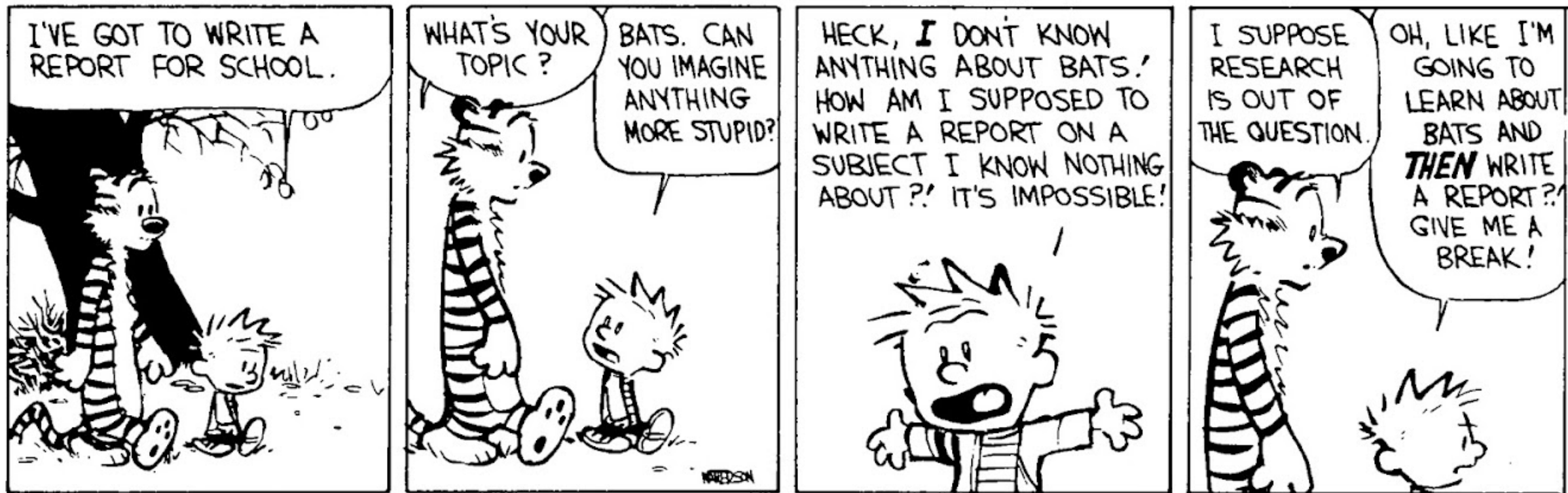
THIS GETS EASIER WHEN THE NUMBERS ARE BIG.

WEEK

9-10

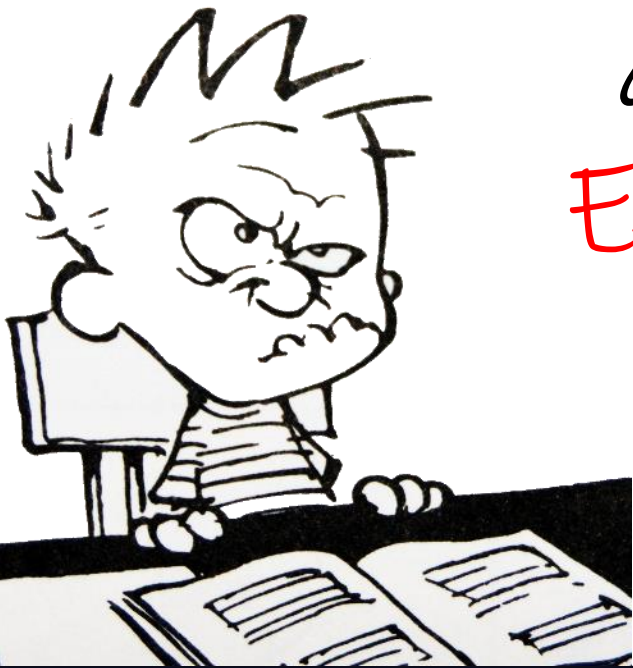


Research



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

-Modelling Emotional Requirements, 2014



- 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"

