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1 Accountability

Accountability is answerability, i.e., a state of being compelled to or called to account for ones action

1.1 Importance of accountability

We have improved standards of reliability for computer systems but **neglected accountability** for the impact of computing, specifically for the harms and risk of fault and malfunctioning systems.
Accountability is needed

- Even if things go drastically wrong for the users at least they are **assured of answerability**

- For developing a sense of responsibility, **as a virtue**

- For **motivating better practices** and reliable and trustworthy systems

In terms of **social welfare**, a culture of accountability

- Motivates actions to **prevent or minimize** harms and risks

- Provides a **reasonable starting point** for assigning punishment and compensation for victims of harm through failure.

2 Accountability vs Liability vs Responsability

2.1 Accountability

Accountability applies to all those involved in a specific action.

Accountability is assessed from the **nature of action** and the **relationship of the agent** to the **actions outcome**. In many instances, accountability is mediated through conditions of **blameworthiness** by considering **casual and fault** conditions.

2.2 Liability

Liability is focussed on a person **who is to blame** and needs to **compensate victims** for damages suffered after the event.

Liability is rooted in the suffering of victims. The starting point for assessing liability is the victim's condition

2.2.1 Strict liability

To be strictly liable for a harm is to be liable to compensate for it, even though one did not cause it thorugh faulty action.

2.3 Responsibility

A person or a group of people is **morally responsible** when their **voluntary actions** have morally significant outcomes that would make it appropriate to blame or praise them. In order to appropriately *ascribe* moral responsability, three conditions should be followed.

- There should be a **casual connection** between the person and the outcome of actions

- Subject has to **have knowledge** of and be able to **consider the possible consequences** of it's actions

- The subject has to be able to **freely choose to act** in a certain way.

2.3.1 Possitive responsibility

Positive responsibility emphasizes the virtue of **having (or being obliged to have) regard** for the consequences that actions have on others. Strive to minimize **foreseeable undesirable** events. Computer practitioners have a moral responsibility to avoid harm and to deliver a properly working product, regardless of whether they will be held accountable if things turn out differently.

3 Lack of accountability

Factors that influence adoption of accountability.

- **Many hands**: Computing systems are built by big teams, they are complex and multi-layered making it difficult to assign responsability.

- **Bugs**: The view that bugs are inevitable implies that, they cannot be helped, and it would be unreasonable to keep programmers responsible

- **Computer as Scapegoat**: People point at the complexity of the computer to argue, that it was computers fault

- **Ownership without liability**: Commercial companies protect computing innovation and take advantage of exclusive use, without responsibility to protect from harm.

4 Ethics and computing agents

- **Implicit ethical agent**: A computer that has the ethics of its developers **inscribed in their design**. Adhere to the norms and values of the contexts in which they are developed or will be used

- **Explicit ethical agent**: A computer that can **do ethics**, i.e., on the basis of an ethical model, determines what would be the right thing to do, given certain inputs. For example, implementation of Kantian or utilitarian ethics rules

- **Ful ethical agent**: Entities that can make ethical judgments and can justify them, much like humans beings can There are no computer technologies today that can be called fully ethical.

5 Moral responsibility for the computing artefacts

We aim to provide a normative guide for people who design, develop, deploy, evaluate or use computing artefacts

- **Computing artefact** for any artefact that includes an executing computer program.

- **Moral responsibility for computing artefacts** indicates that people are answerable for their behaviour when they produce or use computing artefacts

- **Moral responsibility** includes an obligation to adhere to **reasonable standards of behaviour**, and to respect others who could be affected by the behaviour.

- Each computing artefact should be considered within the context of a **sociotechnical systems** comprising people, artefacts, physical surroundings, customs, relationships, assumptions, procedures and protocols.

5.1 Rules

5.1.1 Rule 1

The people who design, develop, or deploy a computing artefact are **morally responsible** for that artefact, and foreseeable effects of that artefact.

5.1.2 Rule 2

The shared responsibility of computing artefacts is not a zero-sum game. The **responsibility is not reduced** because more people become involved.

5.1.3 Rule 3

People who knowingly use a computing artefact are morally responsible for that use

5.1.4 Rule 4

People who knowingly design, develop, deploy, or use a computing artefact can do so responsibly only when **they make a reasonable effort** to take into account the *sociotechnical* systems in which the artefact is embedded

Reference section

sociotechnical
Sociotechnical systems (STS) is an approach to complex organizational work design that recognizes the **interaction between people and technology in workplaces**.