

Engineering, Ethics & Society: Engineering Ethics 1 - Bases

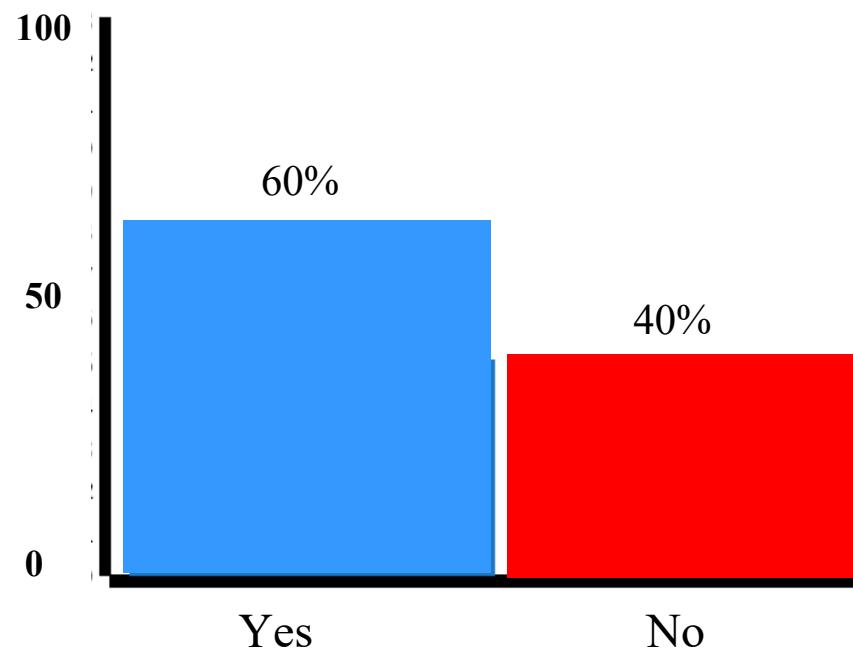
Dr. Gershon Weltman
Engineering 183EW, UCLA SEAS
Lecture 2

Lecture Contents

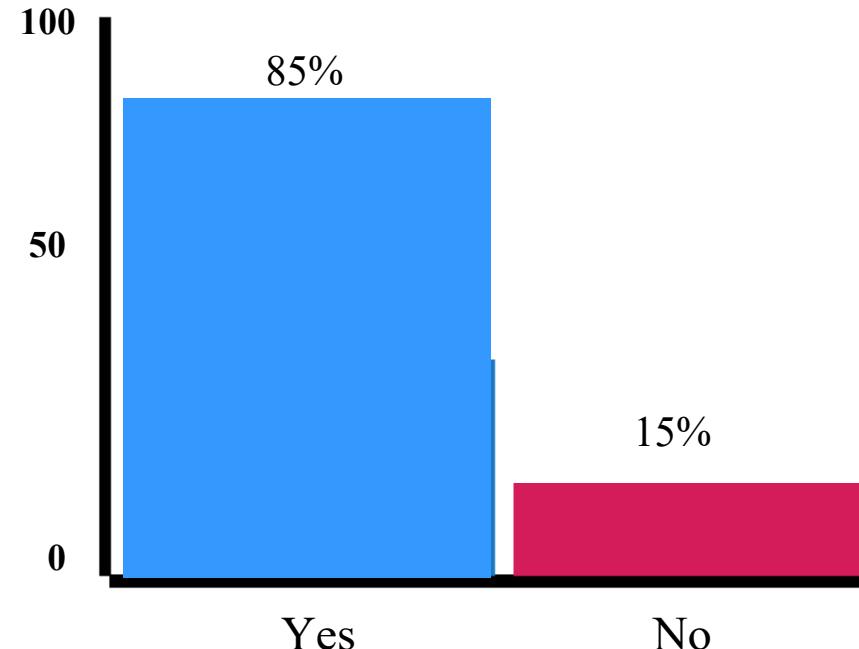
- Sources of Morals and Ethics
- Ethical Progressions
- Moral Revelations
- Some Ethical Codes Historically
- Morals, Ethics and The Law
 - The Principle
 - Case 1: Introduction of Child Labor Laws
 - Cases 2 & 3: Reversal of Laws and Covenants
 - Case 4: Movement of Knowledge
 - Engineering Practice Implications
- Ethical Action: Major Influences
 - Religion
 - Science
 - Reason
 - Intuition
 - Experience
 - Choice

Online Poll Results I

Do you feel you are better at doing the right thing than other people?

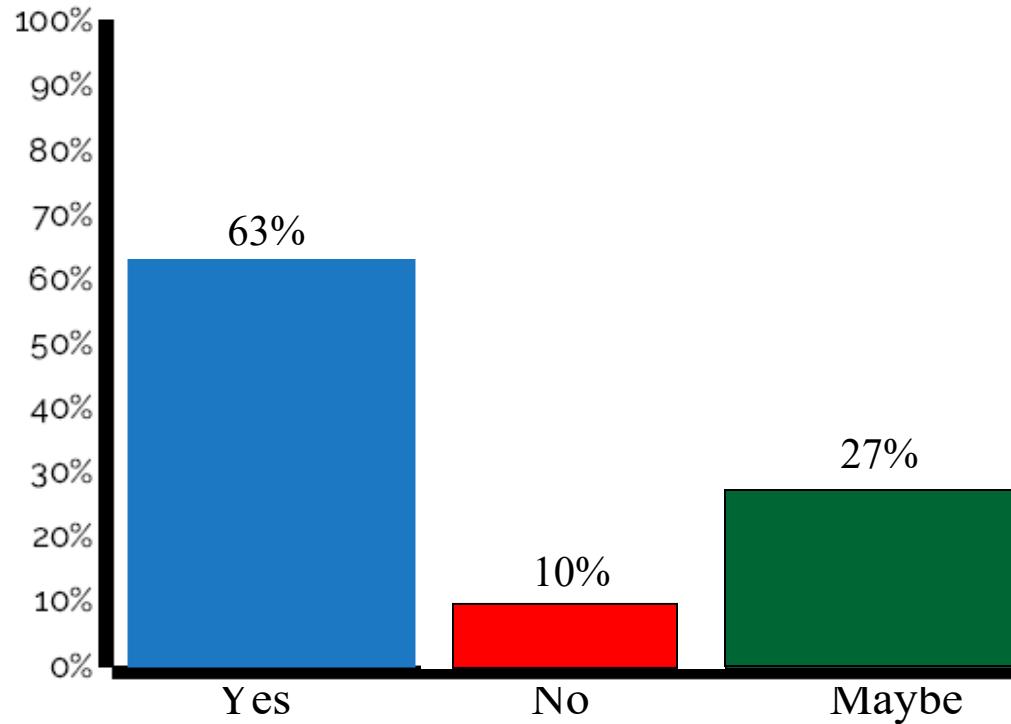


Are you satisfied with your own ethics?



Online Poll Results II

Do you believe you will learn more about engineering ethics in this class?



The good news, for us anyway, is that only 10% feel the class is hopeless, and 90% are sure they'll learn something or are willing to give it a chance.

