

Fact-File 50: Techno-connectivity – boon & bane: harmonising the human & technological...



Extracts from a presentation to The Leadership Lounge, Brisbane June 2012

Primacy of Techno-Connectivity

No-one disputes ICT or *techno-connectivity*, with its dazzling devices, has radically revolutionised the way we live and work. The benefits are self-evident, in terms of speed, personal productivity, convenience, efficiency, versatility, flexibility and sheer ingenuity.

It's also redefined how we experience work, even the nature of work itself, with far-reaching ramifications for how we relate, balance work and personal life, health, well-being and is perhaps even re-wiring neural networks that determine how we connect and socialise brain-wise.

Techno-connectivity has eliminated, automated, or robotised many jobs. It facilitates us to work faster, smarter, longer, harder and at-home. It has boosted personal productivity, enabling us to manage bigger workloads with fewer people.

Techno-connectivity's primacy is apparent. But is it a benevolent rule? Is techno over-connectivity in danger of killing off human connectivity?

Human Connectivity – more or less?

Human connectivity is a basic, primal urge we all feel to belong, be accepted, supported, in-synch with those around us. We're born to connect. It's hard-wired into every single synapse.

- ❑ We all crave to feel close to others. It's a badge of our basic humanity, a prime ingredient of healthy relationships and vital to our emotional and physical well-being.
- ❑ Connective moments is what gives us the 'satisfy' experience in things like a good meeting, a good conversation, a good team, a good leader, a good culture or a good job.
- ❑ *Connecting* is a precondition for anything else that happens in any interactions we have. It's part of our own emotional guidance system.

Empathy makes human connectivity possible. It's what our limbic system does. It scans the human terrain like an emotional radar, detecting 'blips' that help us tune in to others. There are numerous signals our radar picks up: from facial gestures, tone, to actual chemical emissions. Spindle cells and mirror neurons for instance are designed to read others at a chemical level.

You can see connective moments in action: people incline toward each other, nod more vigorously, tension leaves their bodies. They may mirror posture, expressions, voice-tone. There's an aura of relaxed attentiveness. It's a dance: a *limbic tango*.

Edward Hallowell, from Harvard Medical School, says connective moments are "*human moments*".

"A human moment doesn't have to be emotionally draining or personally revealing. A 5-minute conversation can be a perfectly meaningful human moment. To make the human moment work, you have to set aside what you're doing and focus on the person you're with. Usually when you do that, the other person will feel the energy and respond in kind." Edward M. Hallowell "The Human Moment at Work" in Harvard Business Review Jan-Feb 1999

Chemicals released during connective moments restore, calm and heal. Stress hormones like cortisol decline. We emit oxytocin promoting trust and bonding; dopamine, an attention enhancer and serotonin that reduces fear and worry.

That people are more likely to do better work and work better together when they feel connected is really a 'no-brainer'. Lack of human connectivity costs. It makes us more prone to catching toxic emotions that undermine work cultures, cripple teams and affect mental and physical health.

Dialling up Disconnection

Amidst the daily bustle and busyness, were often not present enough to notice human moments. Self-absorption and distraction dull our radar and dissipate human connection. Techno-connectivity provides many distractions that play interference with human connectivity.

- ❑ Daniel Goleman in *Social Intelligence*, sees his book as a critique of society's creeping disconnection in the digital connectivity age.
- ❑ Our social and emotional learning come from connecting. Lack of it is emotionally stunting. Under-using our brain-circuitry for connecting can diminish our capacity to relate socially.
- ❑ Many people in numerous social surveys say they're too busy keeping up with social media, which ironically limits time to make room for real human connections.

Hallowell says a real human moment "*has two prerequisites: people's physical presence and their emotional and intellectual attention.*" Yet these ingredients are conspicuously absent from social media like Facebook that claims to deliver the human connectivity we clamour for. In terms of what our brain needs for a connective moment, the actual chemistry is sadly lacking.

