

Pegasus Documentary! Thoughts?

- How does this documentary highlight the role of CS Professionals in our world today? Do CS professionals have duties/responsibilities to the public at large, and if so what are they?
- Do you feel, after viewing this documentary, that your attitude towards writing code has changed in any appreciable way?
- What parallels can you draw between:
 - 1. The actions taken by NSO / the products built by its engineers
 - and
 - 2. The companies and products that exist in the tech industry here in Seattle?

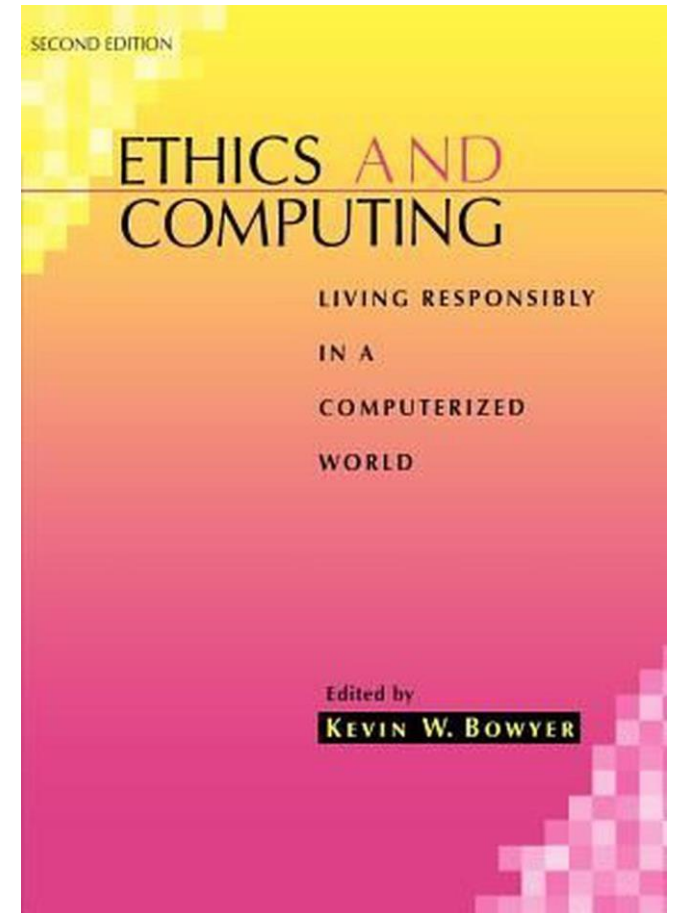
CS 205/299: Professional and Social Issues in Computing

