Mindscapes:

Design for the Mind

by: Brian Alexander and Jeff Reuschel

1. The office environment may be defined as an interrelated set of conditions, objects, and circumstances surrounding the worker.
2. An office worker's tasks include activities involving judgment, analysis, creation, and execution.
3. An office worker's tasks are primarily cognitive.
4. The purpose of an office environment is to enhance the cognitive tasks of the worker.

Assuming these proof statements are even partially accurate, who should be responsible for making sure our offices provide a fertile environment for the minds of knowledge workers? Because designers are strategically at the intersection of several disciplines, questions of performance in the workplace seem to be settling on their shoulders. This being the case, we offer the following brief treatises on some of the issues related to design for the mind. They are not intended to be a prescription, but rather an introduction to the diagnosis of today's mindscape ailments.

Ethereal World

When designing objects or environments, we introduce relationships between our creations and the user. This effect is inevitable. The problem is, creation of relationships shouldn't be the result of the design process. It should be the design process. The key to this relational design perspective is being able to think about people and objects in terms of what they do, rather than what they are.

We must first try to think about the space itself without objectifying it. We must think of the space as a medium for the activities that occur there — a medium supporting communication, cognition, and living. From this perspective, the negative space comes alive with activity and presence in a way that the world of physical objects cannot.

The people working in this medium should also be thought of less concretely. Consider their actions apart from their surroundings — their thoughts as opposed to their movements, their influence rather than their location. From this perspective, the performance of objects and people transcend time and space barriers and fuse into seamless work events, a much more useful portrayal than the typical unilateral man-machine interface perspective.

We often assume that the physical manifestation of what we do is the work — the spreadsheets, reports, and meetings — when those are only a pale representation of it. The tasks of knowledge workers are mostly cognitive, invisible until they reveal themselves in a communication medium or another execution. As a result, we preoccupy ourselves with the most visible, rather than the most valuable, aspects of work.

Viewing work environments from an object orientation is troublesome in that it results in design solutions built around more efficient production and management of work symbols (paper generation, meeting attendance, media storage) at the expense of solutions that assist in human performance (decision making, analysis, creation, communication, memory, attentiveness).

Big Heads

We live and work in a sensory template that reaches beyond what we deem to be a part of ourselves. This template is a rich web of meaning that surrounds us and allows us to function in a complex world. It is made up of traces of our thoughts, called cognitive artifacts, that are consciously and unconsciously off-loaded into our surroundings. In this way, our physical surroundings must be considered a part of ourselves.

Most of the trauma of a new job, or fear of leaving the one we're in, comes from the self-inflicted act of tearing ourselves away from the current environment. Because so many of our ideas and meanings are in the outer environment, we are actually tearing ourselves in two when exiting familiar surrounds, leaving behind that part of ourselves that extended into the space.

Studies of students show that test scores are significantly higher when tests are taken in the same room where classes meet. In the classroom setting there is an ongoing multi-channel recording occurring that connects abstract information with the surroundings. When we take that away via a new location, we are limited to a single-track recording, in a sense, and recall can be limited. It's important to note that this absorption of the surroundings is constant, it doesn't occur only when we are deliberately recording our activities. In fact, we have no conscious control over the way this works. We just know it does. In this way, our space functions as an extension of our memory.

This should raise serious questions, when considering recent workstyle proposals such as hot desking and hoteling. By frequently moving to a new location (even if it's only 10 feet away), we are severely limited in what we can produce as mind-extending artifacts and we lose the unconsciously embedded cues that familiar environments provide. This problem is even more insidious because people are usually

unaware that this mental spillover occurs and are not likely to articulate its absence as a hindrance. There isn't yet (and may never be) a way of measuring how detrimental shifting contexts can be to a person's performance. But it is likely that knowledge workers can ill afford any degree of environmental lobotomy.

Living Room

Like a child with a stuffed animal, we instinctively assign thoughts, meanings, personalities, and associations to everything we come in contact with. We don't think about how to make our neurons and synapses fire a certain way to pick up a pencil. Neither do we exert any conscious effort or specific thought process to exist in our physical environment.