Techno-connectivity keeps us e-connected and linked-in like never before. But physical face-to-

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face conversation is the irreplaceable medium for human connectivity at work and elsewhere. There is no substitute for this kind of face-time.

- ❑ Connective human moments are *embodied*. Our limbic system relies on physical proximity to do essential readings that release those restoring, calming chemicals we crave.
- ❑ Techno-connectivity is disembodied. A facebook chat seems superficially similar to a real conversation: sentiments are shared, feelings are triggered but without real presence, it's like a comic book as opposed to a movie.

Techno-devices enable us to take the 'meet' out of meetings. Email allows us to send our thoughts to someone in the next work station or down the hall we once used to have to get up and go see.

In one UK study, IT people praised efficiency of techno-devices in reducing wasteful face-to-face meeting-time, unproductive social chit-chat and spoke highly of things like: sharing instant i-pad summaries after a meeting, thus avoiding "getting involved in all that dreary conversation" during it and being at a meeting in-body but have your laptop on during it to do "all the things this meeting once used to get in the way of getting done." in Breu, Hemingway and Ashurst *The impact of mobile and wireless technology on knowledge workers*

Over-reliance on email, video-links, virtuality and various other versions of techno-connectivity, no matter how vivid, may not only deprive us of real human connectivity, but also shrink our social skills and impair basic brain-wiring that enables us to connect with each other at a human level.

Rewiring our Brain: boost or bust?

Everyone's heard by now of 'neuro-plasticity' – how our brain literally reshapes itself in response to what we expose it to, how we exercise it and the stimuli of daily life. This in turn, affects our thinking, behaviour and emotional habits. When habits are positive, we don't mind. But it's difficult to stop a bad habit once brain-ingrained. We get addicted to it because we crave for the chemicals our brain releases every time we do it.

This is the key premise of social intelligence: that brain-altering stems from interaction with others, or lack of it. We literally rewire each other's brain circuits. "The more we act a certain way – be it happy, depressed, or cranky," says Daniel Goleman, "the more the behaviour becomes ingrained in our brain circuitry, and the more we will continue to feel and act that way."

A piano experiment run at Harvard Medical School divided people who'd never played into one group that practised 2 hours a day for 5 days and another who were asked to imagine doing piano exercises over the same time period. Scans after, showed brains of the piano-exercisers registered marked changes in the areas linked to finger mobility. But brains of those who just imagined piano exercising were almost as marked as the piano exercisers - showing how the brain reshapes in response not just to physical but also to imagined events.

Techno-connectivity bombards human brains with ever more ingenious devices that brain science says definitely reshapes us. There's no debate about its brain-altering ability. We know virtual realities like video-games, evoke emotional responses affecting our brain because it reacts to imagined not just real events. "The bottom line is, the brain is wired to adapt. There's no question rewiring goes on all the time," Steven Yantis, brain scientist at John Hopkins says.

Rather, the debate centres on how significant the effect of techno-connectivity is on brain-wiring, whether changes will result in lasting evolutionary brain-boosts and if they do, whether this will end up being a good adaptation or not.

Techno-connectivity may benefit brains in some ways. Imaging studies show internet user's brains may be better at finding information and display more activity than non-users, while players of video games seem to develop better visual acuity and more rapid eye-hand co-ordination reflexes.

The Myth of Multi-tasking

Many people say multi-tasking makes them more productive, smarter and more clever. Has techno-connectivity actually helped multi-taskers rewire themselves to handle bigger brain-loads? Sadly the answer so far is *no*. Evidence suggests that:

- ❑ Multi-taskers sub-optimize in all tasks. They have trouble with focus, get more easily distracted, take longer to switch between tasks and are less efficient problem-solvers.
- ❑ They also seem more stress-prone. A UCLA study found email interruptions raised stress significantly compared to those left alone to focus without interruptions
- ❑ Tests at Stanford show multi-taskers may be too overly-alert to in-coming distractions like the bings of techno-devices that act as primal alarms and take attention away from tasks

After multitasking ends, fractured focus persists.