"...[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



"...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

"...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



"...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

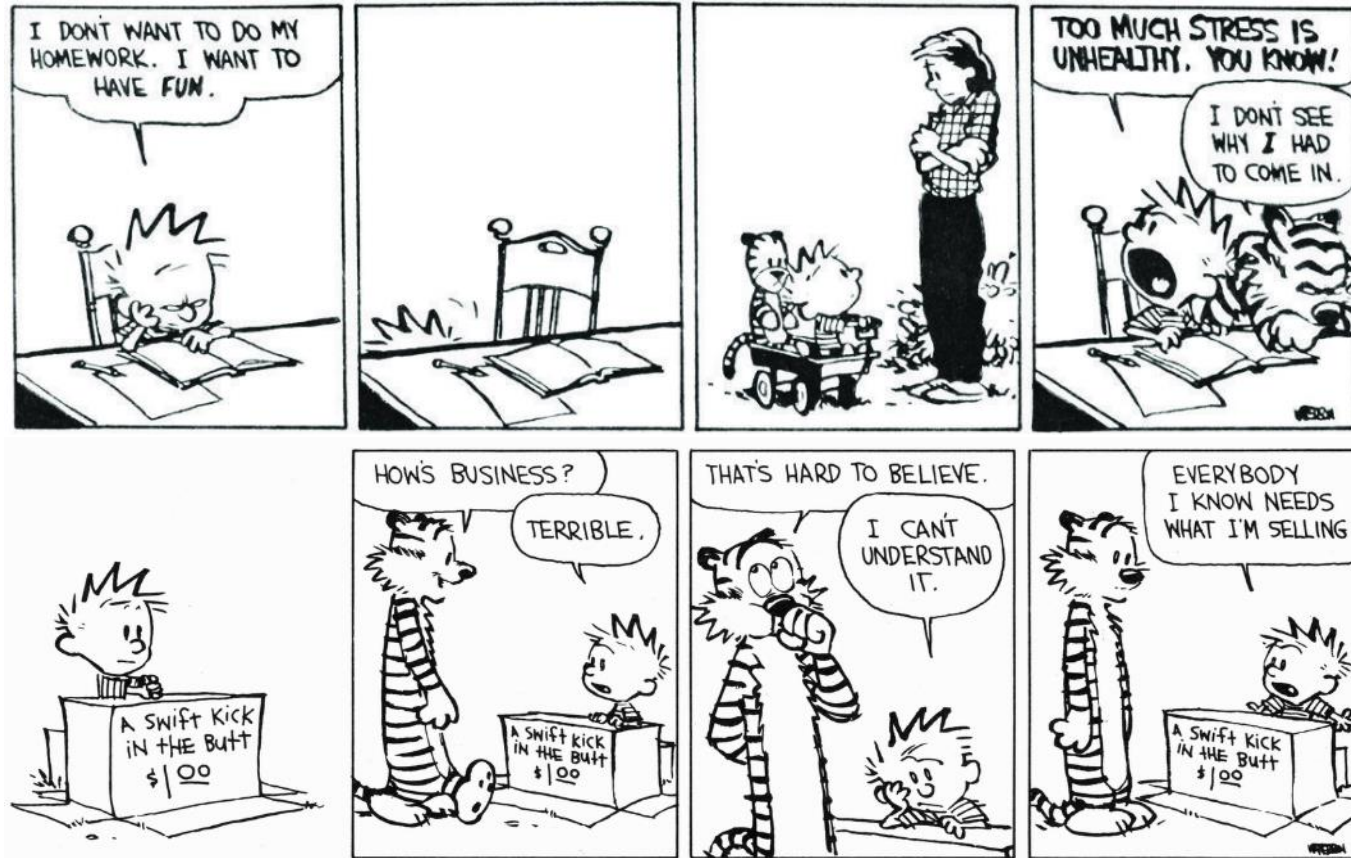


"The way people
FEEL about a **TECHNOLOGY**
can determine whether
the technology is
embraced or rejected
by its intended users."

-Modelling Emotional Requirements, 2014

Research suggests that
EMOTIONAL requirements
can influence **SOFTWARE**
acceptance and should be
considered!

Requirements



• Software Requirement

- 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>**

• Requirement

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

• Want

- Something that is **desired**.

• Need

- Something that is **necessary** (for some purpose).



• 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**.

