**Working Up A Sweat**

**Dirty Furniture 2**

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Last year, fashion designer, socialite and former girl-band member Victoria Beckham tweeted a picture of herself on a treadmill desk in impossibly high heels. ‘Every office should have one of these, workout and work at the same time!!’, she exclaimed.

A work surface at standing height with a running machine placed underneath it, the treadmill desk was first endorsed in the mid-1990s for its medical benefits. Treadmill desks balance a worker’s metabolic rate while reducing risks of cancer, heart disease and obesity – conditions that are connected to prolonged periods of sitting. Eulogised by middle management and health professionals alike, treadmill desks materialise a key aspect of contemporary labour ideology: the supply of efficient, resilient and productive human capital.

The treadmill desk is one of the more extreme recent examples of an archetype that has evolved significantly since the industrial revolution - particularly since the advent of digital communications - guided predominantly by a desire to manipulate the movements of its users so that they remain productive. The primary symbol of work, it is perhaps unsurprising that the desk’s evolution maps the changing conditions of labour better than most other objects.

The current disruption of rigid labour practices as the global economy shudders, coupled with the potential of new technology, presents a future in which the desk takes on new practical and symbolic roles. Today, along with the economic systems it has long supported, the desk is caught in a battle for its own survival. But will this finally leave the global workforce free to move to its own rhythm, or else place it in suspended animation?

**Putting Work on a Pedestal**

To understand the role the desk plays in our current labour economy, we begin in the early nineteenth century: With the introduction of universal education came a jump in literacy rates. This, coupled with rampant industrialisation and urbanisation led to an explosion of ‘white collar’ administrative work. Into this socio-political framework, at the turn of the twentieth century, stepped Taylorism – or the ‘art’ of scientific-management. Centralising and streamlining business enterprises became commonplace; a strategy central to modern office politics.

This was the era of the pedestal desk, a simple flat surface supported by two pedestals; initially stacks of drawers but later evolving into simpler table leg constructions as paper was standardised, and archival shelving and filing cabinets were mass-manufactured to hold it. The pedestal desk’s cheapness and simplicity led to the rise of the instantly recognisable ‘bullpen’ – armies of clerks typing furiously in a large grid of desks – the mainstay of the office for the remaining century. The term ‘bullpen’ starts to hint at the relationship between the arrangement and design of office furniture and the manipulation of office workers’ movements. It suggests a kind of restricted chaos, herding employees towards a common goal – profit.

The introduction of the typewriter in the early twentieth century is an indicator of the effect new technology would have on the desk’s design. The weight and ferocity of these new machines, as well as the speed at which administrative work could now be performed, required desks to be wide and hardwearing. The ‘tanker desk’, for example – a variant of the pedestal desk made from robust sheet metal – was hugely popular in the US in the early- to mid-twentieth century, its name bearing hallmarks of its indestructible, inflexible and immobile nature.

**Taking Action**

By the mid-twentieth century, the pedestal and bullpen had become problematic. The large imposing desks restricted workers’s movements and physical activity, and the lack of partitions made for a noisy and impersonal workplace, lacking in privacy.

Upon evaluating these disadvantages, furniture manufacturer Herman Miller’s research department – under the direction of designer George Nelson and day-to-day supervision of Robert Propst – embarked on a radical redefinition of the office. The result was the Action Office. Though a commercial disaster when it launched in 1964, the Action Office was a design success, winning several awards.

In contrast to large, bulky pedestal desks, the Action Office featured small, mobile, modular units and surfaces that could be quickly rearranged. Crucially, surfaces were at different heights in order to increase flexibility, interaction and movement. But it was the second iteration, the 1968 Action Office II, based on Propst’s observation of the need for privacy and territory, which shaped the modern office environment. In addition to the mutable aspects of its predecessor, the Action Office II became the first office furniture series to include partition walls, around which the entire system was based. It proved to be a staggering success – both critically and financially – serving businesses of all sizes and needs.

At least this was the view from the senior executives and chairmen, who specified but, of course, did not actually use these systems, retaining the private offices associated with their elevated status. For the nameplate-less majority, the cubicle’s ubiquity and symbolic attachment to white-collar drudgery made it an icon of existential dread – a veritable prison cell in the eyes of pop culture.

