

# Engineering, Ethics and Society: Introduction and Overview

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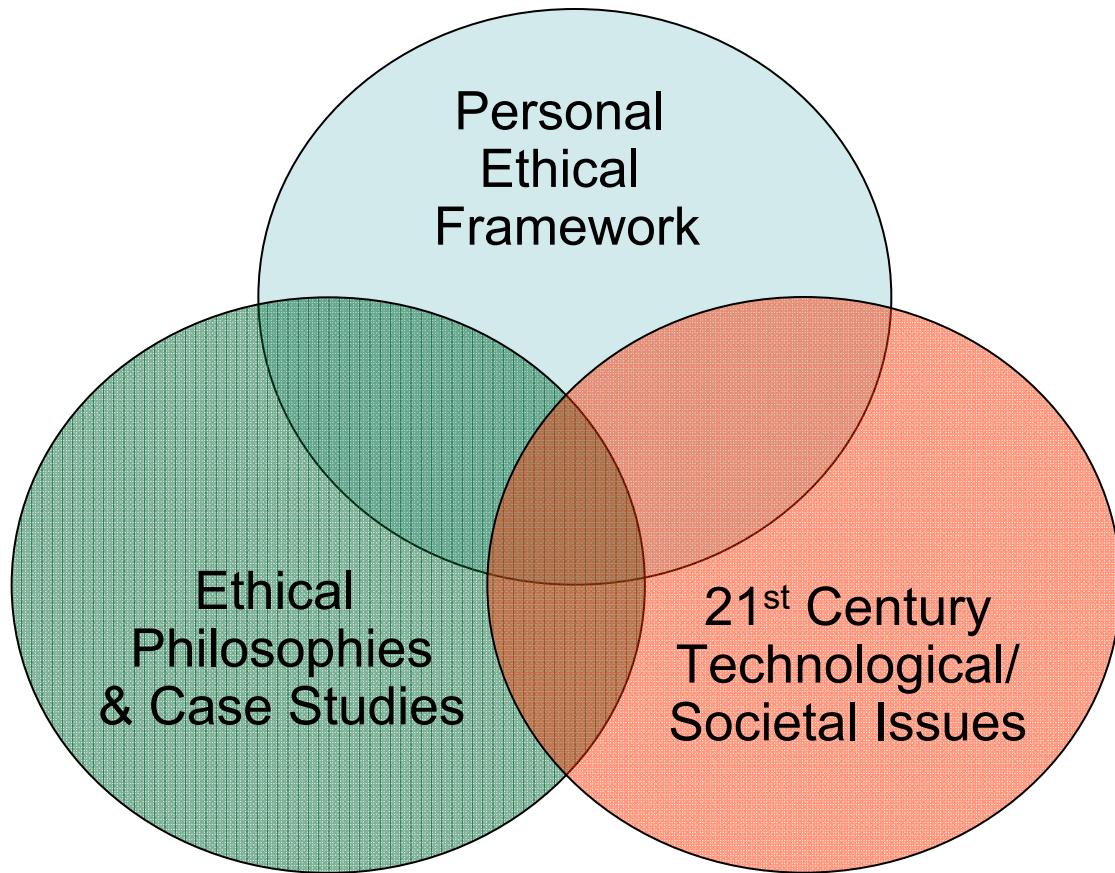
Engineering 183EW, UCLA SEAS

Lecture 1

# Lecture Contents

- Course Overview & Objectives
- Importance of History
- Value of Engr 183EW
- My Background & The Role of Simulation
- Course Structure & Rationale
- The Two Cultures
- Ethics & the Engineering Profession
- Challenge and Opportunity
- *Student Outlook (onlinepoll)*

# Course Overview



We are going to cover a LOT of ground as efficiently and coherently as we can

# Course Objectives

- Prepare students to help identify and address *society's critical technical issues* as highly qualified *and ethical* engineering professionals,
- Help students build a *Personal Ethical Framework* with which to identify and apply the ethical principles affecting these issues,
- Provide an understanding of *how technology and society have influenced each other* during important historical periods,

# The Importance of Historical Context

1. Knowing how technology and society have interacted in the past gives us a *framework of understanding* for current issues
2. Equally important, to recognize where we are now, and decide where we should be going, *it is essential to know how we got here*

"Those who cannot remember the past are condemned to repeat it."

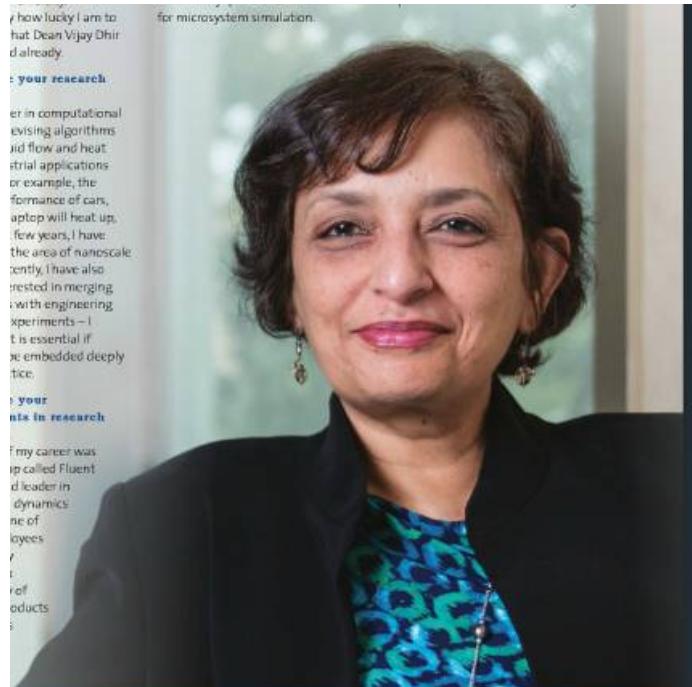
George Santayana  
Spanish and American Philosopher  
1863-1952

3. But there are some periods in the past that we might like to repeat -- in an up-to-date way -- and these are also worth remembering!

# Specific Course Objectives

- Prepare students to help address the world's *critical socio-technical issues* as engineering professionals,
- Help students build a *Personal Ethical Framework* to identify the moral and ethical principles affecting these problems,
- Provide an understanding of how technology and society have interacted up to now and will likely do so in the future,
- Examine specific critical *contemporary societal issues* that involve both technology and ethical factors
- Provide experience in successfully *researching, analyzing and describing* technical/ethical problems both as individuals *and in teams*
- Improve ability to write and present *high quality engineering memos, papers and reports*
- Provide *guidelines and methodology* for making *ethical engineering decisions*
- Lay the groundwork for continued individual study

# 183EW Will Complete You As Engineers...



“Engineering schools must give students hard technical skills. But also breadth. Students must be able to appreciate the *social, historical and political* contexts in which they practice their profession so that they can make real impact”

Dr. Jayathi Murthy

Our Engr183EW course helps fulfill former SEAS Dean Murthy’s vision of what a world-class engineering education should include.

# ...Help You Value Your Contribution...

*The products of your mind are the most precious things you own, that you possess.*

*And you must protect them, and must not do wrong with them,  
You must do the right thing.*

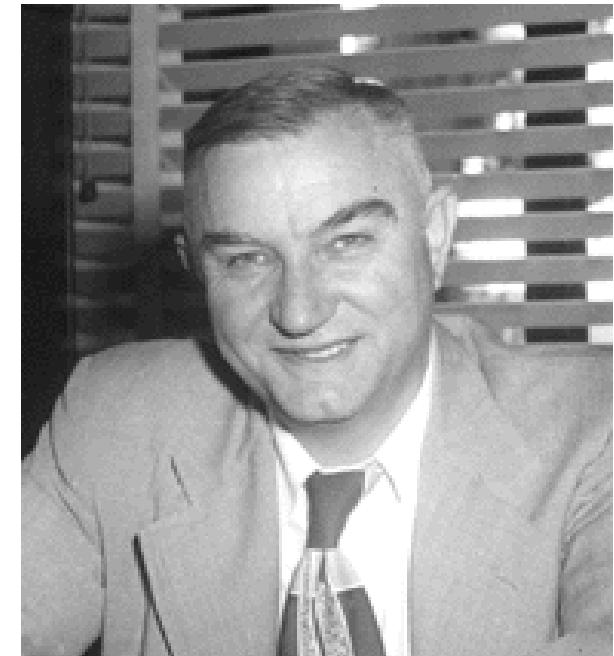
***You must always remember that the products of your mind can be used by other people either for good or for evil,  
And that you have a responsibility that they be used for good.***

*You see, you can't avoid this responsibility, unless you decide to become an intellectual slave,*

*And let someone else make all of these value judgments for you.*

*And this is not consonant with our democratic system in this country.*

*You must accept the responsibility yourself, for yourself, and for others.*



Llewellyn M.K. Boelter  
Dean, UCLA SEAS 1963

Dean Boelter stressed the *personal responsibility* of engineering.

# ...Provide a Guide to Action...



“Doing what’s right isn’t the problem. It’s knowing what’s right.”

Lyndon Baines Johnson  
36<sup>th</sup> President of the United States

## .. Influence Your Personal Life...

“When you discover that you have values, it makes things much simpler.”

Alan Alda  
Actor and Activist



# ...Show You a Direction...

“Touch people with the *better angels of your nature.*”

Abraham Lincoln  
16<sup>th</sup> President of the United States



# ....Help Realize What it Takes...



"Courage is the most important of all virtues, because without it we can't practice any other virtue with consistency."

Maya Angelou  
Poet and Author

# ...Do Personal as well as General Good....

“If you act properly, your actions allow you to be psychologically integrated now, and tomorrow, and into the future, while you benefit yourself, your family, and the broader world around you.”

Jordan B. Peterson, Ph.D.  
Professor of Psychology

Author of “12 Rules for Life: An Antidote to Chaos”



# ...Understand World Problems...

“First feed the face, and then talk right and wrong. For even honest folk can act like sinners, Unless they’ve had their customary dinners.”

Bertolt Brecht &  
Kurt Weill, 1928



# ...and Fulfill an Important Goal!

“Intelligence plus character - that is the true goal of education.”

Rev. Martin Luther King, Jr.  
Civil Rights Leader



# In Summary

*Our Goal* in Engr 183EW is to give you knowledge and practice  
in ethics and societal issues that will help make you

*a more thoughtful engineer now –*

and also set you on a path of

*lifelong learning*

about the critically important interactions among science, technology  
and the evolving needs of society.

# Ethical Example: The Gorilla or the Child?



Harambe the gorilla at Cincinnati Zoo in 2016 with child who fell into his enclosure

While most of our ethical case studies will involve engineering problems, ethics knowledge can help you define and deal with daily problems as well.

