ILLINOIS TECH | College of Computing

ITMM 485 / 585
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Legal and Ethical Issues in Information Technology

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Ch4: Professional Ethics and Codes of Conduct in IT
P3: Distinguish between Responsibility, Liability, and Accountability

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Learning Objectives:

Upon completion of this lesson the students should be able to:

- Define Professional Ethics and why a separate category of Professional Ethics in IT might be needed
- Describe the Purpose of Professional Codes
- Differentiate between Codes of ethics, Codes of conduct and Codes of practice
- Identify situations where divided loyalties pose significant ethical challenges
- Distinguish between Responsibility, Liability, and Accountability

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Responsibility, Liability, and Accountability

What are the differences, if any?

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Responsibility

- *Traditional models of responsibility* require that two conditions be satisfied:

i. *causality*,

ii. *intent*.

- For example, some agent, *X*, is held morally responsible for an act, *Y*, if *X* caused *Y* (or intended to cause *Y*).

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Responsibility (Continued)

- **A person could be held responsible for causing some outcome, even if he or she did not intend the outcome.**
- **For example, a person who carelessly left a cam fire burning, which started a major forest fire, could be held responsible for causing the fire.**

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Responsibility (continued)

- Agents can also be held responsible when they *intend* for something to happen, even if they ultimately fail to cause (or bring about) the intended outcome.
- For example, suppose a disgruntled student intends to blow up a computer lab, but is discovered at the last minute and prevented from doing so; even though the student failed to carry out his objective, we hold him morally culpable because of his intentions.

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Liability

- ***Liability* is a legal concept.**
- It is sometimes used in the narrow sense of "strict liability."
- To be strictly liable for harm is to be liable to compensate for it even though the party that is liable one did not necessarily bring it about through faulty action (e.g., when a someone is injured on a person's property).
- In liability incidents, the moral notion of "blame" may be left out.

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Accountability (vs. Liability and Responsibility)

- **Nissenbaum (2007) argues that responsibility is only part of what is covered by the (broader) notion of *accountability*.**
- **For Nissenbaum, accountability means that someone, or some group of individuals, or even an entire organization is *answerable*.**

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Accountability (Continued)

- **Nissenbaum points out that in cases of accountability,**

  …there will be someone, or several people *to answer* not only for malfunctions in life-critical systems that cause or risk grave injuries and cause infrastructure and large monetary losses, but even for the malfunctions that cause individual losses of time, convenience, and contentment.

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The Problem of "Many Hands" in a computing Context

- Because computer systems are the products of engineering teams or of corporations, as opposed to the products of a single programmer working in isolation, "many hands" are involved in their development (Nissenbaum, 2007).
- It is difficult to determine who, exactly, is responsible whenever one of these computer or safety-critical system failures/accidents results in personal injury/harm to individuals.

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The Problem of Assigning Responsibility when "Many Hands" are Involved

- Two problems for assigning responsibility using the classic model of responsibility (as apparent in the classic Therac-25 incident described in Scenario 4-2 in the textbook) are that we tend to think of responsibility:

I. as something that applies (only) to *individuals* but not to groups (or "collectivities" such as organizations);
II. in *exclusionary* terms, such that: If X is responsible, then Y is not, and *vice versa*.

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Accountability vs. Responsibility

- ***Accountability*** **is a broader concept than responsibility because it:**

a) **is non-exclusionary,**

b) **can apply to groups, as well as to individuals.**

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Table 4-2: Responsibility, Liability, and Accountability

Moral Responsibility	Legal Liability	Accountability
Attributes of blame (or praise) to individuals.	Does not attribute blame or fault to those held liable.	Does not necessarily attribute blame (in a moral sense).
Usually attributed to individuals rather than "collectivities" or groups.	Typically applies in the case of corporations and property owners.	Can apply to individuals, groups of individuals, and corporations.
Notions of guilt and shame apply, but no legal punishment or compensation need result.	Compensation can be required even when responsibility in a formal sense is not admitted.	Someone or some group is answerable (I.e., it goes beyond mere liability).

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Do Some Computer Corporations Have Special Moral Obligations?

- **Arguably, some computer corporations, in virtue of the scope and impact of their products and services, have some special moral obligations to society.**
- **Consider the case of companies that develop autonomous systems and robots.**
- **Do they have any special obligations?**
- **If so, what are they?**

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Special Responsibilities for Companies that Develop Autonomous Systems

- **The Royal Academy of Engineering's 2009 Report notes that *autonomous systems* – from "unmanned vehicles and robots on the battlefield, to autonomous robotic surgery devices, applications for technologies that can operate without human control, learn as they function and ostensibly make decisions" – will soon be available.**
- **The report also points out that these systems raise a number of "social, legal, and ethical issues."**
- **Arguably, these systems also raise some *professional-responsibility-related* issues.**

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Responsibilities for Companies that Develop Autonomous Systems (Continued)

- **Wallach and Allen (2009) describe an actual case that closely mirrors one kind of concern anticipated in the Royal Academy's report.**
- **They describe an incident in which a prototype of an autonomous system (designed to make decisions "independent of human oversight") has already malfunctioned and resulted in human casualties.**
- **Arguably, companies that develop these machines should be held responsible for "moral-decision-making software code" that they build into them.**

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Do Other Kinds of Computer Corporations also have any Special Responsibilities?

- **There may indeed be other kinds of computer corporations that also have special responsibilities to society in light of the significant social impacts of their products and services.**
- **For example, hyperscalers and major AI companies may have special social responsibilities.**
- **Concerns of this type may be more appropriately analyzed under the category "business ethics."**
- **But to the extent that these concerns particularly affect computer/IT professionals, they also warrant discussion within the context of cyberethics-and-professional-responsibility-issues as well.**

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