Sources of Morals and Ethics

Morals and Ethics Are:
Beliefs, Assumptions, Values → Guides to Action

The Main Sources of Morals and Ethics Are Considered to be

**Biological
Genetic/Neurophysiological**

**Natural
Nature's Laws/Universal Truths**

Descriptive Ethics – Deals with describing existing ethical systems
Normative Ethics – Deals with determining right choices and actions

A Sense of Fairness in Monkeys

A study reported by Dr. Frans de Waal and his colleagues at the California National Primate Research Center, UC Davis



Procedure and Results

- Two sets of monkeys were taught a simple task
- The reward was a slice of cucumber for each monkey.
- One monkey was then given a grape instead of the cucumber.
- The “underpaid” monkey protested
- *The conclusion: The underpaid monkey recognized the unfairness of the deal and reacted accordingly.*

The implication for existential ethics is that while we are certainly free to act, we may have a disposition to act fairly, which is not a bad thing overall.

Fairness May Be Advantageous In Evolution

SCIENCE + TECHNOLOGY

Inequality not inevitable among mammals, study shows

Fairness has played as big a role in evolution as dominance and hierarchy — but has been understudied



Joy Ernst/Unsplash

Capuchin monkeys are among species showing an innate sense of fairness.

A study published by Michael Alfaro, UCLA professor of ecology and evolutionary biology at UCLA and others shows fairness and equality are key to social behavior.

Sources of Ethics

**Morals and Ethics Are:
Beliefs, Assumptions, Values → Guides to Action**

The Main Sources of Morals and Ethics Are Considered to be

**Biological
Genetic/Neurophysiological**

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**Revelation
Transcendental Authorities**

**Philosophical
Theoretical, Experiential**

**Societal
Historical, Conventional**

**Cultural, Identity
Family, Ethnicity, Gender, etc.**

**Descriptive Ethics – Deals with describing existing ethical systems
Normative Ethics – Deals with determining right choices and actions**

Ethical Progressions



Early Codes: Egypt & Mesopotamia



- 2050 B.C. Ur-Nammu
- 1850 B.C. Lipit-Ishtar
- 1780 B.C. Hammurabi
- 1500 B.C. Hittite
- 1100 B.C. Assyrian

These were both bodies of law to be followed and records of how cases had been decided in the past. For instance, in Egypt the Pharaoh was the living law - and the law was he. The “law” was the prerogative of kings and priests, but they might be influenced by societal custom and past events.

Code of Hammurabi (Babylonia, ~1800 BC)

Hammurabi, prince, called of Bel am I the, making riches and increase, enriching Nippur and Dur-ilu beyond compare, sublime patron of E-kur; who reestablished Eridu and purified the worship of E-apsu; who conquered the four quarters of the world..... When Marduk sent me to rule over men, to give the protection of right to the land, I did right and righteousness... and brought about the well-being of the oppressed.

1. If any one ensnare another, putting a ban upon him, but he can not prove it, then he that ensnared him **shall be put to death**.
2. If any one bring an accusation against a man, and the accused go to the river and leap into the river, if he sink in the river his accuser shall take possession of his house. But if the river prove that the accused is not guilty, and he escape unhurt, then he who had brought the accusation **shall be put to death**, while he who leaped into the river shall take possession of the house that had belonged to his accuser.
3. If any one bring an accusation of any crime before the elders, and does not prove what he has charged, he shall, if it be a capital offense charged, **be put to death**.
.....
282. If a slave says to his master: "You are not my master," if they convict him, his master **shall cut off his ear**.

(These are the) LAWS of justice which Hammurabi the wise king established. A righteous law and pious statute did he teach the land. Hammurabi, the protecting king am I.

Early Biblical Material (~1000 BCE)



Potshard containing early biblical material

1. you shall not do [it], but worship the [Lord].
2. Judge the sla[ve] and the wid[ow]/Judge the orph[an] [and] the stranger.
3. [Pl]ead for the infant / plead for the po[or and] the widow.
4. Rehabilitate [the poor] at the hands of the king.
5. Protect the po[or and] the slave / [supp]ort the stranger

Translation by Gershon Galil
University of Haifa, Israel

The writing was discovered on a pottery shard dug up during excavations at Khirbet Qeiyafa, near Israel's Elah valley. The excavations were carried out by archaeologist Yosef Garfinkel of the Hebrew University in Jerusalem. This could mean that parts of the Bible were written centuries earlier than previously thought.

[LiveScience.com](#) Jan 15, 2010

Revealed Laws - Noahide (Israel, ~600 BCE)

The Seven Laws for Mankind

1. You shall practice equity, establish and promote justice
2. You shall not commit Idolatry
3. You shall not commit Blasphemy
4. You shall not commit Sexual Immorality
5. You shall not commit Murder
6. You shall not commit Theft
7. You shall not eat the limb torn from a live animal. Flesh with the life of it, the blood of it, you shall not eat.

According to Biblical teachings the first six universal laws were given to Adam, the seventh was added for Noah after the flood.

Revealed Laws - The Decalogue (Israel, ~500 BCE)

I am the Lord your God who brought you out of slavery in the land of Egypt

1. You shall have no other gods before me.
2. You shall not make idols to worship them.
3. You shall not take the name of the Lord thy God in vain.
4. Remember the Sabbath day and keep it holy.
5. Honor your father and mother.
6. You shall not murder.
7. You shall not commit adultery.
8. You shall not steal.
9. You shall not give false testimony against your neighbor.
10. You shall not covet your neighbor's goods, nor his house, nor his wife, nor his manservant, nor his bull, nor his donkey, nor anything that is your neighbor's.



The Decalogue appears twice in the Jewish Torah, which has a total of 613 recognized injunctions involving religious practices.

The Ten Commandments in American Society



[**H48200 Ten Commandments Cardboard Cutout Standup**](#)
by Wet Paint Printing + Design
\$ 49.00 + \$14.90 shipping



[**4030037 10 Commandments Stretch Bracelet**](#)
by Christian Scripture Religious Thou
Price: **\$9.99 FREE Shipping**



[**Ten Commandments Dog tag Necklace Pendant**](#)
[**24 inch Stainless Steel Chain Giftpouch and Keyr**](#)
By Keyring
Price **\$17.99 Prime**

American society has embraced the Ten Commandments as a historical moral symbol, and as a result various groups believe the Commandments should be part of civic locations such as city halls, courtrooms, etc. Other groups say this would directly violate the Constitutional clause prohibiting “establishment.”

Many Additional Biblical Injunctions (Leviticus19)...

