

# THE VALUES OF UX Peter Purgathofer, Visual Computing & Human Centered Design







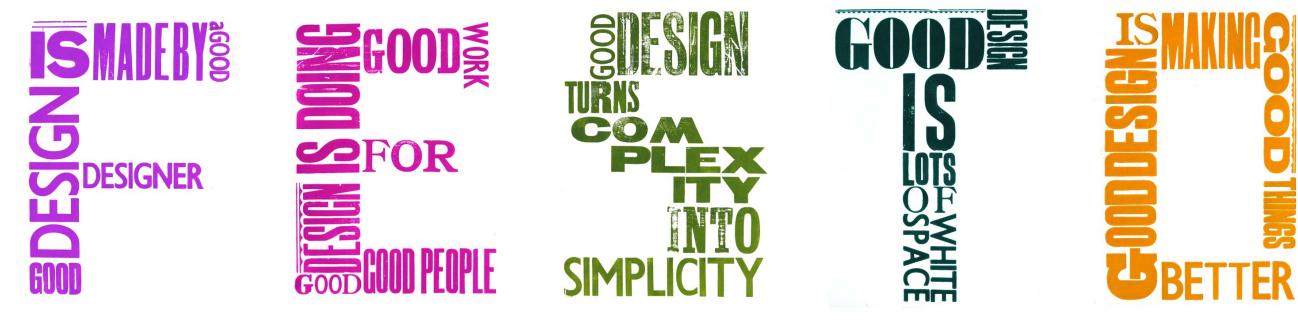




AND NUCH OF TOOLESS

**TOOLESS** 

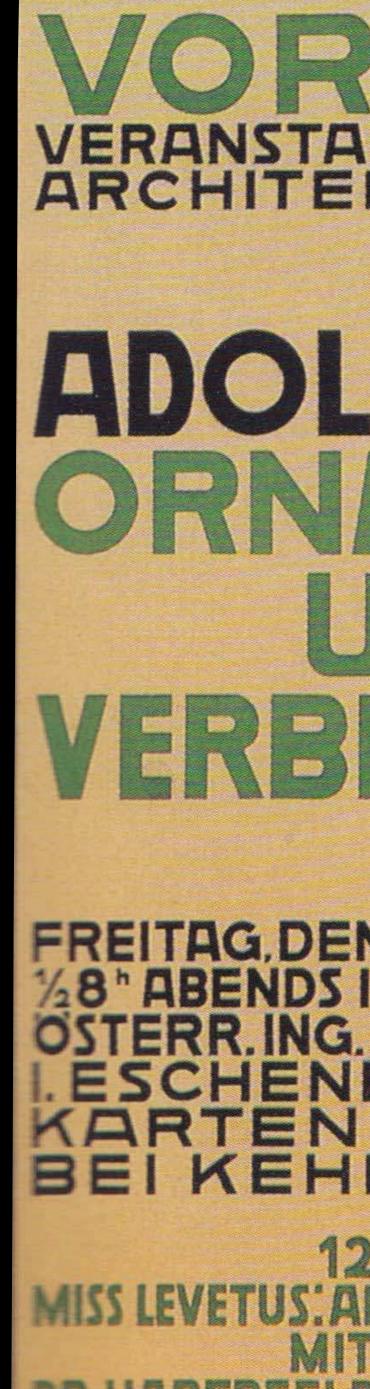




patrycja zywert, 2009



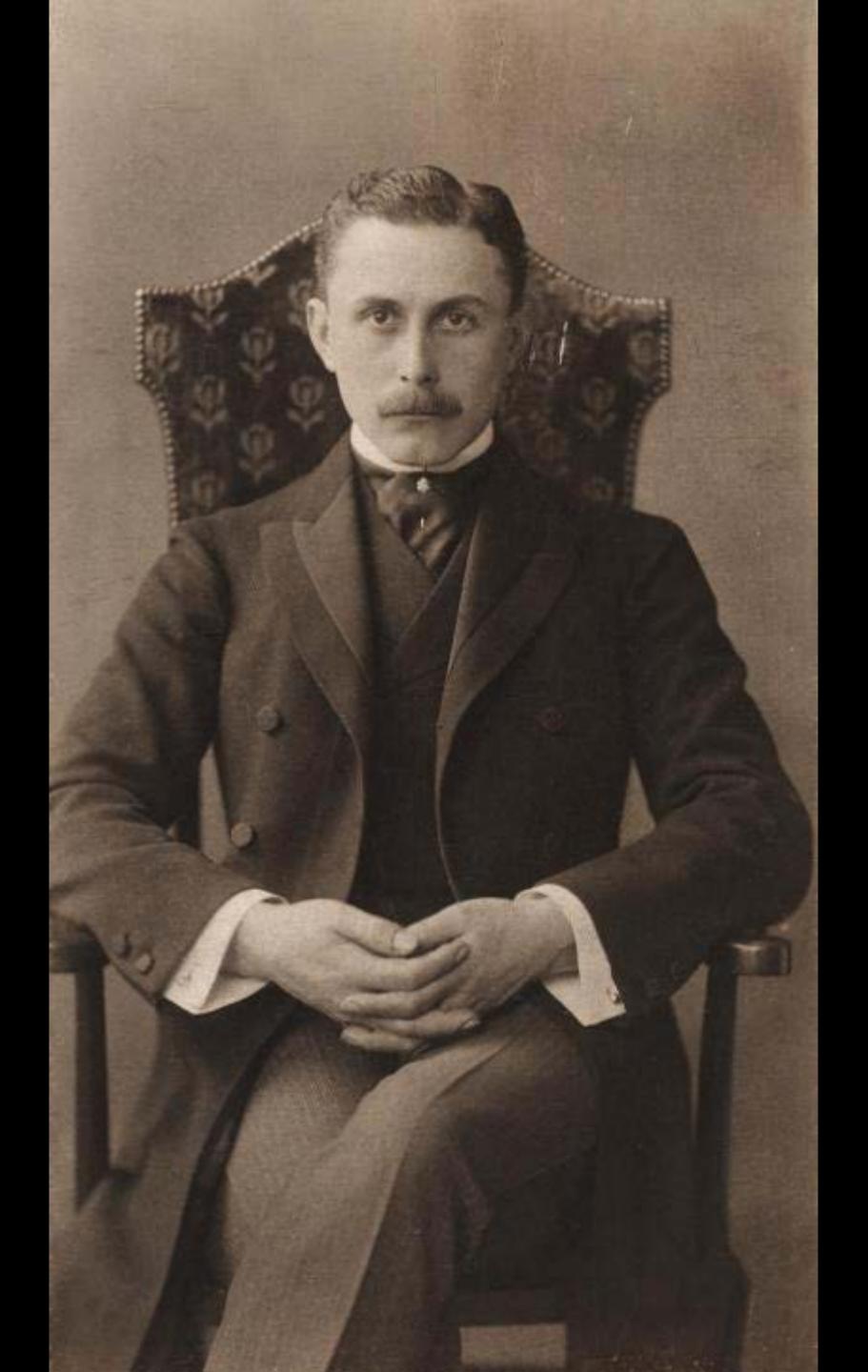




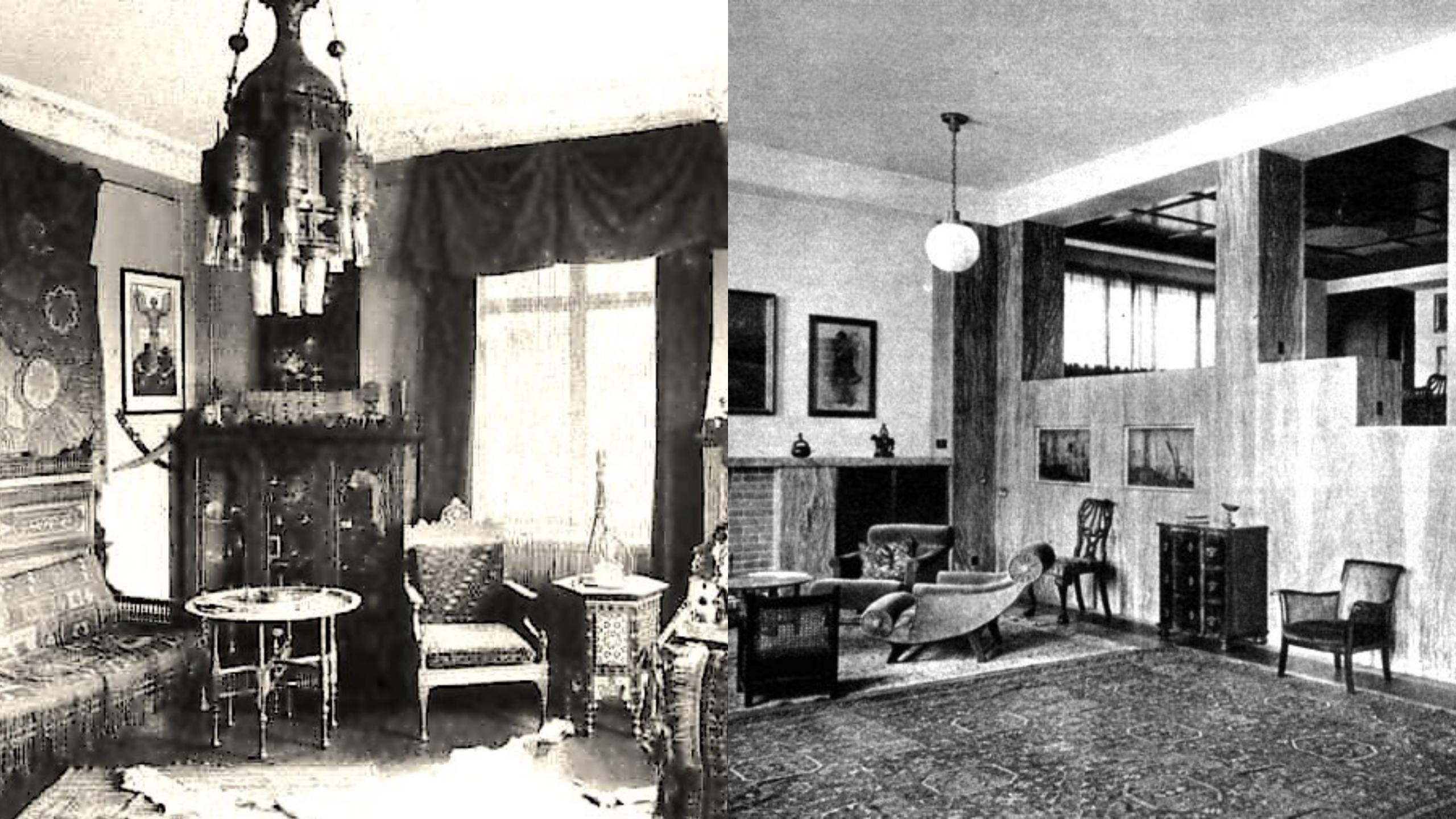
## VORTRAG VERANSTALTET VOM AKAD. ARCHITEKTEN VEREIN. ADOLF LOOS. ORNANENT UND VERBRECHEN FREITAG, DEN 21, FEBRUAR 1913.

38 ABENDS IM FESTSAAL DES OSTERR. ING. U. ARCH. VEREINES LESCHENBACHGASSE 9. KARTEN ZU 5.4.3.2.1K BEIKEHLENDORFER

12. MÄRZ: TENGL KATHEDRALEN. MITTE MARZ: DR. HABERFELD: ÜBER ADOLF LOOS.









### A manifesto

We, the undersigned, are graphic designers, photographers and students who have been brought up in a world in which the techniques and apparatus of advertising have persistently been presented to us as the most lucrative, effective and desirable means of using our talents. We have been bombarded with publications devoted to this belief, applauding the work of those who have flogged their skill and imagination to sell such things as:

cat food, stomach powders, detergent, hair restorer, striped toothpaste, aftershave lotion, beforeshave lotion, slimming diets, fattening diets, deodorants, fizzy water, cigarettes, roll-ons, pull-ons and slip-ons.