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It becomes the default: what our brain's like not just when techno-connected but when we're not. As Clifford Nass from the Stanford tests says: *"The scary part is they can't shut off multitasking tendencies when they're not multitasking."*

- ❑ Multi-tasking may be more a matter of moulding brains less able to concentrate and more habituated to manic switching. At work, people change windows or check e-mail or other programs 37 times an hour on average
- ❑ Techno-connectivity may turn out to be an attention degrader. Our ability to focus is one of 5 emotion-states for staying productive at work but it looks likely we're undermining this, re-wiring for shorter concentration spans and paying too much attention to distractions.
- ❑ Digital distraction may be addictive. Over-use is emerging as a serious social issue with Facebook addiction named as a new mental disorder displaying separation symptoms like anxiety and agitation, states that degrade concentration and connectivity skills.

Sherry Turkle's book, *Alone Together*, anticipates a terrifying techno-trend. We can literally bail out of the physical world all together. *"We no longer have multi-tasking – we now have multi-living"* she says. We can shape an entire virtual life inside the net, where avatars are virtual stand-ins for our real bodies. *"If you're spending 3, 4 or 5 hours a day as your Avatar in an on-line world, and those hours are the average,"* Turkle says, *"there's got be some-place else you're not!"*

"We begin to feel overwhelmed and depleted by lives technology makes possible. We may be free to work from anywhere, but we are also prone to being lonely everywhere... We turn to new technology to fill the void, but as technology ramps up, our emotional lives ramp down." Sherry Turkle, *Alone Together* 2011

Extreme Jobs – a perilous paradigm

Techno-connectivity is indispensable in so many disciplines. It's enlarged and enriched many jobs, relieving us of tasks that were repetitive, arduous, time-consuming or boring. It provides access to vast stores of data on the spot, whether we're a traffic cop, a clinician on a hospital ward or a geologist in the field. By the same token:

- ❑ Many jobs have disappeared and techno-job replacement regimes keenly adopted by cost-conscious corporates, regardless of customer connectivity, staff stability or social contracts.

- ❑ Techno-connectivity invites us to enter into a new work contract: dedicate more personal time to work or let those who will do the work.

In Extreme Jobs: Dangerous Allure of the 70-Hour Workweek, Sylvia Hewlett and Carolyn Buck-Luce claim 44% of high-earning professionals feel the pace of their job is extreme. Marilyn Gardner writing in *The Christian Science Monitor* (Dec 4, 2006) says we promote work cultures that hold up extreme-jobbers as heroes, which militates many to work more than 70 hours per week. In *Harvard Business Review* Dec 1, 2006

Ironically, techno-connectivity can enhance work-life balance, shorten work-days, save us time to savour personal life more, but indications are it's doing the opposite for many. It looks like being at work may be the new work-life balance.

- ❑ Techno-connectivity connects us to our work like never before. No matter what time of day or night, we're never off-duty, always on-call.
- ❑ More of us bring work home because techno-connectivity has blurred boundaries between home and work, personal and professional.
- ❑ Techno-connected workplaces operate round the clock and expect staff to be available too.
- ❑ Many are increasingly unable to physically or mentally leave work, impacting health, personal, social and recreational life.
- ❑ We're drenched in data. We can collect more, create more, so we do. The downside is overload: vast piles of data we can't act on or absorb. As Sherry Turkle says: *"We don't keep computers busy, they keep us busy."*

Techno-connectivity puts the productivity dream of doing more with less within reach. In response, organisations thin workforces, those left asked to do even more with less. This leads to more stress and more loss of human connection time with colleagues, family, even customers. It also encourages over-working addiction. Many feel pressured to stay constantly connected and get stressed and anxious if they don't.