- 26 Ye shall not eat *any thing* with the blood: neither shall ye use enchantment, nor observe times.
- 27 Ye shall not round the corners of your heads, neither shalt thou mar the corners of thy beard.
- 28 Ye shall not make any cuttings in your flesh for the dead, nor print any marks upon you: I *am* the Lord.
- 29 Do not prostitute thy daughter, to cause her to be a whore; lest the land fall to whoredom, and the land become full of wickedness.
- 30 Ye shall keep my sabbaths, and reverence my sanctuary: I *am* the Lord.
- 31 Regard not them that have familiar spirits, neither seek after wizards, to be defiled by them: I *am* the Lord your God.
- 32 Thou shalt rise up before the hoary head, and honour the face of the old man, and fear thy God: I *am* the Lord.
- 33 And if a stranger sojourn with thee in your land, ye shall not vex him.
- 34 *But* the stranger that dwelleth with you shall be unto you as one born among you, and thou shalt love him as thyself; for ye were strangers in the land of Egypt: I *am* the Lord your God.
- 35 Ye shall do no unrighteousness in judgment, in meteyard, in weight, or in measure.
- 36 Just balances, just weights, a just ephah, and a just hin, shall ye have: I *am* the Lord your God, which brought you out of the land of Egypt.
- 37 Therefore shall ye observe all my statutes, and all my judgments, and do them: I *am* the Lord.

...and Harsh Penalties as Well

Mosaic law provides for the death penalty in these cases:

- Adultery (for a married woman and her lover)
- Bestiality
- Blasphemy
- Child sacrifice
- False testimony in capital cases
- False prophecy
- Proselytizing and promoting other religions
- Male homosexual relations
- Idolatry, actual or virtual
- Incestuous relations
- Insubordination to supreme authority
- Lying about one's virginity upon marrying a spouse
- Kidnapping
- Murder
- Rape committed against a betrothed woman
- Striking, cursing, or otherwise rebelling against parental authority
- Sabbath-breaking
- Witchcraft, divination, necromancy, sorcery, etc

Revealed Christian Doctrine (Israel, ~30 AD)

According to the Gospels, Jesus of Nazareth preached:

- Follow the Law, obey the Commandments
 - Do not only not swear oaths falsely, do not swear oaths at all
 - Blessed are the meek, the persecuted, the merciful, the peacemakers
 - Agree with your adversary, murder begins in the heart,
 - Turn the other cheek, do not give “an eye for an eye, a tooth for a tooth”
 - Love your enemies, do good to those who hate you
- Do your charitable deeds in secret, pray privately, fast to be seen only by God
 - Lay up treasures in heaven and not on earth, you cannot serve both God and mammon
 - Adultery is committed in the heart when you look at a woman with lust
 - Divorce is adultery, unless for sexual immorality
 - Do not worry – about your life, about food and drink, about clothing.....
 - Judge not, that you be not judged

These novel teachings emphasized humility, loving kindness, and forgiveness rather than prohibitions and retribution

An Essential Idea: The Golden and Silver Rules

- Judaic: “Silver”
What is hateful to you, do not do to your neighbor.
- Christian: “Golden”
What you would want others to do to you, do so to them.
- Buddhist: “Silver”
Hurt not others with that which pains you.
- Muslim: “Golden”
Desire for your brother that which you desire for yourself.
- Hindu: “Silver”
Do nothing to others which if done to you would cause you pain.
- Baha'i: “Golden”
Choose for your neighbor that which you choose for yourself.

And a Silver and Golden Conundrum

How do you know what is hateful or desirable to others?

- Experiential Level
 - Assume homogeneity – Everyone thinks the same 



And a Silver and Golden Conundrum

How do you know what is hateful or desirable to others?

■ Experiential Level

- Assume homogeneity – Everyone thinks the same 
- Emphasize *principles* over *particulars* – E.g., pleasure & pain
- Empathize -- Do as *they would have you do* onto them! “Platinum Rule”

What is Empathy?

“Empathy is an awareness of other peoples' feelings, needs and concerns.”

Daniel Goleman, PhD

Author, *Emotional Intelligence: Why It Can Matter More Than IQ*
Co-Director, Consortium for Research on Emotional Intelligence, Rutgers University

And a Golden Conundrum

How do you know what is hateful or desirable to others?

- Experiential Level
 - Assume homogeneity – Everyone thinks the same 
 - Emphasize *principles* over *particulars* – E.g., pleasure & pain
 - Empathize -- Do as *they would have you do* onto them! “Platinum”
- Practical Level: How to Empathize
 - Shared cognitive models
 - Family and Friends
 - Learned cognitive models:
 - Individuals – Psychology
 - Groups – Sociology
 - Meta-cognitive processes
 - Create models
 - Test and refine models
- Analytical Level: Ethical Philosophies Based on Normative Principles

Life Code: Chivalry (Europe, ~1000 AD)¹

- Observe all the Church teaches
- Defend the Church
- Do not recoil before your enemy
- Make war on the non-believer without cessation or mercy
- Love your country of birth
- Perform your feudal duties
- Champion the Right and Good against Injustice and Evil
- Be generous to everyone
- Respect all weaknesses and make yourself their defender
- **Never lie, and keep your word**



¹After Gautier, Chivalry, 1989

Life Code: Way of the Warrior (Asia, ~1100 AD)

❖ THE SEVEN VIRTUES OF BUSHIDO ❖

義 礼

GI
Integrity

Be acutely honest throughout your dealings with all people. Believe in justice, not from other people, but from yourself. To the true warrior, all points of view are deeply considered regarding honesty, justice and integrity.



Warriors make a full commitment to their decisions.

REI
Respect

True warriors have no reason to be cruel. They do not need to prove their strength. Warriors are courteous even to their enemies. Warriors are not only respected for their strength in battle, but also by their dealings with others.



The true strength of a warrior becomes apparent during difficult times.

義	Justice (gi)
勇	Bravery (yuu)
仁	Benevolence (jin)
真	Veracity (makoto)
礼	Politeness (rei)
名 誉	Honor (meiyo)
忠 義	Loyalty (chuugi)

真 義

MAKOTO
Honesty and Sincerity

When warriors say that they will perform an action, it is as good as done. Nothing will stop them from completing what they say they will do. They do not have to "give their word." They do not have to "promise."



Speaking and doing are the same action.

CHU
Duty and Loyalty

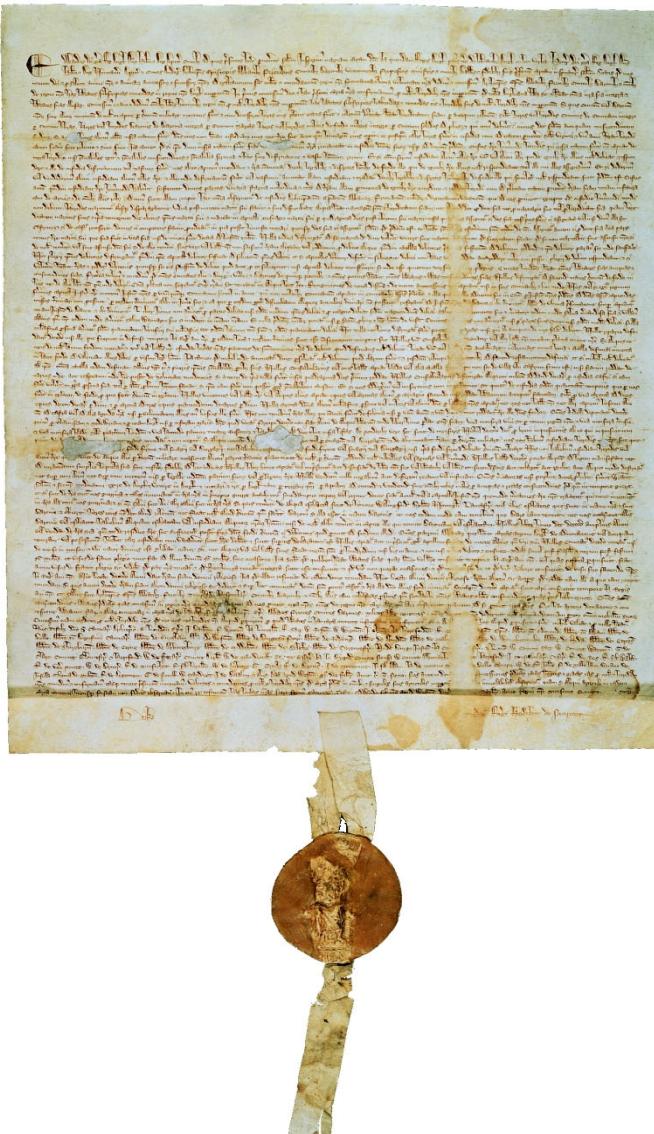
Warriors are responsible for everything that they have done and everything that they have said, and all of the consequences that follow. They are immensely loyal to all of those in their care.