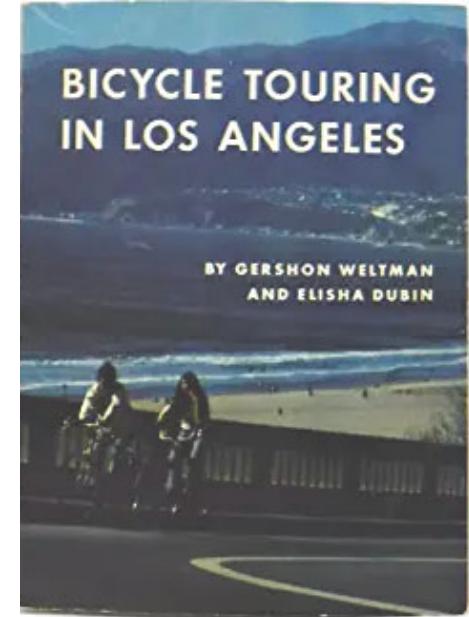
# My Background

- Preparation: Engineering Education
  - Ph.D., M.S. & B.S. @ UCLA SEAS
  - Postdoctoral Fellow @ Weizmann Institute, Israel
- Act 1: UCLA Engineering Faculty
  - Teaching
    - Machine and Environmental Biotechnology
    - Humanities for Engineering Students
  - Research -- Human Performance Underwater
- Act 2: Defense Industry
  - Perceptronics, Inc; AI-Based Decision Support, Distributed Interactive Simulation
- Act 3: Do It Again
  - Perceptronics Solutions, Inc; AI Applications to Decision Support, Manned-Unmanned Systems, Performance Training and Assessment
  - SEAS Lecturer: Engineering and Society



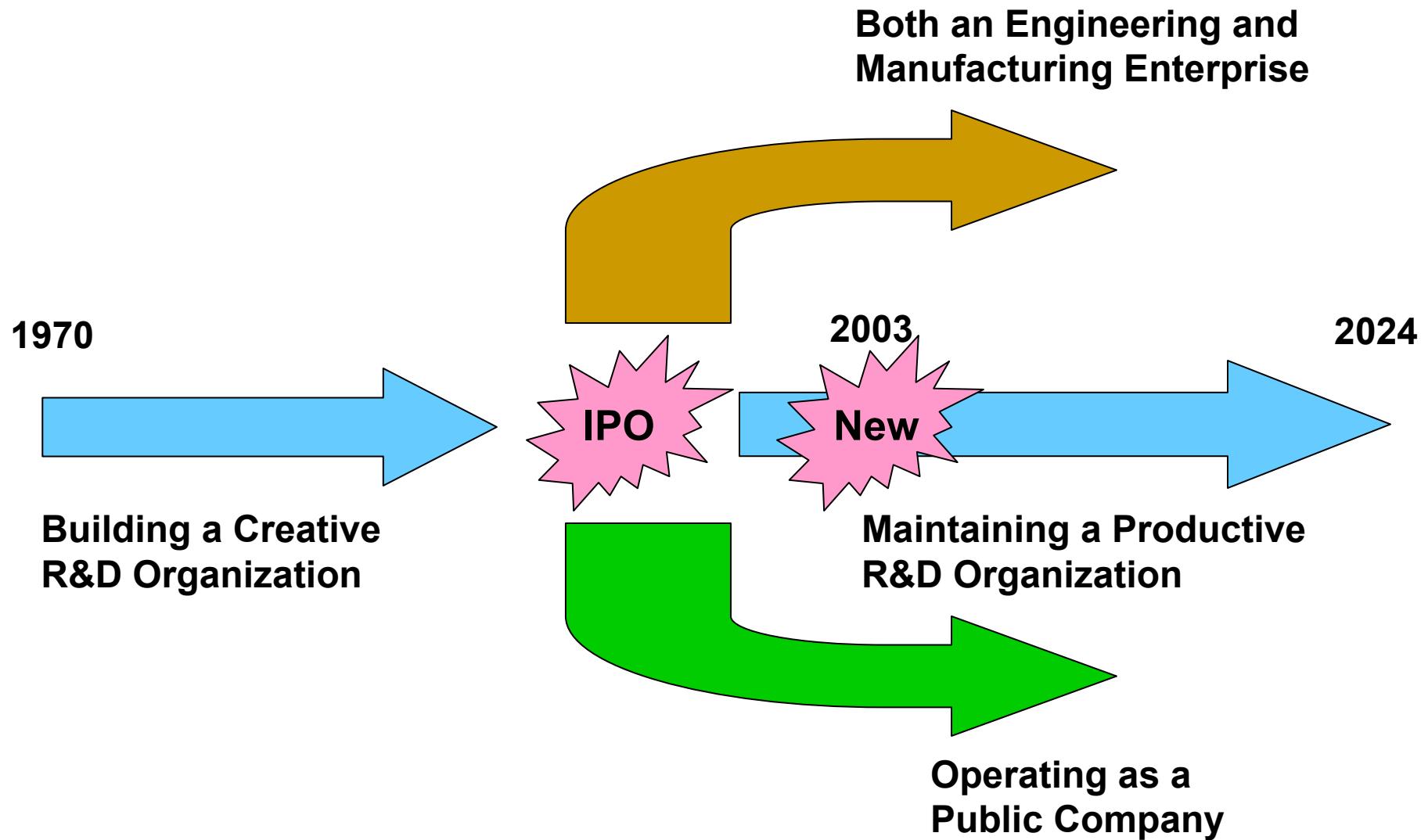
# Other Personal Items

- Lifestyle Interests
  - Mind: Books, TV, movies, art, jazz, discussion
  - Body: Road bicycling, “slogging,” weights, Pilates
- Roots of My Ethical Structure
  - Parent’s Political Idealism
  - Extended Family’s Ethnicity/Religion
  - Boy Scouts of America
  - Sports and Peer Groups
  - Education: Formal and Informal
  - Experience: Teaching, Business, Travel
  - Continual Self Examination



“The unexamined life is not worth living.”  
Socrates, ~400 BC

# Perceptronics Timeline

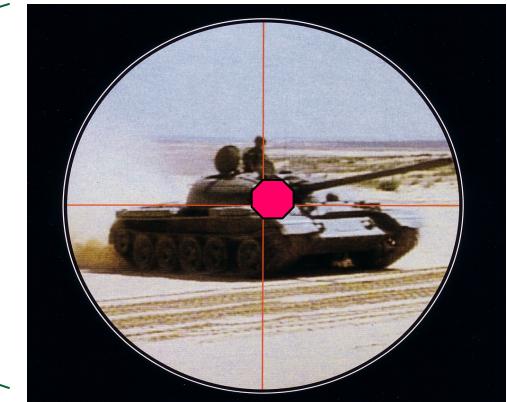


# A Lot Depended on This Technology



Pioneer Industrial Videodisc Player ~1976

# 1st Product: Videodisc Gunnery Trainers



## Filmed Scenarios

- Real Targets
- CIG Firing Effects
- True Challenge



## System Features

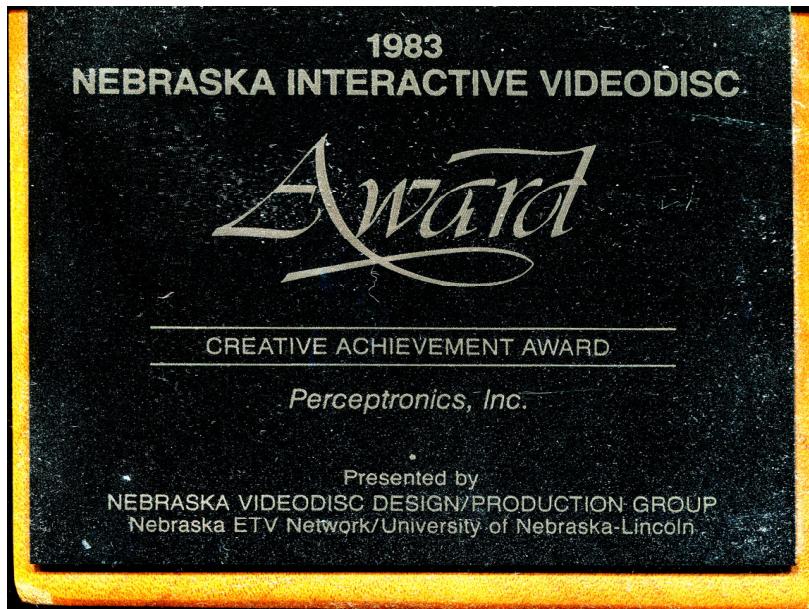
- Low-Cost
- Portable
- Training Transfer

# New Ideas in Military Simulation

- Selective Fidelity
- Entertainment
- Industrial Design
- Rapid Prototyping
- Affordability: COTS Components
- Distribution to Units
- Family of Products