Latest ABS stats show we work on average 34 hours a week but considering 30% are part-time, others must work an awful lot more. The Australian Work Life Index says 43 hours. About right if you factor-in full time workers only - and 20% apparently work 51-60 hours a week.

The impact of techno-connectivity on work is also about what it has not delivered. For example:

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- ❑ It can de-silo organisations, yet it's reinforced functionalism. Cross-boundary cooperation is as much of a problem as it's always been.
- ❑ The idea it's reduced work pressure, created more family-time or relieved stress, also isn't the case for most Australian workers.

"A majority of working Australians feel rushed and pressed for time. Managerial and professional workers are especially negatively affected with poor work-life scores and long hours. They set the terms of worklife for others (which) does not augur well for good outcomes." from Australian Work & Life Index 2010 by Pocock, Skinner and Pisaniello The Centre for Work + Life University of SA

Socially Intelligent Work Design

Systems, structures, work processes and jobs we design can either connect or disconnect us. The primacy of techno-connectivity can lead to design of work and jobs that are harmful to health, addictive, counter-productive and sub-social.

A determining factor is how we harmonise human and techno-connectivity. *Socially Intelligent Work Design* is about designing work and jobs in a way that balances techno-connectivity business needs with the social and emotional needs of people to make the experience of work not just productive but also meaningful, fulfilling and connective.

Some see this as the soft side of work, But work processes or technology don't do the work (at least not yet) and they don't design it: people do, and their values reflect in what they design. How people feel about the jobs they do is still pivotal to performance, productivity, well-being and culture. The human element still counts for something.

Ironically, just at the time when we're learning the real, intrinsic value of social intelligence and connectivity in working better together, techno-connectivity reinforces an opposing regime based on *technocracy* and *technological determinism*.

Technocracy dominates because it reinforces prerogatives of power, control and efficiency,

- ❑ Technology is seen as prime profit-maker; jobs are designed to make the most of it and we must fit-in. Technology is valued – people are simply *'techno-extensions'* of it.
- ❑ IT designers, engineers or managers decide how work will be done because they are the experts who design the system. The effect is to reduce real participation in or control over jobs and how to design in human connectivity

- ❑ Technology controls people, not the other way around. Systems may give the illusion of choice, but are designed to control, normalise and constrain flexibility, forcing people to follow pre-set procedures to prevent variance

Technological determinism allows technology to be the sole determiner of how work is done, how jobs are designed, even what jobs will exist. It is driven by two imperatives: efficiency and efficacy.

- ❑ *The efficiency principle* says if it involves cheaper labour costs and is more convenient to the corporation, adopt it.
- ❑ *The technological efficacy principle* says if we have a technology to replace human with techno-connectivity, then we are obliged to use it since it is there to be used.

Neither principle takes heed of human need for connectivity. How can leaders striving to maintain a performance edge also keep in sight human connectivity? Moderating technocracy overkill means revising paradigms to include socially intelligent design principles that ensure techno-connective innovation takes account of human connectivity needs, including social-emotional factors in the design of jobs and enabling people to play a meaningful part in the redesign process.

Of course some say we already do these things. But most designs are already decided before staff are consulted. We insult them if we think they can't see through a flimsy illusion of inclusion.

Techno-connectivity has become an integral part of us and we, at the same time, seem to want to become extensions of it. Embedding technology - micro-processors inserted in our bodies is not a science fiction but a serious science option on the way to actualisation. *Like The Borg in Star-Trek, will we be absorbed, losing the human element that defines us in the name of becoming more productive and capable techno-humans?*

Addiction or utilitarianism, we embrace techno-connectivity passionately and irreversibly. But we need ways to temper techno-connectivity with socially intelligent work design that respects human needs for real connectivity. Understanding techno-connectivity's impacts on social-emotional well-being may well become a pressing priority for ethical and caring organisations who say they value people as more than mere resources and honour work-life balance.

The Change Forum provides programs on **Socially Intelligent Work Redesign**. Contact **Bill Cropper**:

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