To everyone that they are responsible for, they remain fiercely true.

Stated in different ways, and sometimes involving 8 rather than 7 qualities, the Way of the Warrior appears in Japanese, Chinese and Korean cultures.

Societal Code: Magna Carta (England, 1215)



- England's King John promises his barons that he will "obey the law of the land"
- Establishes the principle that *laws apply to all* -- even to kings
- Recognizes the rights of individuals within states and elucidates those rights
- A partial basis for the American Constitution and Bill of Rights

An American Example

Los Angeles Times
\$3.66 DESIGNATED AREAS HIGHER © 2023 FRIDAY, MARCH 31, 2023 latimes.com

TRUMP INDICTED

He becomes the first former U.S. president to face criminal charges



Alleged hush-money payment to porn star is at center of case; 'Political Persecution,' he claims

BY SARAH D. WIRE AND ARIT JOHN

WASHINGTON — Former President Trump was indicted Thursday in New York City on charges related to an alleged hush-money payment made to a porn actor in the final days of the 2016 campaign, marking the first time in history that a former U.S. president has been criminally prosecuted.

The unprecedented indictment, confirmed Thursday by Trump's attorneys, comes as Trump is facing separate investigations into his alleged involvement in 2020 election interference by his supporters and the Jan. 6, 2021, attack on the U.S. Capitol, along with his handling of classified documents after leaving office.

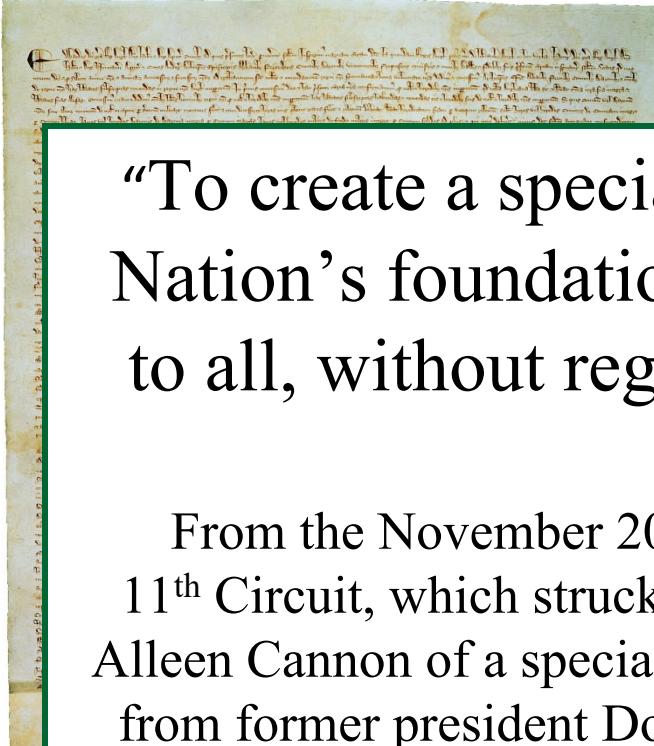
"He did not commit any crime. We will vigorously fight this political prosecution in Court," Trump's lawyers Susan Necheles and Joseph Tacopina said in a statement.

Manhattan Dist. Atty. Alvin Bragg's office said Thursday night that it had reached out to Trump's attorneys to coordinate his surrender. Multiple outlets reported that Tacopina said Trump's arraignment is likely to occur early next week.

The indictment is sealed and the exact charges a New York grand jury voted to bring against Trump are still unknown. They are expected to be related to a \$130,000 payment made by his former attorney Michael Cohen to adult film star Stormy Daniels, money allegedly paid to prevent the actor from publicly saying she had an affair with Trump. The former president has been accused of hiding his reimbursement of Cohen by funneling it through his business and recording the payments as legal expenses.

The indictment by a New York Grand Jury shows that no American is above the law!

An American Example 2



“To create a special exception here would defy our Nation’s foundational principle that the law applies to all, without regard to numbers, wealth or rank.”

From the November 2022 decision of the Court of Appeals for the 11th Circuit, which struck down the appointment by district court judge Alleen Cannon of a special master to review the documents legally seized from former president Donald Trump, partially on the basis that former presidents should be treated differently than ordinary citizens.

The indictment by a New York Grand Jury shows that no American is above the law!

Life Code: Boy Scouts (England, ~1900 AD)

Oath:

On my honor I will do my best to do my duty to God and my country and to obey the Scout Law; To help other people at all times; To keep myself physically strong, mentally awake, and morally straight.

Law: A Scout is

- Trustworthy
- Loyal
- Helpful
- Friendly
- Courteous
- Kind
- Obedient
- Cheerful
- Thrifty
- Brave
- Clean
- Reverent



Societal Code: West Point (USA, ~1950 AD)



A cadet will not lie, cheat or steal,
or tolerate those who do!



Simple codes are easy to remember, but in their simplicity they may neglect more complex ethical and moral issues of great importance

Societal Code: UCLA Student Ethical Standards



Societal Code: UCLA Faculty Ethical Standards

- ✓ Fair Dealing
- ✓ Individual Responsibility and Accountability
- ✓ Respect for Others
- ✓ Compliance with Applicable Laws and Regulations
- ✓ Compliance with Applicable University Policies, Procedures and Other Forms of Guidance
- ✓ Conflicts of Interest or Commitment
- ✓ Ethical Conduct of Research
- ✓ Records: Confidentiality/Privacy and Access
- ✓ Internal Controls
- ✓ Use of University Resources
- ✓ Financial Reporting
- ✓ Reporting Violations and Protection from Retaliation

Again, codes with such broad categories have their uses, but generally give little guidance toward applying them to specific individual cases.

