The Design Principles

Three
A Guide to all the Design Principles used

Development of icons

The important accomplishment in this project was the development of the Design Principles which form a bridge from traditional architectural programming to improved Law Office design. Each of the fifteen principles was the work of an individual in the integrated Facility Design Studio.

Each principle stems from a clear Design Topic that was identified as being important from a longer list of issues. Looking back to that early point in the semester no one in the class had an overall picture of the work going on except as a list of fifteen discreet topics.

One enterprising student, Bill Robison, saw the enormous wasted time each class meeting in communicating the nature of those fifteen domains of effort to all participants. Words and lists were just not enough.

Bill's contribution was to design a graphic icon for each Design Principle, each then still a Design Topic. These compelling flags became very useful in our communication in the class and for presentations to clients and visitors to the studio. It is possible that many individual authors were positively motivated and directed by these icons as they moved the Design Topic to the more powerful Design Principle status.

Possible Design Principles and the ones found in this booklet

The fifteen Design Principles match the number of students in the studio. There are more topics for the Law Office than this number.

The list of possible Design Topics was perhaps twice the number of students. This longer list was generated from group discussion process, the experience of the instructors and by examining the context of the particular Law Office case study we chose.
Design Topics come from three basic sets—
1) Human behavior topics universal to all projects, but often omitted
2) Issues common to the type of facility
3) Issues specific to the client's needs and building context.

In this publication the fifteen Design Topics were selected as most being most appropriate, and one was assigned to each student. The involved process of making a Design Principle out of a Design Topic has already been explained in Part Two. As you read the next pages, you will see that method applied over and over.

We hope the overall iconic summary shown by the table on the left (Fig. 1) gives you a clear map of this exciting new approach to architectural programming and facility design.

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*Figure 1. An overall table indicating each selected Design Topic, the resulting Design Principle and its graphic icon*
Indoor/Outdoor Connections

Overview

The reasons for wanting a connection with the outdoor world are numerous. The obvious pertain to natural light and view. Just how important these are and how to achieve an equitable distribution of them are both behavioral and design issues. However, given the scale and complexity of the modern, large office, there is, conceivably, more than the indoor/"outdoor" connection at the periphery of the building. There are basically two modes of such connection:
1) The interface of the real outdoor environment and the indoor environment
2) The creation of an "artificial," large-scale interior space which serves as a surrogate for the outside environment.

Issues

Isolation from the outside world
In today's large, modern office complex, many employees are isolated within artificially lit spaces where getting a view to the outside is difficult at best. This is even the case in some spaces that are relatively close to the perimeter, but whose natural light and view are all but blocked by opaque, perimeter offices. Among the various needs for sensory stimulation, this need for access to the outside is great. (Fig. 1)

Indoor point of entry
In a tall building, public access is invariably by elevators.
vator, which is, in most instances, at the building's core. When the elevator doors open, the visitor is at the threshold of the facility - the point of indoor/ "outdoor" connection. (Fig. 2)

Design approaches

Main street
One or more major circulation pathways that transect the facility, uninterrupted, with a view through at each end, where there could be a public or semi-public space such as a conference room, lunchroom/lounge, waiting area, or anteroom to a particular functional space. (Fig. 3)

Transparent boundaries
Extensive use of acoustical glass partitions, frameless, tempered glass doors, and an expanded core area containing spaces for common use, functions requiring carefully controlled lighting, and service spaces. Some kind of visual connection with the outdoors is crucial for a psychological as well as a perceptual vista. A visual connection with the outside improves one's wayfinding, de-emphasizes space limitations, gives a true sense of time, and may also reduce perceived crowding. (Fig. 4)

Edges and partial enclosure
The North American concept of space makes use of the edges of things. If there aren't any edges, we make them by creating artificial lines. Therefore, a distinct edge between the office proper and the window wall can create a zone that alludes itself distinctly with the outdoors.

