Some outcomes from doctoral research
A Future Archaeology of the Mobile Telecoms Industry

by Laura Watts
Department of Sociology
Lancaster University UK

10 Future Myths to watch for

in the
Mobile Telecoms Industry

with special appendices

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Moore's Law

In 1965 the founder of Intel, Gordon Moore, published his prediction that the number of components per integrated circuit would rise exponentially year on year.

Through the myth of the Silicon Age, the silicon chip has been conflated with the development of silicon-based technology more generally. Now so-called Moore's Law is applied to almost any measure of technological development, even though these developments may have nothing to do with the published prediction, and the underlying assumptions are more than forty years old.

This new Moore's Law assumes that technological development happens in a linear progression, that as time passes some measure of technological efficiency will improve. This has the effect of requiring measurements of technology, so that a number can be plotted on a graph. It requires technological development to be quantised and turned into bandwidth, battery life, size of screen, megapixels, cost etc. Even though technological development is much more complex, messy, and discontinuous; and sometimes goes backwards, as with the quality of voice telephony, or even stays still for decades, as with Videophones.

The exponential line of Moore's Law, for example in the increasing bandwidth from 2G to 3G to 4G, is both a myth and a prophetic trap. As with all predictions of the future it also affects the future. By holding to a future measured in bandwidth or number of megapixels or even ARPU then other possible futures become unwanted, are unfunded, and wither and vanish. Moore's Law becomes a self-fulfilling prophecy. Moore's Law is risk-averse, a safe investment - just follow the exponential line.

The presence of Moore's Law can therefore demonstrate a lack of vision, a lack of imagination, and a lack of innovation. Innovation is much harder to measure, since the units have yet to be defined.

Examples to watch for...

"The key drivers [for the future of handset batteries] are Moore's Law... process and power goes up at an exponential rate."
Industry Analyst, 2004.

"Forget Moore's Law because it is unhealthy. Because it has become our obsession. Because high-tech has become fixated on it at the expense of everything else – especially business strategy... It is a runaway train, roaring down a path to disaster, picking up speed at every turn, and we are now going faster than human beings can endure."
Journalist, Red Herring magazine, 2003.

"They [marketing] want that hockey-stick effect..."
Venture Capitalist, 2004.

Further reading

Moore, G. E. (1965). Cramming More Components onto Integrated Circuits. *Electronics* 38(8).

Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Figuration 1'.

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Technology determines the future

It is sometimes assumed that technology is somehow separate from people. That technology determines its own future, and that technological progress is out of control, or outside any control; that technology changes the world, all by itself, with no help from anyone. It is an assumption called technological determinism: technology determines the social world and the future. It leads to the bizarre notion that technology is innocent and a-political.

But how do technologies get made except for the difficult negotiations and working of designers, strategists, manufacturers; even science fictions writers participate in what gets made. For example, technological prophets such as Marshall McLuhan acknowledge that they are inspired by Victorian science fiction stories such as the global electronic brain. Would the flip-phone have been created without Captain Kirk's flick-of-the-wrist communicator?

Technology is not separate from people, it is deeply entangled in everyday life. From its creation, to its maintenance and use, to its disposal and decay (there are strict laws for the recycling and disposal of most high-tech devices).

Technology does not transform lives because you cannot separate technology from life. Human life has been bound up with technology, with stone tools and string bags, with monuments and art, from before homo sapiens. The world we live in is everywhere profoundly technological.

Similarly, neither do people determine the future by themselves. There is no social determinism. We are not floating brains, or pure social relations, we live in the messy material world - that includes mountains that stop radio signals.

We live in both a social and material world. And this social and material world makes the future. Technology is never innocent because it cannot be separated from the desires, intentions, lives, and politics of people.

Examples to watch for...

"Operators are frightened to death of technology. It comes at us like missiles. Many [of us] are investing out of fear... so that if it works, we are prepared, if not we are sunk."
Operator CEO, 2005.

""IT is the key driver towards modernity."
Mechanical engineer, 2004.

"Mobile phone was a revolutionary device... and changed the world incalculably..."
Market research consultant, 2004.

Further reading

Bijker, W. E., Hughes, T. P. & Pinch, T. (1989) The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology, London/Cambridge MA, MIT Press.

Mackenzie, D. & Wajcman, J. (Eds.) (1985) The Social Shaping of Technology, Milton Keynes, Open University Press.