Foreseeing this eventuality, Nelson, having reportedly fallen out with Propst over the implementation of the partition walls in the Action Office II, wrote to Herman Miller’s Vice-President for Corporate Design, in 1970:

*One does not have to be an especially perceptive critic to realize that AO-II is definitely not a system which produces an environment gratifying for people in general. But it is admirable for planners looking for ways of cramming in a maximum number of bodies, for “employees” (as against individuals), for “personnel,” corporate zombies, the walking dead, the silent majority.*

Office work, in these conditions, is a hard sell to a human consciousness: given the choice it’s pretty safe to assume that most people would not toil away in a cubicle, for fractional returns, to perform the repetitive data entry, communications or telesales tasks that make up the majority of service sector jobs. As such, over time, the Protestant narrative of hard work as a virtuous pursuit for self-completion has given birth to the neoliberal ouroboros of ‘efficiency’, where physical fitness and productivity are brought together under the delightfully vicious name of ‘wellness.’

**Get Well Sooner**

The proponents of this ideology advocate a paradoxically idealised (and ultimately unachievable) state of being more ‘well’ than you are now: more healthy, more intelligent, more active, more connected, more driven, more energetic, more cultured, more worldly, better read, more social. But, as Carl Cederström and André Spicer point out in their book *The Wellness Syndrome*, this is largely a diversionary tactic of late-capitalism, to distract workers from the deleterious effect work is having on their lives. If the office is to function as a well-oiled, efficient machine, then workers must be the most efficient, smooth running and compliant components possible – the ‘happily stupid athletes of capitalist productivity’, as journalist Steven Poole described it.

The treadmill desk therefore materialises ‘wellness’ in its most pure form – the convergence of the protestant and neoliberal work ethic into a single artifact. It also signifies a broader shift: where, historically, the health and leisure pursuits of the white-collar worker were up to the individual, human resource departments increasingly push gym memberships and cycle-to-work schemes on employees, complemented by rigorously enforced ergonomic guidelines.

Of course the treadmill desk is far from mainstream office use, largely due to the obvious impracticalities of installation and use. As Catherine Pearson, reviewing her days with a treadmill desk in the Huffington Post, noted:

*Surprisingly, the physical task of writing was the most difficult thing – even when I slowed down, I wound up walking all wonky and sideways and tripping over myself… I found it tough to do a lot of things – drink water, eat food, talk and type – all while keeping up my pace.*

As Pearson’s experience shows, the treadmill desk diverts physical labour; although the user is invited to perform constant physical activity, it makes any other sort of movement – not to mention reflecting or just thinking – extremely difficult.

Treadmill desks, in opposition to the principles of the Action Office, restrict where you can move: endlessly forward, deeper into the monitor in front of you. This desk owes its existence to a point in time when the nature of desk-work is seen by HR departments to require very little movement. They are indicative of the ethereal legend of the paperless office, and assume you have no need to move around sheathes of paper, go to the printer or photocopier, hand out memos or even turn pages. Paradoxically, it may be that the paperless office, rather than freeing workers from the physical weight of their work, confines them to their treadmills.

**Making fun**

The treadmill desk has already invited parody. The Hamster Wheel Standing Desk, published on the maker-culture community website Instructables, shows the disdain for desk culture reaching its peak. As artist Robb Godshaw and Instructables developer Will Doenlen wrote in their accompanying blurb:

*Rise up, sedentary sentients, and unleash that untapped potential within by marching endlessly towards a brilliant future of focused work. Step forward into a world of infinite potential, bounded only by the smooth arcs of a wheel. Step forward into the Hamster Wheel Standing Desk that will usher in a new era of unprecedented productivity.*

Maker culture has always offered respite from the soulless cubicle. One of Make magazine’s earliest publications – Eccentric Cubicle (2007) – taught budding makers how to construct particularly masculine desk gadgets, indicative of the publication’s male, white-collar target demographic . Maker culture can find it’s genesis in the crafts movement, but rather than a quasi-spiritual vocation of dedication, patience and skill, Maker culture extolls ambition, risk and individual triumph. Maker culture finds its footing, as indicated in Eccentric Cubicle in the middle-class white-collar particularly male demographic, where individuality comes at a premium and competitiveness is weaponised. Here, Maker culture is proffered as an opportunity to express power and character. A kind of Fight Club with soldering irons.