The edge in conjunction with partial enclosure might further reinforce this zone that is linked to the outdoor world and strengthen its identity as a fully differentiated space, without disturbing visual continuity. (Fig. 5)
Letting the outside in
Borrowing a part of the outside allows one to cross the threshold into the fringes of the outdoor world, while still bound to the indoor world. An accessible extension can be a balcony, a roof garden, or some other creative means of embracing a portion of the outside. (Fig. 6)

A volume of space and light
A large spatial volume within the bounds of the building structure; there may be plants within it, and water; it offers visual relief and possibly allows several floors to be seen; may be a place for repose or discussion; air rising through it may refresh the senses; may also be an arousing point of arrival. (Fig. 7)

In the case of a facility where there is no preexisting natural place for a literal indoor “outdoor” connection, an interior volume of space and light serves as a meeting place, a retreat, and a central organizing space - active uses of the space, as opposed to strictly passive ones (that is, for visual relief, or a change from indoor lighting).

A volume of space and light permits openness within the security of the facility.
Status as a Tool of Organization

Over View

This principal explains the role of status in defining and differentiating groups and individuals in a law office setting. This study explains how different philosophies can become manifested in design as well as detail various means of manipulating space to achieve desired levels of status.

Issues

The overall status of the office should be perceived by the public to be commensurate with that of a successful law firm. Status definition should reward and recognize relative importance to the overall organization.

The definition of groups by status level should not isolate or alienate lower stationed employees.

The choice of status distribution should reflect the organizational philosophy of the firm. Three types of organizational “mind-set” are as follows:

To the Winners Go the Spoils

One point of view provides a strict definition of status levels between various groups. A proponent of this philosophy would feel that each group has its place in the corporate hierarchical ladder. They recognize that it is not particularly fair, but they had to suffer on their way up and everyone else should have to also.
All men (and women) are created equal.
A second design philosophy gives equal status to all members of the organization. This approach attempts to avoid differentiation and promote a "democratic" organization.

Rewards based on merit
A compromise approach combines the two previous philosophies into a balanced distribution. Merit is rewarded and groups are defined, and there is careful consideration given to all parties to achieve a balanced distribution.

Design Approaches

Offices with a view
A design emphasizing view as a determinant of status would situate high level executives with access to that view. As the view to the view diminishes, so does the relative level of status. Site specific conditions would decide the relative level of each location. For example, a corner location with a poor view might carry a higher level of status than a mid-building location with a spectacular view. (Fig. 1)

Higher level, higher status
Generally, the higher the floor, the greater the level of status. Executives can easily judge their progress up the corporate ladder based on their progress up to higher floors, with attainment of the best office on the highest floor as the ultimate status symbol. (Fig. 2)

Corners as a status opportunity
The corners of an office always carry a higher level of status. The degradation of status is proportional to the distance from the corner. (Fig. 3)

Larger offices, higher status
As the size of an office increases so does the perceived level of status. Offices in less desir-
Figure 6. Equalizing spaces with status.

Example: The offices along the perimeter are located furthest from circulation routes and therefore have less distractions. Design by Adrian Langhuis

Figure 5. Status as related to privacy.

Example: Office clusters adjacent to primary activity centers, as in the library shown above, will be more desirable. Design by Haideruddin Munip.

Figure 4. Levels of status based on office size.

Figure 7. Status gained from proximity

able area can be enhanced by increasing their respective size. (Fig. 4)

Status influenced by privacy
Offices located in remote locations can be perceived as having a higher level of status based on their privacy. This fact can be utilized to upgrade isolated offices that might ordinarily be less desirable. (Fig. 5)

Activity centers influence neighbors
Strategically placed activity centers can influence perceived status, i.e. Adjacency to the library or the board room can bolster the status of less desirable offices. (Fig. 6)

Equalizing spaces with status
A floor plan can be manipulated using various status related factors. The factors can help to define groups and individuals. They can also serve to reduce status differentials among seemingly disadvantages locations. (Fig. 7)

Equivalency with other firms
The overall status of the firm should be at least equal to that of similar law offices. This status standing can be achieved by several methods, i.e. choice of finish materials or the use of elegant and sophisticated interiors.
In Control

Overview

The design of the workplace should provide all individuals with a sense of control over their environment. This is especially important considering the limits that one's position places on the degree of and factors over which one has control.

