



Navigating the InforGlut

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I spend an increasing amount of time researching the genealogy of ideas. My current focus is on following the trail of the intellectual fallout from the industrial revolution. This includes areas of process improvement, decision theory, general systems theory, and architecture--which brings me to the topic of information glut.

When asked to define it, or give my opinion of it, various ideas pop into my head. One of these is: What would happen if someone from the 1800s were here today? How would he/she feel? I contend that he'd feel right at home. With the exception of computerizing (i.e., switching from paper to electronic media), most of the way white collar work is accomplished has changed little.

Having been a management and technology consultant for the past 15 years, I've watched as various new technologies and computer systems have been introduced. Each system has been justified with promises of financial returns that would make an investment manager's head turn. In addition, each system has promised quantum leaps in productivity that would be the envy of Deming, Juran, and Taylor.

What each system has delivered, however, is something less--plenty of data and too little information. And with each new system implementation, we get more data and less information.

In our rush to computerize, we have buried ourselves with data. We've built tremendous machines to gather, store, and crunch data into all sorts of forms except the one we need. Furthermore, these systems enable interruptions to our real work by superfluous data at any time. We're at the point where we have devices to allow us to save this data to wade through at a later time. What we've built are electronic pencils or typewriters on steroids. How many people have four or more voice-mails saved from weeks ago or an electronic in-basket with more than 25 notes?

We're on the receiving end of a fire -hose-size gusher of data that threatens to drown us.

So what can we do about it? Is newer technology the answer ? Yes and No.

To paraphrase Einstein, "The level of thinking necessary to solve a problem is different than the level which created it." Technology assisted in creating this problem and can be part of its solution, but it is not the full answer. We must beware the logical trap of thinking that because the tool we have is a hammer, everything around us is a nail. Throwing more data (or systems to manipulate data) at the problem will not necessarily

solve it. In seeking a solution for "infoglut," it is important to realize that data is not information, that IT (information technology) tools are not a substitute for thinking, and that not everything is worth reading or holding onto.

The Right Tool for the Right Job

But before we allow ourselves the equally unhelpful, Luddite delusion that all these modern systems are the problem, we need to remind ourselves that IT has provided us with some life preservers to cling to in the flood of information. The trick is to use them with care and discrimination. These tools have been developed for specific functions in areas such as:

- data capture and creation,
- data storage--DBMS (database management systems) and file management systems,
- data management--product data management (PDM), electronic document management (EDM), and configuration management, and
- data analysis.

They enable us to store, sort, and retrieve data which, in turn, will become information, and the manner in which we wish to perform these functions will determine the tool we need to use. A simple example is searching for a document by its name, or by its creation date. The average PC operating system does this. However, when we want to store and retrieve, say, a list of names, we typically use some form of database. This tool enables us to store and retrieve data organized by various attributes and associations between other data. Relational databases such as SQL Server and DB2 are examples of such. They enable much more granular control of data.

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Perhaps we wish to access data at a coarser level--say, data associated with a particular product. Here, PDM tools are in order. In a system such as this, data files are associated with a particular part ID or project for retrieval. Maybe we want to find data associated with a particular version of a control system or a specific configuration of a complex assembly. In this case, configuration management systems are the ticket. Possibly all the data has nothing to do with a product or part, but is a collection of images and documents about a subject entered into the EDM system.

Maybe we already have the data in a form we can store and retrieve, and now we just wish to view it in a different way to get some information and insight about how the data relates. We can then use tools like spreadsheets (with charting capabilities), executive information systems that summarize data, decision support systems that assist in visualizing options and potential benefits, or management consoles and simulators which assist in testing out decisions and monitoring results. In every one of these cases, the solution to the infoglut problem is to choose the right tool for the right job.

The Rules of the Game

Another life preserver in the flood of data is a set of sensible rules for data archiving and retention. How many people save receipts for a candy bar they bought in '92? Yet we save megabytes of old data on floppies, backup tapes, magnetic disks, and their hardcopy printouts, "just in case." We are all familiar with the rules governing the retention of financial and legal data; we need a similar set of rules for electronic data.

Think of data like food. It has a shelf-life--past that date, it spoils and has limited, if any, value. I purged my TRS-80 Model I books and programs years ago, as they ceased to be of value, and I had no sentimental interest in them either. They were just tools to be used and replaced, just as the data they contained were. We need to apply the same kind of cold, unsentimental logic to corporate data retention. If there's no legal or financial reason to keep data beyond a certain date, and you can't come up with any other valid reason for doing so, then dump it.

In my consulting practice, I consistently gather and create data. This has yielded over the years approximately a 10-foot by 10-foot cube of files, not to mention an extensive professional library which today revivals many company libraries. This past year I've spent time reducing my files down to one-tenth their original size, and I hope to eventually convert all my paper to electronic archive formats. And while I still have an extensive subscription and book purchase activity, I've started to cull that library down too. My local library and a number of charities are very grateful.

This is not to say I've ultimately solved my personal information glut problems, but I now have a more manageable problem. Which brings me to the last of my tactics in handling my own personal data overload issues--delegate. Not everything requires my personal attention. I have an accountant, a financial advisor, a doctor, dentist, etc. for a reason. They've spent years learning how to collect, manage, summarize, and report on specific types of data. I let them maintain the details on a daily, weekly, monthly, and yearly basis, and have them give me reports as needed and archive the rest.

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