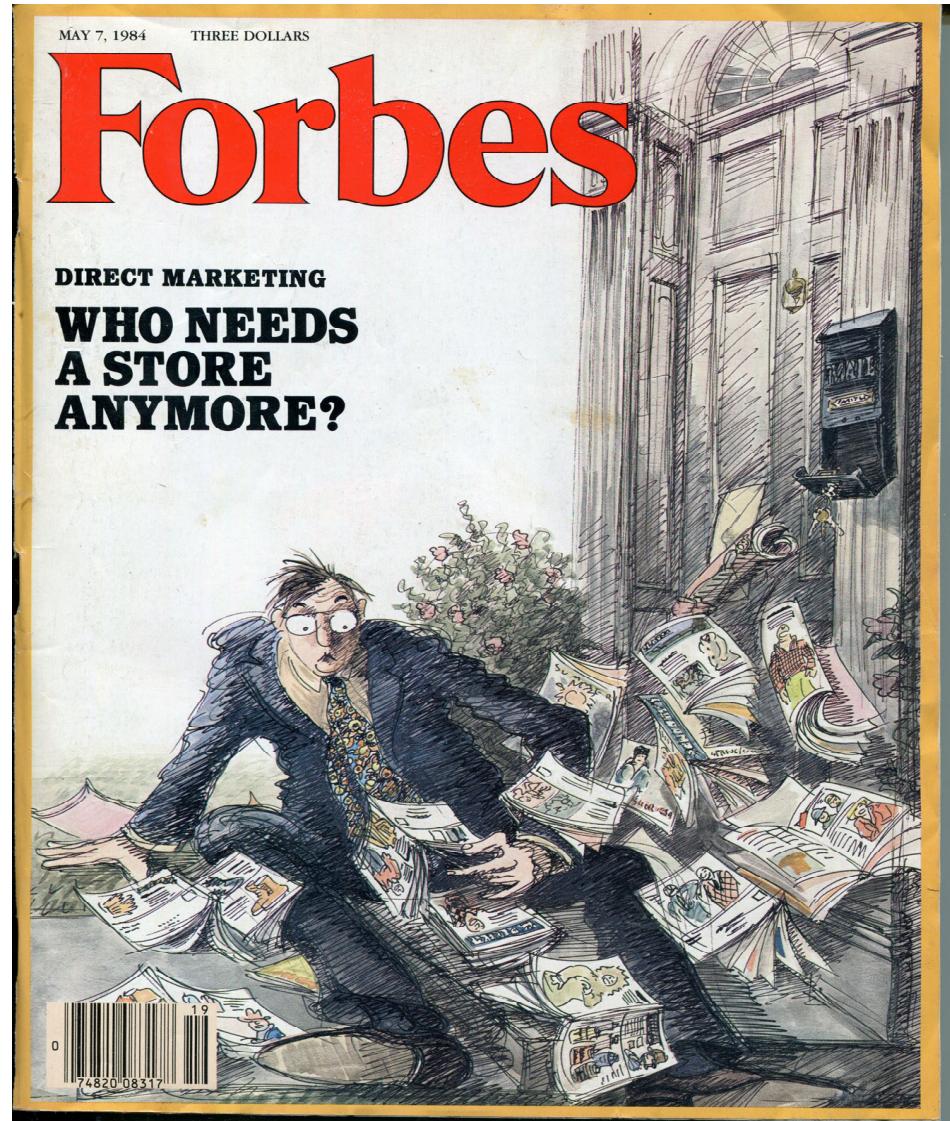


# Recognition

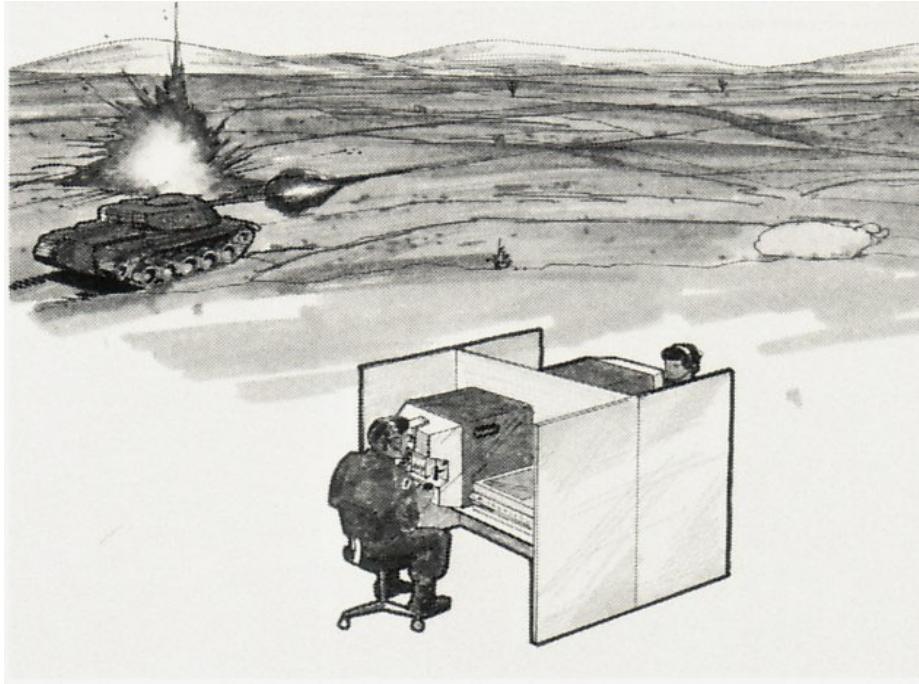


1983 Creative Achievement

May 7, 1984



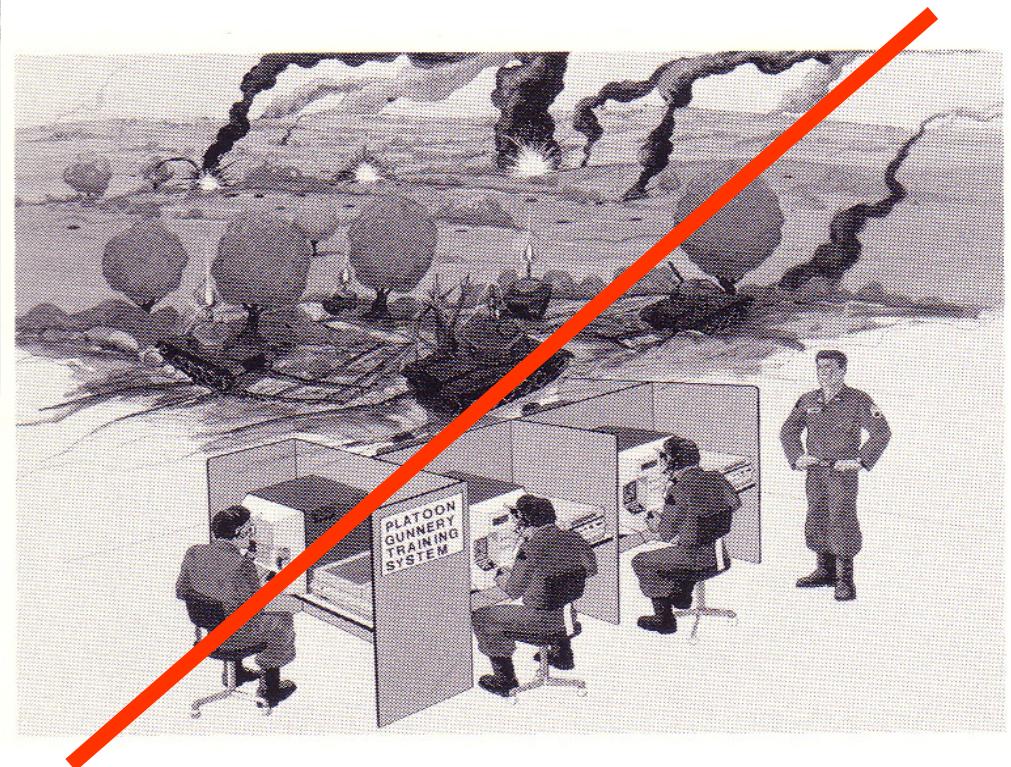
# Extensions of Concept



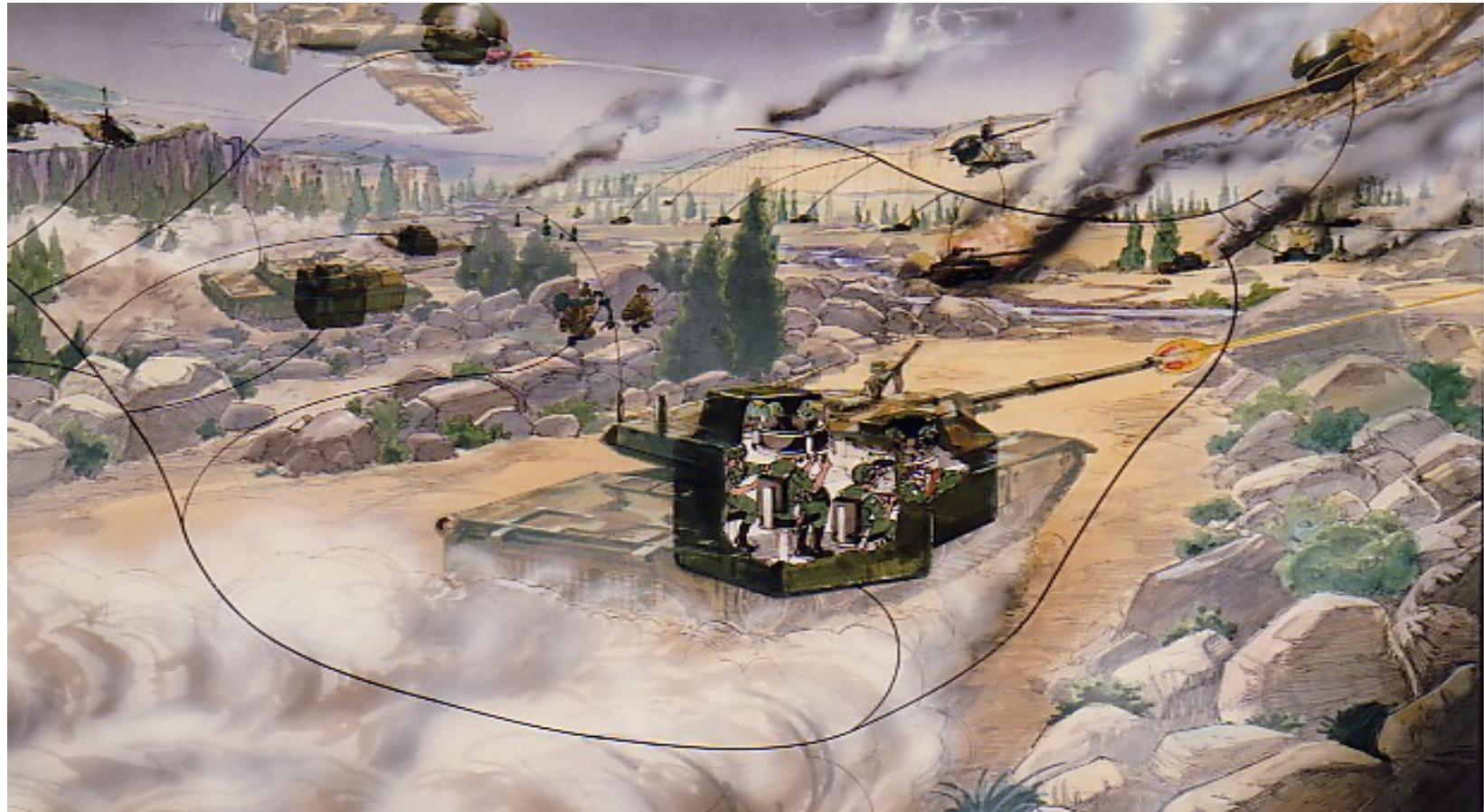
**Proposed “Platoon” Configuration**

## “Shoot Off” Configuration:

- Dramatically Different Experience
- Enthusiastic Customer Response



# Bigger Extension: 3D Virtual Battlefield



**SIMNET = Full-Crew Simulator Network (1st MMOG)**

# SIMNET Full-Crew Tank Simulator



Production Objectives:

- Low Manufactured Cost
- Modular/Reconfigurable

Design Objectives:

- Exercise Features Only
- Feeling of “Tankiness”



# SIMNET Original Virtual World



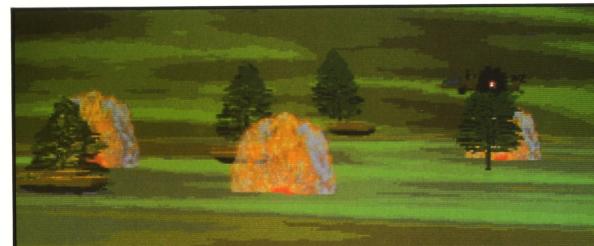
Air bursts are exploding across the scene as 25mm rounds are walked into the BMP (center right) and smoke from a 500 lb. bomb lingers behind the tree line.



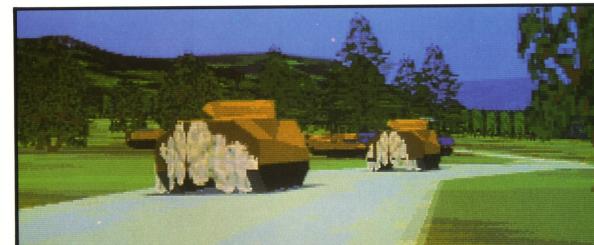
A low power view through a gun sight shows a column of T72s coming down the valley, air bursts above, and one destroyed tank still smoking.



A high power view of the same scene through the sight brings the destroyed tank into higher magnification.



Three artillery rounds have landed among the M1s who have taken slight cover under the scattered trees. An AH64 hovering to the right is threatened by the ground bursts and the single air burst at tree-top height.



Two M2s travel a dirt road, throwing small dust clouds (at low speed) as they approach a resupply activity seen in the trees to the left.

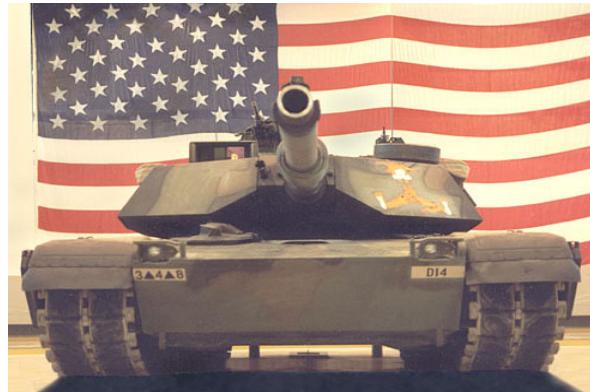


A battle seen from the BC's center view port in an M2 (note the chain gun barrel right of center at bottom of view); coming up a slight rise we find that air bursts have destroyed the enemy tank to the left.

# SIMNET Immediate Success...



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The first four SIMNET M-1 tank simulators were installed at the US base in Grafenwoehr, Germany and loaded with the terrain of the forthcoming 1987 Canadian Army Trophy (CAT) tank gunnery competition. "CAT," held every two years, was considered the "World Series of Tank Gunnery."

Following its training on SIMNET, the US Army platoon won the prestigious CAT competition. This was the first time the US had even placed. The highest-scoring M-1 tank at the 1987 Canadian Army Trophy (CAT) competition is shown at an indoor 2nd Brigade facility.

This is the Canadian Army Trophy (CAT) that was awarded to the winning US Army tank platoon at Grafenwoehr in 1987. The unprecedented victory dramatically showed the value of SIMNET training for coordinating troop actions as well as improving precision tank gunnery.