Issues

Individuals in upper level positions usually occupy cellular offices which offer a greater degree of direct control over their environment. They have more opportunities to express the control associated with their status.

Individuals in lower level positions tend to work in more open plan areas or shared offices where control over their local environment is limited. The public nature of their work setting deprives them of direct control over many aspects of their daily experience.

Equally important is the perception of control sought by clients. They must be reassured that despite the fact that they have revealed their most personal affairs to their attorney, they have not relinquished all control over their fate.

Design approaches

Democratic design

Involve users in the design from the start. Worker participation in the design process itself has been
found to increase satisfaction in various qualities of the work environment. The effect is even reflected in satisfaction ratings for qualities over which the workers had no influence. As employee participation increases, so does satisfaction.

I need my space
The configurations of workstations themselves should either provide some degree of enclosure defining an individual's space or, at least, some type of controlled access to what is perceived to be the individual's space. Avoid all orientations that permit traffic to approach from directly behind the seated worker. The workspace becomes defensible through the ability to define one's area of control and to survey one's surroundings. (Fig. 1)

The boundary itself can assume varying degrees of enclosure at the discretion of the occupant. Some type of transparency, such as a window to the office space, would introduce an intermediate level boundary whose permeability or impermeability is controllable. (Fig. 2)

In the control seat
Employees should be provided with some form of control over lighting levels, temperature, solar gain and glare within their work area. Flexible workstation equipment can fulfill the task requirements of each position as well as each individual worker's needs. (Fig. 3)

I did it my way
User control over the workstation can be heightened by a design which includes only the most basic elements and invites the occupant to fill in the gaps with his/her own touches. The location of features, such as doors and windows, and the basic office shape should allow several arrangements of furniture and equipment.
Retreat

Overview

The term retreat covers not only the physical manifestation of space to accommodate “leisure activities” and interaction outside the workspace, but the physical and psychological need for escape and relaxation during the workday as well.

Issues

Physical fatigue
Employees require breaks in the day to relieve eye strain, and stretch.

Mental fatigue
Employees need an escape from office routines and surroundings to find privacy or interaction, as well as a change of scenery.

Client needs
A good law office must provide the client with a space where they can feel they have some measure of privacy.

Design Approaches

Visual variety
The type of retreat defined by visual variety can be experienced without the viewer even moving. The use of indoor/outdoor connections contrasts with the confinement and the lack of visual variety of the typical office area and produces a situation where the viewer can cleanse his mind with a visual “break” and never

This view of a community area connecting two office clusters is an example of retreat. The space affords the employee a place to “get away” from their work and chat with fellow workers in a pleasant atmosphere. Design by Kristi Minser.
leave the workstation. Where indoor outdoor connections are impossible manipulation of surface textures, color, patterns, space configurations and artificial light may help to provide visual variety.

Private place
Privacy is an important part of any office. The means by which an individual gains privacy and the levels of privacy vary greatly. At higher levels workers are allowed physical isolation away from others if they choose. In the lower ranks the workers may have only implied privacy, such as dividers or partitions. Places should be allocated where employees can go to for privacy. (Fig. 1)

Transitional retreat
Workers on route to a meeting or bringing material to the data processing center all experience some “retreat time” as they move from one space to another or from one activity to another. This off task time could be used constructively. Information could be gathered about issues pertinent to the company on time that the user sees as leisure. (Fig. 2)

Social Interaction
Social interaction provides a form of retreat for workers and is a valuable tool for the company. It not only allows them a break from their work, it may also provide an opportunity for the exchange of ideas. With this in mind, the company can manipulate where workers socialize and ensure that even during free time, the employees are productive. (Fig. 3)
Privacy

Overview

In any office it is possible to define a continuum of spaces from the interface of the firm with the outside world, to the sanctum of individual offices. Individuals at various positions along this continuum should ideally be provided with opportunities for environmental control of social interaction and involvement in activities.

