Editorial Extract

Extracted From Paperless Ponderings
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Serious Records Management

SUBJECT	IN PRAISE OF CLUTTER – PILE THEORY
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Leave my desk alone. It works

On the six square feet next to the computer on which this article is being written, a complex ecology has developed. There are approximately (it is impossible to be precise without disturbing the natural order) 100 assorted print-outs (e-mails, web pages, newspaper articles), 12 books, ten academic articles, six pamphlets, five notebooks, three newspapers, two magazines, two faxes, two telephone books, one file containing further faxes and print-outs, six pens, one box of matches, one key (origin unknown) and one handheld organiser. Some of this is being used in the writing of this article. Some of it will be used in the writing of future articles. Some of it will never be used at all, but will eventually, when the reason why this correspondent originally thought it so interesting has faded, be thrown in the bin.

This desk is not unusual in THE ECONOMIST's editorial offices--just one particular sort of habitat in a rich and varied landscape. The deputy editor's office, for example, contains roughly 700 books (he just got rid of another 400). The defence correspondent has a charming mural patchwork of telephone numbers, e-mail print-outs, press releases and religious iconography. The economics correspondent's in-tray is two-and-a-half feet (76 centimetres)high--in two piles, for stability.

The inhabitants of these offices seem perfectly happy in their surroundings, and are mostly left alone to adapt the environment to their convenience. The editorial floors of THE ECONOMIST's offices are treated somewhat like a nature reserve, where strange beasts roam and browse at will, undisturbed by the fads and fancies that sweep through the rest of business life. Others are not so lucky.

CLUTTERPHOBIA

Many companies these days--United Parcel Service and General Motors in America, for instance, and Asda, a supermarket chain in Britain--run "clean desk" policies, requiring employees to remove all evidence of work from their desks by the end of the day. The reason given is usually security--that burglars will be less likely to find anything interesting if it is put away--but that is a poor excuse. Any self-respecting burglar can pick the lock of a filing cabinet, and will be far more likely to find what he is looking for in a methodical office than in one whose logic is comprehensible only to its creator.

The real reason is more likely to be the common hostility to "clutter", which managers tend to regard as an obstacle, rather than an aid, to work. Although office clutter is usually almost entirely work-related, it tends nevertheless to be treated as though it consisted of the dirty socks and crisp packets of an adolescent. Workers are confused. They know that creating clutter is an essential part of the way they work, but they are made to feel guilty about it.

There are plenty of parasites who make a living out of this confusion. Jeffrey Mayer, for instance, exhorts people to "Get rid of the clutter! Save time! Become more productive!" in his book "Winning the Fight Between You and Your Desk". The book is endorsed by Barry Greenberg, president of Chemex Industries: no doubt the Chrome Finish Autoflush Valve for Urinals and Toilets, advertised as his most exciting new product on his website, has benefited from the insights in this OEUVRE. Donald Wetmore of the Productivity Institute, a company that purports to help people become more productive, cites the "messy desk" as one of the "Top Five Management Mistakes" and maintains that "studies [which studies? Citations, please] have shown that

the person who works with a messy desk spends on average one-and-a-half hours a day looking for things or being distracted by things."

During the 1990s, technological change lent authority to the familiar prejudice against clutter. Clutter, after all, was paper, and paper was old-fashioned. Paper has no memory; paper cannot be networked. As digital devices began to talk to each other, as computers of different sizes and shapes with different purposes proliferated, the persistent popularity of a means of communication that had been around for 6,000 years became increasingly irritating to the guardians of the ZEITGEIST.

Some of the digital age's finest thinkers set about burying paper. Paul Saffo, director of the Institute for the Future in Menlo Park, California, explained in "The Electronic Pinata: A Paperless Future is Waiting in the Wings" in 1992, that "paper is well on its way to becoming a metaphor", in the sense that the screen and stylus of a handheld organiser mimic notebook and pencil, "rather than a medium". "Digital paper and sushi computers [ones you can roll up]", he wrote, "will become business realities after this decade is over.

"THE TYRANNY OF THE TIDY

It is fortunate for contemporary prophets that most of their predictions are as swiftly forgotten as made, for paper, while it may be used in a metaphorical sense by the electronics industry, has also remained stubbornly literal. The more digital information sped around the world, the more people wanted to print it out. From 1992 to 2002, world consumption of paper and board products grew from 250m tonnes to 325m.

Insecurity, said the visionaries: children clutching on to familiar objects as the world accelerates past them. As the value of tech stocks rose, bosses became increasingly determined to prove that they "got it". One way of demonstrating that they were truly wired was to espouse the paperless vision.