Professional Code: General Engineering (USA ~2000)

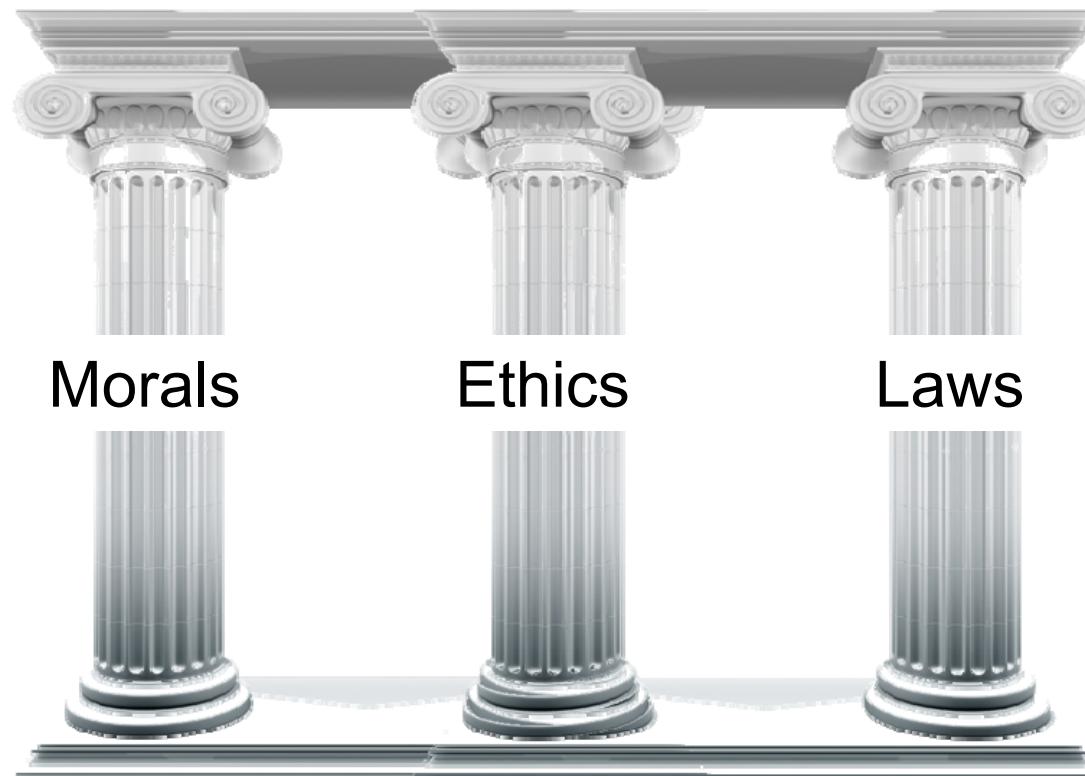
Engineers, in the fulfillment of their professional duties, shall:

- Hold paramount the *safety, health and welfare of the public*
- Perform services only in the *area of their competence*
- Issue public statements only in an *objective and truthful manner*
- Act in professional matters for each employer or client as *faithful agents or trustees*
- Avoid *deceptive acts in the solicitation* of professional employment

The above Fundamental Canons are followed by detailed Rules of Practice and Professional Obligations. Most if not all of these cast the engineer in the role of employee or agent rather than in the role of entrepreneur, employer or initiator. *And few if any deal with societal moral or ethical issues.* Is a Professional Code of this type still appropriate and/or adequate for today's more complex world?

Morals, Ethics and the Law

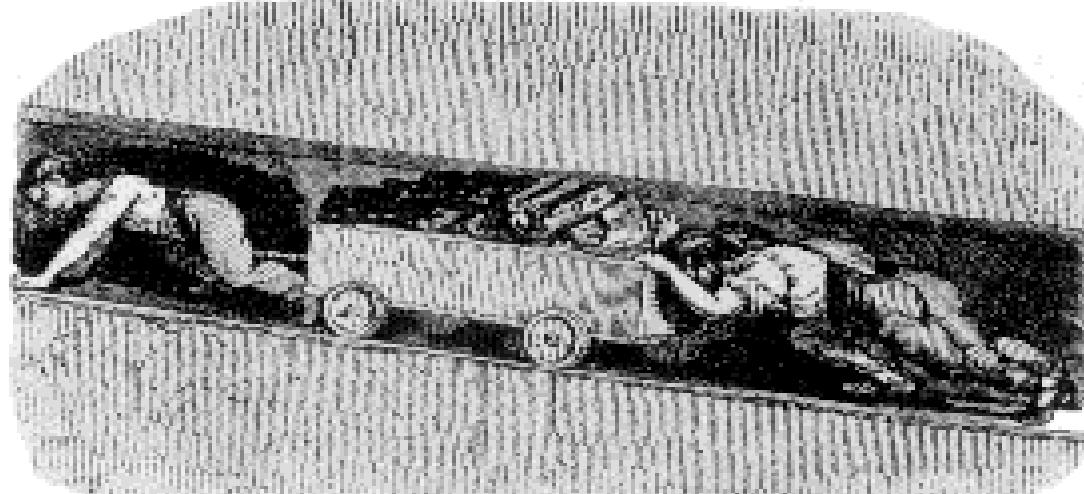
Societal Guides to Action



Morals, Ethics and the Law

- Ethics occupy the *middle ground* between a society's *Fundamental Morals* and its government's *Regulations and Laws*
- Ethics provide *direction* toward adherence to the Law as well as *guidance* in ambiguous areas of the Law
- Moral and ethical principles often *create new laws* when there is sufficient political and/or public support
- The reverse is also true, laws become *outmoded or unenforceable* when the moral and/or ethical climate surrounding them changes

Case 1: Creation of Child Labor Laws



Child “hurriers” in
19th century coal mines

- Child labor played a major role in the European Industrial Revolution
- More than 50% of children from 5 to 15 worked without regulation
- 1802 - English law reduced children's work day from 16 to 12 hours
- 1847 - English law limited adults and children to 10 hours work daily
- Child labor laws presaged other restrictions on industrial practices

Case 2: Reversal of Existing Laws

In the USA many previously legal practices have been overturned or are being reexamined on the basis of moral or ethical considerations:

- Slavery
- Racial Segregation
- Racial Discrimination
- Disenfranchisement
- Subjugation of Women
- No Contraception/Abortion
- No Interracial Marriage
- No Same-Sex Marriage
- No LGBTQ Rights
- Government Surveillance
- Cruel and Unusual Punishment
- Torture for Interrogation
- Death Penalty for Crimes
- Chemical/Biological Weapons
- Sale of Body Parts
- Treatment of Animals
- Regulation of Industrial Pollution
- Others

Many further examples in politics, business, sports and daily life, and
many of these remain open and contentious issues in America and the world.

For Example: Child Labor



THE
NEW YORKER

Newsletter My Account ▾ SEARCH

NEW YORKER FAVORITES In Cold Blood E-Mail from Bill Gates Murder By Poison Amelia Earhart's Last Flight

COMMENT JUNE 12, 2023 ISSUE

CHILD LABOR IS ON THE RISE

State legislatures across the country are making it easier to hire minors in low-paid and dangerous jobs.