New hotness by Ethan Hall
Original slides by Pushpak Karnick

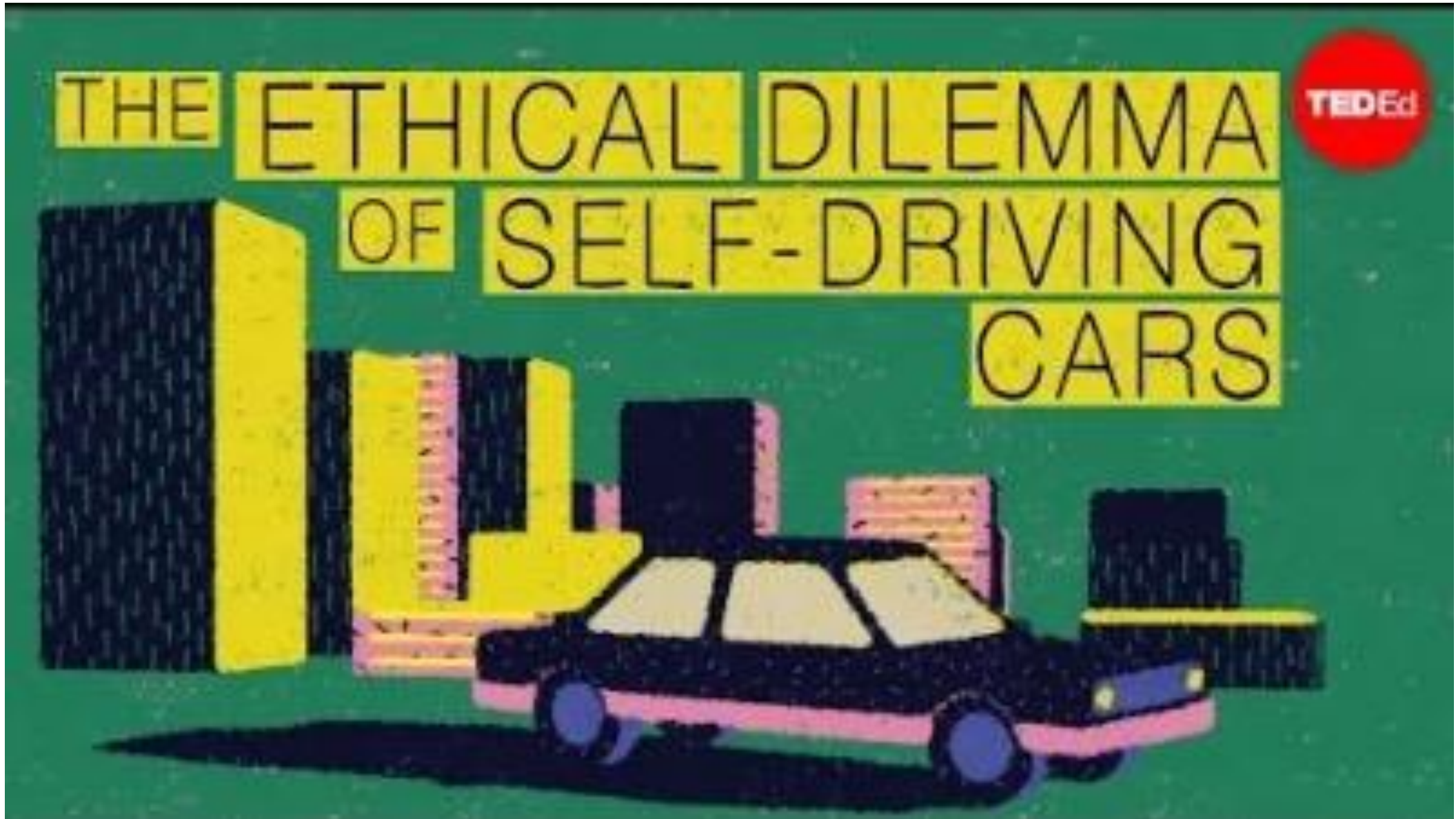
Professional Codes of Ethics

Computing standards for ethical behavior

<https://www.youtube.com/watch?v=fQLqDLcDnMU&t=11s>



Why should computing professionals care about ethics?



Professional Organizations in Computing



Joint sponsors: Code of ethics for Software Engineers

CPSR Computer Professionals
For Social Responsibility



Why so many different codes?

- Specific to discipline within computing
- Allows a more nuanced discussion of policies and processes that govern ethical behavior
- Allows application of the codes to areas of specialization in the profession
 - Academia, industry, research, games, software, hardware, networks

What's shared by these codes?

- Different codes of ethics have commonalities; not every code of ethics promotes the same ideas or serves the same functions, but they usually have areas of overlap
- We'll look at some of the common functions that a code of ethics might serve
- Keep in mind: this list isn't exhaustive, and any particular code may not hit all of these things (or maybe any!)