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Silicon Age

In 1836, a Danish scholar, C. J. Thomsen, published a guidebook to artefacts in the National Museum of Copenhagen. He is credited as the first person to separate technological development into distinct ages: Stone, Bronze and Iron.

The notion of technological ages is a Victorian one. The idea that technology defines a particular way of life, or that there is some distinct separation in time between forms of technology, has long been discredited in archaeology – the term Bronze Age is now a short hand for a chronology (that varies from place to place) and has increasingly little to do with bronze itself.

Thomas Kuhn's discussion of paradigm shifts in science (published in 1962), seems to have revitalised the notion of scientific ruptures and ideas breaking with the past – in marketing jargon especially. However, Kuhn was explicitly referring to transformation in scientific knowledge. Paradigm shift is a subtle term that has almost nothing to do with the development of technology.

For example, consider a brand new car. What age does it belong to? The wheel is Stone Age, the combustion engine is from the Industrial Age, the onboard computer is Silicon Age, the styling could be Space Age, optional extras from the Service Age, and shipping it by tanker from the manufacturer part of the Transportation Age (and ordering online is, of course, Information Age). Technology folds time, mixes it. Time in technology is rarely linear.

It is also worth noting that a futurist in 1969 placed the Telecommunications Age in fifth position, behind the sixth Transportation Age. His series of technological ages was an effect of his situation: the Cold War was producing the space race, and a version of the future that was speed-based. Speaking of technological ages is to speak only of your own location in time (and place). In a few years it will be out-moded.

Examples to watch for...

"the high-speed cellular age"
Journalist, 2005.

"the Information Society"

Further reading

Robins, K. & Webster, F. (1999) Times of the Technoculture: From the Information Society to the Virtual Life, London, Routledge.

Serres, M. (1995) Conversations on Science, Culture and Time: Michel Serres with Bruno Latour, Michigan, University of Michigan Press.

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Videophone

Arthur C. Clarke and Stanley Kubrick's 2001: A Space Odyssey (1968) has firmly implanted the idea of the videophone, or picturephone, in the imagination of the telecoms industry. And since then numerous science fiction films have assumed a future of video telephony (Aliens, Blade Runner, Starship Troopers and on). However, the first science fiction film to show a videophone was Fritz Lang's silent Metropolis (1927), and perhaps it is no coincidence that this was a silent film that therefore required a visual form of remote communication.

Bell Labs first demonstrated a working picturephone at the Chicago World Fair in 1933 (more than seventy years ago). After World War II, they setup a trial system in 1964, with analysts predicting worldwide billion dollar revenues by 1980 (see Moore's Law). It has also been suggested that these analogue circuit-switched networks were much more appropriate for the transmission of video than current digital packet-switched networks, which actually reduce quality through compression and division. Bandwidth was never the issue. What was the issue was that users were always ambivalent. The everyday world is not like the movies.

New versions of the videophone concept have been launched (with fanfare) every few years since the early seventies. The BT ISDN videophone quietly became a visual aid to the hearing-impaired. The Hutchinson Orange 2G Videophone almost never made it manufacture.

Video telephony is an example of a technological timewarp. It is not new but old, yet it steadfastly remains in the future not the past. It seems as if the dream of a videophone is loved far more than any real-world attempt. To create a loveable (and useable) videophone would require letting go of that science fiction dream and creating something prosaic and practical – that perhaps was no longer a videophone at all.

Examples to watch for...

"It's the science fiction dream [videophones]... All the advertising that Hutchinson did... still can't get people to do this... and there must be something... I am an optimist... It doesn't seem possible that you never want to do that."
Handset designer, 2004.

Further reading

Noll, M. A. (1992) Anatomy of a Failure: Picturephone Revisted. Telecommunications Policy, May/June, 307-316.

Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Reconstruction 6'.

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Wearable Technology

'A technology suited to a mobile way of life' – is this from a marketing brochure for a Bluetooth headset, or an archaeologist's description of a stone blade from twelve-thousand years ago? The latter. Wearable mobile technology is evident for over half a million years of hominid development, from shell jewellery to wristwatches. Archaeologically speaking a Bluetooth headset is just another form of wearable technology. What makes the mobile telecoms industry so-often adamant that it is something new?