## Leads to Large-Scale Acquisition, Training...

# .... Continued Technical Improvement...



Evans & Sutherland

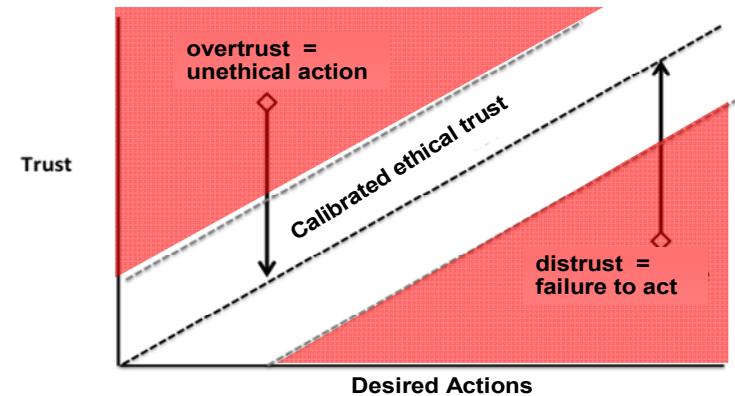
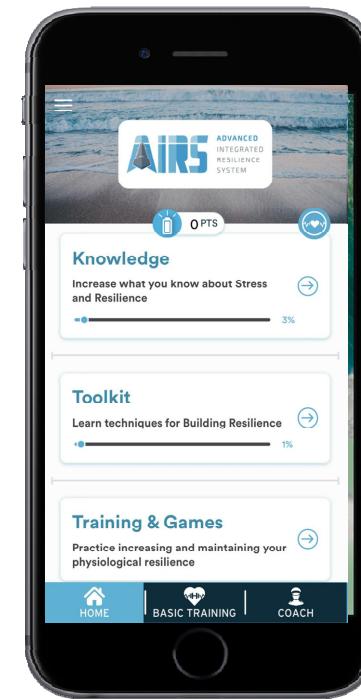
# ...and Offsprings

- German SIMNET (Perceptronics)
- Taiwan SIMNET (Perceptronics)
- US Army CCTT (Someone else)
- Computer Games (Everybody)



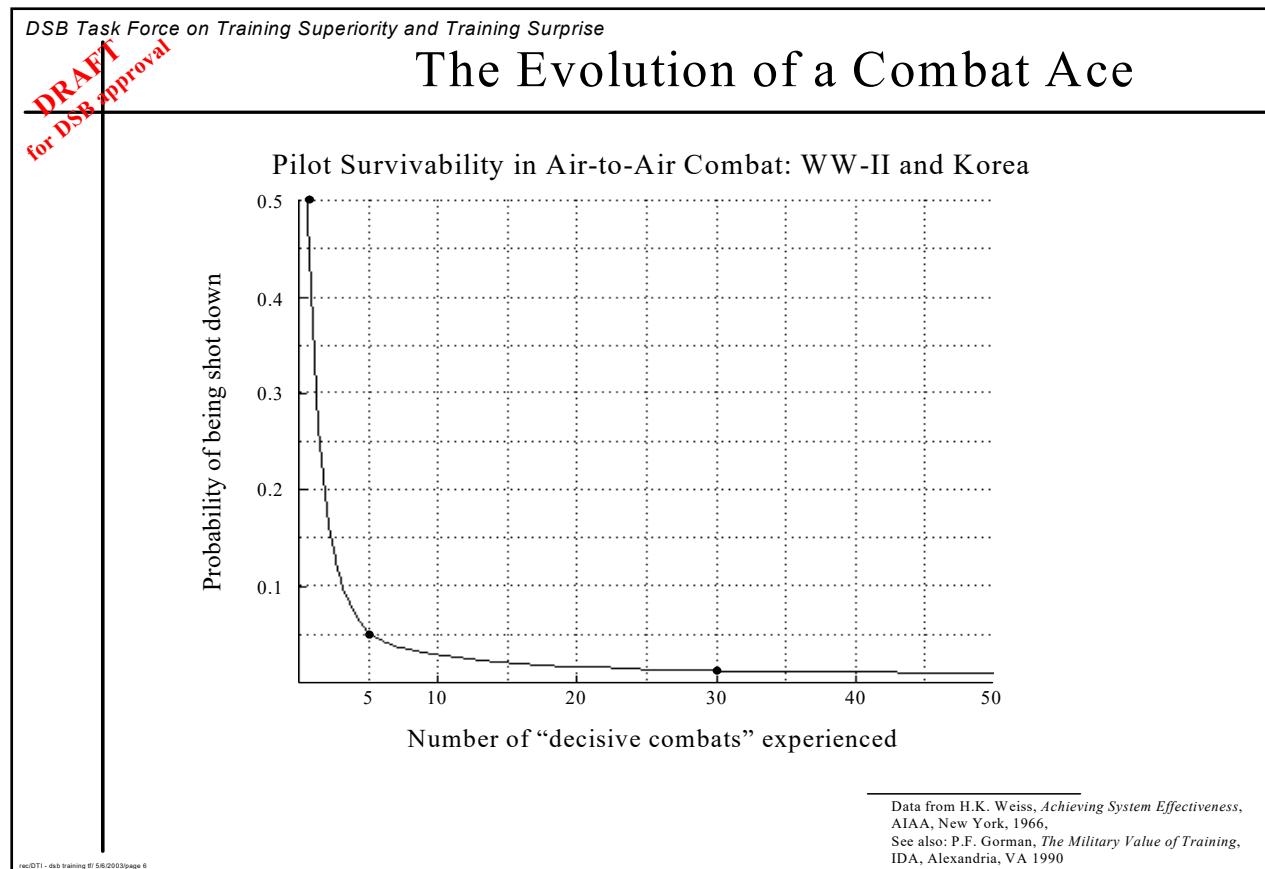
# My Recent Projects Include...

- Advanced Integrated Resilience System (AIRS)
  - Balance negative and positive effects of stress
  - Use proven HRV biofeedback methods
  - Maintain performance in stressful situations.
  
- Ethical Decisions for Lethal Autonomous Weapons
  - “Killer Robots” are new military weapons.
  - Expected to adhere to ethical standards, but
  - AI-based decisions are hard to predict, and
  - Commanders remain morally responsible, so
  - Operators need to understand and to trust the autonomous weapons’ ethical behavior



# Simulation is Important Because...

Simulation is “Condensed Experience”



....which can be applied to numerous skill areas – even ethics!

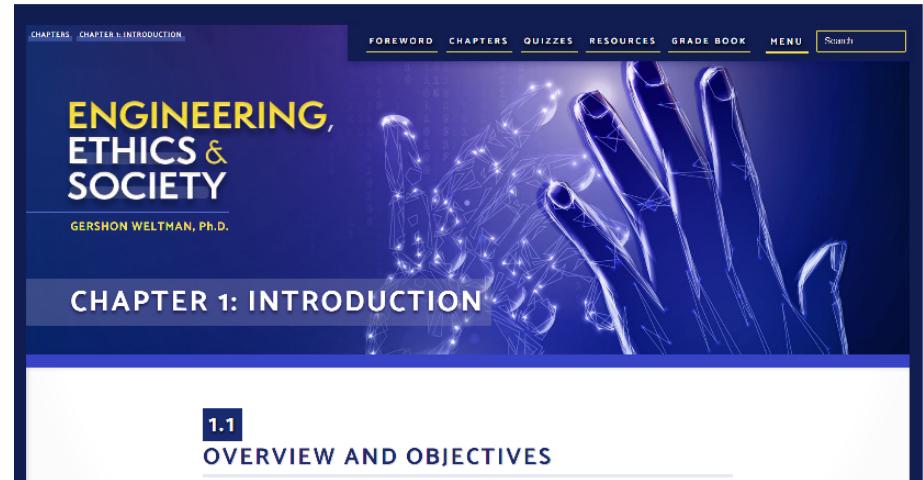
# Course Syllabus

## *Attendance and Reading*

- 17 Lectures (Recommended!)
- 10 Discussion Sections (Required!)
- 17 Textbook Chapters (Recommended)
- Additional Readings (Recommended)

## *Assignments*

- 2 Individual Essays (Required!)
- 1 Team Research Report (Required!)
- 1 Oral Presentation (Required!)
- 2 Examinations (Required!)
- 5 Lecture Quizzes (Recommended!)



Online Textbook

“ENGINEERING, ETHICS & SOCIETY”

Gershon Weltman, Ph.D.

Great River Learning

Access card purchase:

[www.grlcontent.com](http://www.grlcontent.com)

& @ UCLA Bookstore

Suggestion: Take notes on what is *emphasized* in the lectures.  
Slides are posted on BruinLearn site *after* the lecture.

# Grading Percentages

■ Individual Writing	24%
□ Ethical Issue	12%
□ Case Study	12%
■ Team Research Report	29%
□ Written Report	24%
□ Oral Presentation	5%
■ Examinations	37%
□ Midterm	12%
□ Final	20%
□ Lecture Quizzes	5%
■ Participation	10%
□ Discussion/Lecture	10%
<hr/>	
Total	100%

All assignments must be completed and submitted to complete the class!

# Lecture Quiz: Answer Sheet Format

Last Name, First Name (Printed)

Question 1

*T(rue)*

Question 2

F(false)

Question 3

C

Question 4

B

# Course Schedule

Lecture Number	Date	Lecture Topic	G. Weltman: Engineering, Ethics and Society	Additional Reading
<b>Module 1 Ethical and Societal Background</b>				
1	Apr 1	Introduction and Overview	Intro & Chapters	G. Orwell
2	Apr 3	Bases of Morals & Ethics		
3	Apr 8	Ethical Philosophies		
<b>Module 2 Societal/Technical/Ethical Issues</b>				
8	Apr 29	Population and Resource Ethics	Chapters 8-15	
9	May 1	Environmental Ethics		
10	May 6	Bioengineering Ethics		
11	May 8	Computing Ethics I: Simulation & Gaming		
12	May 13	Computing Ethics II: Artificial Intelligence		
<b>Module 3 Ethical Engineering Practice</b>				
	May 27	Memorial Day Holiday	Chapters 16&17 and Review	
16	May 29	Ethical Decision Making		
17	June 3	Personal Ethics and Continued Learning		
	June 5	Floating Holiday		

Spring 2024 schedule is available at BruinLearn website in Week 1

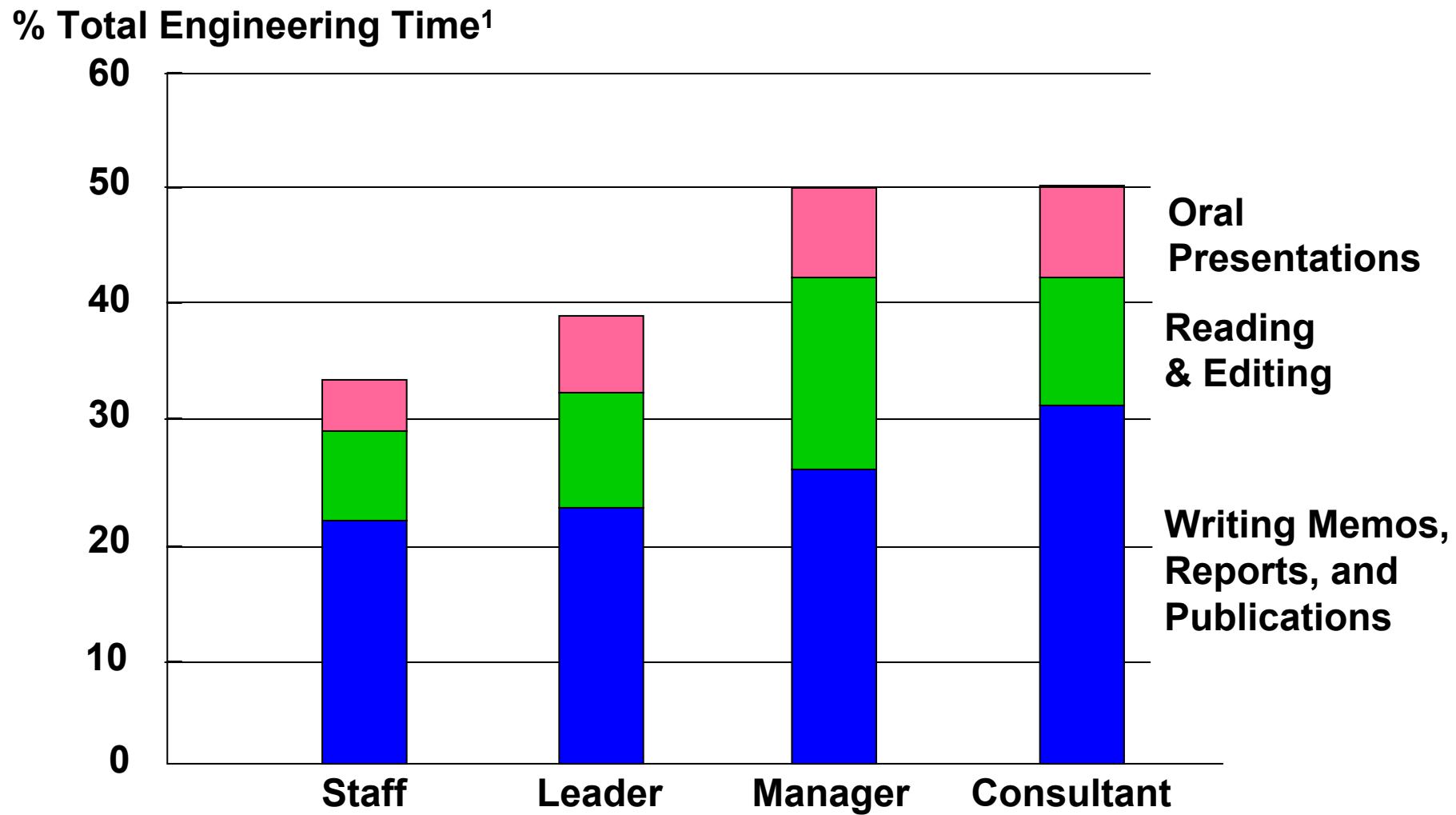
<https://bruinlearn.ucla.edu/courses/184504>