Commonalities in Codes of Ethics (1)

- **Symbolize professionalism**
 - Set the standard for expected professional behavior
 - Defines the “purpose” for the collective
- **Protect group interests**
 - Promote economic interests of the group – fair pay structure
 - (Not JUST about computing specific stuff!)
- **Specify membership etiquette**
 - Standards of inter-personal interaction between members of a group

Commonalities in Codes of Ethics (2)

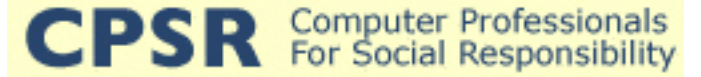
- **Inspire good conduct**
 - Serve as a benchmark for members to aspire to
 - What is the responsibility of a member to the public? Clients? Each other?
- **Educate members**
 - Provide clarity (case studies), exposure to issues
 - Provide a venue for continued discussions
 - Becomes a magnet for those wanting to learn more
- **Discipline members**
 - Enforce the ethical standards defined by the community

Commonalities in Codes of Ethics (3)

- **Foster external relations**
 - Set the expectations for interactions outside the current group (clients, co-workers)
- **Enumerate principles**
 - Provide definitions of moral principles that serve as a guideline for the codes
 - What do we believe in? What are our values?
- **Express ideals**
 - Provide a far-reaching goal that goes beyond the statement of principles
 - Things that members can aspire to!

Commonalities in Codes of Ethics (4)

- Put forth rules
 - Provide specific legal guidance to the moral principles
- Offer guidelines
 - More flexible than rules, may permit “gray areas”
 - “Best practices”
- Codify rights
 - Formalize the rights of the members as well as the community
- Luegenbiehl, 1992 – Journal of Systems and Software



CPSR

Computer Professionals for Social Responsibility

This org was dissolved in 2013... so they've been "dead" a while

Ten Commandments of CPSR

1. Thou shalt not use a computer to harm other people.
2. Thou shalt not interfere with other people's computer work.
3. Thou shalt not snoop around in other people's computer files.
4. Thou shalt not use a computer to steal.
5. Thou shalt not use a computer to bear false witness.
6. Thou shalt not copy or use proprietary software for which you have not paid.
7. Thou shalt not use other people's computer resources without authorization or proper compensation.
8. Thou shalt not appropriate other people's intellectual output.
9. *Thou shalt think about the social consequences of the program you are writing or the system you are designing.*
10. Thou shalt always use a computer in ways that ensure consideration and respect for your fellow humans.



International Game Developer's Association

(this isn't strictly programmers/CS professionals, but certainly includes them)

<https://igda.org/about-us/core-values-and-code-of-ethics/>



Association for
Computing Machinery

ACM Code of Ethics

Association of Computing Machinery

<https://www.acm.org/code-of-ethics>

Main Theme

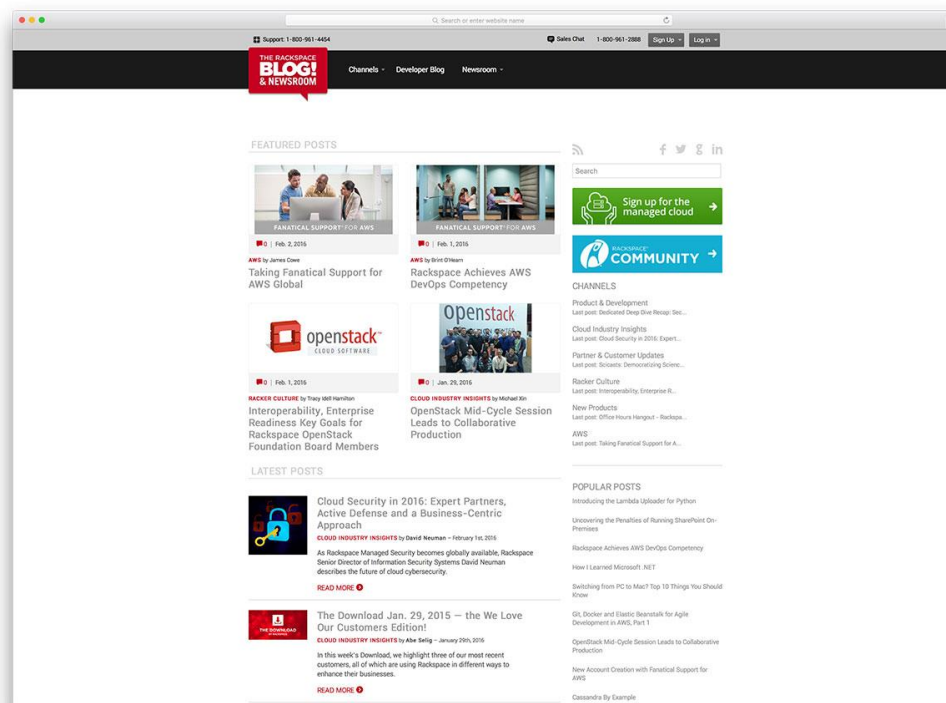
- Computing professionals have the capability to change the world
- As such, they must **reflect on the wider impact of their work**, consistently supporting the public good
- The ACM code expresses the **conscience of the profession**