By far the greatest time and effort of those working in the advertising industry are wasted on these trivial purposes, which contribute little or nothing to our national prosperity.

In common with an increasing number of the general public, we have reached a saturation point at which the high pitched scream of consumer selling is no more than sheer noise. We think that there are other things more worth using our skill and experience on. There are signs for streets and buildings, books and periodicals, catalogues, instructional manuals, industrial photography, educational aids, films, television features, scientific and industrial publications and all the other media through which we promote our trade, our education, our culture and our greater awareness of the world.

We do not advocate the abolition of high pressure consumer advertising: this is not feasible. Nor do we want to take any of the fun out of life. But we are proposing a reversal of priorities in favour of the more useful and more lasting forms of communication. We hope that our society will tire of gimmick merchants, status salesmen and hidden persuaders, and that the prior call on our skills will be for worthwhile purposes. With this in mind, we propose to share our experience and opinions, and to make them available to colleagues, students and others who may be interested.

Edward Wright **Geoffrey White** William Slack Caroline Rawlence Ian McLaren Sam Lambert Ivor Kamlish **Gerald Jones** Bernard Higton Brian Grimbly John Garner Ken Garland Anthony Froshaug **Robin Fior** Germano Facetti Ivan Dodd Harriet Crowder Anthony Clift Gerry Cinamon **Robert Chapman** Ray Carpenter Ken Briggs

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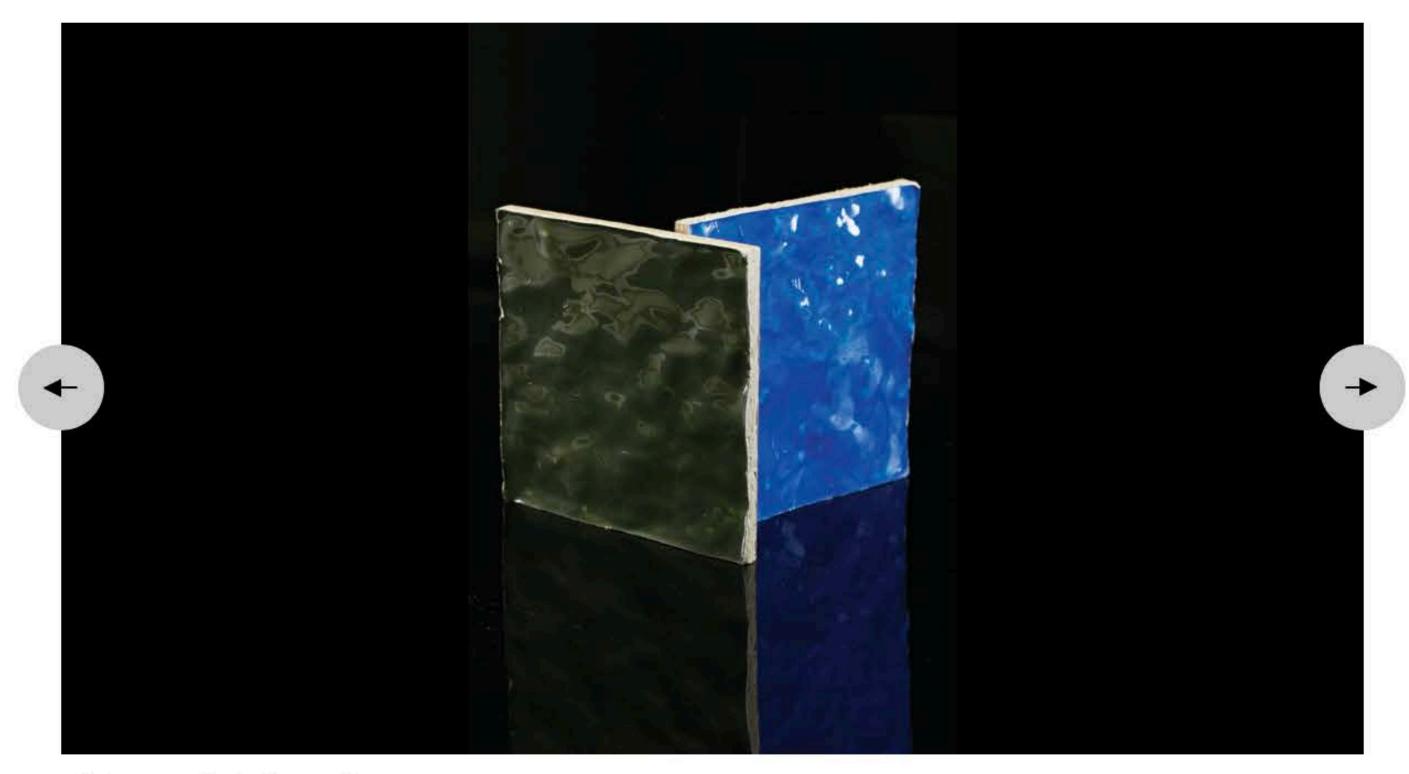
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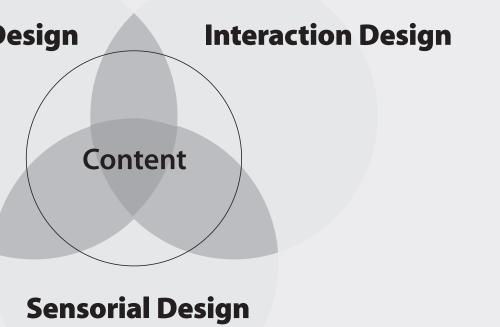
### Information Interaction Design: A Unified Field Theory of Design

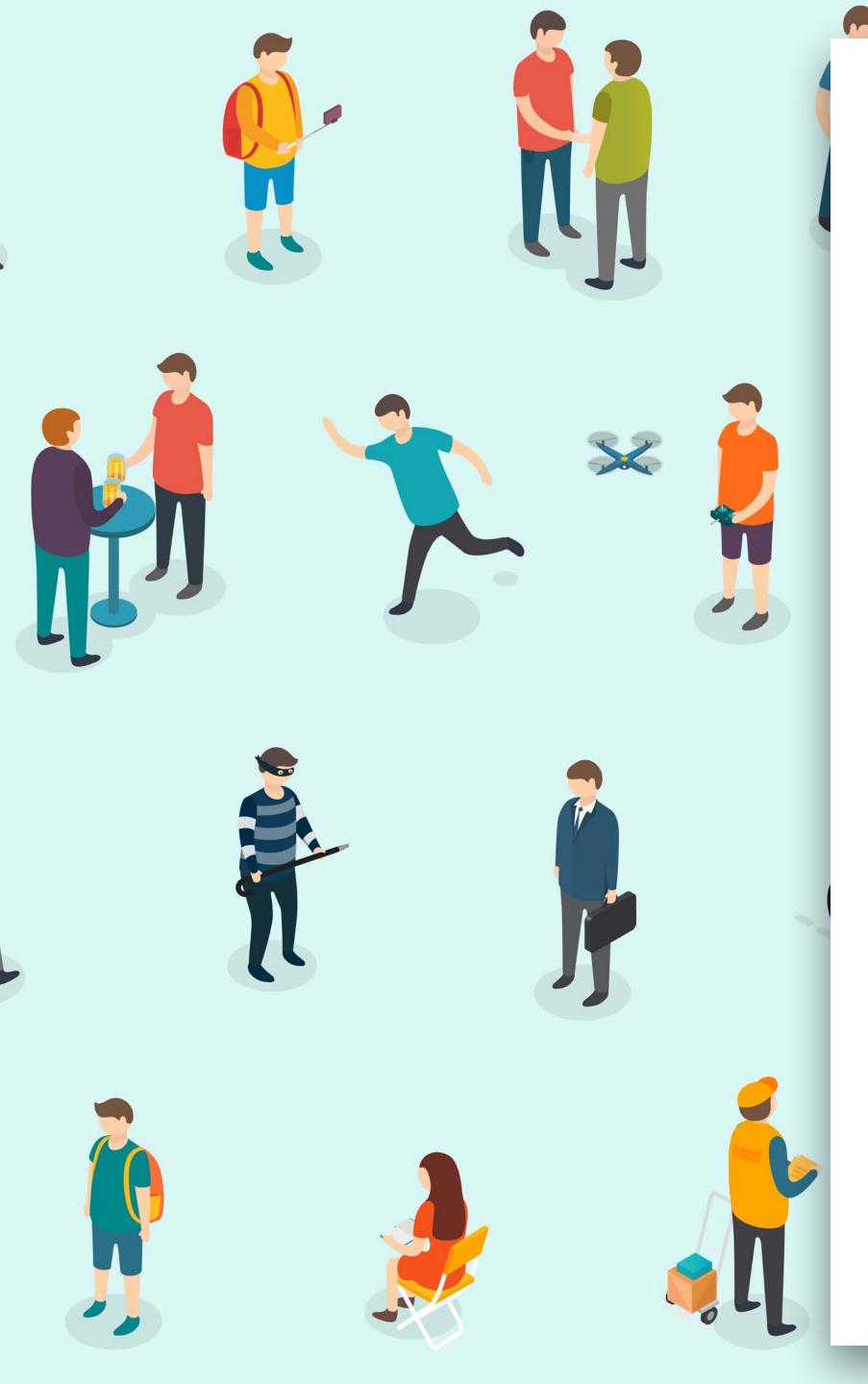
by Nathan Shedroff, Chief Creative Officer, vivid studios

One of the most important skills for almost everyone to have in the next decade and beyond will be those that allow us to create valuable, compelling, and empowering information and experiences for others. To do this, we must learn existing ways of organizing and presenting data and information and develop new ones. Whether our communication tools are traditional print products, electronic products, broadcast programming, interactive experiences, or live performances makes little difference. Nor does it matter if we are employing physical or electronic devices or our own bodies and voices. The process of creating is roughly the same in any medium. The processes involved in solving problems, responding to audiences, and communicating to others are similar enough to consider them identical for the purposes of this paper. These issues apply across all types of media and experiences, because they directly address the phenomena of information overload, information anxiety, media literacy, media immersion, and technological overload—all which need better solutions. The intersection of these issues can be addressed by the process of Information Interaction Design. In other circles, it is called simply Information Design, Information Architecture, or Interaction Design, Instructional Design, or just plain Common Sense.

Many people create or engineer interactions, presentations, and experiences for others. Almost all interactions— whether part of a book, a directory, a catalog, a newspaper, or a television program—can be created or addressed by one process. This process can be used to produce every CD-ROM, kiosk, presentation, game, and online service. It can also be used for every dance, music, comedy, or theater performance. While the traditions and technologies may change with every discipline, the process does not.

**Information Design** 





**Poiesis Prax** DOI 10.1007/s10202-006-0029-0

ORIGINAL PAPER

Is informatics a design discipline?

Peter Purgathofer

© Springer-Verlag 2006

Abstract The article discusses the theory and practice of software development in the light of design theory. It tries to show that the design process cannot be forced into a predefined operational sequence. To underline this, the history of design methods is retraced, showing that such approaches were abolished not only in practice, but also the theory of design. The essay then discusses the cognitive framework of contemporary design theory and closes with the proposal that informatics should redefine itself as a design discipline in order to tackle the problems of interaction design.