Wearable Computing or WearComp was widely publicised by Steve Mann at MIT Media Labs in the mid-1980s. Pictures of him wearing bulky devices on his belt connected to augmented eyeglasses, and stories of his life wearing these, were heavily reported. It is this project which seems to be cited as the origin and inspiration for subsequent wearable devices (although many such projects derived from long-standing Virtual Reality devices, from data gloves to stereo headsets, were ongoing at the same time).

Wearable mobile technologies are never a wristwatch first with a mobile phone built in second. It is always, for the industry, made the other way round. History is carefully erased.

For example: the world's first wireless watch was launched by Seiko at GSM World Congress 2004. However, the world's first wireless watch was also launched by Swatch Telecom in 1998, by Philips in 1999, Samsung in 2000, Motorola in 2001, and no doubt by others. Perhaps it remains to be launched as a world first again. The wireless wristphone along with other wearable mobile technologies, from wireless jewellery to wireless jackets, are caught in a temporal timewarp (much like the Videophone). Their histories are constantly over-written. Wearable technology seems to have no past, only a future.

By repeating the past without change in the concept, innovation in what wearable mobile technologies are and what they might do, seems to stalls.

Examples to watch for...

"[IT Company] to Build Wearable PC"
Headline Wired magazine, 1998.

"In the longer term, [this mobile company] plans to exploit the emergence of 'wearable' technology, as phones morph into jewellery."
PR Spokesperson for mobile manufacturer, 2004.

Further reading

Mann, S. (1997) An Historical Account of the `Wearcomp' and `Wearcam' Inventions Developed for Applications in `Personal Imaging'. *IEEE Proceedings of ISWC October 13-14*, Cambridge, Massachusetts, 66-73.
.
Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Reconstruction 4'.

Harte, L. et al, (2000) The Comprehensive Guide to Wireless Technologies. APDG Publishing, Fuquay-Varina NC.

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Human Needs

Abraham Maslow's Hierarchy of Needs pervades the language of industry. It was first published in 1943, yet despite extensive critique remains present in many marketing textbooks, and in everyday industry parlance.

Maslow ordered his human needs into five sets of goals: physiological, safety, love, esteem, and self-actualization, which he claimed were universal across all races, cultures, and social groups.

However, the only empirical research that he conducted was a very small sample of college students - not a group that is widely representative, least of all in 1930s America. He went on to claim that the basis for his needs were biological, including, for example, the now very dated and highly questionable notion that self-actualisation for women required giving primacy to the family (as a biological imperative).

Anthropology and sociology, two disciplines that specialise in diverse cultural and social groups, have identified no universal needs. Instead, they emphasise the extraordinary differences and richness of how groups of people get on the world, how they live, what is important to them, and what is valuable. Current theories in the social sciences and humanities emphasise the importance of ontology – that different groups of people don't just know different things about the world, but that their worlds are fundamentally different. Different people live in different worlds, not in a manner of speaking, but in their everyday experience. Maslow's universal needs become meaningless in this case.

Examples to watch for...

"GSM and 3GSM has the potential to fulfil the basic human need for communication to some four billion people in the world today without any telecommunications. We have the opportunity to become a key driver of economic development in every country in the world." GSM Association Chairman, 2004.

"Basic psychological needs for achieving quality of life... Storytelling, Sharing, Re-experiencing." Presentation by Social Researcher, 2004.

Further reading

Maslow, A. H. (1943) A Theory of Human Motivation. Psychological Review, 50, 370-396.

Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Reconstruction 4'.

Cullen, D. & Gotell, L. (2002) From Orgasms to Organization: Maslow, Women's Sexuality and the Gendered Foundations of the Needs Hierarchy. Gender, Work and Organization, 9, 537-555.

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Origin Myth

Marty Cooper is often called the father of the cellphone. According to the well-worn story he took the very first cellular call on the Motorola DynaTAC system in Manhattan during April 1973.

Historians of technology, however, do not agree with this simple origin myth. David Hughes was working on electromagnetic induction in the field in 1879, and some have claimed he took the first mobile phone call in London, as a series of clicks. Hilda and Lars Magnus Ericsson in Sweden were working the first mobile telephone, which was car-based, from 1910. And NTT published a paper on their mobile radio system in 1972, one year earlier than the famous patent awarded to Motorola. Finally, there are seven names on that patent, not just Martin Cooper's.

In short, technological systems do not spring fully-formed from the head of any one person (and rarely from one organisation). They are developed in fits and starts over years, involving many people, organisations, and countries. It does not make a good soundbyte, therefore this complicated story is simplified and frequently manipulated in different ways. Sometimes it is a Motorola story, sometimes an American story, sometimes a British invention, and so on.