Straight from the Preamble!

“The Code as a whole is concerned with how fundamental ethical principles apply to a computing professional’s conduct. The Code is not an algorithm for solving ethical problems; rather it serves as a basis for ethical decision-making. When thinking through a particular issue, a computing professional may find that multiple principles should be taken into account, and that different principles will have different relevance to the issue. Questions related to these kinds of issues can best be answered by thoughtful consideration of the fundamental ethical principles, understanding that the public good is the paramount consideration. The entire computing profession benefits when the ethical decision-making process is accountable to and transparent to all stakeholders. Open discussions about ethical issues promote this accountability and transparency.”

–ACM Code of Ethics, <https://ethics.acm.org/>

Who is a modern “computing professional?”



Who is a modern “computing professional?”
(also from the preamble)

The Code is designed to inspire and guide the ethical conduct of all computing professionals, including current and aspiring practitioners, instructors, students, influencers, and **anyone who uses computing technology in an impactful way.**

Should all of these people read and follow the ACM code of ethics?

- Twitch Streamers?
- Bloggers?
- Someone who posts about Science on Twitter?
- Someone who mods retro consoles?

Four main sections

Section	Focus
General Ethical Principles	A set of working guidelines for practical responsibilities in the daily life of a computing professional
Professional Responsibilities	Computing-specific responsibilities for day-to-day activities performed by a computing professional
Professional Leadership Principles	“Leadership may either be a formal designation or arise informally from influence over others . In this section, "leader" means any member of an organization or group who has influence, educational responsibilities, or managerial responsibilities .”
Compliance with the Code	Alignment of activities with the published code, and terms for violation



Association for
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1. General Ethical Principles

How should computing professionals lead their lives?

A computing professional should ...

1. Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing
2. Avoid harm
 1. Harm == negative consequences, especially when significant and unjust
3. Be honest and trustworthy
4. Be fair and take action not to discriminate
5. Respect the work required to produce new ideas, inventions, creative works, and computing artifacts
6. Respect privacy
7. Honor confidentiality



Association for
Computing Machinery

2. Professional Responsibilities

How should professionals create computing products?

A computing professional should ...

1. Strive to achieve high quality in both the **processes and products** of professional work
2. Maintain high standards of professional competence, conduct, and ethical practice
3. Know and respect existing rules pertaining to professional work
4. Accept and provide appropriate professional review
5. Give comprehensive and thorough evaluations of computer systems and their impacts, including analysis of possible risks

A computing professional should ...

6. Perform work only in areas of competence
7. Foster public awareness and understanding of computing, related technologies, and their consequences
8. Access computing and communication resources only when authorized *or when compelled by the public good*
9. Design and implement systems that are robustly and useably secure



Association for
Computing Machinery

3. Professional Leadership Responsibilities

As a computing professional, how should one shape the thoughts and actions of others?

But... why does this section exist?

- Why does this code have a special section JUST about leadership?
- The code should apply to everyone, right? So why make a big deal about leadership in the first place?

“Leader” means...