# Important Dates to Remember

- Essay #1 DRAFT - Week 3 in discussion
- Essay #1 FINAL COPY - Week 5 in discussion
- Midterm Exam - Wednesday, April 24, 8 AM – 10 AM
- ESSAY #2 DRAFT - Week 7 in discussion
- ESSAY #2 FINAL COPY - Week 9 in discussion
- Team Presentation - Week 10 in discussion
- Team Project Final Report - Monday, June 10 by 5pm
- Final Exam (TENTATIVE) - Saturday, June 8, 3 hr, 8 AM – 8 PM

Your TA may have additional due dates for discussion assignments

# Why We Emphasize Good Writing



<sup>1</sup>After Bower, D., Technical Communications in R&D Groups, MIT Thesis, 1985

# Why We Emphasize Good Writing



George Orwell, ~1943

*"In 'Politics and the English Language' Orwell castigated contemporaries for using language to mystify rather than to inform. His critique was directed against bad faith: people wrote poorly because they were trying to say something unclear or else deliberately prevaricating. Our problem, it seems to me, is different. Shoddy prose today bespeaks intellectual insecurity: we speak and write badly because we don't feel confident in what we think and are reluctant to assert it unambiguously. Rather than suffering from 'newspeak' we risk the rise of 'nospeak.'*

Tony Judt  
*The New York Review, July 15, 2010*

# Writing and Engineering Employment

A person asks the New York Times Ethicist Columnist:

*"I prescreen job applicants for a small engineering consulting firm committed to equal opportunity. These jobs are primarily technical, but English-language skills are required for the technical writing involved, and a writing sample is requested. Many applications are full of errors in grammar, spelling and punctuation, and are summarily rejected. This disproportionately affects applicants whose names suggest that English may be their second language, as well as other minority groups. Is it ethical to reject engineering applicants for their writing skills? J.W., PENNSYLVANIA"*

The Ethicist replies:

*"Because clear and accurate writing is a significant part of the job, it is legitimate to eliminate applicants who demonstrate an inability to provide it."*

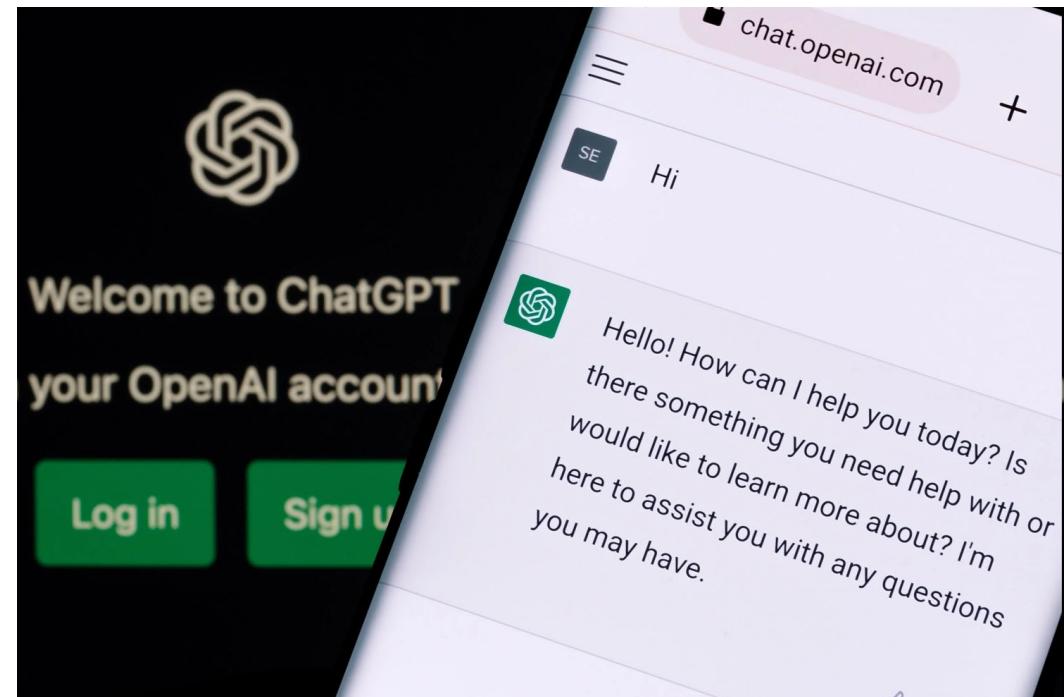
Randy Cohen  
New York Times Magazine, May 3, 2010

# Our Writing Criteria

- Effective Organization:
  - Contents of Paper and/or Report
  - Full Engagement and Teamwork
- Clear Identification of the Problem
- Meaningful Research & Strong Citations
- Comprehensive Description of Issues
  - Problem Background
  - Technical Aspects
  - Ethical and Societal Aspects
  - Meaningful Solutions and/or Recommendations
- Original Ideas (?)
- Confidence-Building Presentation

# What We Warn About ChatGPT et al

- Not 100% accurate
- Makes up references
- Weak on science & technology
- No responsibility/citation
- Creates bad business habits
  - Poses security risks
  - Leaks sensitive data
  - Breaches data privacy
- Not at top university level
- *May violate copyrights & ethics*



ChatGPT *can* be a useful research tool if approached with care and understanding

# Why We Emphasize Teamwork & Diversity

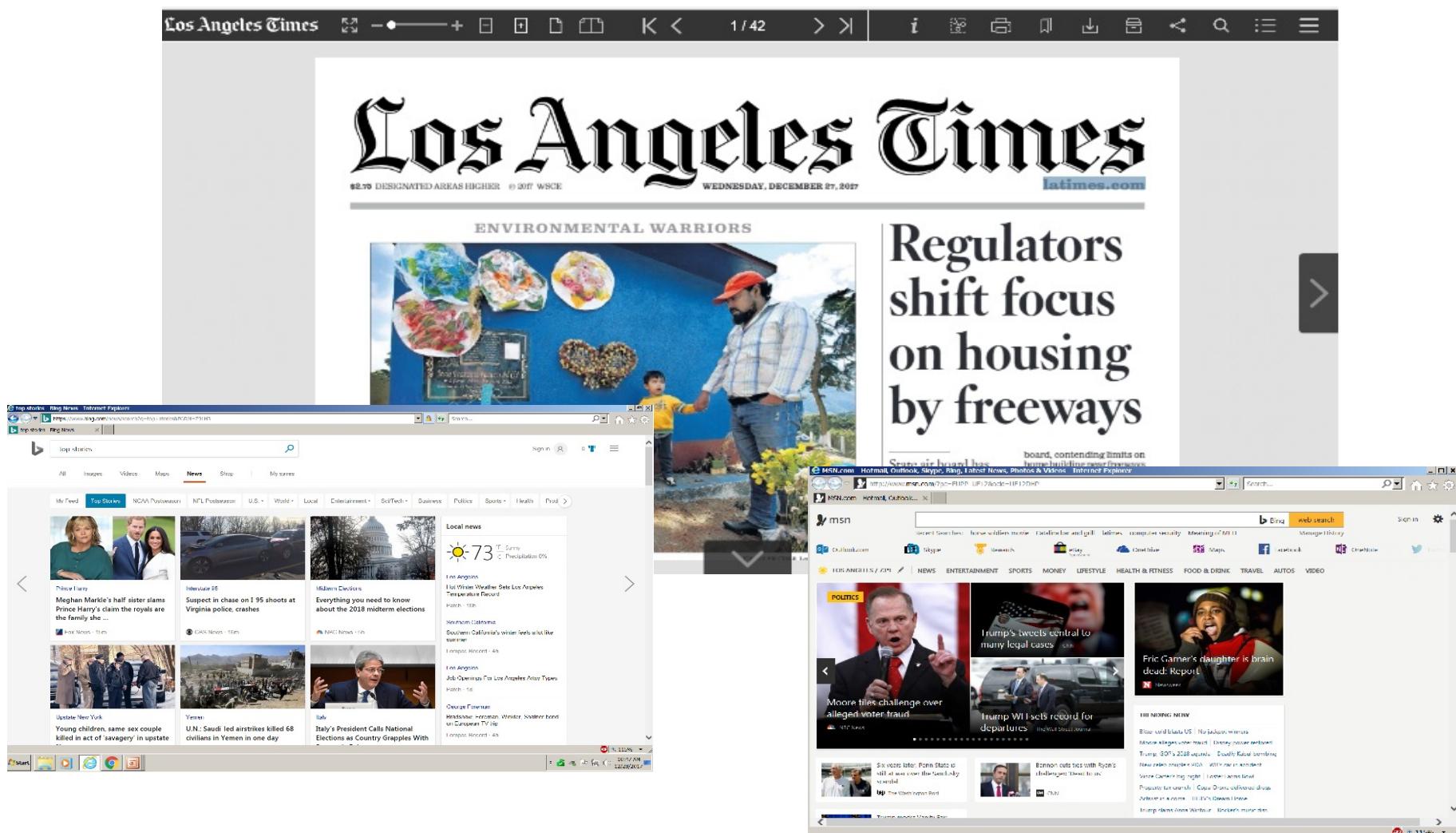
- Successful engineering projects depend on *good teams*
- Modern teams are *highly diverse* in terms of:
  - Disciplines -- Technical and non-technical personnel
  - Organizations – Frequently many and widely distributed
  - Cultures and Ethnicities -- Domestic and international
  - Sex – Gender, identity, pronouns, partner & marriage arrangements, etc.
  - Politics -- Background, party, individual positions on issues, etc.

# Why We Emphasize Teamwork & Diversity

- Successful engineering projects depend on *good teams*
- Modern teams are *highly diverse* in terms of:
  - Disciplines -- Technical and non-technical personnel
  - Organizations – Frequently many and widely distributed
  - Cultures and Ethnicities -- Domestic and international
  - Gender, sexual identity, marriage arrangement, etc.
  - Political background, party, position on issues, etc.
- Engineering education *is currently light on teamwork, but*
- Effective *team membership and leadership* can affect
  - Progress in an organization
  - Overall career success
  - Personal contribution and satisfaction
- We provide *knowledge and experience in teamwork and diversity*

Knowing about teams and leadership is so important we give it a whole lecture.

