# Ethics in Tech Practice Workshop: Sample Slides

"Ethics in Technology Practice" is a project developed by the Markkula Center for Applied Ethics and made possible by a grant from The Omidyar Network Tech & Society Solutions Lab.



The following slides illustrate how the training materials and tools made available by this project can be presented as part of an in-house ethics training workshop for technology professionals.

Please email us at ethics@scu.edu for permission to use and/or modify these materials for your own company, or to learn more about the project.

# Ethics in Tech Practice

## AN INTRODUCTORY WORKSHOP

Shannon Vallor, Regis and Dianne McKenna Professor, Santa Clara University

Brian Green, Director of the Technology Ethics Program

Irina Raicu, Director of the Internet Ethics Program

# The Plan

I. An Introduction to Tech Ethics

II. Ethical Lenses and Frameworks

III. Ethical Toolkit

IV. Case Studies and Discussion

# Goals of the Workshop

1. **Gain an understanding** of the broader landscape of tech ethics and its growing importance
2. **Access useful concepts and tools** for ethical analysis and practice
3. **Practice *applying*** ethical concepts and tools to project thinking in the context of case studies
4. **Engage in a collaborative, open discussion** of key challenges in tech ethics

# I. Introduction to Tech Ethics

Ethics is the theory and practice of ways to make good choices and lead a good life.

It involves both ***knowledge*** and ***skills***.

# What Ethics *Isn't*

- The Same as Law/Compliance
- A Set of Fixed Rules to Follow
- A Purely Negative Frame
- A Subjective Sense of Right
- Non-moral Customs of Etiquette
- Obedience to Authority / Unquestioning Loyalty

# What Ethics *Is*

- A Body of Moral Knowledge and Skills
- A Skillful Practice of Learning to Live Well with Others
- Doing Good Work(s), and Producing Good Things/Effects
- Maximizing Benefits and Eliminating or Minimizing Harms
- Respecting the Dignity of Others and our Duties Toward Them
- Treating People Fairly
- Moral Self-Cultivation – Improving One's Character over Time
- *Like Birdwatching*

So, why are we talking about ethics here, and now?

Power = responsibility:
Ethics is a critical engineering & design issue.

Ethics in tech is an open-ended, evolving, complex challenge.

# Growing Concerns in Tech Ethics

What are people (those who design and build the technology, those who use it, and those who are impacted by it even if they don’t use it directly) increasingly concerned about?

# Growing Concerns in Tech Ethics

- Transparency/Opacity
- Attention Economy
- Data Privacy/Security
- Digital Psyops/Manipulation
- Tech Monoculture
- Surveillance Creep
- Declining Social Trust/Civic Virtue

# Growing Concerns in Tech Ethics

- Rising Inequality/Social Immobility
- Algorithmic Bias/Injustice
- Machine Autonomy
- New Digital Taylorism
- Concentration of Power
- Environmental Sustainability
- Technocracy/Tech ‘Solutionism’

# Some Principles of Technology Ethics

- Technology is **not *value-neutral***; it is ***value-laden***.
- Technology is a form of ***power***; it need not be *partisan* but it is inseparable from the *political*
- To be ethical, technology must *serve* the interests of **life & the public good**, not the other way around.

# Ethics and Birdwatching…

The first step toward building ethical technology is to recognize and identify ethical issues.

And **ethical issues are like birds**.

# How Ethical Issues Are Like Birds

- They’re everywhere: some ordinary, some rare, some big, some small, some local, some exotic, some ubiquitous.
- It’s easy to go through life surrounded by them & not seeing them.
- Getting good at seeing them is a *skill*, only built by practice.
- Practice makes finding them easier, *and* more rewarding.

# How Ethical Issues Are Like Birds

- Skilled watchers learn *how* to see them, *and* where/when they are most likely to turn up
- Certain types are found more in some areas than others
- It's easier to spot & identify them with other watchers (esp. with watchers familiar with particular environments)
- Some in the wild are hard to see without *special lenses*

# II. Ethical Lenses

(To help you spot and identify ethical issues)

# Types of Lenses

1. Philosophical
2. Regional/Cultural
3. Professional
4. Organizational

# Ethical Lenses (Philosophical)

## Rights

Rights are entitlements or liberties; they reflect normative determinations about what is owed to people.

What are some examples of rights?