Zusammenfassung Der Text diskutiert die Theorie und Praxis der Softwareentwicklung im Lichte aktueller Designtheorie. Es wird zu zeigen versucht, dass sich der Designprozess der operationalen Formalisierung entzieht. Dazu wird die Geschichte der Designmethoden nachgezeichnet, die zeigt, dass solche Ansätze nicht nur in der Praxis, sondern auch in der Theorie gescheitert abtrennung sind. Der Aufsatz diskutiert dann die kognitiven Rahmenbedingungen aktueller Designtheorien und schließt mit dem Vorschlag, dass sich die Informatik als Designdisziplin verstehen muss, um die Probleme des Interaktionsdesign wirklich lösen zu können.

Résumé Ce texte s'interroge sur la théorie et la pratique du développement de logiciels à la lumière de la théorie de design actuelle. Il tente de montrer que le processus de design se soustrait à la formalisation opérationnelle. L'histoire des méthodes conceptuelles est par ailleurs retracée, qui montre

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# IN THE 21ST CENTURY. **ALGORITHMS WILL BECOME THE MOST IMPORTANT DESIGN** MATERIAL OF UX DESIGNERS

# WHAT IS AN ALGORITHM?



## **DEFINITION ALGORITHMUS**

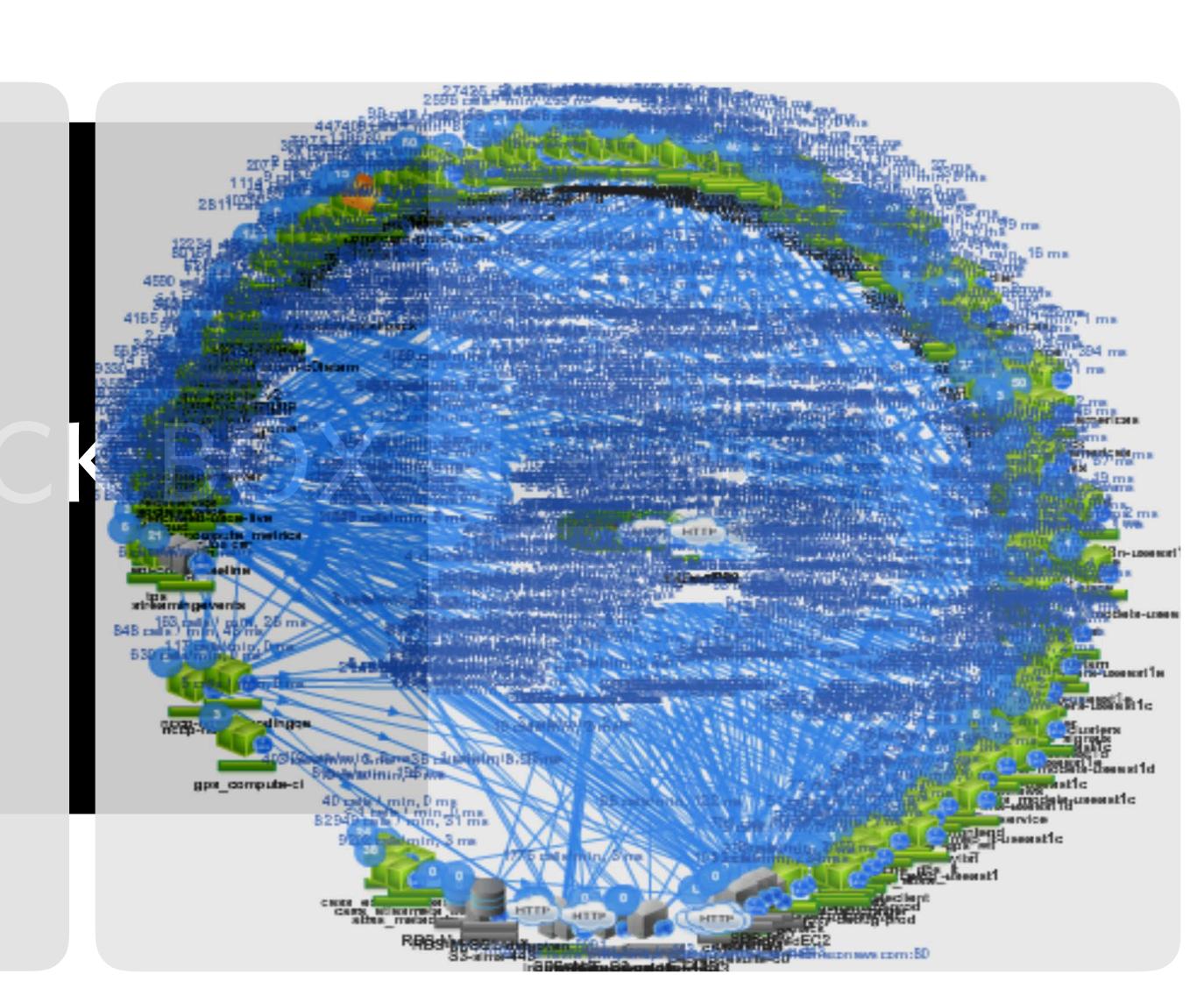
INPUT

## BLACK BOX

### OUTPUT

## **DEFINITION ALGORITHMUS**

# function findIndex(values, target) { for(var i = 0; i < values.length; ++i){ if (values[i] == target) { return i; } } return -1; } findIndex([7, 3, 6, 1, 0], 6)</pre>



## **AS DEFINED BY WERNER STANGL**

führt. Im Gegensatz dazu steht dabei die schnellere, aber auch fehleranfälligere Heuristik.«

## »Ein Algorithmus bezeichnet eine systematische, logische Regel oder Vorgehensweise, die zur Lösung eines vorliegenden Problems



# »Every algorithmic bias is there for a reason«





































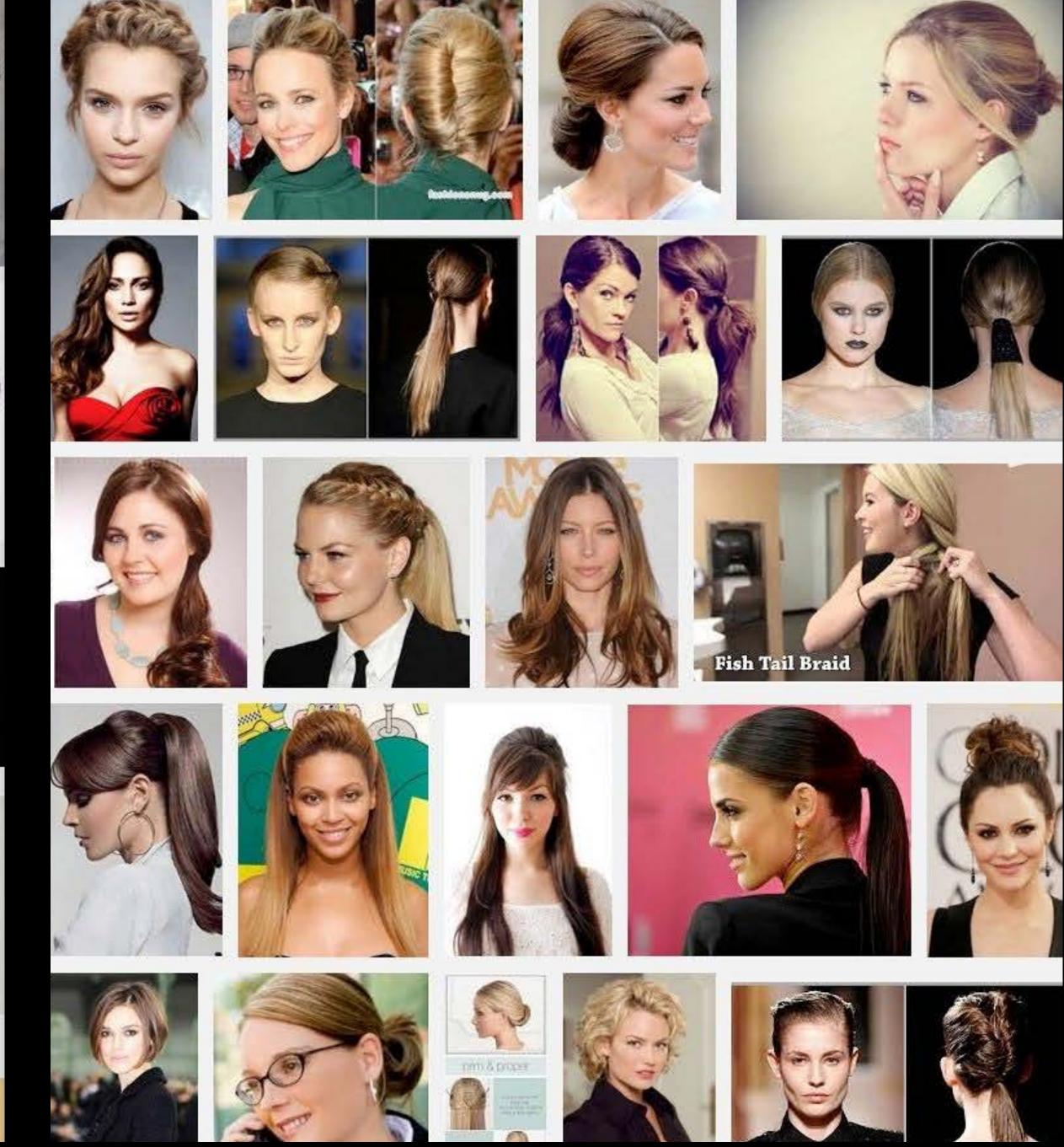








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## »professional hairstyles for work«





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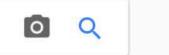


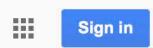


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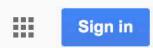








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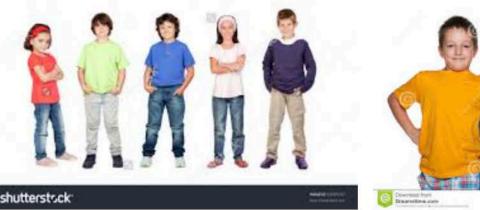


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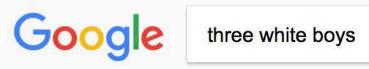


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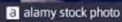
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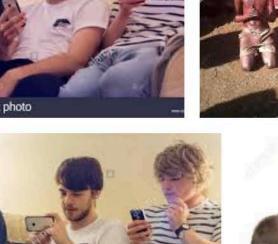
