Patents produce inventors rather than the other way round – a legal necessity to identify ownership. Inventors own inventions.

Technologies tend not to have a point of origin. Neither do they have a neat line of technological progress from that point into the future (see Moore's Law). Telling an origin myth has the effect of also telling a story of a line from one moment in the past to, ultimately, one moment in the future. It tends to deny all sorts of interesting and unexpected things that may have happened, and could yet happen. So be careful of the stories that you tell.

Examples to watch for...

"in the UK... the first land mobile services were introduced in the 1940s [in the UK] and [later] commercial mobile telephony began in the USA in 1947 when AT&T began operating a [car-based service] between New York and Boston."
Published paper by BT Research, 2003.

"The birth of the wireless world."
Chapter title for industry history book, 2002.

Further reading

Schiffer, M. B. (1991) The Portable Radio in American Life, Tuscon/London, University of Arizona Press.
.
Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Figuration 1'.

Galambos, L. & Abrahamson, E. J. (2002) Anytime, Anywhere: Entrepreneurship and the Creation of the Wireless World, Cambridge, Cambridge University Press.

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Ubiquity

Anyone anywhere anytime, was the refrain in the mobile telecoms industry in the 1990s, and it remains in common use to describe the future, and sometimes even the present.

The myth of a future where everything and everyone is connected, has many different monikers: ubiquitous computing (or ubicomp), ambient technology, pervasive computing, and others. In mobile telecoms it is given life in phrases such as ubiquitous access, and global mobile telecommunications network.

The concept of a global electronic network was perhaps first published in 1851 by the science fiction writer, Nathaniel Hawthorne. This Victorian dream inspired Marshall McLuhan's well-known myth of the global village. But the global village, as with the ubiquitous network, has borders that seem to go unnoticed.

There are still distinct parts of the UK, for example, where there is no television signal. Mountains and hills block radio transmission, leaving parts of hilly cities and upland areas without signal. Despite the notion that television is ubiquitous. Mobile coverage is similarly patchy. It is not everywhere. The world is not flat, and topography gets in the way. The weather and numerous other phenomena also affect signal. In less densely populated upland areas, such as remote parts of Scotland, mobile networks may never become ubiquitous.

Not everyone has a mobile phone. Aside from those who choose not to have one, there are those for whom handsets are un-useable, and those who have no choice and cannot have one. It is also worth noting that the UK government currently recommends that children under the age of 16 should be discouraged from using mobile phones. You cannot make claims for ubiquity and then say these people do not matter, or that they are simply at the margins. What would mobile technologies look like that were imagined, designed, and implemented for such people, rather than for the global village?

Examples to watch for...

"We really need that always on, anytime, anyplace, anywhere"
Industry analyst, 2004.

"A coming world where six billion people are online all of the time."
Voice over for mobile demo, 2004.

"Everyone in the world will have a mobile phone"
Industry journalist, 2004.

"Today, millions worldwide expect to call, or be called – anytime anywhere"
Advert for GSM Association, 2004.

Further reading

.

Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Reconstruction 4'.

Bowker, G. (1993) How to Be Universal: Some Cybernetic Strategies. Social Studies of Science, 23, 107-127.

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Magic

Arthur C. Clarke's so-called Third Law states: any sufficiently advanced technology is indistinguishable from magic.

However my corollary is that: any sufficiently magical technology is indistinguishable from advanced technology.

Magic is the ideal technology. It involves zero work. There is no cost, no hazard or drudgery. It's when mobile devices and infrastructures magically simply work, and the extraordinary labours of design, installation, maintenance, and ultimately upgrade and disposal are made absent. Magic is when the sheer effort of mobile technology is glossed over; when the gaps between signal, the system crashes, the overloads are all forgotten, and the mobile technology is treated as though it were dazzlingly effortless and everywhere (see Ubiquity).

Experiencing a magical technology (instead of an advanced technology, for example) is called, in anthropology, having a 'magical attitude'.

The magical attitude makes the labours of hundreds of people invisible. For example, those who install the extra pico-cells in the months before a large industry conference; so that when everyone arrives and switches on their handset, magically it all just works. As with living in Disneyland, this requires enormous amounts of backstage work to make such magic happen.