Issues

Control over accessibility
The ability to control unwelcome intrusions by exercising control over access to one's individual workplace.

Control over distractions and interruptions
The unintentional and accidental effects of being near other people.

Speech Privacy
Refers to the selective control over who receives sensitive or confidential information about one's self or others. Threats to speech privacy may be both intentional and accidental.

Design Approaches

Barriers between public and private zones
Barriers can take the form of actual walls and doors. However, easily recognizable symbols can be equally effective in communicating the same message as a partially shut door or a full height partition.

Privacy is a need shared by all employees, from the lawyers in their cellular offices to the secretaries at their work stations. Design by Adrian Langhus
Transition areas between public and private zones
Clear definition of transition areas can make the gradation of public to private smooth and can minimize conflicts arising from direct contact between private workstations and public zones. Transition zones should be defined both at the macro—the firm’s interface with the outside world—and micro level. (Fig. 1)

Circulation paths that pass by and not through It is important that circulation routes pass along the borders of the different zones and not through them. Thus areas along different points of the continuum from public to private zones can maintain and preserve their desired level privacy. (Fig. 2)

Away from the main street Placement of workstations along secondary circulation routes removes them from the mainstream of activity and these can then serve as extended transition areas for a number of offices. These offices can then maintain some degree of privacy without actually being located in the inner private core. (Fig. 3)
Keep Them Talking

Overview

An office environment which facilitates both formal and informal interaction at all organizational levels will help a firm prosper. Office layouts which allow everyone needed privacy and condemn no one to isolation, which foster intimate interaction among neighbors and bring neighborhoods together as communities, will benefit.

Issues

Too often individual employees or whole departments will suffer the effects of being in a relatively isolated environment. Employees will garner a feeling of being unattached. Whole departments can develop a sense of isolation from the superior powers of the company as a whole. These problems can be attributed to both office layout and managerial style. Bringing people together correlates directly with designing an office environment that facilitates both formal and informal interaction. Here, informal interaction happens dynamically between community members, while formal interaction (such as staff meetings, conferences, etc.) help to tie the individuals to the whole.

Design Principles

Cluster Groups of People
The designer must not simply search for places to put individuals. He must produce spaces

Primary circulation routes are a most likely location for informal interaction. Design by Charles Wischow.
Example: A typical office cluster configuration. Design by Kristi Minser.

Figure 1. Interaction occurs within clusters and between groups.

Example: A full story atrium used as primary circulation promotes interaction and multi-floor integration. Design by Mary Gorman.

Figure 2. A vertical link between levels of a multi-story office decreases isolation. Design by Antonia Diamantis.

Example: A conference table shared by a bay of offices acts as a tool to draw employees together. Design by Keya Ray.

Figure 3. Shared amenities help to encourage intercommunication between groups.

which foster interaction among others in particular neighborhoods or communities. Establishing neighborhoods in an office layout entails careful planning of adjacencies so that offices are clustered together to form communities, and communities are clustered to form the company. These clusters can be placed along circulation routes to increase the chance of intergroup interaction. (Fig. 1)

Vertical Integration
In a multistory office layout, if users haven’t a need to move from one floor to another, they won’t. These users will develop a sense of isolation from the other floors and from the company as a whole. Encouraging floor-to-floor interaction within the firm will help reduce the tendency toward segregation. Additionally, visual cues from open spaces (such as atriums) will be a continual reminder of the multi-floor integration within the firm. (Fig. 2)

Central Support/Amenities
Neighborhood and community interaction is enhanced with centrally located amenities and support facilities. The constant flow in and out of support spaces of people from all different levels will bring the firm together. This chance for informal and/or formal interaction will help to strengthen the firm’s identity as a unified whole. (Fig. 3)