“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**)

- Library card
- To check out books
- To gain knowledge
- To learn to cook
- To impress someone
- To date them
- To feel happy

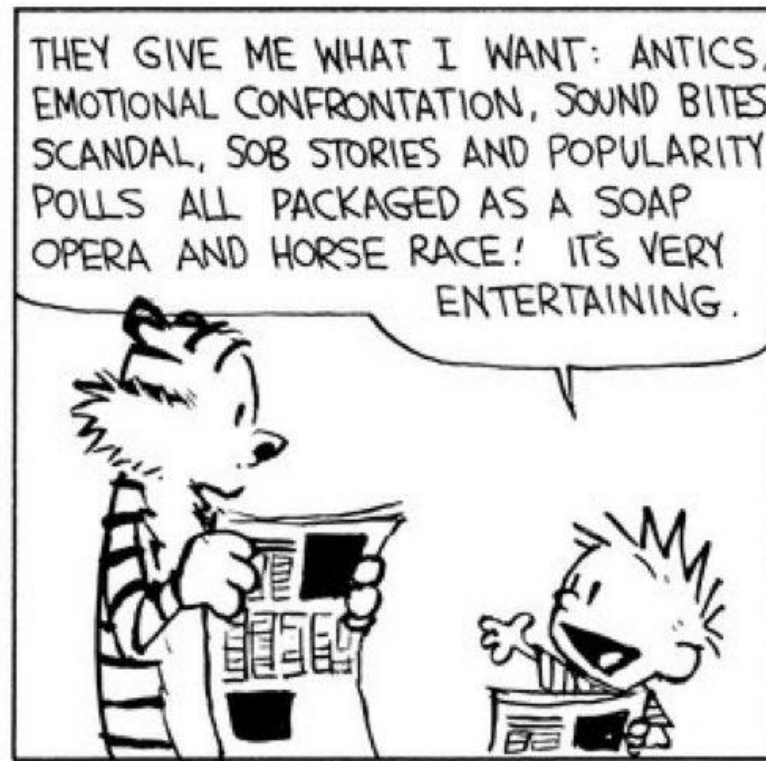
Requirements are
WANTS or **NEEDS**
that can affect,
and often originate from,
EMOTIONS.

Exercise!



The way we **FEEL**
about **SOFTWARE**
is *important!*

Emotional Requirements



• Software Requirement

- A particular **thing or goal** that a system should be or do.

• Emotional Requirements

- A particular **feeling** that a system should induce in a particular user.

• Requirement Formats

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

• Emotional Requirement Formats

- System should induce <feeling> in <role>
- As a <role>, I want <goal>, So that <feeling>

- Feeling

- What **emotion** do you want to induce?

- Target

- In whom do you want to induce this **emotion**?

- Context

- What is the set of circumstances?

• Getting **Emotional** Requirements

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

• Inducing **Emotional** Requirements

- Case-by-case



• Measuring **Emotional** Requirements

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

There are many methods
to get and measure
EMOTIONAL requirements.

Exercise!



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).

CLINICAL to placate
EXPERIMENTAL to control
CONDITIONING to appease

"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

• Isolating Emotions

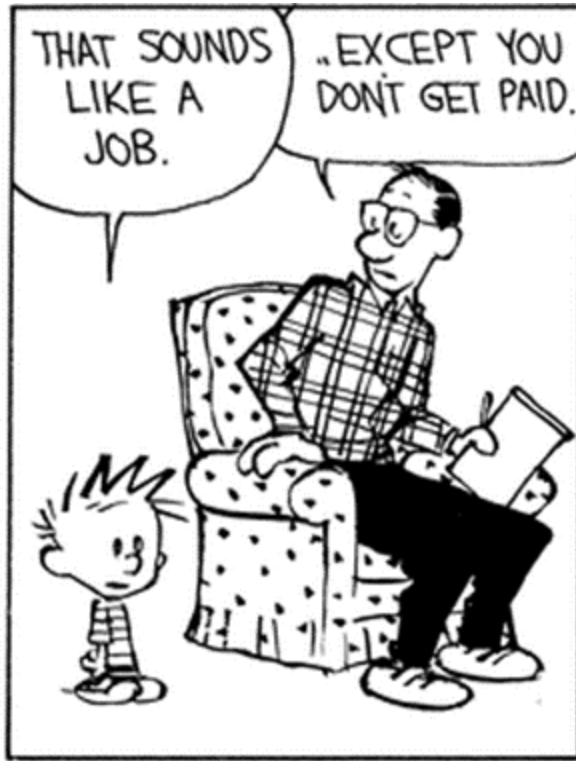
- Imagine that some function or property is just a placebo to better consider the intended emotions that it should induce.