# I Also Feature Current News...



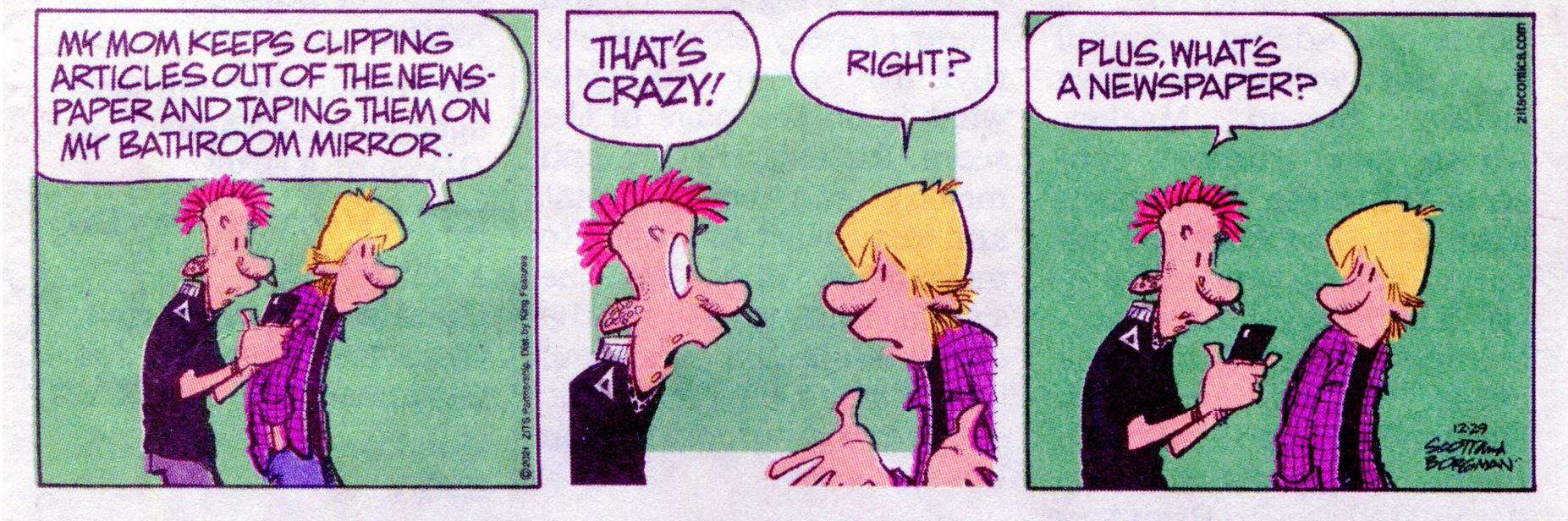
# ...Because

- Might as well know what a *real newspaper* looks like
- Current news events provide *relevant engineering case studies*
- Many engineering news events have *rich ethical context*
- *Societal and political contexts* fulfill Dean Murthy's criteria

Keeping up with what's happening today helps orient you for your future.

# To Make My Point

**ZITS** By Jerry Scott & Jim Borgman

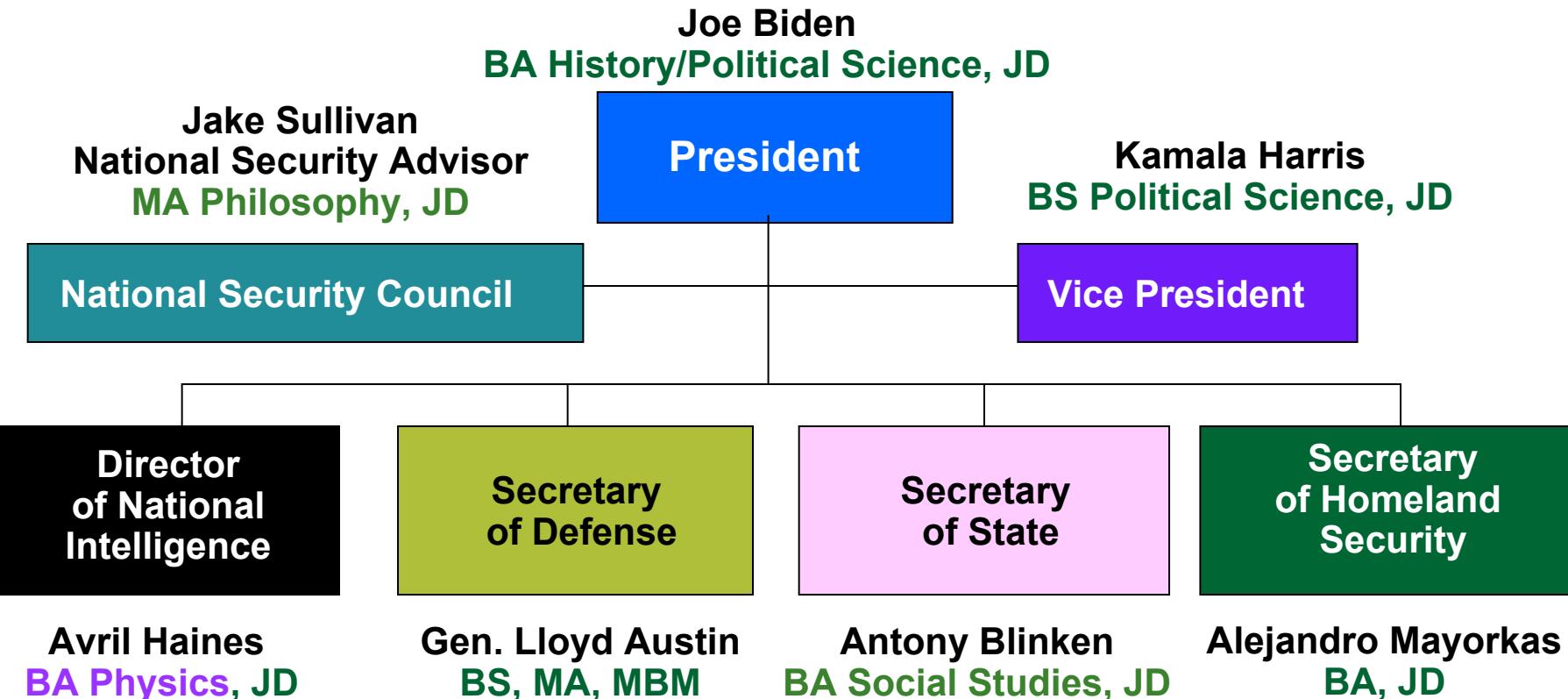


Los Angeles Times, December 29, 2021

# Society and the Two Cultures

- C.P. Snow's 1959 Lecture/Essay on "Two Cultures:"
  - Humanistic: Literature, history, philosophy, religion, arts
  - Scientific: Science and technology
- Snow's Identified Problem:
  - Society's leaders come from the humanistic culture
  - Society's critical issues are increasingly technological and scientific
- Snow's Suggested Solution: Cross education and interaction
- Today's Identified Problems:
  - The same: Our political leaders are mainly not technical

# Society and the Two Cultures



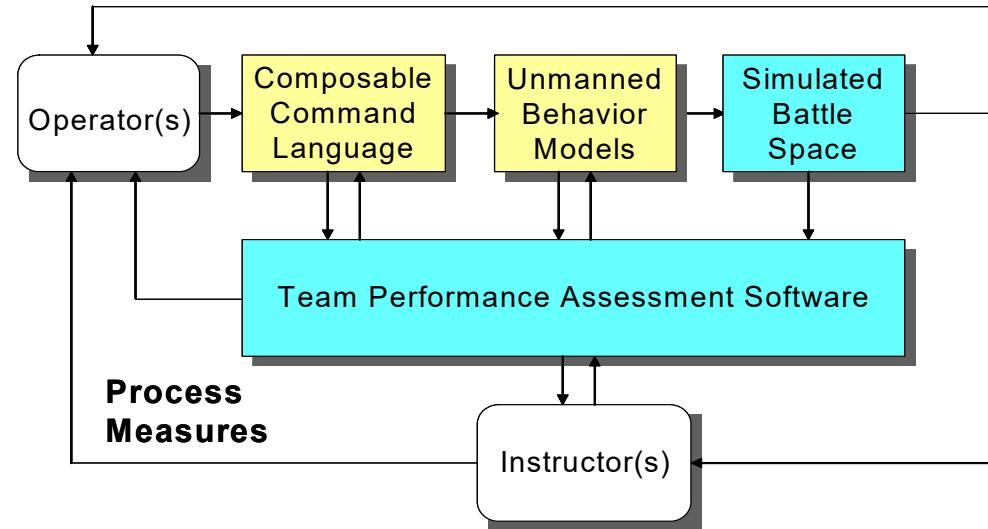
# Society and the Two Cultures III

- C.P. Snow's 1950s Two Culture Formulation:
  - Humanistic: Literature, history, philosophy, religion, arts)
  - Scientific: Science and technology
- Snow's Problem:
  - Society's leaders come from the humanistic culture
  - Society's critical issues are technological and scientific
- Snow's Solution: Cross education and interaction
- Today's Problems:
  - The same: Leaders are not technical
  - **And the opposite: Technology leads, society reacts**
- Today's Solution: Greater awareness *and responsibility*

What do we want? How do we get there? The benefits? The costs?

# The Engineering Sub-Culture

- We use special languages:
  - ❑ Mathematics
  - ❑ Graphs and Spreadsheets
  - ❑ Schematic Diagrams
  - ❑ PPT & Reports
- We see ourselves as:
  - ❑ Creative
  - ❑ Wide Ranging
  - ❑ Solution Oriented
  - ❑ Rational
- Others may see us as:
  - ❑ Overly Analytical
  - ❑ Unbounded
  - ❑ Problems over People
  - ❑ Dangerous



# For Example.....

“When you see something technically sweet  
you go ahead and do it,  
and you argue about what to do about it  
only after you have had your technical success”



Dr. Robert Oppenheimer  
Director of the Manhattan Project  
to build the first atomic bomb

Trinity Atomic Bomb Test  
Alamogordo, NM July, 1945

# Ethics: Two Definitions

*Ethics is ✓ a set of ideas and rules by which to live.*

*Ethics is fundamentally a set of acts based on ideas and rules by which to live!*

“Ethics is the systematic reflection on what is moral.”

Van de Poel and Royakkers, 2011

# Existential Ethics and Engineering

- In the World of Existential Philosophy:
  - *Acts* are more important than words
  - *Acts* ultimately define an individual's ethical structure
  - The individual is forced to act
  - *But the individual is free to chose his or her actions!*
- In the World of Engineering
  - Decisions are Actions
- Engineering Decisions are:
  - Continual
  - Both analytical and uncertain
  - Usually time-constrained
  - Multi-person and multi-organizational
  - Based on both technical and ethical factors
  - *Consequential!*

# Ethics in Engineering Decision Making

- The “Controlling Factor”
  - E.g. “Ethics trumps economics”
  - “We don’t do that!” or “We must do this”
- Another Decision Component
- The Product of an Ethical Culture
  - Team and Project Dynamics
  - Organizational Standards
  - National & International Codes
- A Personal Issue
  - What do YOU stand for?
  - What do you DO about it?
  - **Having Ethics vs. BEING ETHICAL**
  - **Minimizing the difference between your personal ideals and your actions**



The lesson of the Wizard of Oz

# The Engineering Profession

- Meaning of Profession
  - Narrow Definition is Occupation
  - Broader Definition is Authorization or License
  - “*With Authority comes Responsibility*” (*L.M.K. Boelter*)
- Engineering Environment
  - Jobs: Employees to entrepreneurs
  - Organizations: Small to giant, local to distributed
  - Responsibilities: Frequently immense and highly public
  - Influence: Growing rapidly and recognized accordingly
- Professional Ethics
  - Engineering Ethical Codes: Outside influences
  - Personal Ethical Framework: Inside influences
  - Both are important and useful!

# Personal Ethics Counts Positively....



With the TRW deal, Northrop Grumman Chairman Kent Kresa will have realized his vision for the company.

By PETER PAE  
*Times Staff Writer*

On Wednesday, if all goes as planned, shareholders will approve Northrop Grumman Corp.'s \$7-billion purchase of TRW Inc., which will culminate a decade of dazzling deal making for Northrop's longtime chairman, Kent Kresa.

Shortly after what many consider to be his greatest acquisition, the 64-year-old Kresa is expected to announce his retirement and turn over the helm to Ronald D. Sugar, 54, who will be left with a defense behemoth with interests in virtually every aspect of the nation's military.

In a remarkable transformation — much of it engineered by Kresa — Northrop will become the nation's second-largest defense firm, with \$26 billion in annual revenue, rivaling No. 1 Lockheed Martin Corp. and ahead of No. 3 Boeing Co. It will have 120,000 employees scattered from coast to coast in 44 states and 25 countries.

With TRW — Kresa's 16th acquisition in eight years — Century City-based Northrop will become one of Southern California's largest companies, employing 24,000 people in El Segundo, Redondo Beach, San Diego and Palmdale and helping revive the region's once-dominant role as home to the nation's leading aerospace firms.

