The Hidden Requirements

Exploring EMOTIONS with PLACEBOS

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Why?

I WONDER WHY MAN WAS PUT ON EARTH. WHAT'S OUR PURPOSE? WHY ARE WE HERE?
TIGER FOOD.

The way we FEEL about SOFTWARE is IMPORTANT

Agenda

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

Quotations

SO WHAT'S IT LIKE BEING ON TV?
IT'S GREAT!
NOW THAT I'M ON TELEVISION, I'M DIFFERENT FROM EVERYBODY ELSE! I'M FAMOUS! IMPORTANT!
SINCE EVERYONE KNOWS ME, EVERYTHING I DO NOW IS NEWSWORTHY. I'M A CULTURAL ICON.
I THINK YOUR ANTENNA NEEDS ADJUSTING.
WATCH, I'LL USE MY PRESTIGE TO ENDORSE A PRODUCT!
9-30

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

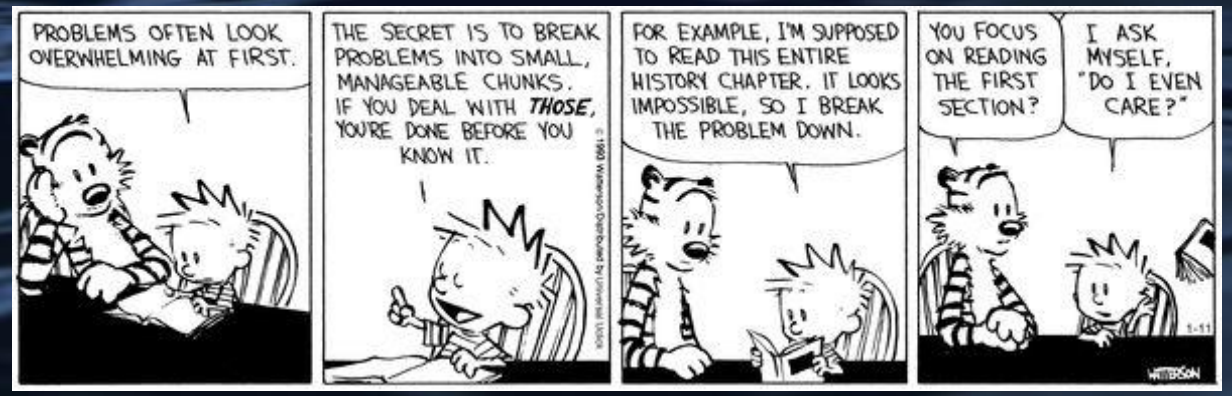
Generally…

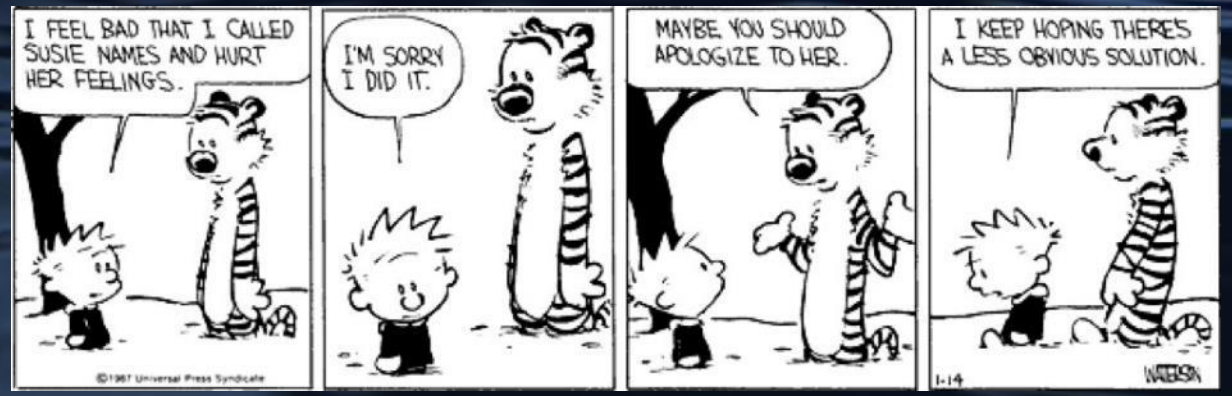
to organize INFORMATION
to collect and process DATA
to simplify/automate WORKLOAD
to maximize SHAREHOLDER PROFIT

Purpose of Software

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

What is a PROBLEM?
What is a SOLUTION?