It’s easy to dismiss artifacts like the Hamster Wheel Desk as playful satire. However, underneath lurks an evangelism for that other tolling bell of late capitalism – disruption – an ideal most often invoked by maker culture’s wealthier, better-looking cousin, Silicon Valley. Disruption is a particularly vicious form of ‘creative destruction.’ Rather than inventing and providing new products or services, the goal of disruption is too upset established competitors and gain an edge into the established market. This behaviour has led to the homogenous landscape of ‘innovative’ apps, platforms and services of repackaged established industries leading Biz Carson to comment in Business Insider:

*Silicon Valley entrepreneurs have millions in funding to spend on startups and maybe tackle world problems. Based on what they're building though, it kinda looks like they just want their mom around.*

**Move fast and break things**

With daily tales of Silicon Valley’s excesses it would be easy to assume that desks are a priority for the brutal regimen of a tech startup. Shows like HBO’s Silicon Valley and films like The Social Network dramatise legends of multi-billion dollar companies started in bedrooms, hastily assembled from whatever comes to hand: Google and Apple starting in garages stand as the great creation myths of tech culture.

As Facebook founder Mark Zuckerberg’s famous dictum ‘Move fast and break things’ indicates, tasteful office furniture is a low priority in a tech entrepreneur’s mind. In response to this attitude, and following extensive research into Silicon Valley work cultures, German designer Konstantin Grcic produced a furniture range titled Hack for Vitra. He explains:

*They don’t spend anything on office furniture. It is something that has to be cheap and has to be quickly accessible. They buy a lot of furniture on eBay because they can have it within 24 hours. These companies are growing fast and shrinking and splitting up, and all of that means that office furniture is a whole different thing for them.*

Peering through Grcic’s mildly hamfisted use of the term, ‘Hack’ is designed eponymously. It goes beyond Nelson’s vision of a totally modular environment to one where the office building is itself transitory. The wood is raw and plain, designed to be drilled into, painted and quickly flatpacked. Grcic admits that Hack will never sell well in Silicon Valley – Vitra just can’t serve the tech scene at the speed and price point it needs – but Hack is indicative of a shift in major furniture design driven by the new and unusual demands of the renegade startup world.

**Travelling without moving**

Further down the spectrum, past the treadmill desks of the service industry and the hastily assembled furniture of entrepreneurs and startups, is the uneasy relationship of the desk and the freelance and contract worker - those who often inhabit the creative industries and work job-to-job, invoice-to-invoice with little in the way of socioeconomic guarantees of pensions or job security. The Workbed by BLESS is telling of our future labour practices and living arrangements. Bearing hallmarks of the Japanese work tradition of sleeping under your desk, the Workbed is literally a desk on one side and a bed on the other.

This is a world in which there is no daily commute, but where you wake up in – or even on – your office. Beautifully made, and clearly aimed at the young, creative precariat class (the product photo shows the designer’s achingly hip Berlin apartment), the Workbed demonstrates a culture of responsive labour in increasingly collapsed physical surroundings – single room apartments that begin to resonate with images of Hong Kong’s ‘cage homes’. Were the Workbed mass-produced and placed in offices, there might be popular outrage, but placed in the home it garners glowing blog posts.

The Workbed talks of the spatial shifts of labour: the worker has swapped the physical dynamics of the office for the relentless tempo of digital workflows as data moves, almost instantaneously, around the globe. The most magnificent transport infrastructure ever conceived has paradoxically enabled employees to freelance from their beds.

**All in it together**

Microsoft’s latest Productivity Future Vision video (a biannual temperature gauge for how mainstream technology companies think about work) begins to fold the spectrum of labour practices in on itself. The film follows two workers as they go about their day: one a ruthless upper-management executive (with a soft side) and the other a charming field researcher. The field researcher works as a freelance marine biologist who, while on a night out with her friends in an unnamed East Asian city, receives a call on her smart-watch that the executive requires her work. Immediately. She hops on a bicycle, rushes to the local co-working space, and uploads her research. In the same way that the sewing machine contributed to the sweatshop, co-working spaces – a more realistic but equally precarious alternative to the Workbed – and the technology that supports them might disrupt the office by disrupting the working day.

