space

A Dialectic Frontier

Industrial and Digital

This article is an argument for how our institutions and organizations are bridging the digital divide by leveraging hominid hardwiring – not the DNA we familiarly know, but another kind of cultural blueprint. What do I mean? In the work world of today, we are pushing the limits of virtuality and distributed work, and as we do, architects and designers recognize the importance of cultural context and how this territorial imperative - the principle of propinquity – is encoded in us, regardless of whether we are "close" in place or intimate in digital space. It is the interrelation of space and social capital, that harmony between collective action in space that is precisely the challenge that architects and designers face. We are not likely to abandon the physical propinquity that comes with a built environment because physicality still meets our primordial need for intimacy – that fluid sense of community that comes and goes with belonging and is inexorably linked to the raw territorialism of our hominid forbearers. But the distributed work is a force that divides us and pushes us into a digital terrain.

Candidly, most traditional business leaders don't see place or space in a workplace environment; only the objects that occupy the space – namely facilities and human costs. For example, one can walk into any call center, computer center and workstation to testify that some tools have changed – from sewing machines to telephone banks to computers and they have become more brightly colored in the transition – but the shape of the work in space has not fundamentally shifted at all. Despite enabling technologies for "virtual" work, we have advanced no further in our ability to substantially change the workspace and place. We may think e-business and new economy and achieve shorter transaction times, but we cage and enrage ourselves with artefacts of the industrial era.

All of us, in our businesses and organizations are caught in this shift from being invested in old structures, moving through space yet espousing a new digital workspace and digital connectivity. Still we lag behind, caught betwixt and between, providing today's value with yesterday's industrial solutions. The agility, speed and resourcefulness to meet customer demands with innovative solutions put us at risk because we don't know how to undergo the substantive change required to compete in this new world. Ironically, knowledge solutions exist inside our organizations but they are invisible, intangible, and tacit and reside in the last place Henry Ford may have thought to have looked – inside people. That's because established firms traditionally define and value capital assets, like elevators as tangible and measurable and workplaces as nothing more than closely-packed Dilbertian cubicles carved

out of a facilities budget as a hard fixed cost. For those firms undergoing change, they recognize that their most important asset is not the elevator; rather it's what goes up and down in it every day. They just don't know how to put a value on it. If they can't value their people assets, then they can't measure them nor put in place a sensible strategy complemented with appropriate workspaces for retaining those assets.

To take this next step requires that business leaders and decision makers "see" space or, more precisely, the shape of space in a new and abstract way. Shape may be folded, as well as financially measured and at times, this novel approach may appear more suited to science fiction fantasies than to business financial reports. Frankly, most executives are too preoccupied with the financial pulse of the firm that they fail to recognize that humans they hire make up a financial asset called human capital. But social capital, the sum total of the collective intelligence of all the human capital of corporation has the greatest financial impact but is as invisible as the work space – yet both are financially measurable. So there you have it - the faintest of outlines in this practical landscape: the triangulation of physical space (the building or neighbourhood), intellectual capital (the social interaction through community and culture) and virtual connectivity through technology (the e-collective). And architects and designers have to solve for it if we are to make an impact in new workplace solutions! That is the challenge before us!

Traffic and Trust

In any organization there are two parallel universes: one of authority from which unfolds formal rules, bureaucratic procedures, transactional traffic;
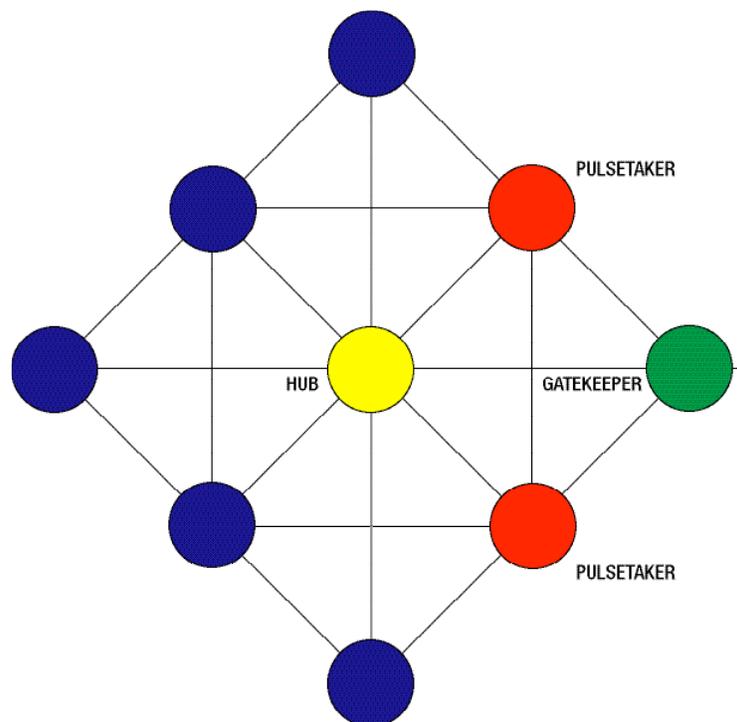
and trust through which informal understandings are transmitted and a good portion of the real work is done. The former is characterised by hierarchical structure and the latter by networks. Managers understand the former; they live and breathe the hierarchy. What they fail to fully appreciate is the network of relationships that riddle their hierarchy because networks are built from trust and trust is invisible and ubiquitous. Collegiality characterizes these networks and is evidenced in innovation, elevator conversations, etc. The "water cooler" phenomenon, while at one time considered insignificant in business, is recognized as containing a wealth of early innovation, largely untapped and lost because it is unrecognised and unrewarded.