Square

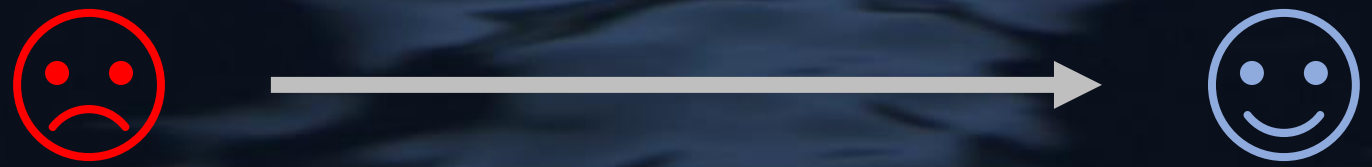
A figure with **four equal straight sides** and **four right angles**

Problem

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

Solution

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



EMOTIONS

are an essential characteristic

of PROBLEMS and SOLUTIONS

Purpose of Software

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

Purpose of Software

to affect EMOTION

...unless...

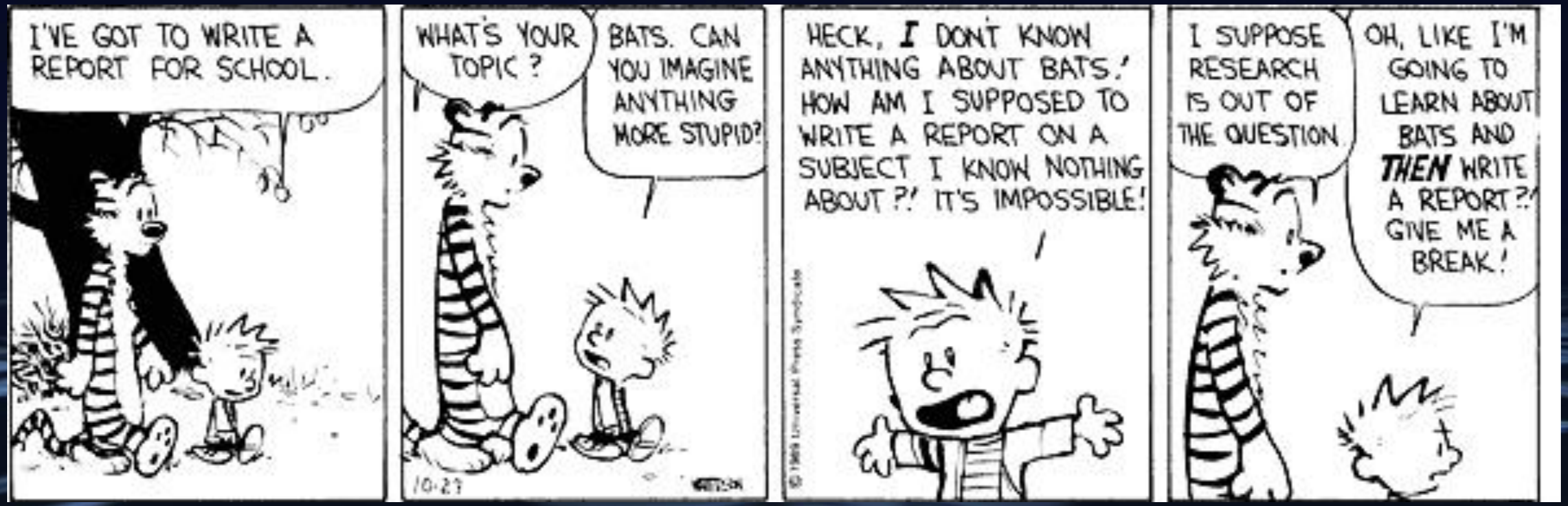
MONOPOLY

&

NECESSITY

A purpose
of SOFTWARE
is to affect
EMOTION

Research


I'VE GOT TO WRITE A REPORT FOR SCHOOL.
WHAT'S YOUR TOPIC?
BATS. CAN YOU IMAGINE ANYTHING MORE STUPID?
HECK, I DON'T KNOW ANYTHING ABOUT BATS! HOW AM I SUPPOSED TO WRITE A REPORT ON A SUBJECT I KNOW NOTHING ABOUT?! IT'S IMPOSSIBLE!
I SUPPOSE RESEARCH IS OUT OF THE QUESTION
OH, LIKE I'M GOING TO LEARN ABOUT BATS AND THEN WRITE A REPORT?! GIVE ME A BREAK!

