

Chapter 9

A new era - the socio-technical

Remember back in the beginning of the book when I talked about the **importance of time**? When you move from a **2-D model on paper** (width and height) into the **4-D world** (width, height, depth, and **time**) you get a much more real, but much more complex view.

Does introducing time matter? It is often the difference between success and failure and sometimes the difference between life and death. The difference between a picture of a baseball player hitting and striking out is time. The difference between a successful evacuation and a disaster is timing.

When you bring in the consideration of **time**, then you must **also** start to consider **people and the situations**.

This is a good thing.

Simplification in order to **begin** to understand something is a good **first step**. **But it is only a first step!**

Looking at a photograph of that great summer on the beach, when I was young, fit and had a full head of hair can jog memories of a wonderful past. However, if I begin to live as if that were reality now...well, there's a problem.

When we begin to look at a situation in time, we also are **forced to look at the people involved and the situation.**

Things become personal. It's a **specific** person at a **specific** time in a **specific** situation. **Things get messy very quickly.**

However, the extra effort required to get a handle on **this more accurate view of the situation** is worthwhile. It is **easier** to look at a picture taken from atop a mountain than it is to climb that mountain and look for yourself. However, the two views have almost nothing in common.

Looking at models is useful because it makes a very complex situation simple. However, that simplicity allows a frame of reference that can spawn mutants - twisted, wrong headed views of a problem and twisted, wrong headed solutions.

The idea of knowledge management, of knowledge as little pieces that can be stored and managed and can be somehow be made useful by finding, **is a problem of decontextualization.** Much of the problem with training as a solution is also related to this decontextualization. **If I learn something out of context**, even if I can answer a question on a test about it, there is **little chance that I will be able to use that knowledge** in the time and place that is needed - **in a proper context.**

How do we get a handle on the context? We need to look at the social setting of the knowledge or situation. Trying to ignore that social context worked in the industrial age with a one-size-fits-all, assembly line view of the world and the people in it. It will not work in the information age, where the **differences** are the difference between success and failure.

Knowledge is an interaction between information and people. The important element here is **the interaction.** We **must** include the people in our consideration in order to develop a useful view of situations and to be able to **design effective interventions.**

People change technology through their use of it. I remember the video recorder war between Beta and VHS. Beta was a superior format in many ways. However, VHS allowed people to record an entire movie on one tape and Beta did not. VHS tapes allowed people to record more television programs on a tape, a use that wasn't even *considered* when the recorders were marketed. VHS won.

It became quickly apparent that people recording programs were more interested in quantity per tape than quality of image. Models introduced recording speeds that allowed up to 6 hours of mediocre quality recording. **Use shaped technology.**

Email was not the reason for developing the internet. The focus was SUPPOSED to be on **transferring files**. However, one of the developers set up a small program that allowed users to send each other messages. Email is still the most popular use of the internet. **Use changed the technology.**

In addition, **consider how much this technology has changed the users.** Love it...hate it...email is an essential part of today's work life. **It has fundamentally changed how we interact.** We can share our thoughts and ideas with others around the globe quickly (often too quickly). We can review what we and others have said. I once resolved a legal dispute by providing emails from the person who had changed their version of history to fit their needs. How often have you exchanged a dozen emails when a single phone call would have settled the matter?

This is an interaction between social and technical that changes both during use.

The invention of Xerox machines was turned down by many companies. The companies asked how they could sell an expensive machine that does what carbon paper does cheaply and effectively?

How completely these “useless” machines have altered our way of doing business! What happens now when the copier goes down? **Use of**

copiers has changed the social interactions within offices. In some offices the copier has replaced the water cooler as the place where people congregate and chat. Conversely, feedback from users based on their usage has driven development of new functions and styles of copiers (**social drives technical**).

As technology (both hardware and software systems) is introduced, it **changes and is changed** by interaction with people.

This will continue and accelerate in the information age. New technologies will spur innovations - **often innovations unintended by the creators of the technology.**

This has been happening usually rather surreptitiously. Look at the different ways that MP3 players are being used (a search on iPod Hacks returned 600,000 hits).

Take advantage of this creative dance!
Notice, consider, celebrate, study these interactions.

A HA's happen in many places, but often the bleeding edge of technology, where people and systems are wrestling, is a fertile nursery of innovation.

This means that **the world is messier than you want it**

to be. At the beginning of a project, you want to know how long and how much. **It's nice to want.** But **don't marry your predictions.**

If you cast the end point in stone, then when things need to change, the only option is to deliver less.

Set markers along the road and reassess throughout the process.

Then you can capture and use the innovations that are certain to arise as people and technologies inspire each other.

It's social and technical.. sociotechnical - the watchword of information age success.