- Any member of an org or group who has influence, educational responsibilities, or managerial responsibilities
- ... does that make ME (your instructor) a leader?
- “Leaders bear a heightened responsibility to uphold and promote”
[principles of the ACM Code of Ethics]

A computing professional, especially one acting as a leader, should ...

1. Ensure that the public good is the central concern during all professional computing work
2. Articulate, encourage acceptance of, and evaluate fulfillment of social responsibilities by members of the organization or group
3. Manage personnel and resources to enhance the quality of working life

A computing professional, especially one acting as a leader, should ...

4. Articulate, apply, and support policies and processes that reflect the principles of the Code
5. Create opportunities for members of the organization or group to grow as professionals
6. Use care when modifying or retiring systems
7. Recognize and take special care of systems that become integrated into the infrastructure of society



Association for
Computing Machinery

4. Compliance with the Code

How should computing professionals evaluate conduct/behavior wrt. the Code of Ethics?

A computing professional should ...

- Uphold, promote, and respect the principles of the Code
- Treat violations of the Code as inconsistent with membership in the ACM

ACM Code of Ethics Enforcement Procedure

(<https://www.acm.org/code-of-ethics/enforcement-procedures>)

- Complaint Resolution Procedure
- Conflicts of Interest
- Confidentiality and Document Retention
- Policy Applicability
- No Retaliation

Complaint Resolution Procedure

- Initial Review by Chair and Committee on Professional Ethics (COPE)
- Complaint is not pursued if
 - Lacking sufficient factual allegations to conduct a preliminary enquiry, or
 - The Chair has enough belief to believe it was made in bad faith
- Complainant should clearly identify which provisions of the Code were violated, and how
- Complaint must typically be submitted within 180 days of the occurrence of the violation
 - If more time has passed, Chair decides if the complaint should move forward

Complaint Resolution Procedure (2)

- Offer of Remediation

- Chair contacts the accused party and offers remediation
- If party accepts, both complainant and accused receive confirmation of the acceptance
- Confidentiality is protected for both parties

- Preliminary Enquiry

- Chair appoints a designated member (can be from COPE) to check if the complaint needs to be pursued further
- Additional staff may be provided to assist in the next steps

Preliminary Enquiry

- One or more steps can be implemented
 - Interviews with the complainant (if any), the subject, and witnesses (if any)
 - Reviewing documents provided by above parties
 - Consulting with CEO & Chair to employ a third-party subject matter experts who are also ACM Members
 - Any other steps necessary for the determination
- Recommendation for full hearing, with complete documentation
- Chair can recommend remediation
- Concerned party may be prohibited from taking part in ACM and ACM-related events

Hearing before a Panel

- If Chair & CEO disagree on the suggested remediation
 - Subject has to opportunity to present before a three-member panel
 - Panel selected randomly by other Council Members (except the President of ACM)
 - Hearing is conducted in front of the panel
- Determination of the Remediation
- Appeals
 - Any appeal must be filed within 30 days from the decision appealed against

Hmmm... why might we care about “Code Compliance”?

- Upon entering the industry, I wasn't automatically inducted into the ACM, or any other groups... so why does this section matter to us?
- Is Satya Nadella in the ACM? How about Elon Musk? Would be interesting to know!

Applying the Code

Case studies to help understand the issues

These cases studies are designed for educational purposes to illustrate how to apply the Code to analyze complex situations. All names, businesses, places, events, and incidents are fictitious and are not intended to refer to actual entities.

Rogue Malware

<https://ethics.acm.org/code-of-ethics/using-the-code/case-malware-disruption/>

Rogue Services advertised its web hosting services as “cheap, guaranteed uptime, no matter what.” While some of Rogue’s clients were independent web-based retailers, the majority were focused on malware and spam. Several botnets used Rogue’s reliability guarantees to protect their command-and-control servers from take-down attempts. Spam and other fraudulent services leveraged Rogue for continuous delivery. Corrupted advertisements often linked to code hosted on Rogue to exploit browser vulnerabilities to infect machines with ransomware.