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

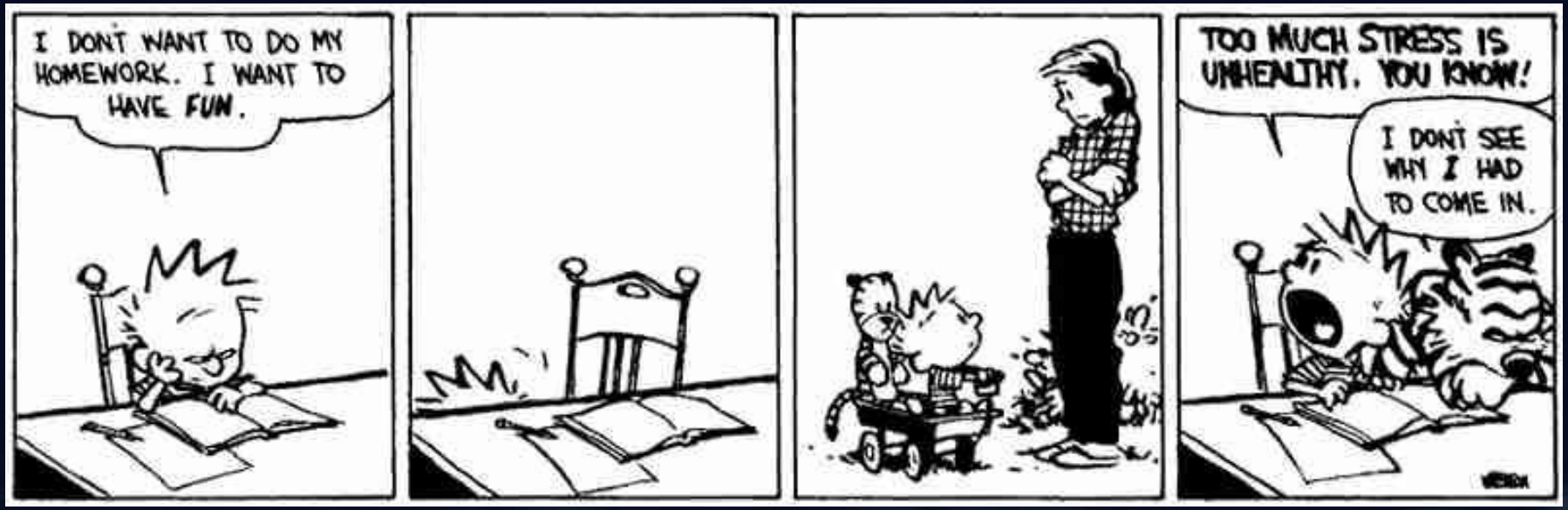
Research

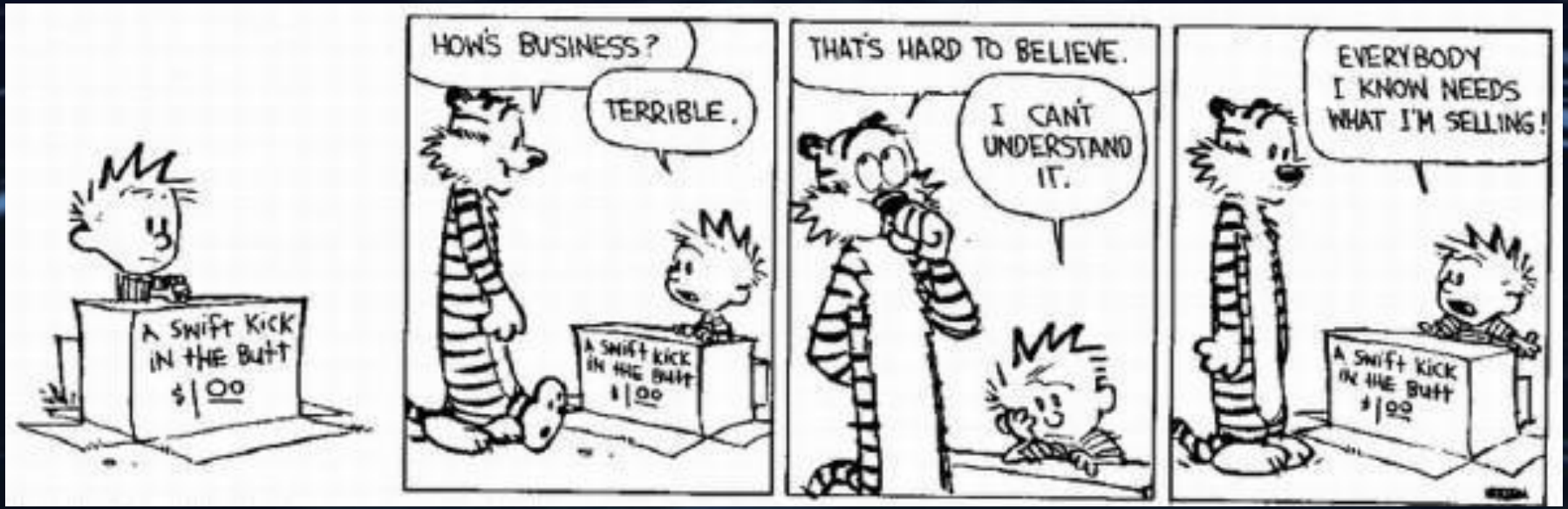
"The way people
FEEL about a **TECHNOLOGY**
can determine whether the technology is
EMBRACED or **REJECTED**
by its intended users."

"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

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 Checking out books from the library be achieved without a]Library Card?”"
   - “No” (the Library Card is a **need**)