# Ethical Lenses (Philosophical)

## Rights

- What (if any) rules or duties must we always follow, whatever the consequences?
- What rights of others must we never violate?
- How can we respect the dignity, worth, and autonomy of others?
- If rights conflict with each other, how can they be balanced or prioritized?

# Ethical Lenses (Philosophical)

## Justice/Fairness

The justice perspective focuses on the distribution of benefits and burdens among stakeholders.

Note: Treating people equally might still be unfair, if some of them are very differently situated (e.g. more vulnerable) than others.

# Ethical Lenses (Philosophical)

## Justice/Fairness

- How should we act in order to treat others equitably and fairly?
- How do we give what is *due* to particular individuals or groups?
- How do ethically relevant distinctions impact the analysis of fairness?

# Ethical Lenses (Philosophical)

## Utilitarianism

The utilitarian perspective seeks to quantify and maximize aggregate happiness. It aims to produce the most overall well-being in the long term, taking into consideration all stakeholders.

# Ethical Lenses (Philosophical)

## Utilitarianism

- What ***action*** will produce the most overall happiness in the long term?
- What ***rules*** tend to produce the most overall happiness in the long term?

# Ethical Lenses (Philosophical)

## Common Good

While utilitarianism focuses on *individual happiness* and its *aggregate sum*, the common good approach focuses on the flourishing of the *affected community as a whole.*

This perspective considers the conditions that are required in order for ***all*** members of a society to flourish.

# Ethical Lenses (Philosophical)

## Common Good

- What are the conditions required in order for ***all*** members of a society to flourish?
- How do we build and preserve the **shared institutions** needed for a healthy society?

# Ethical Lenses (Philosophical)

## Virtue Ethics

Virtue ethics focuses on the character traits (reflected in habits) that we deem good and that we want to cultivate and encourage.

It involves both agents and those acted upon.

What are some examples of virtues?

# Ethical Lenses (Philosophical)

## Virtue Ethics

- What do our **habits** (what we repeatedly do) say about our **character** (who we are)?
- What moral skills/traits must we **cultivate** to flourish with others?
- How can we **excel** in fulfilling a particular role or relationship*?*
- What makes **moral *sense*** to do in this unique situation?

# Ethical Lenses (Regional/Cultural)

## Global Frameworks

- In what situations should we change our ethical expectations to match those of others?
- In what situations should we refuse, for compelling ethical reasons, to honor the social norms of another tradition?
- How will we decide?

# Ethical Lenses (Professional)

## Codes of Ethics

New in the **ACM Code of Ethics** (Revised in 2018)

Duty to consider *unintended consequences / side effects*

Duty to serve *all* stakeholders:

- ✓ "respect diversity"
- ✓ design for "socially responsible" use
- ✓ "meet social needs"
- ✓ design systems to be "broadly accessible"

# Ethical Lenses (Professional)

## Codes of Ethics

New in the **ACM Code of Ethics** (2018)

- Duty not to enable "prejudicial discrimination," including "harassment"
- Duty to be *transparent* re. data practices
- Duty to collect *minimum necessary* data
- Duty to "recognize and take special care of systems that become integrated into *the infrastructure of society.*"

# Ethical Lenses (Organizational)

## Organizational Principles

- [insert/customize]

# Reality Check:

A lot of lenses,
and a lot to see!

# What Ethical Lenses Do—and Don't Do

- Moral theories and principles are tools to help us manage complexity. They don't eliminate it.
- There are no algorithms to 'compute' the ideal ethical solution. Ethics is messy and rarely allows us to optimize for every relevant moral value or good.
- Moral theories and principles are interpreted & applied by people using their intelligence. As ethicist Patrick Lin puts it, they help you "show your moral math."

# Remember:

We are more likely to see what we are in the habit of looking for.