Distinguishing trust from traffic is critical to understanding culture. Trust is like any utility, appropriately "weighted" by the type of knowledge that runs through it. So when we "see" a human network in an organizational MRI, we are observing the aggregated, vestigial remains of trust. When properly tracked, these traces of trust derive from three robust patterns, which like DNA, are the fingerprint of a culture. These cultural fingerprints are a way of identifying how information is processed. We share these same prototypical patterns with our ancient ancestors. What is new is that architects can now design a floor print with a cultural fingerprint in mind.

Fingerprints and Floor prints

The first repeating pattern is to be central, like in a hub and spoke system. This pattern rapidly distributes information and is good for trading in markets, settling cities in flat lands and centralizing work processes. The second pattern is the gatekeeper on critical pathways between hubs. Although not connected to many, Gatekeepers are strategically connected and serve as bridges between parts of a society or within an organization. The third pattern is the pulsetaker, someone who is maximally connected to everyone via indirect routes. The pulsetaker is a behind-the-scenes person, unseen, but all seeing, a touchstone for culture. Together, these three positions: hubs, gatekeepers and pulsetakers, HGP, comprise the fingerprint of a culture. This means that if you want to change rapidly and effectively, these positions should be pro-actively managed before the

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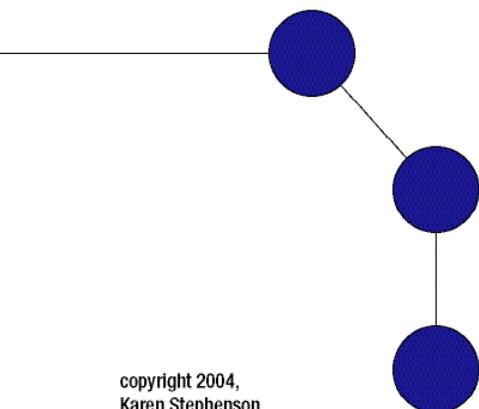
by Karen Stephenson, Ph.D.

remainder of the organization will shift its operations. If ignored in the wake of change, these positions will naturally resist and retrench to protect and defend a legacy in which they have been invested over time. Figure 1 is a model of the smallest network that can be drawn that mathematically distinguishes among these three positions.

Architects and designers may consider these powerful positions as familiar signposts for designing and building floors and buildings. For instance, gatekeepers can and should be made visible, centered in open plans and supported with technologies that facilitate transfer of information. Hubs, because they are naturally interpersonal and behaviourally catalytic, can be placed along the margins, in corridors or corners. Pulsetakers should be sprinkled throughout the floor among the various departments particularly along the edges between departments to facilitate a gentle ripple effect in the work flows. These highly charged atoms form a molecule of social interaction that varies from culture to culture. Depending on whether these positions are embedded in one or the other of the two tectonic plates in culture: innovation or expertise, will determine whether the organization will be either innovative or "business as usual" in the upcoming months and years.

The greatest capital assets in the world doesn't mean a thing if you cannot motivate and retain the best people. New business models are based on a value chain that is tied to a cultural fingerprint that is non-linear in nature and values the timely and targeted application of intellectual resources when and where they are most needed. Coupled with the knowledge for how to distribute these resources in a workplace or digital space, we can complete the second and final premise to an equation that starts with the age-old premise: take away light and space and social ties, and you can reduce a human life to an existence that is nasty, brutish and short. It only stands to reason that the logic to reverse this well recognized spiral is equally robust, meaningful and measurable as its counterpart and is essential to calculating today's value in business.

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