Nooks
Providing small spaces or “nooks” adjacent to public spaces like lunch rooms, or in private spaces such as conference rooms will provide multifold opportunities. The designer can create visual and sensory relief with these expanded areas along hallways, as well as provide employees the opportunity to engage in a more in-depth interaction that might not be otherwise be available in a busy crowded hallway.
Overview

Security and confidentiality are important elements in the success of a law firm. The impression of security and confidentiality can many times be as important as the physical manifestations required to attain them, if not more. A client, as well as an employee, must feel that information is privileged and that the storage and processing of that information is handled confidentially and filed securely.

Issues

Protection from exposure
Inherent in the legal process is the need of the client and attorney for privacy and confidentiality so that privileged information does not fall into the wrong hands.

Enable employees to talk among themselves
Employees handling a client’s case must be able to have conversations among themselves without fear of being overheard. Places must be provided for attorneys to work on confidential documents for extended periods of time, undisturbed.

A safe place for documents
The maintenance of the clients’ privacy must be carried through to the handling, processing and storage of the clients written information and documentation.

It is important for the client to feel confident in the security and trustworthyness of the firm from the moment he walks in the door. Design by Gray Mitchem
Example: Implied boundaries along circulation routes indicate a change in public access. Design by Keya Ray.

Design approaches

Enclosures and boundaries
The architectural elements of enclosure can create physical boundaries and just as importantly, implied boundaries. The physical aspect of enclosure creates a separation from others both visually and acoustically. How others perceive the use of these enclosures can give the physical boundaries they create more power in maintaining separation. What people infer from something like a closed door is as important as the physical barrier the closed door creates. (Fig. 1)

Degrees of isolation
Different levels of privacy require different degrees of isolation. Degrees of isolation deal mainly with the perception of isolation, rather than just the physical manifestation of it. As one moves through space, the feeling of isolation depends more on what an individual's sense of it is than the actual proximity to others in the space. Perceived as well as actual isolation can manifest itself in a variety of ways: in the idea of enclosure, one's orientation in space, a change in the direction or quality of paths, one's relationship to mainstream circulation, etc... (Fig. 2)

A safe place
Processing and filing of client related documents is the “unseen” aspect of security and client confidentiality. A secure and selectively accessible space for current document storage is imperative. Being able to discretely handle documents is as important to the welfare of the attorneys mind as the client's and should be an important aspect of efficient and careful space allocation and placement. (Fig. 3)
Overview

Efficient circulation throughout a typical office depends on the accessibility of various departments and offices to the lawyers and staff. A successful office plan must be easy to understand and the transition between different departments and offices should be as uncomplicated as possible.

Issues

Areas of differing levels of accessibility must be created to allow for the privacy needs of employees and clients and to facilitate wayfinding. Each office and department should be thoughtfully placed in plan so as to reduce the energy expended in travel time between them. Accessibility to one area should not be at the “expense” of another. One should be able to get to a space without interrupting or invading other areas.

Design approaches

Proximity in location
The concept of proximity in location should try to provide users with a non-time consuming accessibility from one area to another. Not only should it answer the issue of traveling time, but it should take into consideration the ease of access to certain areas. This concept applies to Previewing a space allows one to physically see their destination and to choose the best route to travel. It also gives them the opportunity to decide whether to go in to an area or not without having to enter. Design by Hairuddin Munip.
Clear circulation configuration

Clear circulation configuration is important in space planning. The way circulation is designed can either aid or confuse users as to how to approach their final destination. Users must be able to comprehend the configuration of the circulation and, most important of all, be able to figure out which passage would be the quickest route. (Fig. 2)

Visually accessible

Visual accessibility has practical and psychological benefits. To aid in wayfinding, the user must be able to ultimately see his place of destination. Psychologically, visual accessibility helps the user in two ways. The destination and its entry should be easily seen or recognizable to reassure the user not only that they will arrive, but that he or she will be able to enter the space as well. In terms of efficiency, a visually accessible space responds to the need of the user who doesn't want to be in a space yet, but would like to see if there is activity inside. In some cases, this can provide security control of the space. (Fig. 3)

Example: Stairs next to library make it easily accessible from any floor in the firm. Design by William Robison.