By William Finnegan
June 4, 2023

Case 3: Ethics and Law in Los Angeles

#1

CORPORATION GRANT DEED

The Title Insurance and Trust Company, a corporation organized under the laws of the State of California, and having its principal place of business at Los Angeles, California, in consideration of Ten Dollars to it in hand paid, the receipt of which is hereby acknowledged, does hereby grant to W. H. Sherman,

(Notarial Seal)

F. N. Greene, Notary Public

in and for the County of Los Angeles,

State of California.

#151- A full, true and correct copy of original recorded at request
of Grantee, Feb. 8, 1917 at 24 min. past 2 P. M. #418 Copyist 22

C. L. Logan, County Recorder By F. Levy

Deputy

Case 3: Ethics and Law in Los Angeles

~~THIS DEED IS MADE IN WITNESS WHEREOF,~~

2. And upon the following express conditions:

That no part of said premises shall ever be used for the purpose of buying, selling or handling intoxicating liquors and that no part of said premises shall ever at any time be sold, conveyed, leased or rented to any person of African, Chinese or Japanese descent.

Provided, that all and each of the restrictions, conditions, and covenants herein contained in Condition "1" above, shall in all respects terminate and end, and be of no further effect, either legal or equitable, after January 1, A. D., 1916, but each of the restrictions, conditions and covenants herein contained in Condition "2" above, shall be perpetual and binding forever upon
DEVISEES

Covenants such as these were legal and enforceable in California, until they were specifically outlawed by the Rumford Fair Housing Act of 1963.

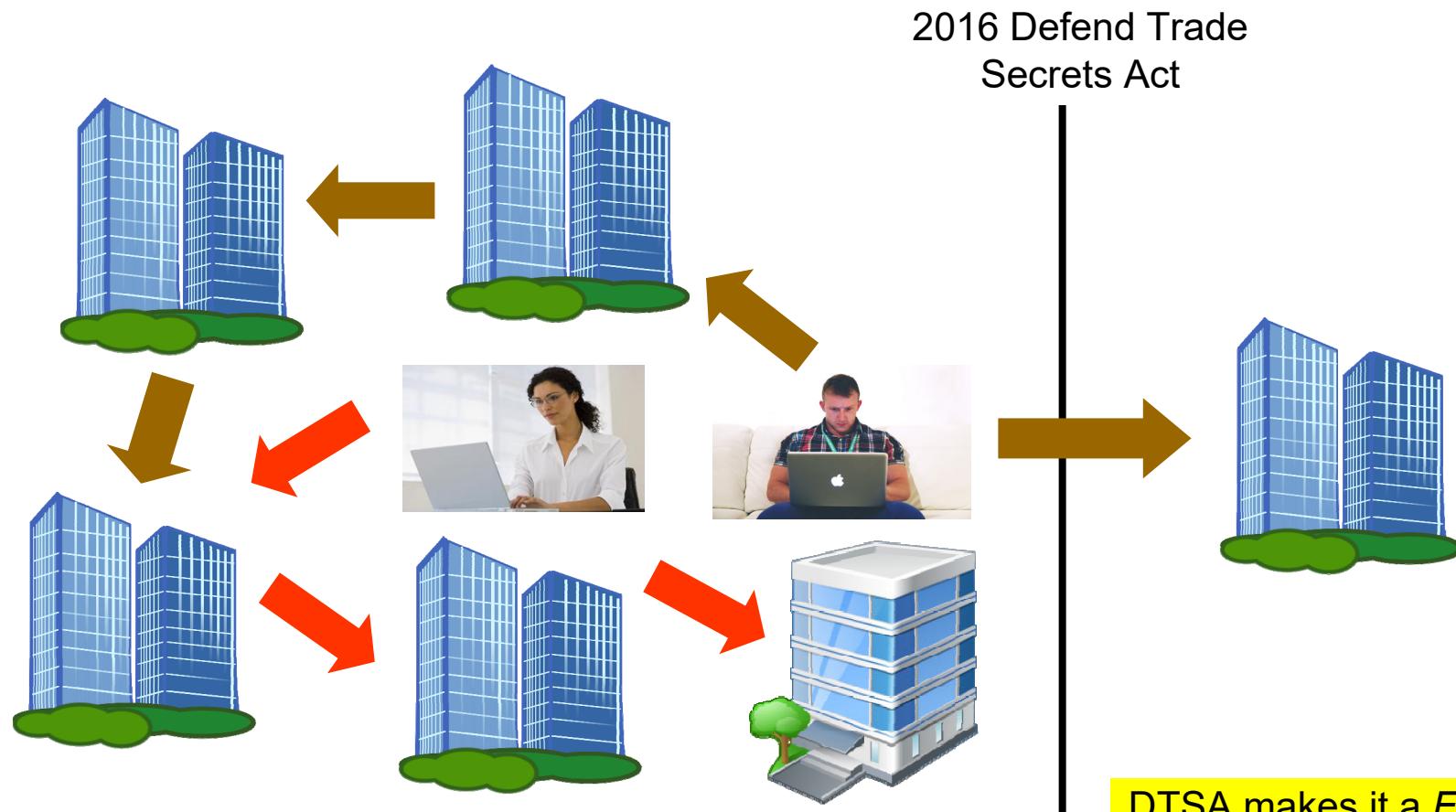
Case 3: Similar Covenants Elsewhere

None of the said lands, interests therein
or improvements thereon shall be sold,
resold, conveyed, leased, rented to or in
any way used, occupied or acquired by any
person of Negro blood or to any person
of the Semitic race, blood, or origin
which racial description shall be deemed
to include Armenians, Jews, Hebrews,
Persians or Syrians.

JEWISH
HISTORICAL SOCIETY OF
GREATER WASHINGTON

Nationwide, such covenants were not invalidated until later in the 1960s.

Case 4: Movement of Technical Knowledge



Silicon Valley benefited from California laws allowing virtually free movement of ideas as people changed jobs, but it also becomes known for idea theft and treachery

DTSA makes it a *Federal crime* for a person to move trade secrets from one position to the next

Ethical Scenario 1: Andrei's Printer Problem



Scenario

Andrei is a manager in a newly established unit and is responsible for selecting and purchasing all the office equipment for the unit.

After narrowing his selection to two vendors with similar products and pricing, he learns that one of the vendors offers a *free printer* for bulk purchases. Feeling inspired by the prospect of a free printer, he focuses his efforts on this company and ends up negotiating a large discount.

Given the discount he negotiated, as well as all his extra efforts on this project, Andrei feels justified in accepting the printer for his home office. However, he isn't sure if it would be appropriate to do so per UC policy.

Should Andrei accept the free printer for his home office?

- A. No. There are laws and University policies that prevent acceptance of a significant gift from a vendor and participating in decisions to award business to that vendor.
- B. Yes. Since the University has not increased his compensation in two years, he should be able to keep the printer as compensation.
- C. Yes. It would be inappropriate to turn down such a gift.
- D. No. Accepting the printer is a conflict of interest.

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- D. No. Accepting the printer is a conflict of interest.

The best answers are A and D, the others are not ethical.