From paper clips to computers, from plants to people, the office is one collective living entity. There is a relationship between man and his created environment, yet we're naive about the environmentally dead nature of the things that are created. Objects "die" when they no longer grow, evolve, or change in correlation with our lives. Perhaps it is the creation of any man-made object that constitutes its demise — the idea, dream, or memory of it always being infinitely richer than the object itself.

Environments, not unlike objects, cease to live when seen as containers that are somehow separate or unrelated to the people and objects within them. This view offers no insight as to the relationships between and effects of all the elements as a whole. It is a singular and separatist viewpoint. Yet we continue to live in our own self-imposed spaces, believing the image and perspective of the environment to be correct and the only one that exists. In an environment of separateness there is an inherent conflict because we concern ourselves only with the physicality of things in space rather than the relationships between the two. Ignoring these vital relationships, individuals react only to what they can perceive at an object-oriented level: the surface.

Doreen Massey of the Open University suggests we think of places as "articulated moments in networks of social relations and understandings," rather than bounded areas. When viewed from this relational perspective, we give our environments the opportunity to evolve and, therefore, survive.

Outside In

Once an individual becomes involved in an environment, the emphasis is no longer on the physical nature of things because he himself has become part of the environment. The meanings an environment's inhabitants associate with the order and appearance of that space are entirely different than those ideas projected from the outside in.

The first time an employee is shown a new office or facility, the surroundings are appraised and summarized with a few comments such as "nice view," "looks sharp," and "where's the bathroom?" This is the first and last time that the space and its contents will be viewed objectively. From then on, the emotional impact or carefully considered scrutiny of the work environment basically disappears. The outside perception shifts to an inside understanding of the office environment. This shift transpires in about one week. Subsequently, the worker's conscious knowledge of the physical space evaporates and he is aware only of deviations in the information gathered during that first week's initiation period.

The relevance and functionality of any space rests with its occupants. When we talk to people about their offices, they can't really tell us anything substantial about them. They can tell us plenty about their offices from a "what do I do and what have I done" perspective, but little about how their offices work for them or why they look a certain way.

From the exterior view, we react to what we see, because we are not part of the image and we have no experience with the environment. Once we become an insider, the meanings and patterns change continually just as we do, the objects flow in the wake of our existence. You see the wake, but not its creator. There is a consciousness about any environment that is carried by its occupants and that is what makes things happen, not the location or appearance of the wake itself.

Gone Native

Becoming accustomed to a space includes getting used to all the sensory stimuli that occur in it. Machine sounds, voices, paper piles, and the play of light in the area are all native information to the inhabitants of an environment. These elements, when assimilated, fade into the background of awareness. The worker becomes oblivious to the ongoing events of the area that no longer constitute a distraction. He has transitioned to a learned cognition and acceptance of his workspace.

Every environmental ecosystem has its own personality, and each is as varied as the people it envelops. If a worker moves from place to place, he brings with him his experiential knowledge. Venturing into a different space brings an anxious sort of fish-out-of-water anxiety that causes the worker to look for the cues and signs of the home-base environment (though they are usually nonexistent or have some other meaning all together).

As change comes or an area is acted upon by those outside the ecosystem, it sets off an awareness of the physical environment that can constitute disruption of varying degrees. Tell an inhabitant about a distraction in his work area, and he may reply with a vague, "oh yeah...I know," indicating that he acknowledges the stimulus exists, but that from his perspective, it has become part of his learned environment and no longer constitutes a distraction. The other side of this awareness is that any deviation introduced into the learned set of stimuli acts as a distraction. It's what is new or foreign to an environment that sets off this subconscious trigger. When people come to an area not their own, the whole environment is foreign, no matter how much it may resemble their home base. The issue with this third-party perspective is that most spaces are created, evaluated, and managed by outsiders. The seeming clarity and simplicity of an outside perspective comes with the caveat that we are not part of the space and therefore can't really sense what's right or wrong about it.

Conclusions

The issues of designing for the mind should cause us all to reexamine our own attitudes and approaches to the practice of design. This perspective introduces a new kind of humanity into our philosophies and connects more of our energy with the people who spend much of their lives in our designs. It also coincides with a shift in business attention from the environment as image to its actual effectiveness and internal workings. If we believe in the potential and core purpose of bringing people together in one space to work, then our greatest challenge and opportunity for growth may lie around the physical world, not in it.