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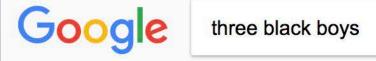
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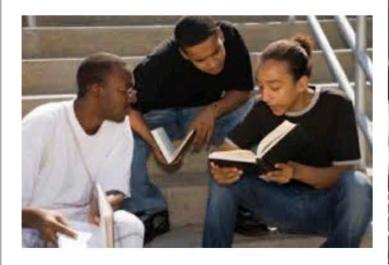
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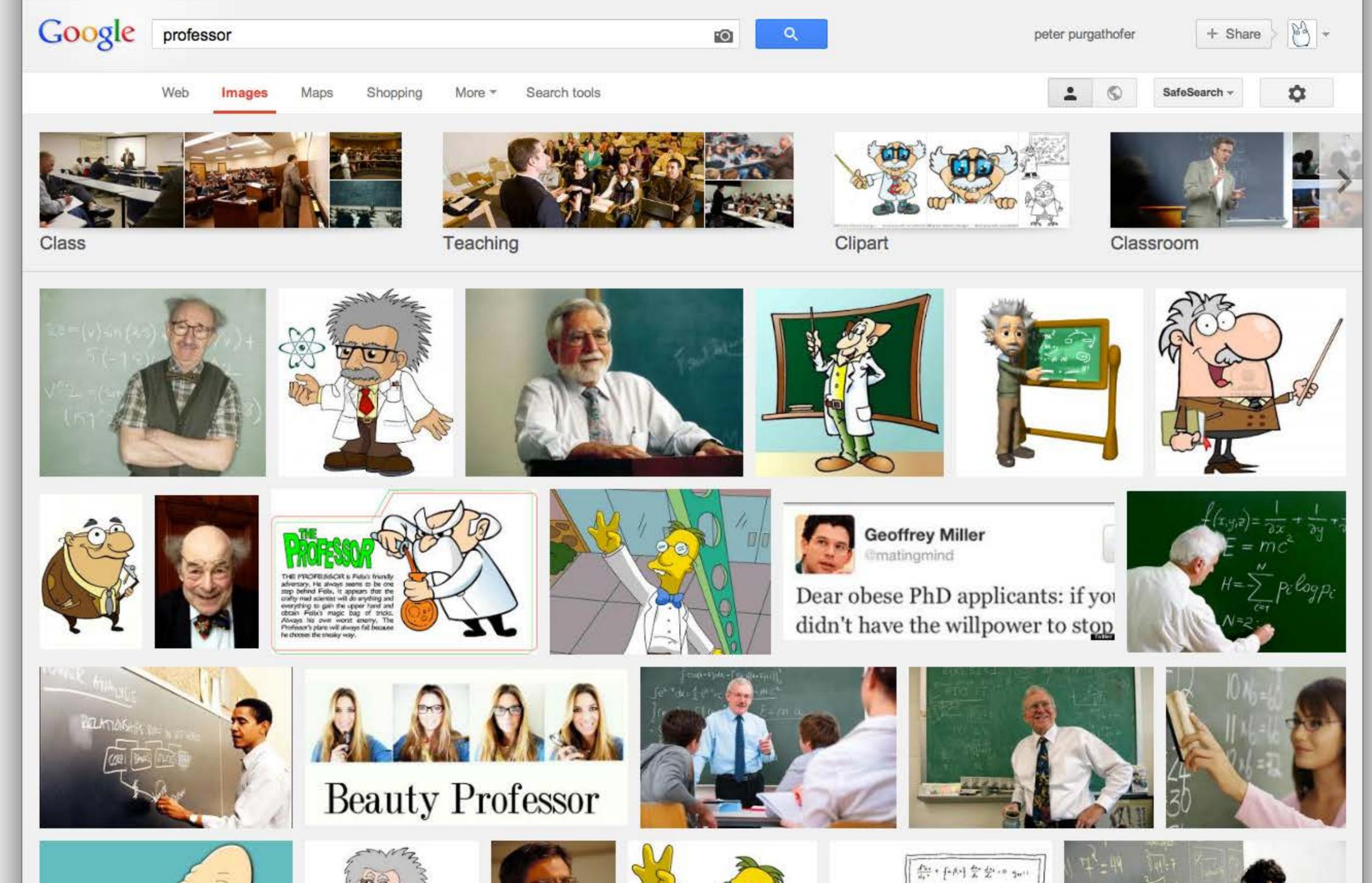


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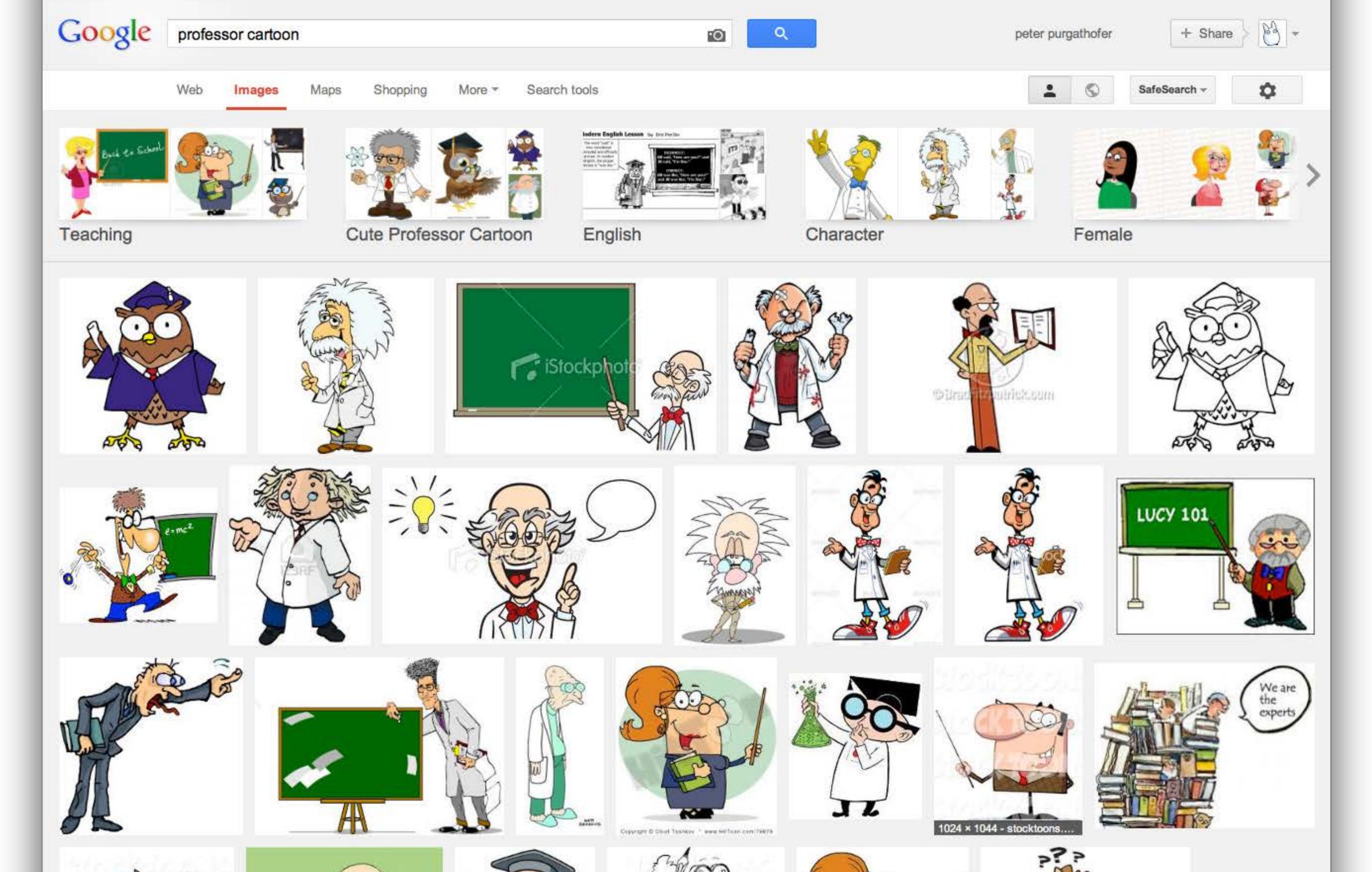