General Compliance Briefing: University of California Ethical Values and Conduct (2018)

Ethical Scenario 2: Contract Shell Games



Scenario

Jesse is a researcher paid 100% on a federal grant fund in a small laboratory. Meredith, the principal investigator of the lab, asks Jesse to stop working on the project in order to work on another project unrelated to his grant funding.

Hayden, the departmental manager, notices that Jesse has been assisting with developing Meredith's project materials and inquires about the situation. Jesse confides that he is concerned that the workload associated with the new project is preventing him from completing the work on the grant from which he is actually being paid.

Which statements are true?

- A. As long as Jesse is getting the work done on the project he is paid from, it is OK to work on the new project.
- B. If Jesse's time is charged 100% to the current grant and he is also working on another project, he and his supervisor Meredith are causing the grant to be falsely reported to the federal government.
- C. There are good internal controls in place to prevent inaccurate charges.
- D. The situation involves an allegation of Improper Governmental Activity, so Hayden should contact her campus Locally Designated Official (LDO).

Ethical Scenario 2: Contract Shell Games



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- A. As long as Jesse is getting the work done on the project he is paid from, it is OK to work on the new project.
- B. If Jesse's time is charged 100% to the current grant and he is also working on another project, he and his supervisor Meredith are causing the grant to be falsely reported to the federal government.
- C. There are good internal controls in place to prevent inaccurate charges.
- D. The situation involves an allegation of Improper Governmental Activity, so Hayden should contact her campus Locally Designated Official (LDO).

In this case, statements B and D are true, A and C are not.

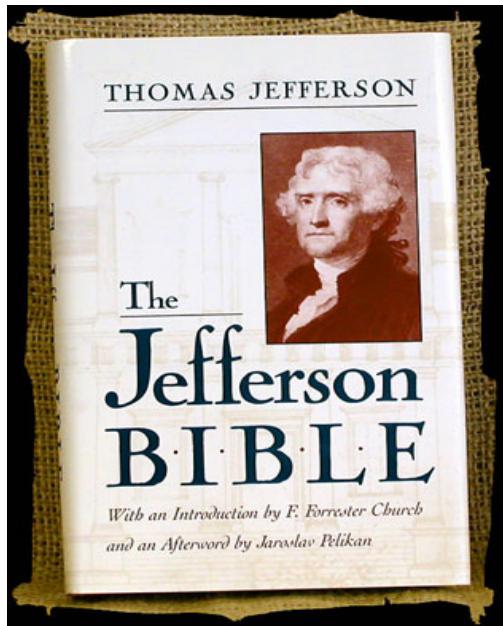
General Compliance Briefing: University of California Ethical Values and Conduct (2018)

Ethics, Morality and Law in Engineering Practice

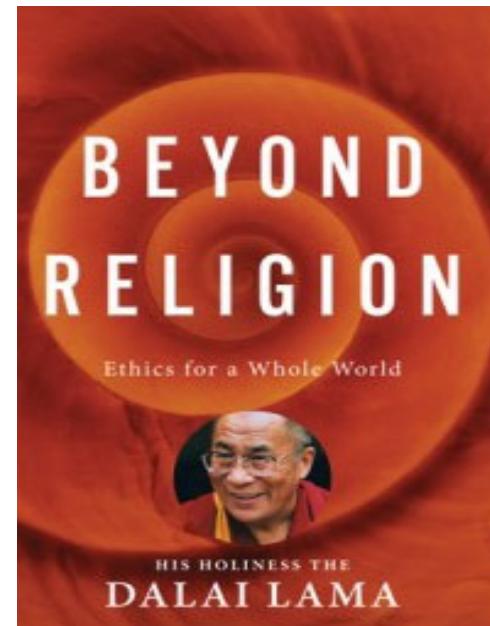
- *Legal*: Many of the difficult problems in engineering ethics remain *inside* the boundary of what is legal.
- *Illegal*: But a number of things that were formerly ethical questions -- such as sexual harassment, age discrimination, arbitrary dismissal, and moving trade secrets -- are now *outside* the Law.
- *Open Issues*: Many of our current laws are *open issues from a national and worldwide perspective*, and even some of our well established laws are being reexamined from various ethical, moral and religious viewpoints.

The challenge is to establish a solid *Personal and Professional Ethical Framework* in the face of the continual fluctuation of societal morals, ethics and laws – and then to act decisively on the basis of that framework.

Ethical Action: The Role of Religion



Thomas Jefferson created an abridged New Testament that contained his choice of Jesus' most important moral and ethical teachings, and eliminated the miracles and supernatural happenings. The Smithsonian Institute recently republished the original Jefferson Bible.



The Dalai Lama has said: “All of us, all human beings, are basically inclined toward what we perceive to be good...In view of this, I am of the firm opinion that we have within our grasp a secular way and means to ground inner values without contradicting any religion and yet, crucially, without depending on any religion.”

While religion can certainly be a guide to ethics, many people, even religious ones, have also sought a secular or non-religious path to ethical behavior

America is Becoming More Secular

	<u>1945</u>	<u>2020</u>
■ Members of a church, synagogue or mosque	75%	47%
	<u>1970</u>	<u>2020</u>
■ Claiming “None” as religion	5%	30%
	<u>1970</u>	<u>2020</u>
■ Believe the bible is the actual word of God	40%	25%
	<u>1990</u>	<u>2020</u>
■ Confidently believe in the existence of God	63%	53%

Pitzer College Professor Phil Zuckerman writes that America is joining societies such as Japan, Scandinavia, the United Kingdom and Australia that combine social consciousness with a declining religious foundation.

Statistics from Phil Zuckerman, “Why America’s record godlessness is a good thing.” Los Angeles Times, April 2, 2021

While the Supreme Court Skews Religious

Log in Mail Gershon Weltman These robotic trash...

ACLU

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NEWS & COMMENTARY

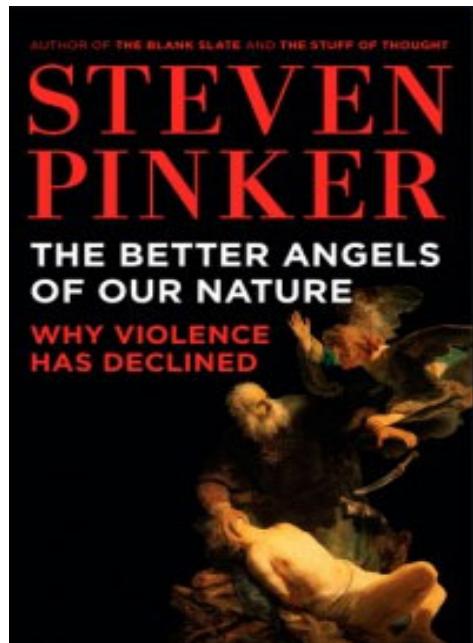
The Supreme Court Benches the Separation of Church and State

The court has adopted an approach that would see the lines between church and state hopelessly blurred, if not eliminated altogether.



Civil rights organizations such as ACLU are concerned about recent Supreme Court rulings, while religious organizations praise its return to “fundamental American values.”