"What Kresa did with Northrop is a truly amazing story," said Jack Kyser, chief economist for the Los Angeles County Economic Development Corp. "Kresa quietly crafted together one of the most successful aerospace firms, and he did it ethically."

The company's ascension

**“What Kresa did with Northrop is a truly amazing story,” said Jack Kyser, chief economist for the Los Angeles County Economic Development Corp. “Kresa quietly crafted together one of the most successful aerospace firms, and he did it ethically.”**

# ....and Negatively – Yesterday

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## Economic slump: Ethics loom large

Compared with previous recessions, the last two downturns can be pinned more on greed.

By David R. Francis, September 15, 2008 Christian Science Monitor

It used to be that post-World War II recessions in the United States were the bad part of plain vanilla business cycles – inventories had piled up too high as a result of too few sales, or the Federal Reserve raised interest rates and slowed the supply of new money into the economy to battle inflation. But the mild 2001 recession and the current slump are a bit different. Their cause, at least partly, has been dishonesty, greed, and weak business ethics.

The accounting scandals at Enron, Global Crossing, WorldCom, etc., combined with the bursting of the dotcom stock bubble, pushed the economy down in 2001. Today's sinking economy, to some degree, is the result of sagging real estate values and the bad behavior of many in the mortgage industry and on Wall Street. Losses from today's financial crisis have already reached \$500 billion

# ....and Negatively – Today

HER © 2019 WST †

THURSDAY, MARCH 14, 2019



SCOTT EISEN Getty Images

**WILLIAM "RICK" SINGER** of Newport Beach pleaded guilty this week to charges of fraud, racketeering, money laundering and obstruction of justice in a scheme that shuttled rich students into elite universities.

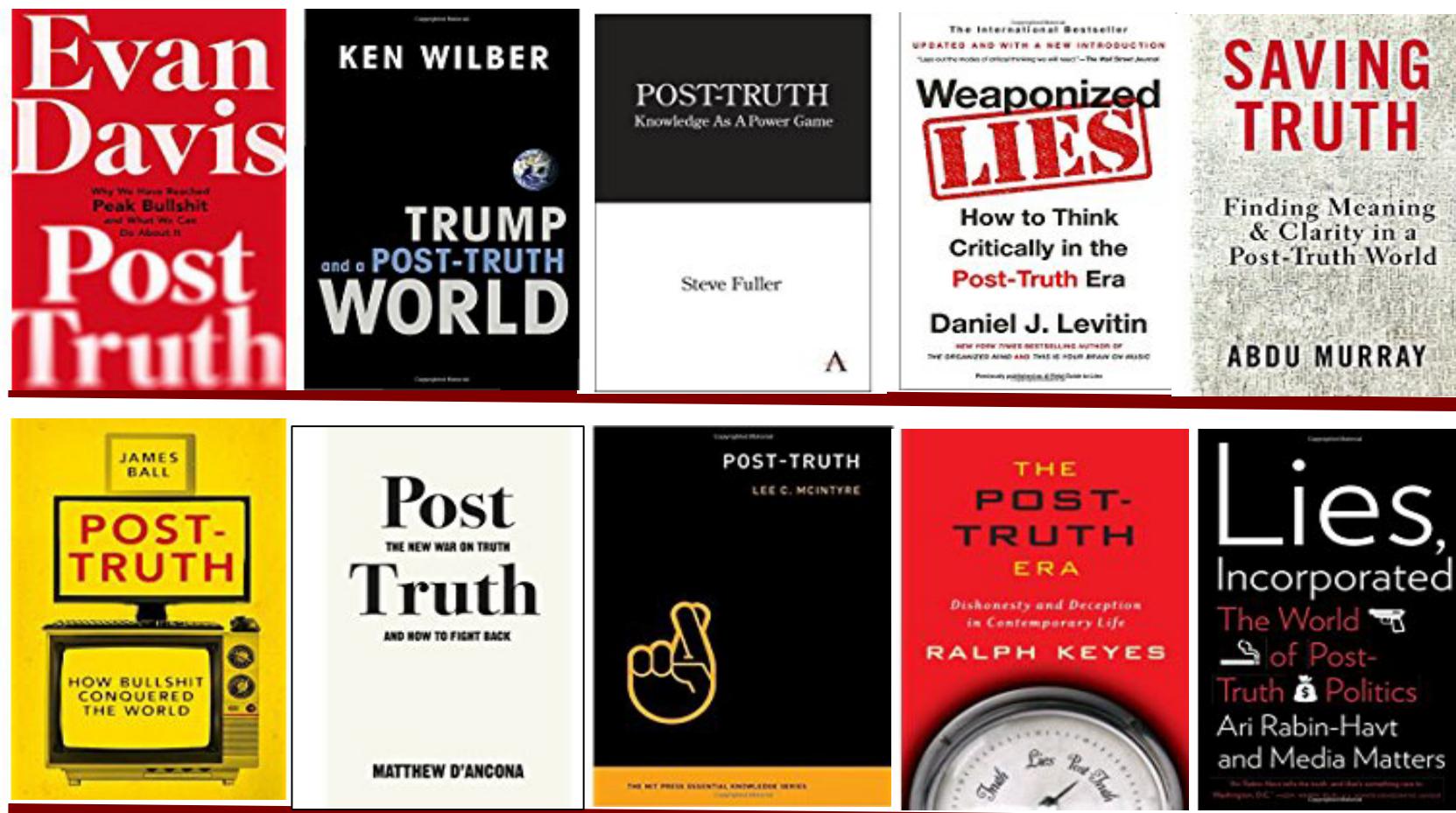
## How wealth pried open a ‘side door’ to top colleges

USC’s central role in yet another scandal prompts shock, anger

**Two ways to bribe**  
The cases of fraud vary in detail, but they all took two paths to deceive college admissions boards:

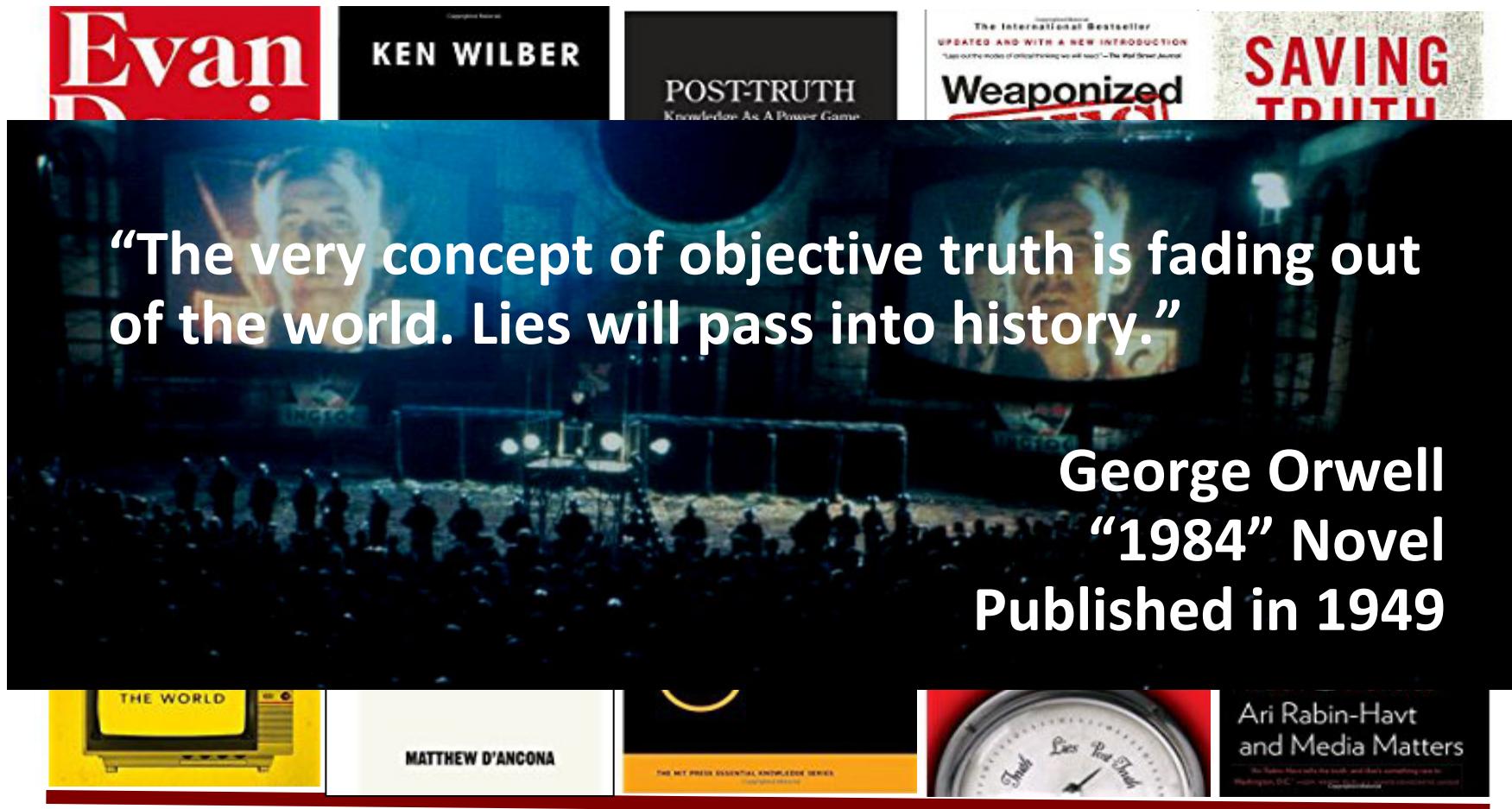
It was the ‘home run of home runs,’ he said: a con that raked in

# In Addition: The Current War on Truth



Just a few of the many books documenting our loss of respect for facts.

## In Addition: The War on Truth...

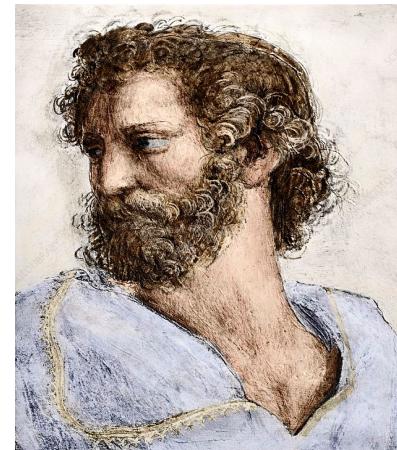


Just a few of the many books documenting our loss of respect for facts.

# ...Facts vs. Feelings...

Regarding what is true:

*"To say of what is that it is not,  
or of what is not that it is, **is false**;  
while to say of what is that it is,  
and of what is not that it is not, **is true.**"*



Aristotle  
Greek Philosopher

Regarding the false perception that US crime has increased steadily:

*"liberals have a whole set of (counter) statistics that theoretically may be right...(but) as a political candidate, I'll go with how people feel and let you go with the theoreticians."*



Newt Gingrich  
Republican Politician

After Lee McIntyre, "Post Truth," MIT Press, Cambridge MA, 2018

# ...Locally as well as Nationally...

## Sign says 'not safe.' Data say, not so

BY TERRY CASTLEMAN

The large banner draped across an empty storefront on the Third Street Promenade carries an eye-catching message for crowds of holiday shoppers: "Santa Monica IS NOT safe," it reads, above a second sign with the words "Crime ... depravity ... outdoor mental asylum."

The Santa Monica Coalition, described on its website as a group of "homeowners, renters, business owners and locals," posted a statement featuring the same message and graphic on its website.

The statement demands that city leaders "enforce the laws, fund law enforcement" and improve public safety. "Do not come to Santa Monica," it states bluntly. "IT IS NOT SAFE."

But a Times review of public data from the city undercuts the idea that the city is growing more dangerous.

Overall police incidents in Santa Monica have trended downward in the last 15 years.

The most common police incidents involve theft from vehicles, public intoxication, vandalism, simple assault and fraud.