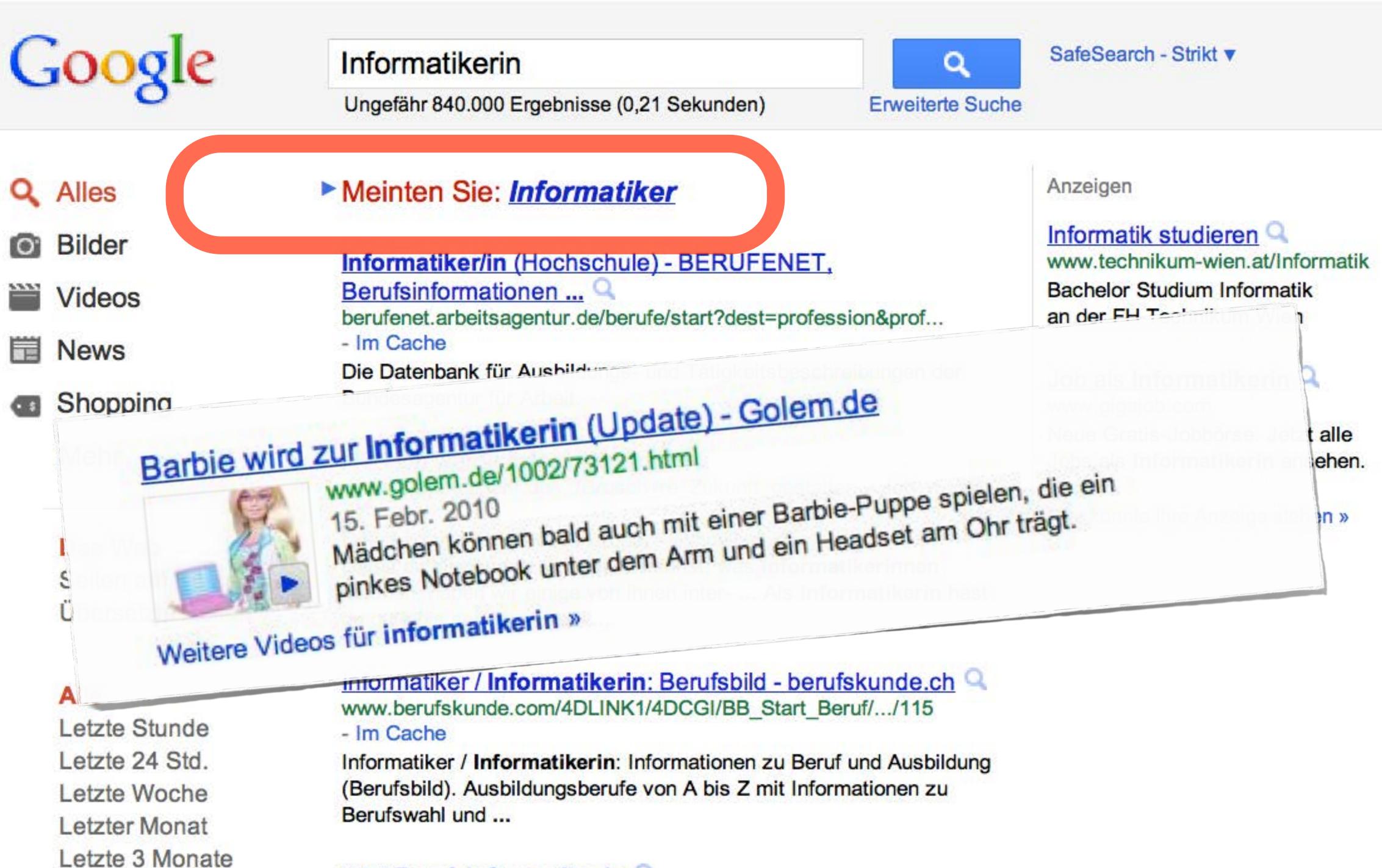






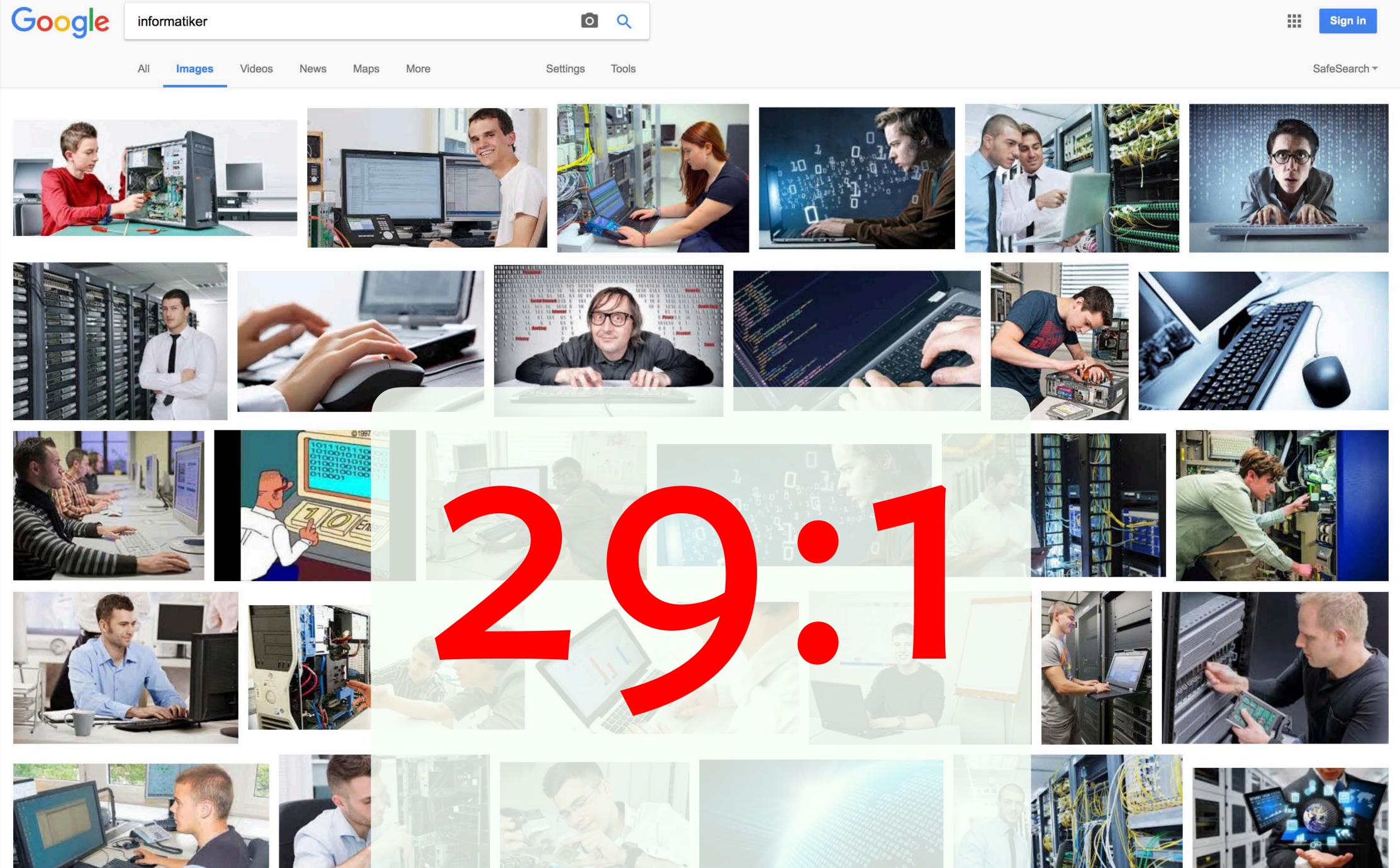


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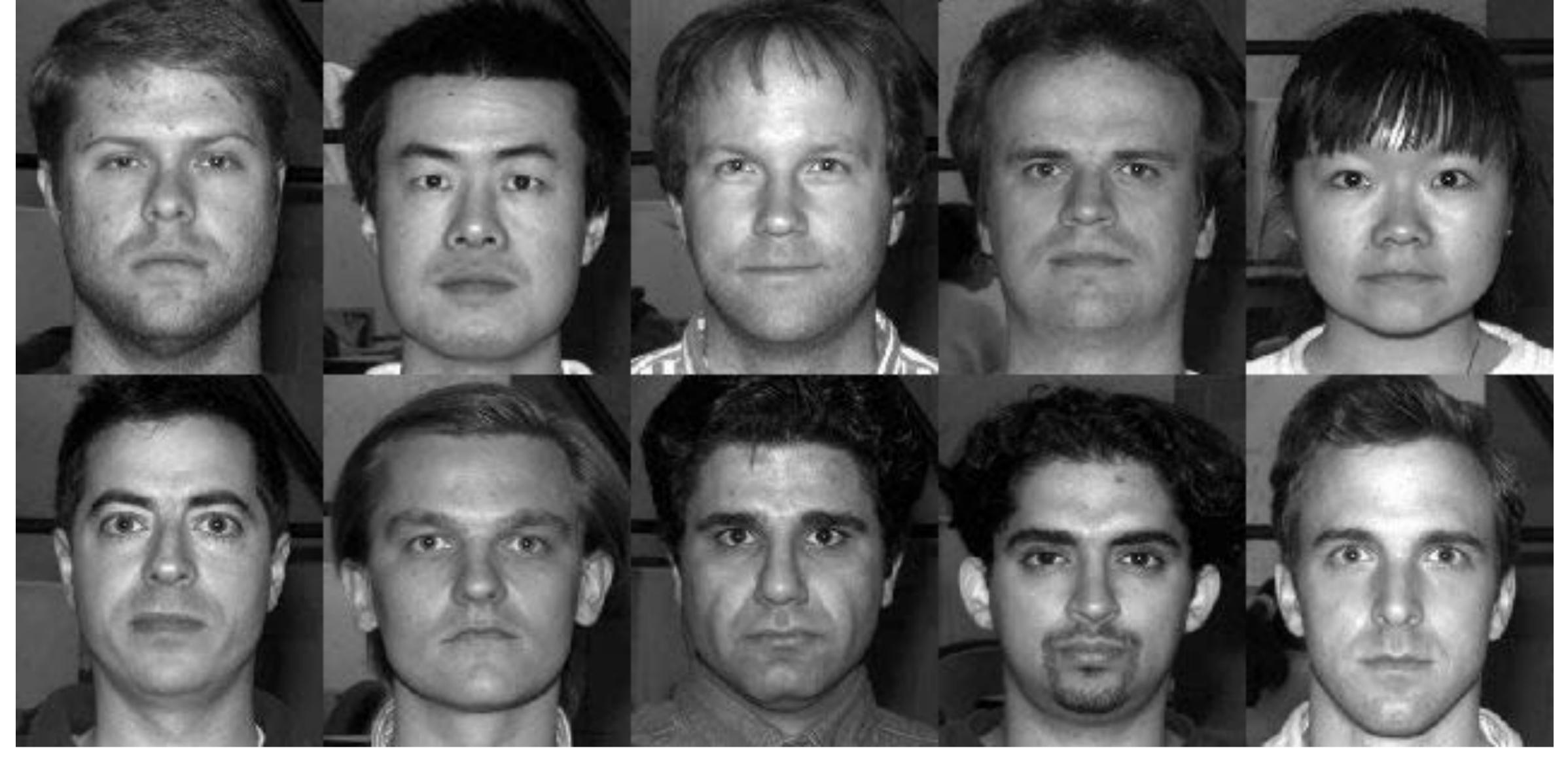


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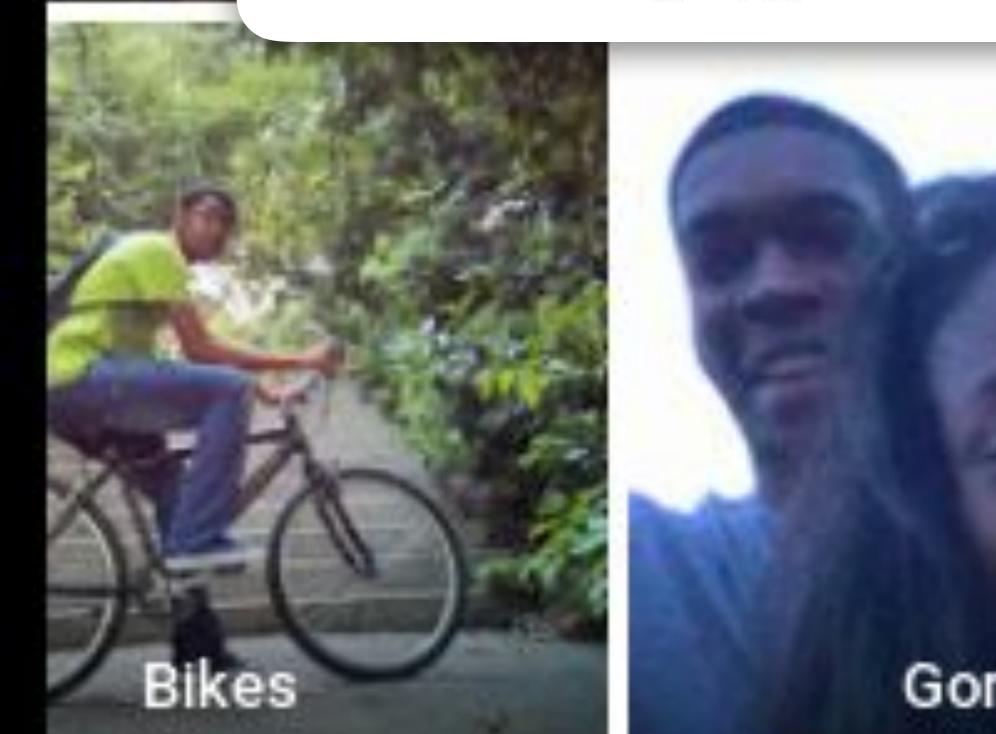


The Yale Face Database B+ Facial Expression Recognition Benchmark Image Set 16128 Pictures of 10 Faces



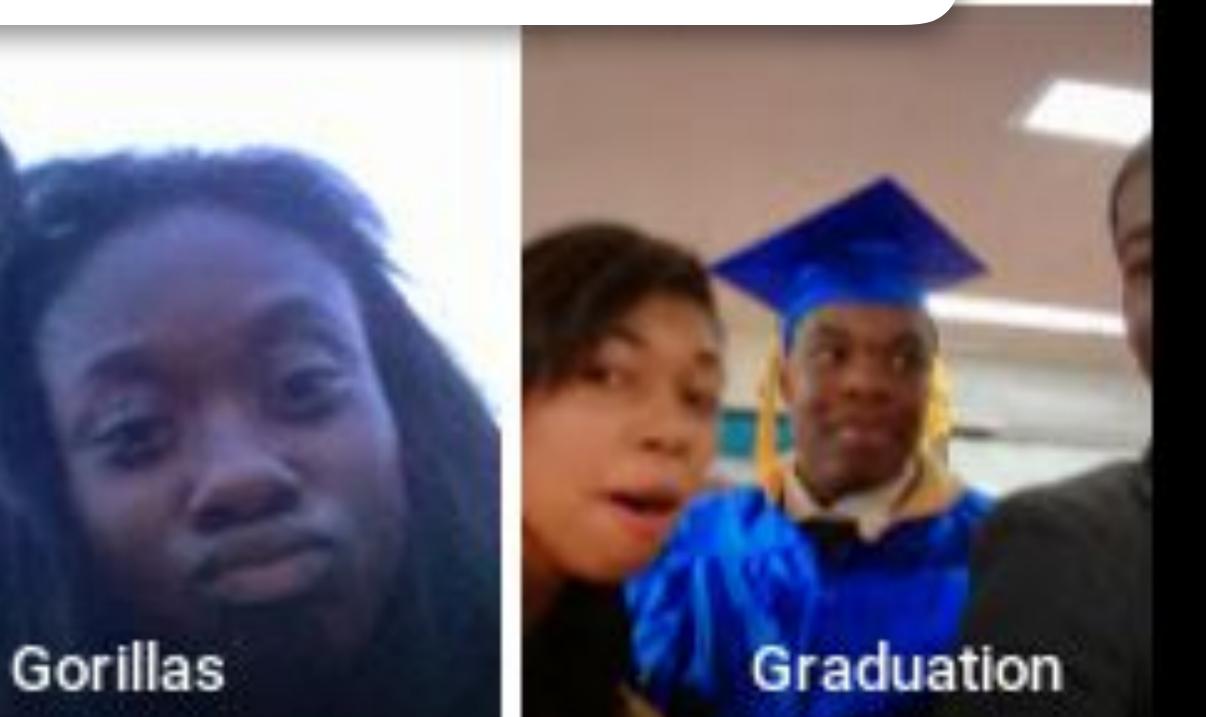
## list of bugs you \*never\* want to see happen. ::shudder::