Ethical Action: The Role of Science



“Modern sensibilities have increasingly conceived moral worth in terms of consciousness, particularly the ability to suffer and flourish, and have identified consciousness with the activity of the brain. *The change is part of the turning away from religion and custom and toward science and secular philosophy as a source of moral illumination.*”

Steven Pinker
The Better Angels of our Nature

Pinker is certain that the growing field of brain research will clarify the idea of consciousness and provide a scientific basis for our moral and ethical actions.

Ethical Action: The Role of Reason



Aref Ali Nayed
Kalam Research, Dubai



Prof. Christine Korsgaard
Harvard University



Prof. Antonio Damasio
USC

- Reason has little or no role...

“Rather, moral action depends on compassion. Parents need no reasoning to nourish their children to loving kindness. Human beings need no reasoning to help other needy humans and creatures. All we truly need is compassion.”

- Moral action depends on reason, but not always...

“.. We do not have to go through a process of reasoning in order to arrive at a view of what morality requires on every occasion. Often, we simply know. But moral action does not merely depend on reason. Moral action is rational action, because the moral law is a law of reason.”

- Moral action depends on previous reasoning...

“...because the actions we can truly call moral depend on the work of reason at some stage, [but] the moment-to-moment execution of actions, moral or otherwise, is not necessarily under the control of reason.”

Today's ethical philosophers are divided, citing a variety of factors including genetics. For a complete presentation of these and other views, see www.templeton.org/reason.

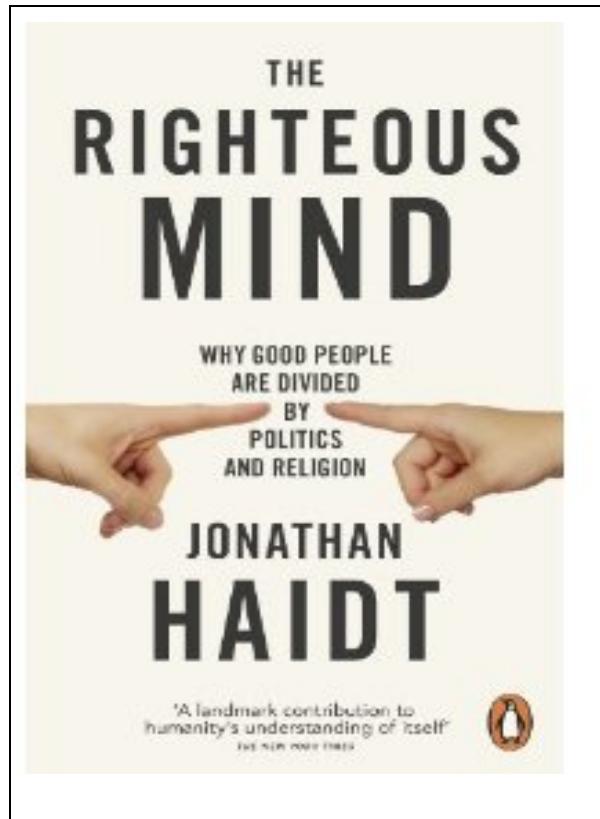
Sample Application: The Gorilla or the Child?



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

With no time to waste, the guard's action includes compassion for the child (and maybe for the gorilla), but it likely results from previous reasoning about their relative value.

Ethical Action: The Role of Intuition 1

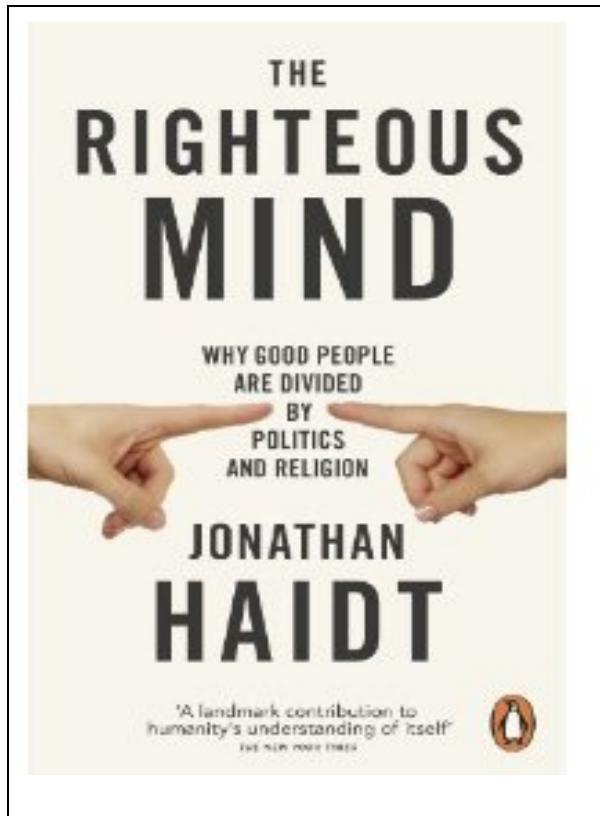


In accord with *Moral Foundations Theory*, which postulates a universal set of “intuitive ethics,” Jonathan Haidt lists six types of moral response that have evolved to promote group cohesion and are manifested through *intuitive emotional reactions*:

1. Care/harm
2. Liberty/oppression
3. Fairness/cheating
4. Loyalty/betrayal
5. Authority/subversion
6. Sanctity/degradation

Haidt further theorizes, using scientific evidence, that different groups make different use of these basic ingredients to form their moralities, and that these evolutionary attitudes contribute more to the control of behavior than does reason.

Ethical Action: The Role of Intuition 2



Jonathan Haidt postulates six types of moral response that have evolved to promote group cohesion and are manifested through intuitive emotional reactions:

- *Care/harm*
- *Liberty/oppression*
- *Fairness/cheating*
- *Loyalty/betrayal*
- *Authority/subversion*
- *Sanctity/degradation*

For example, Haidt believes Liberals emphasize the first three responses, while Conservatives emphasize the last three. The two groups are building on the same set of responses, and so should be better able to understand each other.

Ethical Action: The Role of Experience :

“The life of the law has not been logic; it has been experience.”

Judge Oliver Wendell Holmes, Jr.
The Common Law, 1881

“Genuine experience is aggregated of events and individual circumstances from which conclusions are drawn and tested over time. It is the wisdom to be had from the commonplace, which is why the consensus that grows from shared experience transcends mere custom. Recourse to that civilizing authority is one of the things that breaths ethical life into the day-to-day administration of our courts and the production of newspapers and newscasts.”

Tim Rutten, Regarding Media
Los Angeles Times, July 30, 2003

“Learning from experience” undoubtedly includes the ability to reason as well.

For Example



“While her potential confirmation may not alter the balance of opinion on the U.S. Supreme Court in the short term, ([Ketanji Brown Jackson’s](#)) professional experience, particularly as a judge with a significant background as a public defender, and her personal experience as a Black woman in the United States will shape how she approaches cases before the court and how both majority and minority opinions will be framed and argued.”

Camille Busette, Brookings Institution, February 25, 2022

Ethical Action: The Role of Choice

“An act has no ethical quality whatsoever unless it be chosen out of several (acts that are) all equally possible.”

William James
The Principles of Psychology, 1890