Rogue Malware (2)

Despite repeated requests from major ISPs and international organizations, Rogue refused to intervene with these services, citing their “no matter what” pledge to their customers. Furthermore, international pressure from other governments failed to induce national-level intervention, as Rogue was based in a country whose laws did not adequately proscribe such hosting activities.

Ultimately, Rogue was forcibly taken offline through a coordinated effort from multiple security vendors working with several government organizations. This effort consisted of a targeted worm that spread through Rogue’s network. This denial-of-service attack successfully took Rogue’s machines offline, destroying much of the data stored with the ISP in the process. All of Rogue’s clients were affected. No other ISPs reported any impact from the worm, as it included mechanisms to limit its spread. As a result of this action, spam and botnet traffic immediately dropped significantly. In addition, new infections of several forms of ransomware ceased.

Analysis

- Identify specific ACM Code of Ethics principles that were clearly violated in the preceding scenario
- Identify any “gray area” or conflicting actions that resulted in vastly different outcomes in the preceding scenario
- Which Workable Ethical Theory framework does the justification for the actions of the security vendors fall under?
- What are your thoughts on this incident?

Workplace Behavior

<https://ethics.acm.org/code-of-ethics/using-the-code/case-abusive-workplace-behavior/>

Diane recently started a new industry research job, joining the interactive technologies team. In graduate school, her advisor had collaborated with several members of the team on a number of research projects, involving and highlighting Diane's contributions whenever possible. The team had been impressed by Diane's work and recruited her as she was approaching graduation.

Max, the team's technical leader had built a reputation as a brilliant yet mercurial expert in augmented reality. His team's contributions were highly cited within the field, with Max typically claiming primary authorship as the team leader. Their work was also highlighted frequently in popular press, always with quotes only from Max. Despite the team's repeated successes, Max would erupt with verbal and personal attacks for even minor mistakes. He would yell at the person and berate them in internal chat forums. On multiple occasions, women team members have found their names removed from journal manuscript submissions as punishment.

Workplace Behavior (2)

Diane soon found herself the target of one of Max's tirades when she committed a code update that introduced a timing glitch in the prototype shortly before a live demo. Infuriated, Max refused to allow Diane to join the team on stage. Feeling Max's reaction was unprofessional and abusive, Diane approached the team's manager, Jean. Jean agreed that the experience was unpleasant, but that was the price to pay for working in an intense, industry-leading team. Jean's advice to Diane was to "Grow up and get over it."

Analysis

- Identify specific ACM Code of Ethics principles that were clearly violated in the preceding scenario
- Identify any “gray area” or conflicting actions that resulted in vastly different outcomes in the preceding scenario
- Which Workable Ethical Theory framework does the justification for the actions of the parties involved fall under?
- What are your thoughts on this incident?

OK but... what about being proactive?

What role does a code of ethics play... now?

- Are applications like Instagram, TikTok, Generative AI, Apple Vision, HoloLens... built with their end effects in mind?
 - *ACM Code of Ethics - Give comprehensive and thorough evaluations of computer systems and their impacts, including analysis of possible risks*
 - *ACM Code of Ethics - Foster public awareness and understanding of computing, related technologies, and their consequences*
 - *CPSR -Thou shalt think about the social consequences of the program you are writing or the system you are designing*



Social media's growing impact on our lives

Media psychology researchers are beginning to tease apart the ways in which time spent on social media is, and is not, impacting our day-to-day lives.

By [Summer Allen](#)

Date created: September 20, 2019

Please Help: I'm Addicted To Vampire Survivors And It's Ruining My Life

Vampire Survivors is so good that it's eating into my leisure time and my weekends

By David Smith Published March 4, 2022



Screenshot: Vampire Survivors

We Have To Talk (Again) About How War Games Depict The Middle East

Narratives perpetuated by games like *Call of Duty* contribute to the tone of the Israel/Palestine conflict

Call Of Duty Activision



8:11 HOSTAGE RESCUE

TERRORISTS 7

CT FORCES 27



US Army orders more Microsoft AR headsets now that they no longer make soldiers want to barf



/ Microsoft's latest HoloLens-like goggle prototypes aren't causing nausea to soldiers testing them, earning the company a go-ahead new contract.