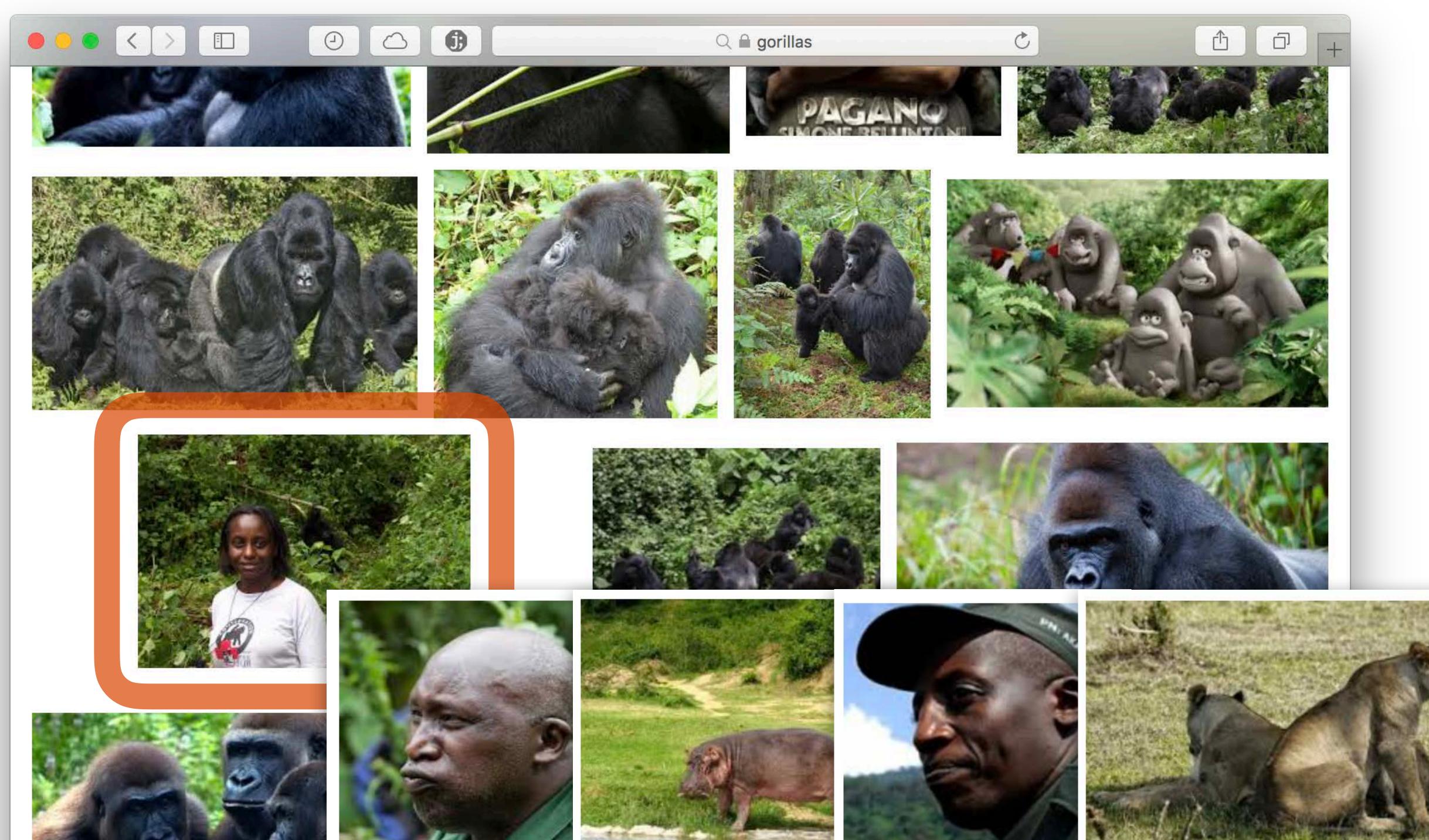
### – Yonatan Zunger (@yonatanzunger) June 29, 2015



Skyscr

@jackyalcine Thank you for telling us so quickly! Sheesh. High on my

















are women evil

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Every woman has some degree of prostitute in her. Every woman has a little evil in her. ... Women don't love men, they love what they can do for them. It is within reason to say women feel attraction, but they cannot love men. 25 Jun 2015

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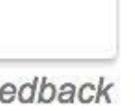
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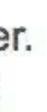
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I will explain how ALL women are evil - Bodybuilding.com Forums forum.bodybuilding.com > More General Categories > Misc. • 4 Oct 2013 - 30 posts - 21 authors In that they're only there until somebody comes and takes them from you or for as long as you have the resources to keep them. A woman ...

Why are women so evil? im done with it? - Dating www.datehookup.com/thread-1390705.htm -16 Dec 2014 - 60 posts - 10 authors I have discovered something that has been known for centuries, women are evil creatures at the core.Does that sound strange coming from me ...

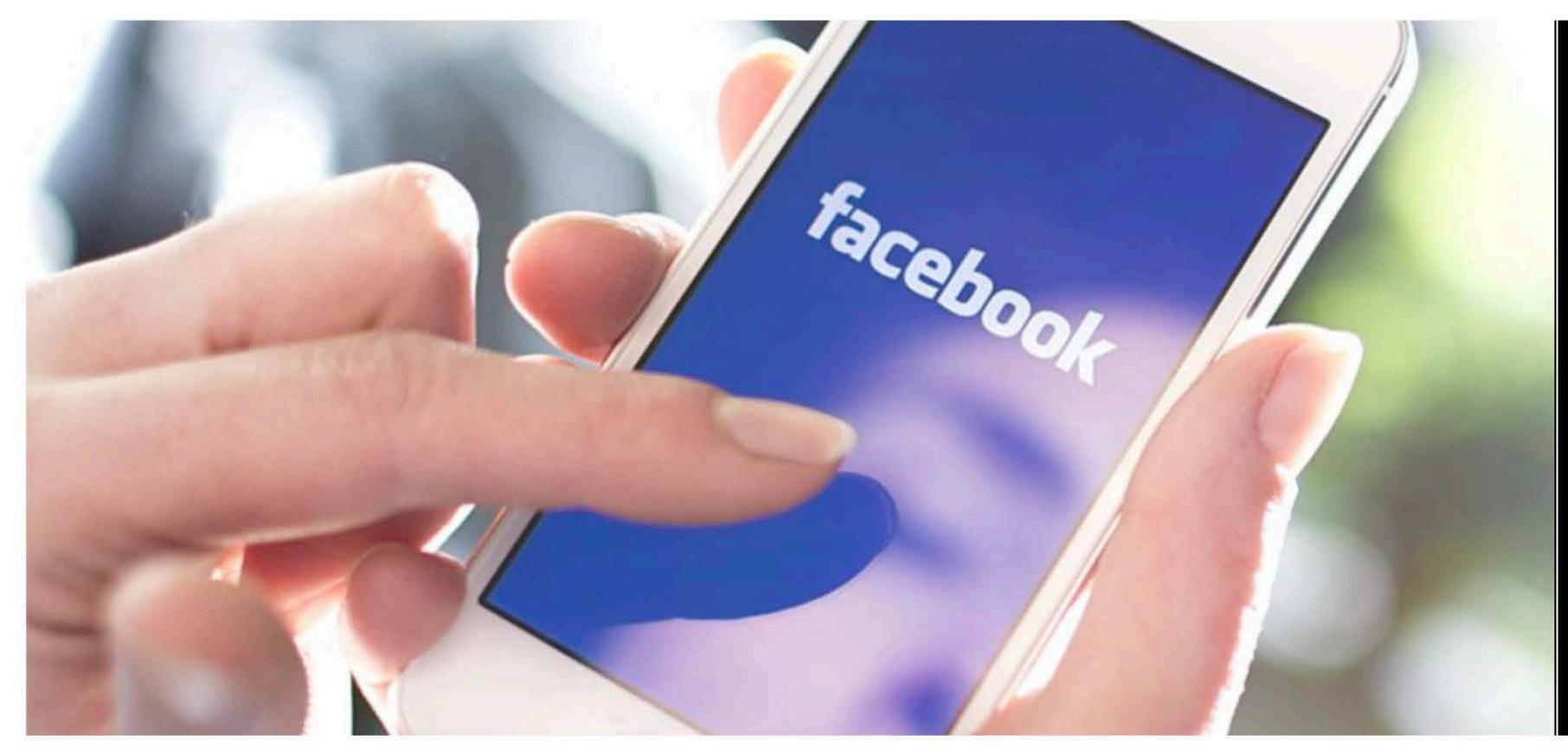
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### **≡** salon



(Credit: Shutterstock)

### Facebook's co-founder blasts social media: "It literally changes your relationship with society"

One of Facebook's founders says that social media may have a negative im-



y

A DELICIOUS TREAT WITH A PRIZE INSIDE ANNIE ZALESKI

THE MIRACLE MOP: \$3 BILLION LATER RACHEL LEAH



exploiting a vulnerability in human psychology.

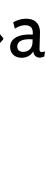
anyway.<

Matthew Rozsa: Facebook's co-founder blasts social media

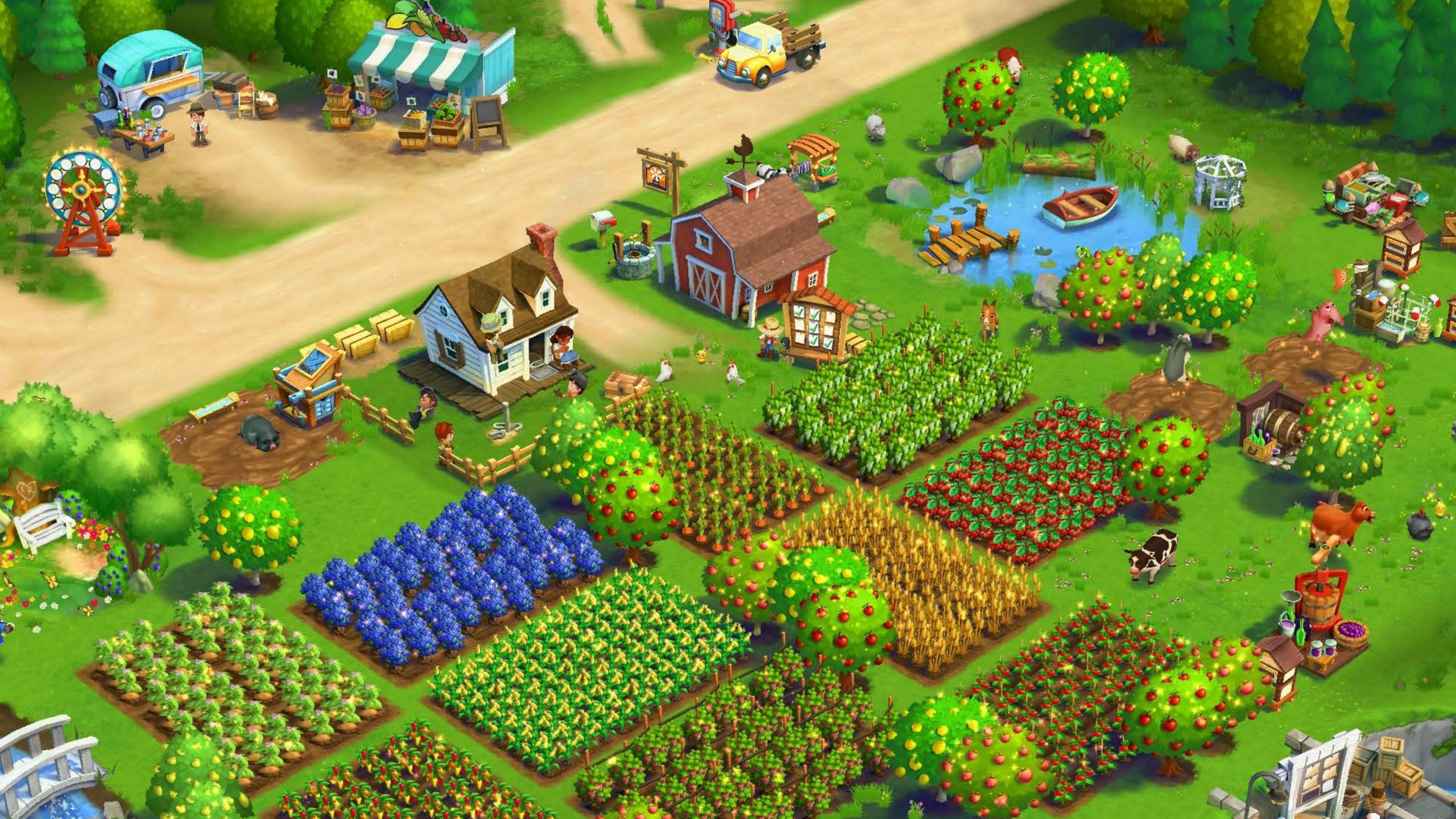
## He said that Facebook and its successors were deliberately designed to consume as much time and attention as