Figure 1. Departments shared by all members of the firm (3) should be centrally located, while secretaries and legal assistants (2) should be nearby lawyers (1).

Example: Circulation should be clear, easy to follow and make all areas of the office accessible. Design by Jerry Crain.

Figure 2. Loop circulation patterns are commonly used because of their straightforwardness.

Example: Seating into a room before entering avoids interruptions and is reassuring to the user. Design by Eric Ponto.

Figure 3. Visual accessibility is aided by multi-story views and windows in offices and rooms. Design by Eric Ponto.
Comfort

Overview

Comfort is an essential element in the creation of any habitable office environment. In the case of a law office, comfort becomes a critical factor that must be considered. Employees must feel comfortable to do their job well and clients must feel comfortable when visiting the firm. Physical comfort (an obvious aspect of comfort) deals with furnishings, lighting control and environmental fluctuations. Psychological comfort is often overlooked when designing for comfort. Feeling comfortable in an office depends on the way the surroundings are perceived as much as how the office actually appears.

Issues

Physical
As is the case with many large office buildings, the control occupants have over their environment is limited. As employee positions are lower on the scales, the amount of control over physical comfort also decreases.

Psychological
Control is a factor that makes an environment comfortable psychologically. Not being able to regulate your surroundings tends to be frustrating, making users very uncomfortable. Social comfort within a large law firm is also an issue that needs attention. In many cases, people of

Adjustable seating is imperative for employees whose primary tasks include sitting for long periods of time. If it is not imperative, adjustable seating can help to improve worker effectiveness, concentration and overall performance.
different status levels work together in functional work groups. Too much disparity between comfort levels within these groups tends to alienate and create a feeling of uneasiness among employees.

Design approaches

Open plan controls
In today's modern office environment employees need to be able to control their surroundings. Many office planning systems do integrate controls into their systems to regulate lighting (for reading, glare discomfort) and temperature (hot/cold discomfort). (Fig. 1)

Noise and sound alterations
If distracting noise is within the immediate area, masking it with a more pleasant sound can tend to drown the noise out. (Fig. 2)

Ergonomics
Ergonomics is a major element that is all too often overlooked in the modern office environment. The benefits of comfortable furnishings can be felt through an increase in productivity and decreased medical expenses. An employee's needs should be taken into consideration so that the proper furniture can be found for their individual jobs.

Example: Comfort in the office begins with the employee's work station and extends out to control of environmental factors and distractions around the immediate area. Design by Hairuddin Munip.
Overview

Responsible office design today can no longer begin with mere physical planning. It first requires an understanding of the corporate culture: the idiosyncratic way in which an organization operates as well as its pervasive philosophies. Those who design the modern office must view the client in precise terms and then determine how to successfully convey the unique image of that client. In addition, the competitive market of today dictates that as a base, interiors must impart a sense of permanence and distinctive character, to counterbalance rapid employee turnover and to create corporate individuality.

Issues

Philosophies and goals
The organization's outlook and style should be emphasized in the design and throughout the office.
Corporate self confidence
The character and attitude of the organization should be fostered within the firm and projected to the public.
Public self confidence
An image of power and experience should be created and conveyed to the public to inspire confidence and act as a beacon for future employees.

The library, a symbol of knowledge, skill and tradition, here becomes a building within a building. Housed in the centrally located atrium, it serves as an icon for the firm and acts as a dominant image maker. Design by William Robison.
Example: VPKK is a firm modern in thought and based in tradition. The three facets of VPKK—power (stairs, 2-4 story views), knowledge (library) and tradition (rows of massive columns) are enclosed in the atrium to create an enduring and dynamic image. Design by Mary Gorman.