By [Umar Shakir](#), a news writer fond of the electric vehicle lifestyle and things that plug in via USB-C. He spent over 15 years in IT support before joining The Verge.

Sep 13, 2023, 10:29 AM PDT



9

Comments (9 New)

A previous IVAS prototype sent to the Army by Microsoft. Image: US Army

Amazon fires two tech workers after they publicly criticized warehouse conditions / The company said they ‘repeatedly’ violated its internal policies

by  **Jon Porter**

Apr 14, 2020, 3:44 AM PDT

Amazon has fired two Seattle-based employees who publicly criticized safety and working conditions at its warehouses during the COVID-19 pandemic, *The Washington Post* reports. User experience designers Emily Cunningham and Maren Costa were both fired on Friday after they tweeted criticism of the company, and offered to match donations to warehouse workers. Both had also previously criticized Amazon’s climate policies.

A third employee, Chris Hayes, was asked not to return to work after he circulated an invitation to join a virtual discussion with warehouse workers, *The New York Times* reports. Hayes had handed in his notice at the company over its treatment of the workers and was due to leave on April 17th, but was told he would no longer be allowed to work after sending out the invitation on Friday.

No Games For Genocide Wants You To Boycott Xbox

Alyssa Mercante

6–8 minutes

No Games For Genocide, a collective of video game workers and union organizers, just announced a pledge to boycott Xbox. It calls on journalists, developers, streamers, and consumers to participate in the Palestinian-led BDS (boycott, divest, sanction) movement against Microsoft, which it's accused of being complicit in Israeli war crimes. The tech giant recently cut off cloud services to an Israel Defense Forces intelligence unit that [used them for mass surveillance of Palestinians](#), but continues supplying them to the rest of the military.

After years of acquisitions, Microsoft has become a gaming industry monolith, and avoiding it entirely may prove difficult for many, especially considering how dire the industry's job crisis has been over the last few years. But [No Games For Genocide](#) believes that the more people who take part in their movement's proposed collective actions, the better chance the tech giant will take notice.



Update 12/3/2025 at 2:40 pm E.T.: A Microsoft spokesperson told *Kotaku*, “the company treats claims about our technology seriously. As we indicated in our blog, we have undertaken an ongoing review of these allegations” and linked to the aforementioned September 2025 blog post. The company also pointed to an internal email from President Brad Smith about a new “Microsoft Integrity Port” for employees to report their ethical concerns to.



Amid backlash, The Finals lead doubles down on the FPS' controversial AI usage, says it allows the team to "work better and faster, and do more with less"

By [Iain Harris](#) published December 15, 2023

"These new tools allow us to do things that we couldn't do before outside of our means"



MEGHNA JAYANTH

NARRATIVE DESIGN

I design contextual narratives, build worlds counter to capitalist-colonialist fantasies, and think about video games + culture.

I am open to short-term consultations on narrative design + decolonisation, as well as longer-term engagements. I am particularly interested in working with indies.





- <https://medium.com/@betterthemask/white-protagonism-and-imperial-pleasures-in-game-design-digra21-a4bdb3f5583c>

White Protagonism and Imperial Pleasures in Game Design – Meghna Jayanth

- So what are the design features of capitalist-colonialist systems and entities, what are its tendencies? Contemporary culture is about filling up every nook and cranny of our time — to colonise and expand into the available space. These entities will invent new spaces to fulfill their fantasies of endless exploitation when they are at risk of saturation. Think about Facebook's attempts to colonise the internet in the developing world, and its recent push towards a new digital territory ripe for colonisation, the metaverse.
- Capitalist-colonialist entities are designed to extract profit or attention or whatever is desired by the system from human beings and the world, with no regard for our integrity or needs.