- **possible** from their users. The result was that they created >a social-validation feedback loop . . . exactly the kind of thing that a hacker like myself would come up with, because you're
- He added, The inventors, creators it's me, it's Mark [Zuckerberg], it's Kevin Systrom on Instagram, it's all of these people — understood this consciously. And we did it

(<u>salon.com</u> 11.9.2017)







### **Dark Patterns in the Design of Games**

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### **ABSTRACT**

Game designers are typically regarded as advocates for players. However, a game creator's interests may not align with the players'. We examine some of the ways in which those opposed interests can manifest in a game's design. In particular, we examine those elements of a game's design whose purpose can be argued as questionable and perhaps even unethical. Building upon earlier work in design patterns, we call these abstracted elements Dark Game Design Patterns. In this paper, we develop the concept of dark design patterns in games, present examples of such patterns, explore some of the subtleties involved in identifying them, and provide questions that can be asked to help guide in the specification and identification of future Dark Patterns. Our goal is not to criticize creators but rather to contribute to an ongoing discussion regarding the values in games and the role that designers and creators have in this process.

### **Categories and Subject Descriptors**

K.8.0 [Computing Millieux]: Personal Computing – games.

### **General Terms**

Design, Human Factors

#### Keywords

Design patterns, video games, ethics, game design, dark patterns

#### 1. INTRODUCTION

When writing about game design, authors often stress the focal role of the player using terms like 'player-centered' or 'playcentric' (e.g. [4; 20; 45]). Player-centric design is defined such that "a game's primary function is to entertain the player, and it is the designer's obligation to create a game that does so" [4]. Others note that "[t]he role of the game designer is, first and foremost, to be an advocate for the player" [20, p. 2]. The implication is that most of the work done by the designer is for the benefit of the player or as a dialogue between designer and player (e.g. responding to player demands for features, increased challenge, etc.). However, the game developers and player's interests are sometimes at odds.

In this article, we examine some of the ways in which opposed interests are manifested in a game's design. More specifically we

Staffan Björk <sup>2,3</sup>		Chris Lewis <sup>4</sup>
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rg, SE	417 56 Gothenburg, SE	1156 High St.
039	+46 (0) 702-889759	Santa Cruz, CA, USA
gu.se	staffan.bjork@tii.se	cflewis@soe.ucsc.edu

examine those elements of a game's design whose purpose can be argued as questionable, against a player's best interests, and perhaps even unethical. Rather than focus on particular games, we identify common design elements and implementations we have identified across several games. Our focus is on gameplay, meaning that we look at systemic properties of games – and how players interact with them – rather than thematic or representational issues (e.g. racist depictions of non-player characters). Building upon earlier work in design patterns, we call these abstracted elements Dark Game Design Patterns.

In addition to defining what a Dark Game Design Pattern is, we will discuss some of the challenges in identifying these patterns as well as the related notion of Anti-Patterns. Our analysis includes examples from contemporary games and questions that can be asked to help articulate and identify future Dark Patterns. Our goal is not to criticize game designers or developers but rather to contribute to an ongoing discussion regarding the values in games and the role that designers and creators have in this process.

#### **1.1 Game Design Patterns**

It has been almost twenty years since the first voices were raised regarding the lack of a critical language for analyzing and talking about game design [17]. Scholars and practitioners have since answered that call by proposing ways of understanding games, classifying them, deconstructing them, and more. For instance, Church argued for a set of "formal abstract design tools" [15], Hunicke and colleagues presented a framework for understanding games and bridging the gap "between game design and development, game criticism, and technical game research" [23], and Zagal et al. created an ontology "for describing, analyzing and studying games, by defining a hierarchy of concepts abstracted from an analysis of many specific games" [49]. In 2002, inspired by earlier work in architecture [6], Kreimeier proposed using game design patterns as a way to formalize and codify knowledge about game design [29]. This idea was broadened by Björk and Holopainen, who developed a collection of nearly 300 gameplay patterns [10]. These patterns differ from the original structure in architecture by replacing problemsolution pairs with cause and consequences categories that describe possibilities for the instantiation of a pattern and the potential consequences that pattern may have in a game's design. The reasons for this change were: to support the design and





## **Cuphead and the Racist Spectre of Fleischer Animation**

By Yussef Cole • November 10th, 2017

Cuphead is a 2D platformer with run-and-gun gameplay reminiscent of classic games like Mega Man. What sets Cuphead apart from its predecessors is its unique aesthetic which pays stunning homage to early 20th century American animation. The rftmo

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# META-PROBLEME



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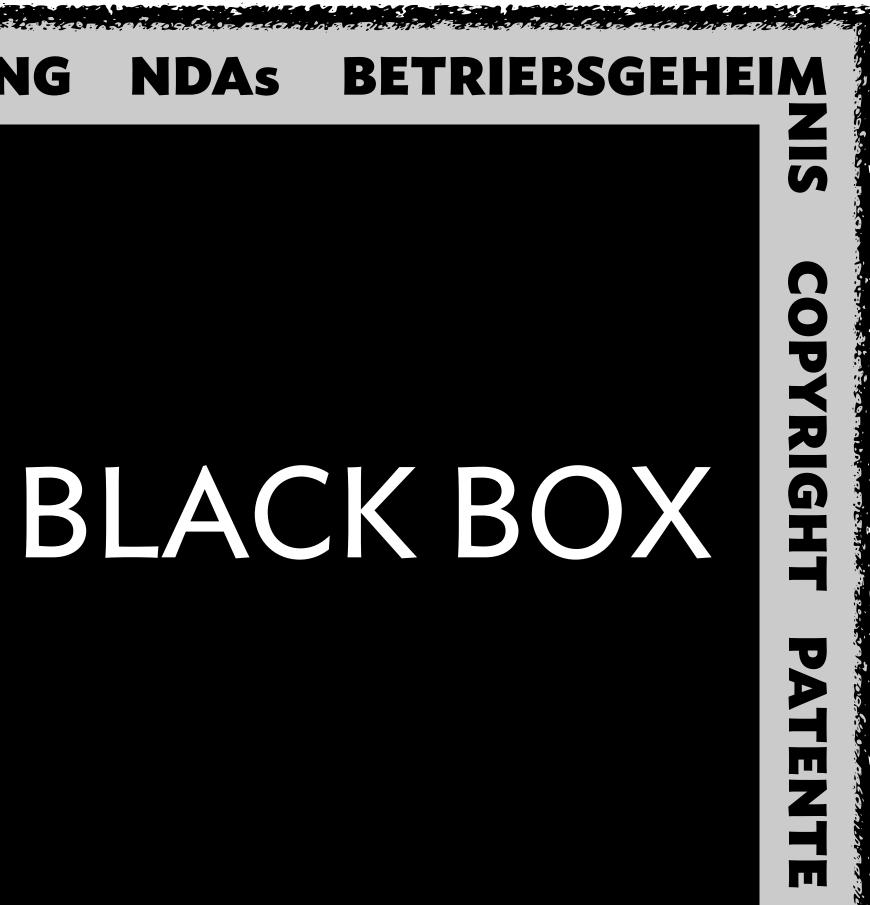






# ALGORITHMEN

# **<u><u>u</u>ng</u> VERSCH** ESBARKEIT



### **TECHNIZITÄT VERFÜGBARKEIT**

# THE VULNERABLE USER

»Designing for **people with vulnerabilities** requires research approaches that are be involved for those who participate and use technologies.«

# sensitive to the risks of stigmatizing people and awareness of the challenges that can



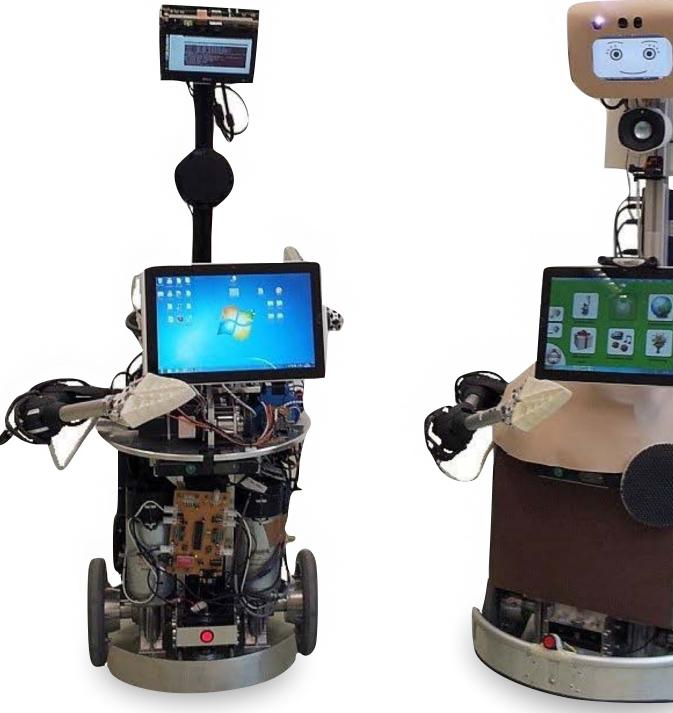
# CARING ROBOTS – MORE DANGEROUS THAN KILLER ROBOTS?

»[...]there is **overwhelming evidence** that robots are a **very effective tool** with which to **manipulate human emotional responses.** It might **theoretically** be possible to do this only in ethical ways of benefit to individuals and society. **Unfortunately** there has been little or no discussion of exactly what these ways might be.