Requirements

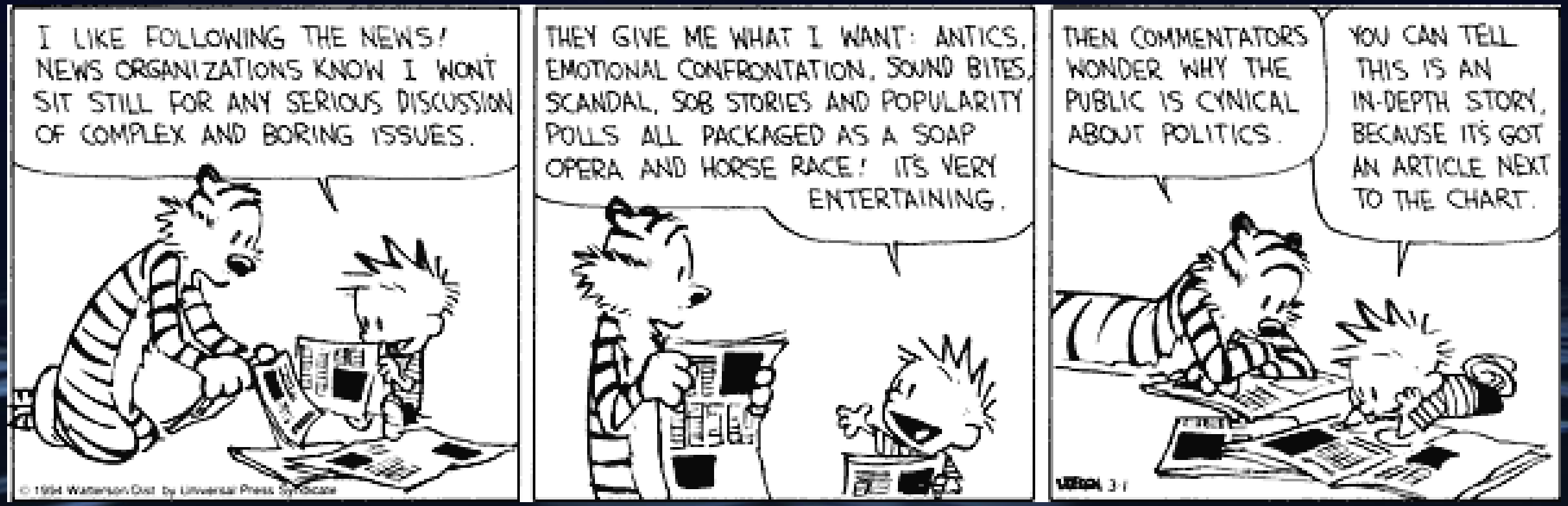
Library Card	Need
to Check Out Books	Want
to Gain Knowledge	Need
to Learn to Cook	Want
to Impress Someone	Want
to Date Them	Want
to FEEL HAPPY	Want? Need?

