

## Gift of Fire

See Sara Baase (2003) Gift of Fire (2nd Edition). Prentice Hall.

CIS 381

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## Overview

To frame our discussion, consider:

- Why is the "Gift of Fire" analogy useful in describing the rise of IT?
- Why is it important for IT professionals to understand technologies in context?

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## Outline

- A Gift of Fire
- Example
- Themes

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## **A Gift of Fire**

Prometheus, in a Greek myth, brought us the gift of fire. It gives us the power to heat our homes, and cook our food. It is also a destructive force.

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**Why use the "gift of fire" analogy in discussing computing and information technology?**

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• **Computing technology fundamentally changes the use context.**

- The question is whether this is predictable.
- The question is whether this is acceptable.

**Not to ask,  
can we develop an application,  
rather,  
should we develop an application.**

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## **ATM**

- The ATM allow us to withdraw cash or conduct bank transactions at any time. What issues might be associated with the use of ATMs?

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## **Employment**

- In 1983, there were 480,000 bank tellers. In 1993, there were only 301,000.

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## **Alienation**

- Automating teller functions eliminates human contact between the customer and a live teller.

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## **Crime**

- People are robbed at ATMs.
- ATM cards are stolen or counterfeited.

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## **Loss of Privacy**

- ATMs can provide information about the person's whereabouts and activities since the transactions are recorded in a database. Furthermore, the use of video surveillance devices to prevent crime increases the loss of privacy.

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## **Errors**

- An error in the ATM software for a New York bank cause accounts to be debited twice the amount of the actual withdrawal. In less than a day, more than 150,000 transactions, totaling \$15million, were incorrectly recorded.

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## Themes

- Changes in technology usually require adaptive changes in laws, social institutions, business policies, and personal skills and attitudes.
- As technologies are developed we need to understand their potentials and pitfalls.
- Decision making should be informed and deliberate, integrating our understanding of personal choices, as well as, social norms and laws.

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## Let's Think?

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## Technology

- **Artificial Intelligence**  
Robot makers say World Cup will be theirs by 2050  
Scotman.com, <http://news.scotman.com/scitech.cfm?id=26542005>, Jan. 2005
- **E-Commerce**  
Q1 2004, E-Commerce accounted for 2% of total retail sales.  
U.S. Department of Commerce, <http://www.clickz.com/stats/sectors/retailing/article.php/3361411>
- **Internet**
- **Automation**  
Virtual engineering is a user-centered process that provides a collaborative framework to integrate all of the models, data, and decision-support tools needed for good engineering design..  
[http://www.dekena.com/articles/applications/the\\_virtual\\_workspace/](http://www.dekena.com/articles/applications/the_virtual_workspace/), Jan. 2005

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## **Social Issues**

- Employment
- Equity
- Immigration

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## **Personal Issues**

- Privacy
- Anonymity
- Speech

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## **Institutional Issues**

- Commerce
- Competition
- Regulation
- Intellectual Property
- Liability

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## Conclusion

- **In looking at significance of technological development,**
  - can you restrict your thinking to computing and its advancement? or
  - must you also look at impact on the other areas?
- **Are there drawbacks to a techno-centric approach?**
  - What might they be?

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