Modern office design: friend or foe – reviewing the research

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Much has been written about the benefits of open-plan office design and its more tech-savvy offspring, hot-desking. Open-plan design has been around since at least the 1960s with its adoption taking hold in New Zealand as organisations seek to benefit from the promise of reduced overheads and greater collaboration.

But does open-plan, and more recently hot-desking, fulfil these promises?

A recent article in the Sydney Morning Herald suggests otherwise, pointing out that many of the perceived benefits are overhyped or non-existent.[1] Closer to home, an associate of one of the authors describes the new fit-out at the Ministry of Health as "like a battery farm". This echoes the sentiment of many employees, particularly in Wellington's public sector offices, where offices seem to have got larger, more barn-like, and increasingly crowded with some workers evidently resorting to ear plugs.

The rationale for large open-plan offices is that they reduce overheads, by making savings on space and other resources. In addition to these tangible benefits, organisations also use open-plan offices (purportedly) to enhance interaction, innovation, and flexibility, with the ultimate aim of improving productivity. So in theory they efficiently use resources while they also facilitate effective employee behaviours.

Although employers often think that they provide employees with the necessary resources and tools to operate effectively in an open-plan environment, employees find it hard to cope with unwanted noise, distractions and privacy impingements (Oxford Economics, 2016). Designated 'quiet' spaces, small partitions between desks, dividing bookshelves, or indoor plants and "living wall systems" don't really seem to make much difference (Perini & Rosasco, 2013). Overall, at least one study shows that the risks associated with open-plan offices outweigh the benefits (Kim & de Dear, 2013). This compromises productivity – the primary rationale for employers.

A return to private offices isn't going to happen now, but hopefully in time employers will give more thought to what will work in practice as well as in theory, and value productivity and wellbeing in the same way they value low rental costs.

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[1] http://www.smh.com.au/comment/open-plan-offices-arent-working-20160727-gqexts.html.

Learning to ~~love~~ hate one another

Collaboration, interaction, and communication are among the top priorities for organisations when designing new office spaces (Oxford Economics, 2016). Also, some jobs, such as journalism, are suited to open-plan work, where interaction is necessarily high. But other work, that needs lots of concentration, seems more suited to cellular office or highly screened open-plan design (Davis, Leach, & Clegg, 2011).

Sometimes a shift towards shared, open-plan office spaces does increase face-to-face interactions (Rashid, Wineman, & Zimring, 2009). However, a recent study by two New Zealand researchers (Morrison & Macky, 2017) revealed that the increase in interactions, and its effects, might not be so positive. They found that as a result of employees working in shared spaces and hot-desking, "co-worker friendships were not improved and perceptions of supervisory support decreased" (Morrison & Macky, 2017, p. 103).

Sharing office spaces strains social relationships. The lack of walls and other significant physical divisions between individuals allows for uncontrolled and unwanted interactions (Davis, Leach, & Clegg, 2011). Constant exposure to these intrusions can result in "stimulus overload and subsequent negative behavioural and affective responses" as employees are forced to absorb any surrounding talk (Oldham, Kulik, & Stepina, 1991, p. 929). More specifically, excessive and forced social interaction seems to trigger withdrawal behaviours, decreased task performance, and lower satisfaction.

When employees are commonly subject to irrelevant speech and interactions, their workloads seem higher (Smith-Jackson & Klein, 2009). Overhearing others' conversations raises issues around privacy. Confidential (and important) discussions and feedback between supervisors and peers is harder (Davis et al., 2011).

Low control over noise in one's work environment lowers productivity and performance (Leaman & Bordass, 1999; Green, 1993; Craig, 2010). When people lose productive time through sporadic interruptions, it makes it extremely hard to concentrate and make up the time they have lost.

Large shared office spaces also have more sickness related absence (Pejtersen, Feveile, Christensen, & Burr, 2011). In addition to the interpersonal and psychosocial discomfort mentioned above, employees are more likely to experience more symptoms of ill physical health than those in enclosed, cellular offices (Pejtersen, Allermann, Kristensen, & Poulsen, 2006). Since this research, hot-desking has become more popular, even though it accentuates many of the problems of open-plan designs.

Hot-desking - modern nomads or vagrants?

In one recent study, hot-desking regularly came out as the least popular of open-plan choices, with more distrust and negative interactions, and fewer co-worker friendships (Morrison and Macky, 2017). Hot-desk 'settlers' that are early risers get the best spots. Late arrivals (perhaps after dropping the kids off) tend to do less well and so are sometimes marginalised. Hot-desking also requires "faffing about" – getting set up at a new desk, next

to people you may know only vaguely. A British researcher using an ethnographic approach found that although hot-deskers can be portrayed romantically as 'nomads', a 'vagrant metaphor' might be more apt if they have no ownership of the space they look for a desk in, and cannot express identity – such as a family photo – at work (Hirst, 2011).

Some studies point to how hot-desking can desocialise work, and remove workers' identification with the organisation. But one study found that although hot-desking reduced identification with the team, it did increase identification with the organisation, particularly it seems, if electronic communication is good (Millward, Haslam, & Postmes, 2007). The workability of hot-desking probably depends on other things too. It makes sense for people who mainly work off site. Also, a strong positive culture may well cope, or even get some benefits from open-plan, and be able to manage the risks of hot-desking.

Employees want to work (Oxford Economics, 2016), and to do so they need areas that allow them to focus. Although interaction is important and can bring about good outcomes, the idea that working without physical, and personal boundaries is an effective way of fostering it should be reconsidered. This becomes especially apparent when we come to understand the associated drawbacks and their effect on what open-plan office designs are intended to improve – productivity. It is clear that fostering cultures based on open interactions and productive collaboration without so many risks to productivity and wellbeing is a much more complex task than just redesigning physical space.

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