Workspace Design Considerations
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The workspace in 328 Deschutes Hall represents the culmination of years of focussed attention to the details of the immediate physical working environment, primarily with respect to (1) work efficiency and (2) alleviating and preventing work-related injuries, such as wrist and back problems. Many of the design decisions discussed address both issues at the same time. I have only occupied this office since September, 1999, so most of the background research for this workspace design was as a graduate student elsewhere. This office represents the third iteration of a careful workspace design, and it is still in progress.

The most important ongoing component of this workspace design is that I watch how I work. I identify and catalogue tasks that I accomplish in my workspace. All design considerations relate to supporting these tasks. Some common tasks are listed here. These are elaborated elsewhere, with a careful consideration of exactly what information, documents, controlling devices, and other physical workspace resources are needed for each task.

Representative work tasks
- Waiting on hold or talking on the phone while using the mouse.
- Reading a paper or a bunch of papers or a book for hours.
- Taking notes while reading a paper for hours.
- Computer programming, with occasional reference to a manual.
- Typing an article for hours, with the cursor staying at the bottom of the page.
- Entering an appointing into the Palm Pilot while talking on the phone.
- Looking for a file in the file cabinets in the middle of any other task.
- Moving to another desk and reading or pencil-writing.

The workspace is continually re-designed to support these tasks (1) efficiently and (2) in a manner aimed to alleviate and prevent work-related injuries. Here a number of design decisions:

Design decisions
- Desks and other work surfaces that accommodate both sitting and standing.
- Lots of shelves and work surfaces.
- Careful attention to the height of computer monitor and keyboard.
- Comfortable desk chair that supports a good posture. Height- and width-adjustable arms.
- Rounded desk edges for leaning against.
- Reading stands, both homemade and commercially manufactured.
- Keyboard that supports less-twisted arm and wrist positions, and more thumb keys.
- Foot pedals for frequent keystrokes (such as Ctrl or Alt).
- Most commonly-used devices and controls within easy reach.
- Headset telephone. (This has many advantages over a speakerphone, including better sound and mobility, and no social awkwardness.)
- Many different worksurfaces available for different tasks, and most within easy reach.

The physical environment cannot solve all health-related issues all on its own, though. I also take frequent breaks and pay continual attention to posture.

Bibliography

These are some of the books that I studied for this ongoing project. The two readings by Propst were the most influential and best explain what I am trying to accomplish.

Wollman, Jane. Computer Workplace: Ergonomic Design for Computing at Home. 1985.
    Includes a lot of the early, chunky, modular furniture for the original IBM PC's and Apple

II's, but also some practical and good ideas for setting up a workspace. Lots of photos and drawings.

Dul, J. & Weerdmeester, B. Ergonomics for Beginners: A Quick Reference Guide. 1993, originally published in 1963. Lots of condensed human factors and ergonomics ideas and advise. Didn't use it too much, though. Drawings, graphs.

Foa, Linda. Furniture for the Workplace. 1992. Big, beautiful book of photographs of contemporary ergonomic and stylish office furniture. Without trying to, it gives tons of ideas of how to set up a workplace even those photographed are sterile, paperless, personless, and contrived.

Ivergard, Toni. Handbook of Control Room Design and Ergonomics. 1989. Lots of technical details specifically for laying out a control room, including some layouts of existing systems such as the bridge of a ship.

Cohen, Barbara G.F., ed. Human Aspects in Office Automation. 1984. Very pro-worker collection of articles discussing the visual, muscular, postural, and emotional (stress) factors of the workplace.

Grandjean, Etienne. Ergonomics in Computerized Offices. 1987. Technical, detailed, largely specific to VDT's, including suggested screen, monitor, and document placement for different tasks. Admits that people do not sit like the perfect, erect figure always diagrammed and recommended as correct sitting posture.

Knobel, Lance. Office Furniture: Twentieth-Century Design. 1987. Kind of like Foa's, but (smaller and) with a lot more explanatory text. Includes a discussion on the "Action Office" as well as its successor's. Some historical photographs of office settings. One of my favorite books from the bunch.

Diffrient, Tilley, and Harman; for Henry Dreyfuss. Humanscale 7/8/9. 1981. Stylish plastic cards that you can use to dial up the ideal reach and posture and so forth depending on a person's height. Limited usefulness. Can also dial up other data that could have been more easily accessed in a table format.

Clark and Corlett. The ergonomics of workspaces and machines: A design manual. 1984. Didactic principles and suggestions for designing an ergonomic workplace. Largely a cataloging of facts, some of which are obvious and some of whose accuracy I question.

Tilley, Alvin. The Measure of Man and Woman. 1993. Modern cataloging of suggested measures for all sorts of occupations, including wheelchair access. But more of a guide for architects than for my workspace design.

Propst, Robert. The Office - A Facility Based on Change. 1968. Evidently the introduction of Action Office II after the first in 1964. A revolution in how offices are laid out, putting the worker in the middle of various work stations, each of which suits a different range of tasks and sometimes postures, too. Strongly considers the social implications of furniture layout. Has the photograph of Churchill's writing podium.

Propst, R. L. (1966). The Action Office. Human Factors, 8(4), 299-306. A radical proposal for a redesign of physical office workspace. Propst observed that highly effective and productive office workers "are likely to keep their work classified and organized by using several work stations. Their work-in-process is kept visible and, once a complex work situation is generated, they maintain it until they have completed the task."