For the caring robots now being developed by the private sector there is **no guidance whatsoever** on these issues. We can therefore expect **at best**, the manipulation of emotions in order to **maximize profits.** At the **worst** we can expect **dangerous mistakes and disreputable deceit.**«

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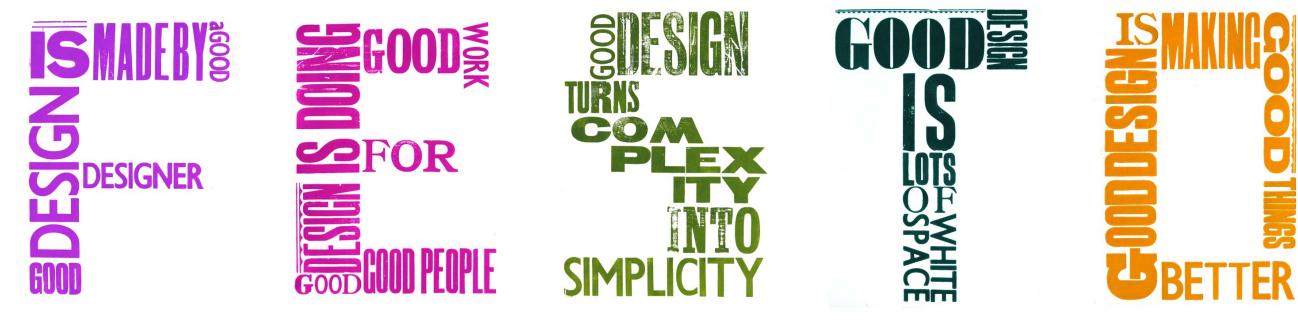




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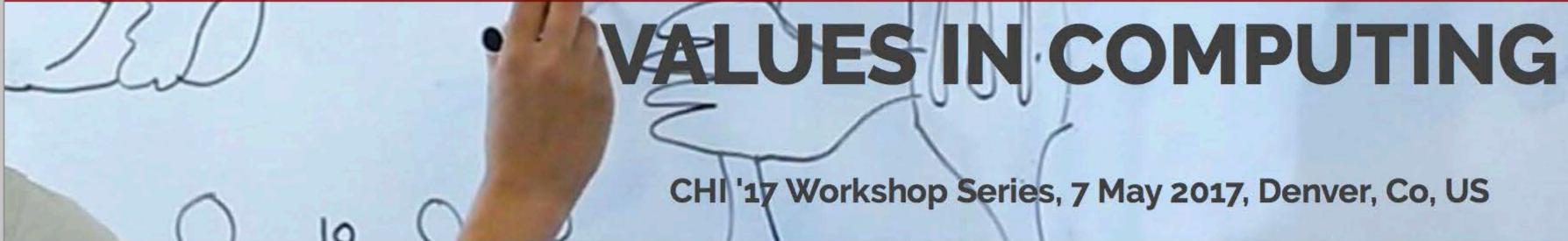




patrycja zywert, 2009







## **The Denver Manifesto**

### **WORKING DRAFT**

We, the undersigned, recognize that values manifest themselves in every aspect of computing. Computing technologies and practices have become unavoidable cornerstones of most societies, including constituencies who may not be the direct users, developers, or designers of the technology. Values play key roles in the design, development and deployment of technologies, shaping and guiding what we imagine.

It is important for these values to be explicitly and intentionally considered, not just with respect to the values intended but whose values are included, how conflicting values are negotiated, and how values are deployed in Values in computing, orga technology is not fully transparent about how it produces its outputs.

### Recent Updates:

The Denver Manifesto Position Papers Now Online Early Acceptance Option

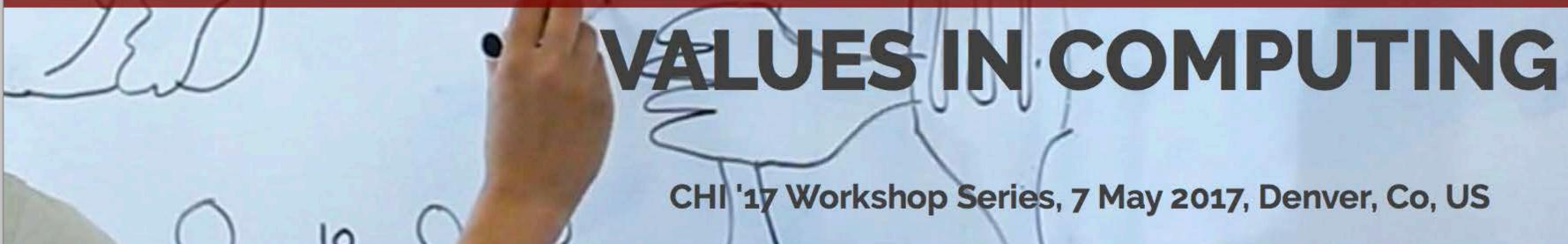


# VALUES IN COMPUTING DENVER MANIFESTO

»We, the undersigned, recognize that **values** manifest themselves in **every aspect of computing.** [...] Values play key roles in the **design,** development and deployment of technologies, shaping and guiding what we imagine.

It is important for these values to be **explicitly and intentionally considered,** not just with respect to the values intended but **whose** values are included, how **conflicting** values are negotiated, and how values are **deployed** in practice, especially but not solely when a technology is not fully transparent about how it produces its outputs.«





## **Position Papers**

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Gilbert Cockton;

A Worth-Focused Creative Design Lens on Values in Computing

Clarisse S. de Souza, Renato F. G. Cerqueira, Luiz M. Afonso, Rafael R. M. Brandão, Juliana S. J. Ferreira;

Semiotic Engineering Tools for the Inspection of Meanings Inscribed in Coftiviaro

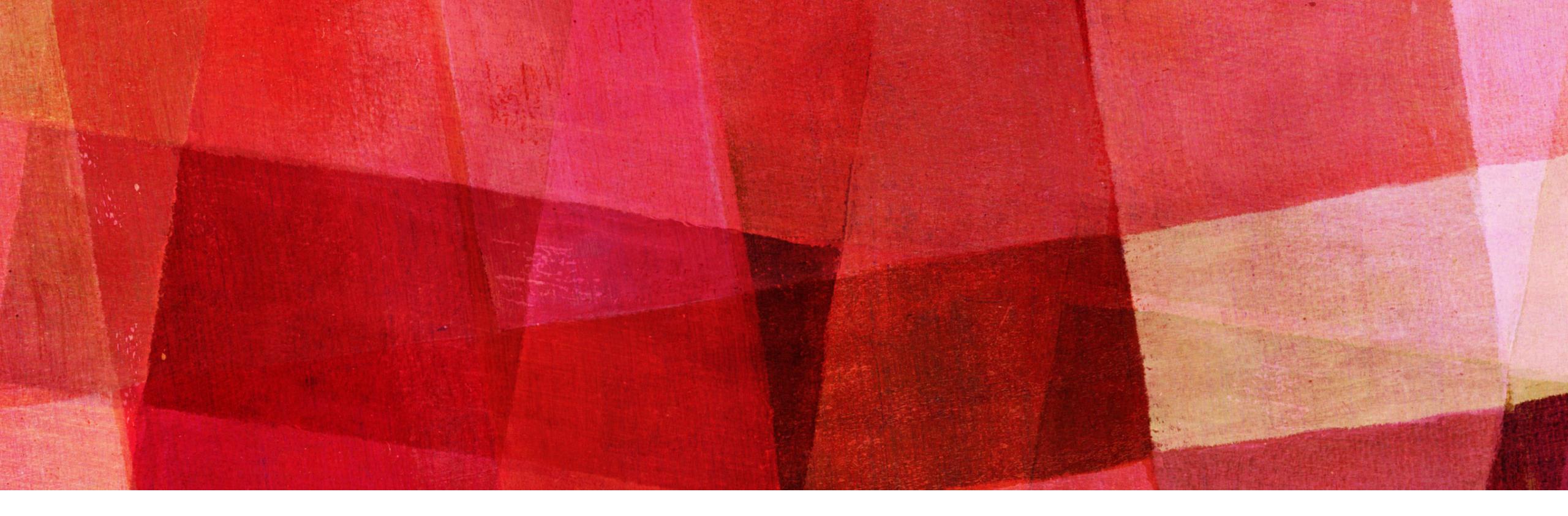
## valuesincomputing.org

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# IN THE 21ST CENTURY. **ALGORITHMS WILL BECOME THE MOST IMPORTANT DESIGN** MATERIAL OF UX DESIGNERS



# THE VALUES OF UX Peter Purgathofer, Visual Computing & Human Centered Design





Bernard Parker, left, was rated high risk; Dylan Fugett was rated low risk. (Josh Ritchie for ProPublica

## **Machine Bias**

There's software used across the country to predict future criminals. And it's biased against blacks.

by Julia Angwin, Jeff Larson, Surya Mattu and Lauren Kirchner, ProPublica May 23, 2016

O NA SPRING AFTERNOON IN 2014, Brisha Borden was running late to pick up her god-sister from school when she spotted an unlocked kid's blue Huffy bicycle and a silver Razor scooter. Borden and a friend grabbed the bike and scooter and tried to ride them down the street in the Fort Lauderdale suburb of Coral Springs.

## How We Analyzed the COMPAS Recidivism Algorithm

by Jeff Larson, Surya Mattu, Lauren Kirchner and Julia Angwin May 23, 2016

#### ← Read the story

Across the nation, judges, probation and parole officers are increasingly using algorithms to assess a criminal defendant's likelihood of becoming a recidivist – a term used to describe criminals who re-offend. There are dozens of these risk assessment algorithms in use. Many states have built their own assessments, and several academics have written tools. There are also two leading nationwide tools offered by commercial vendors.

We set out to assess one of the commercial tools made by Northpointe, Inc. to discover the underlying accuracy of their recidivism algorithm and to test whether the algorithm was biased against certain groups.

Our analysis of Northpointe's tool, called COMPAS (which stands for Correctional Offender Management Profiling for Alternative Sanctions), found that black defendants were far more likely than white defendants to be incorrectly judged to be at a higher risk of recidivism, while white defendants were more likely than black defendants to be incorrectly flagged as low risk.

We looked at more than 10,000 criminal defendants in Broward County, Florida, and compared their predicted recidivism rates with the rate that actually occurred over a two-year period. When most defendants are booked in jail, they respond to a COMPAS questionnaire. Their answers are fed into the COMPAS software to generate several scores including predictions of "Risk of Recidivism" and "Risk of Violent Recidivism."

We compared the recidivism risk categories predicted by the COMPAS tool to the actual recidivism rates of defendants in the two years after they were scored, and found that the score correctly predicted an offender's recidivism 61 percent of the





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Northpointe's software is among the most widely used assessment tools in the country. The company does not publicly disclose the calculations used to arrive at defendants' risk scores, so it is not possible for either defendants or the public to see what might be driving the disparity

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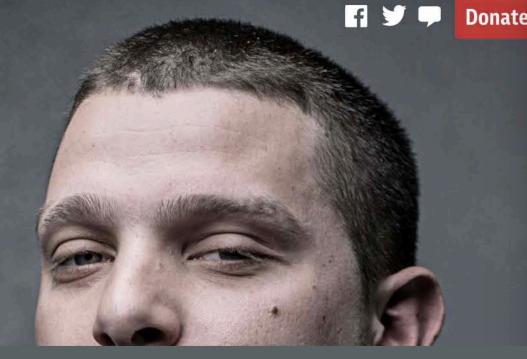
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Black defendants were twice as likely as white defendants to be misclassified as a higher risk of violent recidivism, and white recidivists were misclassified as low risk 63.2 percent more often than black defendants

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May 23, 2016



# Two Drug Possession Arrests

**DYLAN FUGETT** 

**Prior Offense** 1 attempted burglary

Subsequent Offenses 3 drug possessions

## Machir

### LOW RISK

3

drug charges after that.

### **BERNARD PARKER**

Prior Offense 1 resisting arrest without violence

### Subsequent Offenses None

## HIGH RISK

## Fugett was rated low risk after being arrested with cocaine and marijuana. He was arrested three times on

### ed the COMPAS Algorithm

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