A few of them tried to impose the vision on their employees. The most dramatic of these experiments took place at the offices of Chiat/Day, an American advertising agency. In 1993, Jay Chiat, the boss, had a revelation while on the ski slopes, and realised that his employees' minds were trapped by the boxes they were working in. Free their bodies from the box and you would free their minds. They were, accordingly, installed in offices without desks or filing cabinets. There were sofas to sit on and a few special rooms for meetings. There was nowhere to keep any paper; indeed, nobody was supposed to keep paper.

Chiat/Day's employees behaved like any group of refugees torn from familiar surroundings. They tried to rebuild their world. One woman bought a child's red wagon, put her paper files in it and trailed it around the corridors after her. Most people recreated their desks in the boots of their cars, where they stored their files and notebooks, dashing in and out of the building to the parking lot during meetings. Groups of workers took permanent control of meeting rooms and a shanty-town of desks grew up. The company was eventually bought by a traditionalist rival and normal life resumed.

The public sector got the bug too, though rather later. Panting along behind the curve, the British government committed £200m (then $290m) in 2001 to developing a paperless school. Baroness Ashton of Upholland, launching the scheme, waved a paper and pencil around, predicting their eventual demise .

THE REVENGE OF THE TREES

In most quarters, however, the fate of the tech stocks has taken the shine off those futuristic visions. The world is kinder to the past, these days, and to tools that have proved their value over millennia. A sign of the times is the publication of an excellent book- - - - * by Richard Harper and Abigail Sellen which details the many virtues of paper and the many workplaces in which it remains surprisingly important.

People spread paper over their desks not because they are too lazy to file it, but because it is a physical representation of what is going on in their heads

Air-traffic control, for example, does not, at first glance, seem a likely candidate. The business of monitoring incoming aircraft and predicting their future course, which depends on measurement and mathematics, sounds as though it should be entirely electronic. Yet paper remains an essential part of the air-traffic control system in Britain.

Each air-traffic controller works in a team of about five staff. Information about each incoming plane in that controller's sector is printed out on a piece of paper--a flight progress strip, about eight inches long and an inch deep. As the plane moves across the controller's sector, the strip is annotated--with, for instance, speed or altitude changes. On the basis of those annotations, different team members can do their job--working

out, for instance, the implications of those changes for the next sector. In a busy sector, one team may have 50 strips on display.

Many attempts have been made to get rid of the flight progress strips. The only way of doing away with them, it turns out, is to give air-traffic controllers smaller areas to cover. For larger areas--which means a more complex job—the paper strips are essential. "They are a jolly efficient means of annotating information," says Richard Wright of Britain's National Air Traffic Services. "The controllers can read them at a glance. If we replace them it will have to be with something better. They will be with us for some time yet."

Paper's importance to the air-traffic controllers illustrates some of the reasons why it survives. It can be annotated more easily than text on a screen can; those marks can be seen more easily by several people than can digits on a screen; and it can be moved around, thus conveying more information.

It is less surprising, perhaps, that the International Monetary Fund, which Mr Harper and Ms Sellen also spent some time studying, should still use a certain amount of paper. But, given how technology-rich the Fund is--it had spent over $70m on IT in five years at the time of their study, and was spending $18,000 per head per year--its reliance on paper is somewhat unexpected. The 25 workers (16 economists, seven administrative workers and two research assistants) whom Mr Harper and Ms Sellen studied spent 97% of their time working on documents of some sort; of that, 86% of the time was spent working on paper. They liked paper because they could spread it around; because they could annotate colleagues' work without interfering with the text, as they would if they annotated electronically; and because paper interfered less with communication during a meeting than screens would.

In order to observe the differential impact of paper and computers on how people work, Mr Harper and Ms Sellen set up an experiment with ten people, five of them using paper and pens, five of them using screens only. Their task was to summarise a number of reports.

The people working with paper spread out all the reports on a desk, flicked through them, annotated them, moving easily from one to the other. The people working on computers struggled to do something similar, creating a number of windows on their screen. They found navigation--scrolling, clicking and dragging--slow and cumbersome, and several of them got quite cross. One started shouting at his computer.

A BEAUTIFUL MIND

But why do people need to spread papers around on their desks? Why don't they just read their paperwork and file it? Alison Kidd, a psychologist, investigated this question while working for Hewlett-Packard Laboratories. Ms Kidd, whose new firm, The Prospectory, helps companies to use technology to develop new ideas, interviewed 12 workers about how they used information, paper and computers.