White Protagonism and Imperial Pleasures in Game Design – Meghna Jayanth

- On a human level, these are [capitalist-colonialist] systems that are not designed around us as humans, but rather see us as consumers. This type of design is only interested in the parts of us which can be consumed — our money, our attention, our engagement, our time — with no regard for the social, cultural, psychological effects that result. These systems are unable to see value in anything outside of what *it* values, and our well-being, agency, dignity, health, self-esteem, humanity, are not parameters which are factored in to this type of design logic, which is why we live in a world of technology which cheerfully robs us of agency, time, self-esteem, connection and fosters addiction, dependence, hatred, fear, insecurity and even social and interpersonal violence. Under capitalism-colonialism, we do not have to intentionally design *for* these outcomes, but they are almost inevitable unless we deliberately and intentionally design *against* them.

White Protagonism and Imperial Pleasures in Game Design – Meghna Jayanth

- In game design we can see this as a tendency towards attention-seeking design — design which seeks to colonise the player's time and attention, to be demanding within “attention-economy”.
Possessive design: games that guilt or punish you for leaving them, and reward you for engagement. Games which pull on the player's attention neurotically because any gap or loosening of control or potential moment of inattention is a moment where the player may become distracted, because there are a thousand other bright pleasures “in competition” for the consumer's attention.

Violent video games found not to be associated with adolescent aggression

SOCIETY

MENTAL HEALTH

RESEARCH

TECHNOLOGY

Researchers at the Oxford Internet Institute, University of Oxford, have found no relationship between aggressive behaviour in teenagers and the amount of time spent playing violent video games.

The study used nationally representative data from British teens and their parents alongside official E.U. and US ratings of game violence. The findings were published in *Royal Society Open Science*.

'The idea that violent video games drive real-world aggression is a popular one, but it hasn't tested very well over time,' says lead researcher Professor Andrew Przybylski, Director of Research at the Oxford Internet Institute. 'Despite interest in the topic by parents and policy-makers, the research has not demonstrated that there is cause for concern.'

The study is one of the most definitive to date, using a combination of subjective and objective data to measure teen aggression and violence in games. Unlike previous research on the topic, which relied heavily on self-reported data from teenagers, the study used information from parents and carers to judge the level of aggressive behaviour in their children. Additionally, the content of the video games was classified using the official Pan European Game Information (EU) and Entertainment Software Rating Board (US) rating system, rather than only player's perceptions of the amount of violence in the game.

Video games as an art form

Article [Talk](#)

From Wikipedia, the free encyclopedia

*"Empathy game" redirects here. For the Doctor Who audio play, see [Empathy Games](#).
Not to be confused with [Art game](#) or [Video game art](#).*

The concept of **video games as a form of art** is a commonly debated topic within the [entertainment industry](#). Though [video games](#) have been afforded legal protection as creative works by the [Supreme Court of the United States](#), the philosophical proposition that video games are works of [art](#) remains in question, even when considering the contribution of expressive elements such as acting, visuals, design, stories, interaction, and music. Even [art games](#), games purposely designed to be a work of creative expression, have been challenged as works of art by some critics.^[1]

Some interesting questions to ponder!

- There's been a lot of discussion about the practices around games (live service, gacha games, loot boxes, layoffs, etc)... but what about the CONTENT of the games we DECIDE to make?
- Should we question the kinds of experiences and stories we present to players?
- Do we really need more GTA and more Call of Duty?
- Is it morally reprehensible to create games that are power fantasies?
- How does all of this relate back to our discussion of Codes of Ethics?

What role does a code of ethics play... now?

- Do you think Mark Zuckerberg adheres to the ACM code of ethics? What about Elon Musk? Satya Nadella? Shigeru Miyamoto?
- If people and corporations make systems/applications that conflict with these ethical codes... are the codes still useful?
- Would YOU actually consult/keep in mind these ethical codes when faced with an ethical dilemma?
- Would YOU consult/keep in mind these codes in your day-to-day code writing, absent an ethical dilemma?