Public data also show that police calls for service in Santa Monica declined sig-



DANIA MAXWELL Los Angeles Times

**THE BANNER** on the Third Street Promenade aims to get the attention of city officials, said one property owner. City leaders expressed disappointment.

nificantly in 2020 relative to the six years prior, and have stayed relatively flat since.

The Santa Monica Coalition website also links to a YouTube channel featuring political ads, including one titled "Don't Let Criminals Destroy our Santa Monica Culture," which shows predominantly Black people accused of crimes as ominous music plays.

The coalition's website and YouTube channel were

created in May, shortly before the California primary election.

Early content featured reposted articles from conservative blog RedState and the Santa Monica Observer, which came under recent scrutiny for publishing a false article on Paul Pelosi. In a YouTube video posted shortly before the November midterm election, the coalition endorsed Councilwoman Lana Negrete and candi-

date Armen Melkonians.

The city of Santa Monica issued a statement in response to the coalition's Third Street Promenade banners, saying:

"We care deeply about the success of Santa Monica businesses. It's sad that a small group of landlords are working against our collective success through signage at the very moment when small businesses are welcoming holiday customers."

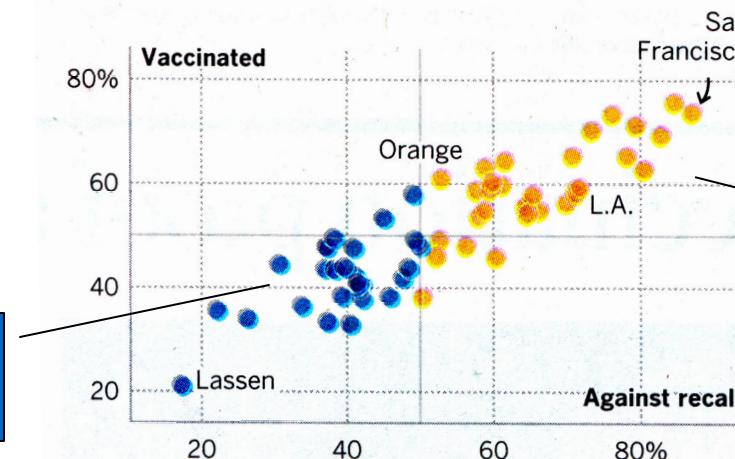
# ...in a Country Politically Divided...

## Divide on recall, vaccination

Results of the recall election show that counties with higher COVID-19 vaccination rates were more likely to support Gov. Newsom. Yellow dots indicate counties that voted against the recall, blue dots those that voted for it.

Republican  
Counties

Democratic  
Counties



MATT STILES Los Angeles Times

Los Angeles Times, September 16, 2021

Attitudes toward scientific/technical issues typically interact with political beliefs.

# ...and Becoming Wary of Technology

## Big Tech's sickness fuels failures like Silicon Valley Bank

By Roger McNamee

**A**FTER 20 YEARS of what appeared to be unstoppable growth, America's tech industry has spent the past year underperforming the rest of the economy. Product failures in new industries like virtual reality and cryptocurrency, layoffs across the board, lower stock prices and the failure of Silicon Valley Bank create a teachable moment to talk about the tech industry's culture and direction.

Beginning in the mid-'50s, the tech industry embarked on a 50-year run of invention, entrepreneurship, empowerment and transformation. It delivered new industries and massive productivity gains to the rest of the economy. Americans grew accustomed to new technology, embracing each new generation, confident that it would make their lives better.

To an increasing degree over the past dozen years, the tech industry exploited the trust of consumers and policymakers to change the game. Rather than empowering users, many new technologies have exploited human weakness. They have used data and application design to manipulate the choices and sometimes the behavior of users, undermining their autonomy. Rather than creating new

chosen to trust even the most untrustworthy of tech companies. We know there is something wrong, but we have not yet insisted on change.

The recent collapse of Silicon Valley Bank illustrates a tech industry culture that prioritizes profit over the public interest time and again. SVB was a community bank. It claimed that half of all startups had accounts there, as well as a huge percentage of venture capitalists and executives. For decades, SVB embraced Silicon Valley culture, providing unique services to its community. And until quite recently, Silicon Valley was loyal to its bank.

Explosive growth in the startup world after the 2008 financial crisis translated into massive deposit growth that stopped a year ago when the Federal Reserve announced its plan to raise interest rates to stem inflation.

Four factors contributed to the collapse of SVB. Had the Fed not raised interest rates by 4.75% over the past year, SVB would not have failed. Had Congress not passed a law in 2018 that loosened the regulation of banks such as SVB, SVB would not have failed. Had SVB employed good risk management, it would not have failed. Had bank regulators done their job during a period of rapidly rising interest rates, SVB would not have failed.

But even with all four failures, SVB

would have you believe the collapse of SVB — as with other failures of tech — is unconnected to the culture and business practices of Silicon Valley. That is nonsense, and there are lessons to be gleaned.

One lesson is that loosening regulations on big sectors — such as the rollback of Dodd-Frank financial reforms in 2018 — rarely ends well. One might reasonably conclude that government regulations, such as those around vaccines, serve an essential role in consumer safety that becomes less obvious the longer they have been effective.

The vast majority of the major players in tech now were not in operation when the deregulation boom began in 1981, but no industry has exploited laissez-faire government policies more effectively than tech. Industry leaders have consistently shifted the burden of harm from their products from themselves to those touched by their products.

Another lesson is that technology progress is not inevitable. The historian Melvin Kranzberg once noted that "technology is neither good nor bad, nor is it neutral." Technology is the work of human beings and reflects their priorities, incentives and values. If we want tech to be a force for good, we need to ensure that the priorities, incentives and values of the people creating it are consistent with the na-

**The social harm stemming from the industry's products shows the need for strong regulations. Such boundaries add stability. They won't slow innovation.**

significant social harm.

Consider all the tech startups since the 2008 financial crisis and ask yourself how we should calculate the harm to society. Some of the most prominent tech segments have done huge damage to consumers, including crypto, AI, self-driving cars, facial recognition, deep fakes and social platforms able to violate your privacy and track your every move. Most startups have done something good, but far too many use the good as bait to enable business practices that lead to harm. They do it because of misaligned priorities, incentives and values.

This brings us back to Silicon Valley Bank. The people whose calls to withdraw funds triggered the bank run are successful, wealthy and careless. If leaders in Silicon Valley are unwilling to support SVB, one of their own and a uniquely valuable partner in their ecosystem, it is safe to assume their business goals would not consider, much less act for, the greater good.

Why would we entrust leadership of an industry central to our economy to people who have no interest in the public interest? The Silicon Valley Bank story also suggests they don't understand banking, a system that plays a central role in their success. What else don't they understand?

The solution to this damaged

# ...and Becoming Wary of Technology

## Big Tech's sickness fuels failures like Silicon Valley Bank

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# But the Tide May be Turning Somewhat

Los Angeles Times

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## Fox News reaches \$787-million settlement in Dominion defamation suit



Tailed by a lone demonstrator, the legal team representing Fox News arrives at the Leonard L. Williams Justice Center where Fox News was being sued by Dominion Voting Systems. (Chip Somodevilla / Getty Images)

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Column: We can't afford another writers' strike. Not Hollywood, not L.A., not the country

Opinion: Cars don't have to rule Culver City, or the future of L.A. transit

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# The Challenge (and Opportunity) Ahead\*

		<u>2004</u>	<u>2008</u>	<u>2010</u>	<u>2012</u>
■ Have you ever					
□ Cheated on exam.....	62%	64%	59%	51%	
□ Stolen from store .....	27%	30%	29%	20%	
□ Lied to teacher .....	62%	64%	66%	55%	
□ Lied to parent .....	82%	82%	80%	76%	
■ Need to lie and cheat sometimes to succeed.....	51%	--	39%	36%	
■ Successful people do anything to win even if others call it cheating		59%	58%	57%	
■ Better at doing right thing than most other people .....	74%	--	79%	81%	
■ Satisfied with own ethics .....	92%	92%	92%	93%	
■ Important to be a person of good character	98%	98%			

\*Based on surveys of large numbers of high school students performed by Josephson Institute of Ethics  
([www.josephsoninstitute.org](http://www.josephsoninstitute.org))

# ...Even in Today's Corporate World

Should Environmental, Social, and Governance (E.S.G.) considerations be a major part of public companies' business mission and ethical structure?

"In today's globally interconnected world, a company must **create value for and be valued by its full range of stakeholders** in order to deliver long-term value for its shareholders."



Larry Fink, Black Rock CEO

The Strive 500 E.T.F., which invests in large public companies will use the power of shareholder votes to refocus companies on **maximizing profit**, a goal from which boardrooms have strayed.



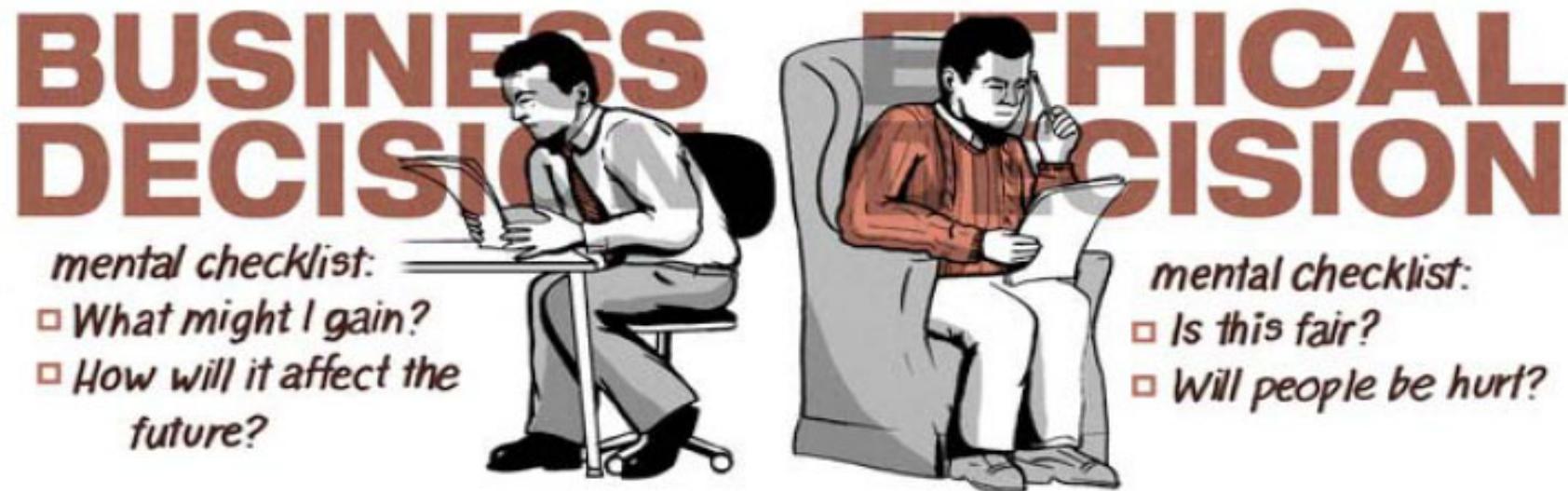
Vivek Ramaswamy, Strive CEO

Strive CEO

Proponents say that attention to E.S.G. will actually result in higher profits.

# “Framing” Engineering Decisions Can Help...

When the same problem is framed as a…



…participating groups react quite differently.

Our goal: Learning to frame professional decisions as both Business (i.e., Engineering) and Ethical – as the situation demands

Chana Joffe-Walt & Alix Spiegel, *Psychology of Fraud*, NPR, May 1, 2012

# Step-Wise Optimization: Perfecting the World Through Good Ethical Decisions



The difficulty is that everybody has to agree on our mountaintop destination.

# In Summary

- **Engineering** is about what *can be done* in terms of technology,
- **Ethics** is about what *should be done* for the benefit of society and individuals,
- **Engineering Ethics** is about *taking the right technological actions* as individual engineers and as engineering companies and organizations

# Online Poll

- Go to <https://onlinepoll.ucla.edu>
- Look for Engr 183EW–Ethics1
- Password: 1234
- Answer the 3 multiple choice questions
- Hit “SUBMIT”