Branding, marketing, and hype can also have a magical effect. They can turn a trial network into a ubiquitous network, membership of the GSM Association into a country with a GSM network, a demo into a manufactured device, a single event into a world craze, an exponential graph into billions of customers, a fluffy cloud on a PowerPoint slide into a global network. The more magical the effect, the more advanced the technology may seem.

Magic is used to create a pretend world and imitation advanced technology. In contrast, innovation requires careful attention to the gaps, to the moments of failure, to learn from these mistakes and move forward.

Examples to watch for...

"In the convention hall... and around the streets of this picturesque city, users are recognising that '3G is for Real'"
Infrastructure manufacturer speaking of a trial network, 2004.

"What's the magic that will make sharing [communications] really work?"
Handset designer, 2004.

Further reading

Gell, A. (1988) Technology and Magic. Anthropology Today, 4, 6-9.
.
Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Reconstruction 2'.

Clarke, A. C. (1982, First Edition 1962) Profiles of the Future: An Inquiry into the Limits of the Possible, London, Pan Books.

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Flatland

Around the world the mobile industry inhabits very particular places. It is predominantly close to global transport hubs, such as Heathrow. In the UK, it has grown up around existing research centres in the defence industry, such as between the M3 and M4 motorways.

Between these places the industry tends to travel in lines: train lines, tarmac lines, and air-corridor lines. These lines create a flatland that does not impede point to point radio signal. When a concrete building or small hill does get in the way, more cellsites are installed so it does not have an impact – it is essentially flattened. London and the M3/M4 areas are the first places where new infrastructure is rolled out, and where mobile cellsites are at their densest.

Everyday the industry generally lives in the centre of its network, in a landscape that topographically does not resist. In this landscape there are few experiences of network gaps, or the difficulties that other, less flat, landscapes experience.

But what if the industry inhabited such a different landscape. Perhaps a mountainous or archipelago landscape, one that resisted point to point radio? Then the everyday experience of a company would be at the edge of technology. Rather than travelling in lines (see Moore's Law), perhaps such a company might take a different route, and think in different shapes.

Landscapes and movement through a landscape creates an experience of the world and of technology. Different landscapes and different ways of moving create different worlds, and therefore different technologies.

Examples to watch for...

[When the company had an agreement that everyone flew business class then the line "went all the way to the back" now the deal is they fly economy and "its back to normal"]
Handset designer, 2004.

Further reading

.

Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Reconstruction 1' and 'Reconstruction 3'.

Gagliardi, P. (Ed.) (1990) Symbols and Artifacts: Views of the Corporate Landscape, Berlin/New York, W. de Gruyter.

Ingold, T. (2000) The Perception of the Environment: Essays in Livelihood, Dwelling and Skill. London, Routledge.

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Appendix A:
Sample of an alternate future myth

The result of the doctoral thesis was to create this alternate future, which attempts to address the myths of the industry and show how it might be otherwise.

Mutable Mobile

Concepts for future mobile technology that are 'seeded' and are left to grow rather than are developed entirely in-house, create very different kinds of futures.

These concepts are not simply designed collaboratively with users. They are 'open objects' – literally demos or models that are released and seeded into many different groups of users, who are encouraged to pass them on. These groups take up the objects in which ever way they imagine, and transform them into new concepts, and new futures.

The result is a future mobile technology that is not a single thing, but is transformed by different users into many, and multiple, things. As the open object moves from place to place, from user to user, it mutates. Such a future mobile technology constantly inspires new and diverse futures, rather than promotes one single future.

However, it requires an open rather than owned approach to design.

This mutable approach to design tends to be local rather than global. The concept may be highly mobile, and move around the world, but it always specific to each place where it is taken up and developed. Each future concept created by a user belongs to them.

Such future mutable mobile technologies are powerfully embedded in people and places.

Examples to watch for...

"It's a fine example of a local technology. You cannot just move [the archaeological monument], and rebuild it the same way somewhere else. It has to be there, in that location, otherwise the sun doesn't rise over the mountains in the right place. If you move it, you'd have to change its architecture. The monument and the landscape are irreducible, the technology is inseparable from its locale."
Social researcher, fictional company, 2007.

Further listening

.

Watts, L. (2007) Sand14 Podcasts, available for download from www.sand14.com

Further reading

.

Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapters on Sand14.

De Laet, M. & Mol, A. (2000) The Zimbabwe Bush Pump: Mechanics of a Fluid Technology. Social Studies of Science, 30, 225-263.