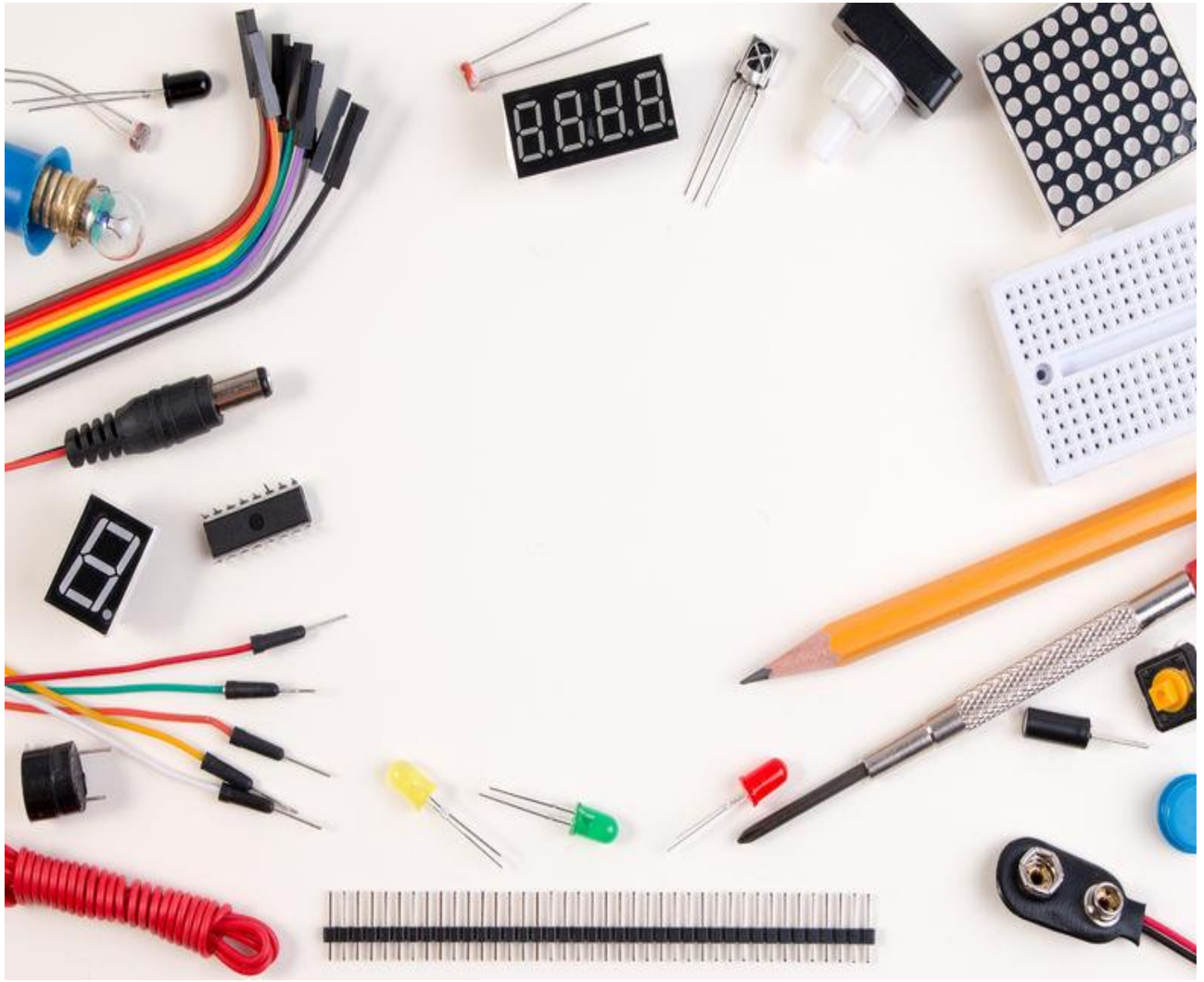
In the Case Study Analysis part of this workshop, we will practice looking for ethical issues. But first…

# III. Ethical Toolkit

The following are some techniques for **integrating ethics into technology practice.**

They require consistent use.

They are ***not*** exercises in "checking the boxes."



# Tools: Operationalizing Ethics

- Case-Based Analysis
- Ethical Risk-Sweeping
- Ethical Pre- and Post-Mortems
- Remembering the Ethical Benefits of Our Work
- Expanding the Ethical Circle
- Think about the Terrible People
- Closing the Loop: Ethical Feedback & Iteration
- Synthesis: The MCAE Framework

# Case-Based Analysis

Creating a library of ethics case studies can help bolster company norms. **Cases can and should provide examples of ethical success, too**.