Requirements

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

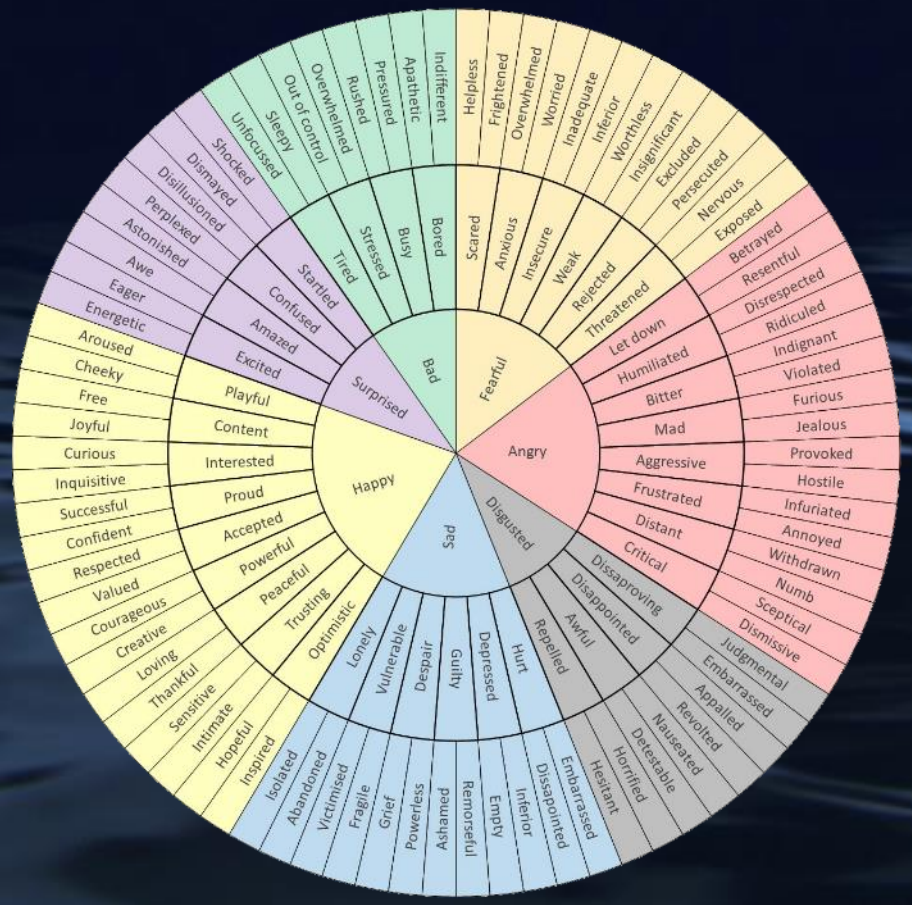
- System should be/do <thing> inducing <feeling> in <role>
- As a <role>, I want <goal>, So that <feeling>