Richards, C. (1996) Monuments as Landscape: Creating the Centre of the World in Late Neolithic Orkney. World Archaeology, 28, 190-208.

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Appendix B:

These myths are derived from the ethnography conducted in the design studio during Spring 2004.

Intellectual Borders

To create a brand, or distinct group, requires creating a border between insiders and outsiders. This can be between: management and workers, engineers and designers, permanent and contract staff, those who know and those who should not know, different sites, different functions, those in the room and those listening behind the door.

Borders have to be maintained, they require investment of time and effort; a constant surveillance of who can read what, who can go where, who is a security risk, who is an insider. Borders stop flows of people and flows of ideas. Intellectual Property borders stop intellectual flows. They tend to purify rather than mix knowledge. But mixing knowledge tends to create unexpected new strains of ideas. Borders, however, tend to prevent new ideas and innovation.

But innovation is itself not very mobile. A new way of thinking cannot be reduced to a soundbyte on a PowerPoint slide. An innovative concept requires many people and many technologies working together – holding together – so that knowing one part does not give you knowledge of the whole.

Located accountability, where all individuals are accountable for making and transferring their knowledge, does not require borders. People do not have to spend time making fixed borders, instead they can be responsible for making their own effective flows of knowledge, in order to inspire innovation.

Intellectual borders create brands. But what would a brand look like that was not defined by who was in, or its IP? A brand that was defined by innovation that was too immobile, too embedded in the organisation, to easily leak? One where accountable flows of knowledge were encouraged not prevented?

Examples to watch for...

"Us and them..."
Senior manager, 2004.

"[Employees] are nine to fivers, and have a completely different life outside... Is this right for the brand?"
Senior manager, 2004

"This is top, top stuff... you are very privileged to be part of it... We don't even let these guys [from outside] in."
Senior manager, 2004.

Further reading

.

Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Reconstruction 1'.

Suchman, L. (2002) Located Accountabilities in Technology Production. Scandanavian Journal of Information Systems, 14, 91-105.

Kunda, G. (1992) Engineering Culture: Control and Commitment in a High-Tech Corporation, Philadelphia, Temple University Press.

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Oral stories

Although there is a complex process written down for product development, its implementation is more a matter of oral tradition (a familiar practice throughout high-tech industry).

Oral stories are passed on through PowerPoint slides, like a pictorial baton. But each person tells those stories, and interprets those pictures, in a different way. Senior management are passed many slides, and are adept at weaving hundreds of pictures into a great saga.

But as slides accrete, as the process is followed, earlier decisions do not accrete but become subsumed into the picture. Decisions and knowledge about a product do not build up, instead a picture builds up, which could reflect many different decisions back down the line. What tends to matter, then, is the picture. Design specialises in producing pictures that inspire great and memorable stories. But it's a double-edged sword – the picture, a shape of a new handset, can inspire all sorts of stories never intended by the designers.

A shape on a slide can say very little of the decisions concerning what is inside the product: how its envisaged to be held, its user interface, its texture, its characteristics, features, its raison d'etre as a device. Yet the shape is often partly defined by all those decisions in its past.

How to pass on the pictorial baton, without loosing all those decisions, without loosing something vital in the story of the image? What are the key moments in the plot of the story, that cannot be lost without changing the story itself?

In those pictures, in the PowerPoint slides, can there be snagging technologies, things that stick like velco to the story as it is taken up by different people in different parts of the organisation? Perhaps some parts of the story cannot be passed on, and those people who need to hear them, have to travel to listen to particular storytellers tell them in a certain way?

Examples to watch for...

"Yes, that's right. Despite our use of PowerPoint we're not a document company."
Senior manager, 2004.

""[It's] partly a cascade process... We have trend and strategy dissemination sessions... We would like to be a horizontal company, but we're not... I will go through the presentation plus the three hundred slides for the day's audit... over one hundred people [in the audience]."
Senior manager, 2004.

Further reading

.

Watts, L. (2007) A Future Archaeology of the Mobile Telecoms Industry, unpublished thesis. Lancaster University. Chapter 'Reconstruction 6'.

Vaughan, D. (1999) The Rôle of the Organization in the Production of Techno-Scientific Knowledge. Social Studies of Science, 29, 913-943.

Vaughan, D. (1997) The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA, Chicago/London, University of Chicago Press.

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