How Does Office Design Influence the Nature of Office Work?

Should Your Company Transition from Traditional Private Offices to an Open Office Plan?

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The vast majority of corporations in North America have considered changing from traditional, private offices to some version of an open-plan office. Based on a great deal of scientific research on the influence of the physical environment on human motivation, performance and job satisfaction, this paper explores the advantages and disadvantages of making this transition for your organization. It includes tips on how to make this change as painless as possible at your company, including psychosocial change management strategies that have been successful for many corporations.

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Traditional, Open or Something In Between?

Attempting to monitor the trends in office design can be difficult at best. It seems that with every decade come "new" recommendations on how best to design environments to support office workers. Frequently, we hear echoes of past suggestions in the latest design guidelines, leading wary facilities managers to question whether market manipulation and "fads" are really limited to Madison Avenue. For better or for worse, over the last few decades the various trends "to and fro" among traditional, private offices; landscaped offices; "cubicles"; and open offices has afforded researchers a cornucopia of information. A number of consistent findings appear to be emerging from this work, although certainly more research is needed to corroborate these conclusions.

The link between the physical environment and office work has been explored in numerous ways over the last few decades. Studies have focused on the role of such variables as density, openness, lighting, color and partitions as determinants of office workers' attitudes and job performance. Four clear implications from this material can be summarized as follows:

- The psychosocial dimensions of office design and operation are at least as important as the physical aspects of these environments.
- The perception of individual control over one's work area must be emphasized when designating office environments.
- A broad perspective for intervention that involves multiple levels of the organization can be far more effective than isolated design solutions.
- A functional analysis can improve the ultimate office design solution.

Psychosocial Dimensions

Within certain constraints, the oft repeated maxim that "perception is reality" seems to hold across a broad range of work related phenomena. For example, the opportunity for ease of supervision afforded by open office plans can be seen as an advantage by managers but as a disadvantage by workers. In addition, the vast majority of managers report that noise is not a problem in their workplaces; however, an equally large majority of workers report that noise is a problem. What is the reality? In some important respects, it appears to reside in one's perspective. This psychosocial perspective includes three dimensions:

1. The individual, or psychological
2. The corporate cultural
3. The broader society's

At the level of the individual, factors such as gender, personal space (the area immediately surrounding people where they feel uncomfortable if strangers intrude), willingness to take orders from others, and other personality traits have been shown to relate to satisfaction with particular office layouts. It might be wise to ascertain workers' preferences before arbitrarily imposing uniform footprints throughout an entire work area.

The corporate culture is communicated through the design of the workplace in many ways. How does the office space devoted to executives differ from that given to managers or supervisors? How much space is allocated for clerical and other support staff? Where are these spaces located relative to the others? If very clear messages about rewards, prestige and position within the company are communicated through differences in space allocation and the location of offices, then moving upper level management from private offices to an open plan may result in increased dissatisfaction, in spite of the fact that such a move might improve productivity.

The society can also play a role in the efficacy of office design by determining, for example, what people in general consider to be the perks and rewards of a long career. These cultural expectations can be difficult to overcome in the implementation of office designs that systematically violate such norms. Emphasizing the demonstrated advantages of new configurations while being sensitive to these broader cultural values may smooth the transition from traditional to more open plans.

Perception of Individual Control

Human beings do not readily accept being under the control of others, although cultural differences alter this general tendency. The opportunity to control access to daylight and exterior views, control task and ambient light levels, and influence the territory one occupies—either directly by displaying personal artifacts, or indirectly by boundaries between workers or other personal space designations—increase the perception of control. Aspects of the work environment that decrease this perception of control, such as arbitrary moves, reconfigurations, or reduction in office space usually decrease worker satisfaction. Exposure to unavoidable visual and auditory distractions also decreases the sense of personal control over one's environment.

In transitioning from traditional, private offices to more open configurations, the benefits of increased individual control over the particular features of individual workstations should be stressed, along with potential performance improvements and increased opportunity for social collaboration. An important research finding suggests that open-office plans should also feature low-density configurations; high-density alternatives increase the visual and auditory distractions that tend to offset the advantages of open plans. Flexible, movable partitions can allow workers the freedom to alter their exposure to visual distractions, and neighboring conversations (speaker phones, etc.) can be effectively masked by introducing background white noise into the work area. Such systems need the benefit of expert acoustical design to ensure they provide targeted levels of speech privacy.

Organizational Perspective

To experience the maximum potential benefits of moving to open office plans, a broad organizational focus is essential. If the advantages of an open office are forced on managers while executives remain in much larger, private office areas, this duplicity will not go unnoticed. Ideally, every level of the organization should be convinced of the demonstrated advantages of an open office plan:

1) A shared organizational learning environment
2) Social facilitation of performance
3) Enhanced acquisition of the corporate culture
4) An increased opportunity for social interaction
5) Ease of supervision and monitoring

In addition to these documented advantages of open office plans, a holistic, organizational approach to transition that integrates incentive systems and other aspects of work life normally controlled by separate departments can help to ensure successful change for the long term. Human Resources, Information Systems, Facilities and Designers must all work with executives to develop and implement a detailed transition plan. Such departmental strategic alliances also ensure that workers receive valued rewards, thus increasing their sense of personal control and autonomy. Certainly

the management aspects of environmental transitions are at least as important as the physical restructuring itself.

Functional Analysis & Usability Testing

Other important factors that have been found to influence the link between design of the physical environment and corporate effectiveness include task complexity, temporal (time) demand, and level within the organization. A functional analysis can specify what kinds of groups and tasks will be using the space, how this use might change over time, and what level(s) of the organization will be affected. Tasks that require simultaneous access to the same information across team members, or that require each team member to acquire the skills of other members virtually demand open office plans. Ease of communication and socialization among team members are also enhanced by open plans. Certain jobs (e. g., computer programming, technical reading or writing) have been shown to require more privacy than others (e. g., brainstorming, product design).

Finally, the features of any proposed office plan, both individually and collectively, should ideally be user-tested. Prototypes or mock-ups of individual and group areas should undergo usability testing and evaluation (with as much experimental control as possible) to ensure the feasibility of any proposed system.

A caveat: Unfortunately the information provided in the scientific literature rarely reflects the interests of architects and designers. The hypothetico-deductive method poses questions as "either-or" dichotomies, so while office designers may seek specific, optimal physical-environment solutions (e. g., what kind of lighting or wall color would be best to maximize job satisfaction?), the scientific literature answers only whether lighting or color influence work attitudes—yes or no. Another pertinent issue in this regard involves the personalization of work spaces: Science asks such questions as, Do workers personalize their work spaces? Are personal items in their workspaces important to workers? and, Do personal effects in work spaces carry any significant symbolic meaning? But designers typically need answers to another set of questions: What level of personalization translates into the highest level of productivity and satisfaction? How many personal effects in a work space are enough? Questions of this latter variety are rarely addressed by scientific investigations, where establishing reliable links between or among variables per se remains the primary focus of study, rather than specifying the design implications of these relationships. This document seeks to specify design guidelines supported by the bulk of the scientific research.

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