Exercise!



GROWN-UPS CAN ONLY JUSTIFY PLAYING OUTSIDE BY CALLING IT EXERCISE, DOING IT WHEN THEY'D RATHER NOT, AND KEEPING RECORDS TO QUANTIFY THEIR PERFORMANCE.

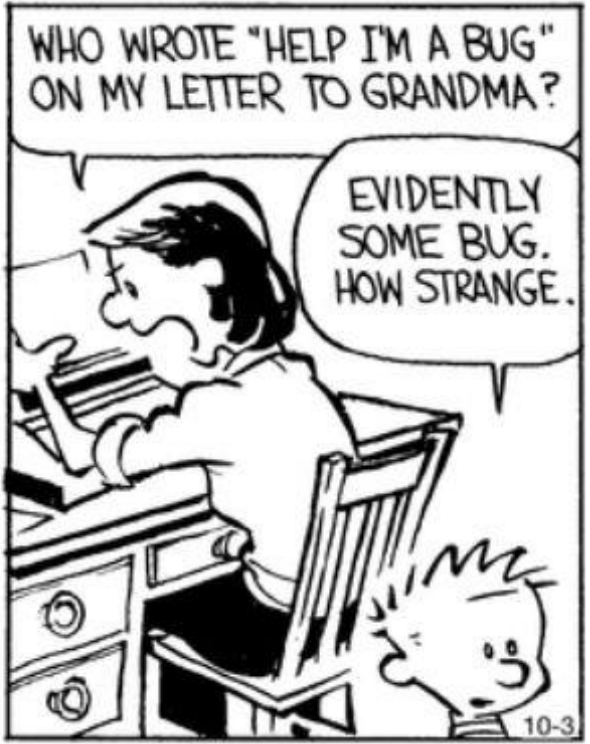


•Bugs

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



Exercise!



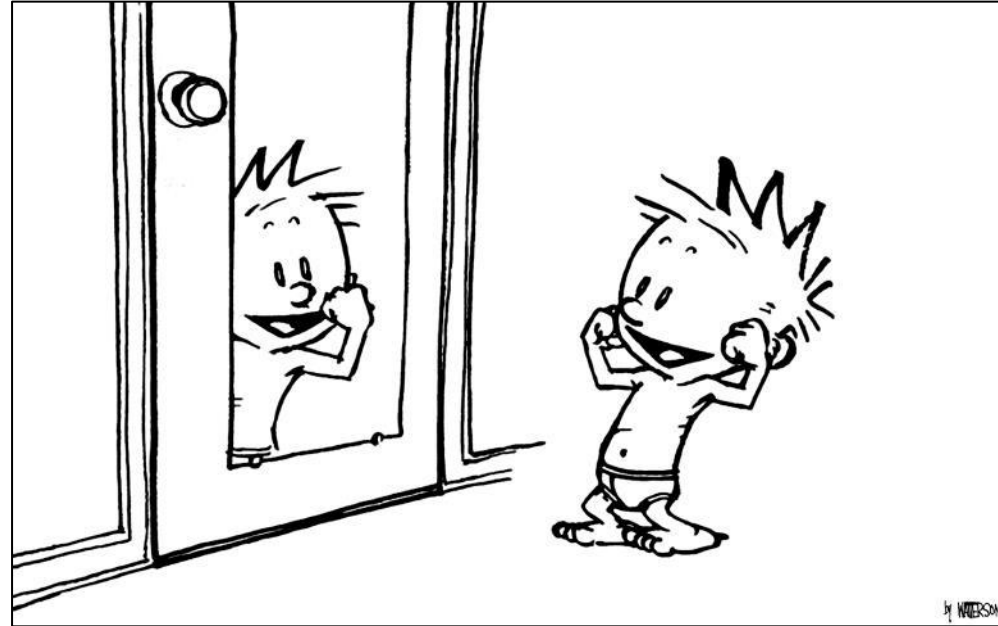
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•Ethics

- Consider intentionally deceiving users for their benefit.



Exercise!



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.

Summary

- 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!