- Identify ‘paradigm’ cases
- Identify relevant parallels/differences with what is being considered
- Evaluate the choices and outcomes of cases
- Use analogical reasoning to identify parallel risks, opportunities, solutions, risk mitigation strategies, etc.
- Incorporate case analysis into futurist visioning and post-mortems

# Ethical Risk Sweeping

Ethical risks may cause significant harm to persons or things with moral status, or are likely to spark moral controversy for other reasons. As part of risk-sweeping,

- Look for the likely causal interactions that will lead to harm
- Seek the moral perspectives of other stakeholders
- Look beyond the material/economic causes of harm
- Consider risks that are subtle, hidden, or significant only in aggregate
- Don’t misclassify ethical risks as legal, economic, cultural, or PR risks

# Ethical Pre-Mortems

In contrast to the ethical risk-sweeping for a particular project, ethical pre-mortems focus on the risks that might come from the organizational context itself. Team members should consider

- What might be a likely cause (or causes) of ethical failure
- What blind spots might lead the team into such failure
- Why individuals or teams might fail to act
- Why/how we might choose the wrong action

# Ethical Post-Mortems (If Needed)

Sometimes projects and products meet bad ends. Ethical post-mortems should help clarify

- The cause(s)/reason(s) for the ethical failure
- Which ethical risks were missed in the risk-sweeping
- What/who could have prevented the failure
- What can be done better next time

Remember: The post-mortem analyses can be turned into ethics case studies—but case studies should reflect good outcomes, too.

# Remembering the Ethical Benefits of Our Work

Too often we focus narrowly on ethics as being about “problems”—but products that benefit human flourishing represent an ethical success.

To keep the ethical benefits of the work at the center of the team’s or the company’s motivation, find ways to ask some hard questions together:

- Will society/the world/our customers be better off with this tech than without it?
- Has the ethical benefit of this technology remained at the center of our work and thinking?
- What are we willing to sacrifice to do this *right*?

# Expanding the Ethical Circle

Ethical technology requires input from beyond a narrow circle of awareness—i.e. consultation with people, rather than assumptions about their interests, desires, skills, experiences, and values.

Questions to ask:

- Who will be the people most *directly* affected by our product?
- Who/which groups will be *indirectly* affected?
- Who is at *greatest* risk of harm from our product, and how?
- How do we engage those groups?

# Think About the Terrible People

Products will be used by many—some of whom are not the ideal customer. This is a tool you will need to use repeatedly. Questions to ask:

- Who will want to abuse, steal, misinterpret, hack, or weaponize what we have made?
- What will our product do in the hands of a person who is careless, reckless, deeply misinformed, or irrational?
- What rewards/incentives/openings might we have inadvertently created for those people or groups?
- How can we remove those rewards/incentives?

# Closing the Loop: Ethical Feedback and Iteration

Ethical product design and management doesn't stop when the product ships. How can you identify and address unintended consequences?

- Identify or create feedback channels to *invite* ethically salient information, not just technical problems/user reviews
- Integrate w/post-ship data gathering & user support
- Develop formal procedures for ethical iteration
- Determine who should be in charge of the ethical follow-up

# A Synthesis: the MCAE Framework for Ethical Decision-Making

The following framework integrates much of what we have just covered and provides a useful method for exploring ethical dilemmas and identifying ethical courses of action:

- Recognize the ethical issues
- Get the facts
- Evaluate alternative actions (through the ethical lenses)
- Make a decision and test it
- Act and reflect on the outcome

# A Synthesis: the MCAE Framework Ethical Lenses

- **Rights**: Which option best respects the rights of all stakeholders?
- **Justice**: Which option treats people equally/proportionately?
- **Utilitarianism**: Which option will produce the most good and do the least harm?
- **Common Good**: Which option best serves the community as a whole, not just some members?
- **Virtue**: Which option leads us to act as the sort of persons we want to be?

# A Useful Tool: the MCAE Framework App

https://www.scu.edu/ethics-app/

# Lunch!

# IV. Practice Cases

Because ethics is a practical discipline, it must be exercised in order to be really “known.”

# Case Study 1

# Case Study 2

# V. Concluding Discussion

# Photo Credits

- **Slides 7 and 53:** "IMG_1157" by Craftepee is licensed under CC BY-SA 2.0
- **Slide 17:** "Pelican" by H. Smithers, cropped, is licensed under CC BY-SA 2.0
- **Slides 18, 20, and 56:** "Nightingale . Luscinia megarhynchos" by gailhampshire, cropped, is licensed under CC BY 2.0
- **Slide 36:** "flamingo" by mtsrs, cropped, is licensed under CC BY 2.0

# Thank you!