Her paper, "The Marks are on the Knowledge Worker", draws a distinction between "knowledge workers" and other categories, such as clerical workers. Clerical workers use information--about, say, customer orders--to aid the smooth working of the company. Knowledge workers use information to change themselves. So, for instance, knowledge workers take notes not in order to store information, but because the process of note-taking helps them to learn. Once taken, notes are rarely reviewed. According to a study of research workers reported in "The Technology of Team Navigation", a paper by Edwin Hutchins, a psychologist, while 64% kept their notes for years, 44% hardly ever referred to them.

The relationship between workers and their clutter is similar. People spread stuff over their desks not because they are too lazy to file it, but because the paper serves as a physical representation of what is going on in their heads--"a temporary holding pattern for ideas and inputs which they cannot yet categorise or even decide how they might use", as Ms Kidd puts it. The clutter cannot be filed because it has not been categorised. By the time the worker's ideas have taken form, and the clutter could be categorised, it has served its purpose and can therefore be binned. Filing it is a waste of time.

Why people need a physical map of what is going on in their heads is not clear. Ms Kidd suggests that the brain may just need some help. She speaks of her father, who suffers from frontal-lobe dementia, which affects the ability to interpret what is going on around one. As his brain has deteriorated, "he uses the physical correlate more than ever", to the point at which his surroundings have become chaotic. So perhaps, as the tidy have always suspected, they are just smarter: they can do more stuff in their heads without outside help than the untidy can.FILERS VERSUS PILERS

Work by Steve Whittaker and Julia Hirschberg of ATT Labs-Research, however, suggests that clutter may actually be quite an efficient organising principle. In "The Character, Value and Management of Personal Paper Archives", they examine the distinction that MIT's Tom Malone draws between "filers" and "pilers".

When filers receive paperwork, they put it away. When pilers get it, they leave it on the desk--not randomly, but in concentric circles. There is a "hot" area, of stuff that the worker is dealing with right now. There is a "warm" area, of stuff that needs to be got through in the next few days: it may be there, in part, as a prompt. And there is a "cold" area, at the edges of the desk, of stuff which could just as well be in an archive (or, often, the bin).

According to Mr Whittaker and Ms Hirschberg, the assumption that filers can find stuff more quickly is wrong. Filers, they say, "are less likely to access a given piece of data, and more likely to acquire extraneous data...In moderation, piling has the benefits of providing somewhat ready access to materials as well as reminding about tasks currently in progress." Filers have two problems finding stuff: they tend to file too much, because they have put so much effort into building a filing system, and they often find it hard to remember how they categorised things.

As well as giving much-needed succour to those attached to the ecology of their desktops, these studies have some serious implications for managers. If they interfere with people's desktops, they may also interfere with their thinking. Trying to force workers to get rid of clutter and scan their papers into a computer system may be an expensive waste of time. Companies which do this may find that they create large, useless databases full of information that nobody ever uses.

By trying to computerise everything, managers m ay undermine the process they should be trying to support. There is a good example of this in the book by Mr Harper and Ms Sellen. A British telecoms-equipment manufacturer decided to computerise its salesmen's paperwork so that, rather than lugging files all over the country, they could plug into a database, and so that people back at base could also have access to this information.

The technical side of the project went well. However, the information that salesmen put into the database was vague to the point of uselessness. The problem was that the nature of the salesmen's files had been misunderstood. Managers had thought that salesmen relied on detailed notes about the nature of the customer's organisation and its likely requirements. Actually, the important information was about people in the client companies--their hobbies and interests, their personal characteristics, and about who to avoid dealing with. It wasn't stuff that the salesmen wanted to put on a database.

Britain's policemen had a similar experience. Chivvied by the Home Office to become more efficient (which is always assumed to mean more electronic), police forces issued constables with laptop computers to carry around with them, for instance, to take statements from witnesses to crimes. They found that the quality of the statements deteriorated. Writing into a computer, they discovered, gets in the way of talking to somebody. That is why you will never be interviewed by a journalist typing his notes into a computer. They want to look you in the eye.

Automation can achieve so much in so many areas of work that managers are tempted to think they can automate everything. But the most important aspects of work are the hardest to automate. "Businesses", says Mr Harper, whose company, Appliance Studio, helps companies to design computer-based tools to work with, rather than against, workers, "must take care not to throw the baby out with the bathwater." Computers are fine, in their place; but their proper place is at the edge of a healthy distribution of clutter.
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[i] The Myth of the Paperless Office By Abigail Sellen and Richard Harper. MIT; 242 pages; $24.95. [i]