Co-working spaces embody the semantic sleight-of-hand big business uses to promote precarious working relationships with its employees: ‘flexibility’ and ‘freedom’ are offered, but at the expense of ownership and security. Even in the Microsoft video we see the freelancer nervously swipe away an overdue utility bill. The extremity of the twenty-first-century freelancer’s longing for the security and regularity of permanent office employment is prevalent in the rise of what Dan Hon has called ‘CorpLit’ – fiction based on office work – and the rise of mailing lists, groups and Facebook pages that enable office role-play. While for Zuckerberg, Page or Gates, being able to flit between offices signals the power they have to work beyond established systems, the structures their success has created leave digital labourers running anxiously between Wi-Fi hotspots, praying that there is a corner of a shared desk free on which to place their laptop, fearful of missing a deadline, thus generating a redundancy email from a boss they’ve likely never met (and the inside of whose fairly standard private office they’ve likely never seen).

**The Untouchables**

In the Autumn of 2014, Harvard Innovation Lab published a video titled The Evolution of the Desk. The desktop of 1980 shows an early computer terminal surrounded by various peripheral items, dictionaries, a globe, telephone, calculator, diary and so forth, while the wall behind the desk carries an assortment of planners and calendars. As the years progress each of these items is transformed into an icon on the screen of the increasingly sophisticated computer at the desk’s centre. Come 2014, all that is left is a laptop, mobile phone and a pair of aviator sunglasses, a telling narrative of responsiveness, mobility and speed for better or for worse. The virtualisation of the desktop, the transformation of the physical into the digital, has in many ways been the key story of the late-twentieth to early-twenty-first century, but it perhaps took its most dramatic turn more recently, at the beginning of 2015.

That was when Microsoft (again) revealed the Hololens, its flagship augmented reality headset. The promotional video for Hololens features people using the device for everything: playing games, designing products, travelling – even doing the paperwork. In a reverse of the Harvard timeline, applications are dispersed around the user and, crucially, the computer screen has evaporated. Though Microsoft’s video shows people sitting at desks, much of the action happens on walls, floors, ceilings and in the air in front of the user. When the material with which and on which we work begins to lose its physical mass, then what role does the desk have?

Eran May-raz and Daniel Lazo hint at an answer in another recent short film, Sight. Here, the video tells a story in which the main character inhabits an augmented reality saturated with data and screens displayed throughout his unfurnished apartment. When a television broadcast the protagonist is watching breaks for commercial, the corporation behind the augmented reality boasts that its products allow you to ‘feel more, experience more, and live with no boundaries…feel free to go anywhere’, the unspoken subtext being ‘without leaving your armchair’. Could it be that the removal of the desk, that barrier which for so long we complained tied us to a particular position and place, will in fact thrust us into a new era of docility?

There are more optimistic visions. Design Academy Eindhoven student Govert Flint’s graduation project The Segregation of Joy combines a concern for the office worker’s enforced lethargy with the gesture-based control systems suggested by virtual and augmented reality. Flint studied contemporary dance to understand how full-body movement can trigger specific emotions, particularly joy. For Flint, the project was a critique of the modern office environment’s lack of opportunity for physical expression and movement:

*Technology is blindly excluding the body. I’m a bit afraid of some kind of Matrix scenario!*

The chair Flint designed acts as kind of multi-directional gimbal, enabling the user to pivot, lean and rotate, extending limbs in all directions to control onscreen programmes. But it’s easy to see this mode of interaction transfer to virtual reality - users strapped to fixed exoskeletons, rolling and grabbing joyfully and child-like at forces unseen to the outsider. While the chair appears to offer you movement, that movement is within limits and predetermined – you are now actually strapped into a machine.

If Flint’s speculative proposal for a desk shows us anything, it’s that the rigid bullpen has shattered – but the animals have not escaped. Some forever climb the greasy pole of ‘wellness’ and ‘efficiency’ along endless treadmills. Others chase the myth of disruption around startup cargo cults on furniture hastily assembled from whatever is to hand. Still others ricochet precariously between transient work spaces and home where the boundaries between labour and life have collapsed. And in some near-future vision we glide around virtual reality datascapes, complicit in our physical docility.