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

Emotional Requirements

There are many methods to get and measure **EMOTIONAL** requirements.

Placebos

I WATCHED AN OLD MOVIE WITH MOM LAST NIGHT.
IT DIDN'T HAVE ANY VIOLENCE, EXPLOSIVE ACTION, OR SWEARING. THERE WAS NOTHING SHOCKING ABOUT IT AT ALL.
DID YOU LIKE IT?
IT'S HARD TO SAY.
NOT HAVING MY EMOTIONS MANIPULATED IS SUCH A WEIRD EXPERIENCE.
6-26

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

Isolating Emotions

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

Placebos

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

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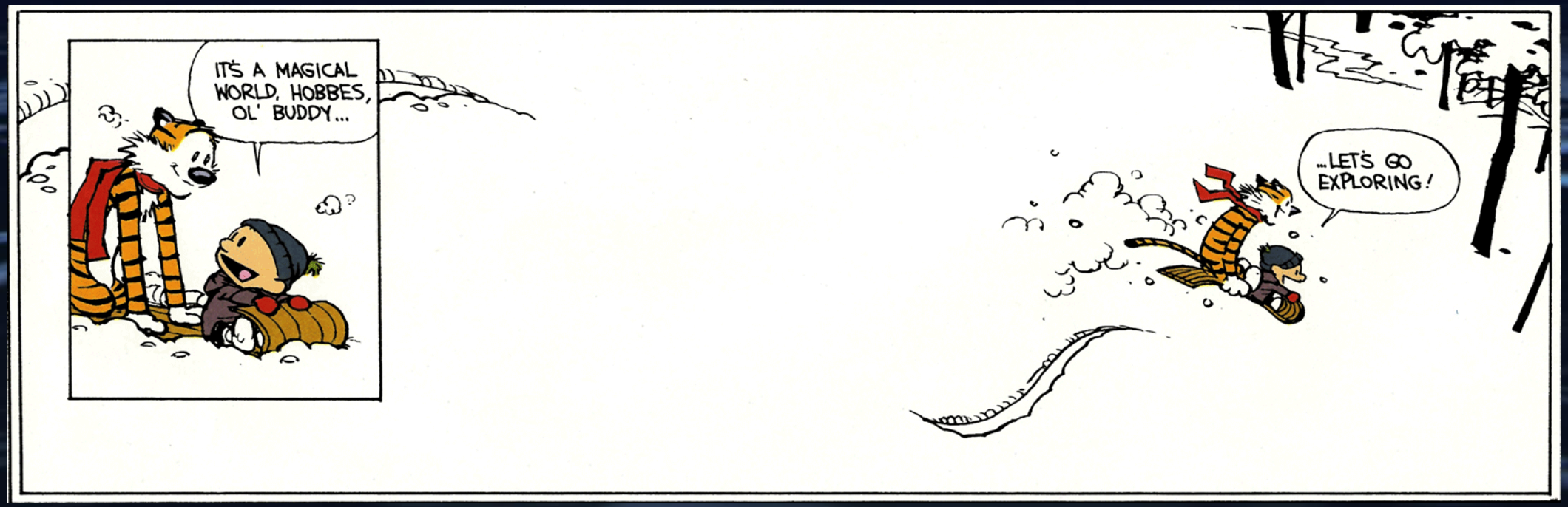
EMOTIONS
with
PLACEBOS

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