Figure 1. Motifs can become cohesive image-making elements in a design. Icon by Norshimah Jantan.

Figure 2. Image starts with the organizational structure.

Example: Soft uplighting, open spaces and multiple views through windows create an honest, straightforward, modern image. Design by Kristi Minser.

Design approaches

Philosophies and goals
Focus on main organizational philosophies and goals that best portray the image the firm wants to put forward to the public. Choose select features that embody the organization's ideals.

Elements and motifs
Appropriate architectural elements and motifs must be selected and applied to create an image commensurate with the ideals of the firm. These elements should tie in with the features and should be prominent, readable and meaningful. Consistency throughout the design with these elements cannot be stressed enough. (Fig. 1)

From top to bottom and inside-out
Surface treatment and architectural motifs should not be the only methods used to convey image. Treatment and arrangement of work stations throughout an office plan are important cues to employees, clients and competitors of the integrity of the firm's projected image. A firm that only worries about the image of it's reception area is a firm that might be perceived to be inconsistent with it's clients as well. (Fig. 2)
A Place of My Own

Overview

A law firm is made up of many individuals, whom in turn comprise various small groups, practices, specialties, and departments. In order to retain a human element in amongst all of these hierarchies, personalization and group identity need to be established. Often, who or what we are is expressed in what we display to others. The control an employee has over his/her own space is a direct reflection of the confidence management has concerning that employee.

Issues

Encourage participation and pride in the company and domain
Encourage self reliance, independence, and sense of identity

Design approaches

Encourage user participation
It has been shown that the higher the level of user participation in the design process, the greater the level of user satisfaction in the created environment. This participation must be promoted not only at the inception of the project, but throughout the life of the building. It is hoped that this participation not only provides better results (due to the fact that the user may very well know the most about his/her individual needs), but as well promotes a sense of control over one's

When employees are allowed to personalize their workspace, their sense of control over their environment increases and their morale improves. Design by Adrian Langhus.
the company, and thus provides for a happier, more productive employee. (Fig. 1)

**Define personal and domain boundaries**
Employees need to be able to express to others their own personal identity. Control over one's space is actually more important to the lower status workers, than some of the higher status workers. This is due to the greater supporting role of the environment in expressing their competence, self-worth, and achievement. The creation of defensible space fosters the attitude of creating a space worth defending, in a company worth defending. People want a space to call their own, in a neighborhood they can identify with (in this case a domain (in whatever form that may take)). These boundary markers help others know where to be and not be, as well as guide behaviors in a particular direction, conducive to the space and the situation. (Fig. 2)

**Design for personalization**
Because personalization is a reflection of self, serving as feedback to the individual as reinforcement of self, foster the personalization of spaces, plan for flexibility. Design the shell of the space and the major architectural details, but leave the interior to be decided by a site interior manager, or by a committee of employees. Leave money in the budget for just this purpose. Allow the occupants of the space to work in the newly designed space for a while, before the furniture, paint, and other accessories are ordered.

*Example: A landmark boundary at a neighborhood point of entry creates a distinct identity for that neighborhood and separates the public circulation from the private office cluster. Design by Mary Gorman.*
A Sense of the Whole

Overview

An organization should be perceived as one entity with one major goal/principle shared by all members. Members should share a feeling of belonging even if separated by multiple floor levels. The sense of belonging to the community of the firm can be achieved through architectural manipulation of the space.

Issues

Increase interaction across departments/floors and prevent isolation.
Promote a sense of unity and belonging across floors to tie all members of the organization together.

Design Approaches

Expanding the Visual Field
Walls that define space can deprive an individual of outside communication and social flow. Expanding the visual field with physical openings (doors) or transparent openings (glass wall, windows) will help to break down the sense of confinement walls can create and enhance the individuals sense of belonging to the whole.
The sense of belonging can also occur on the next largest scale—between floors. Existence of clear connection between floors and a consistency in architectural treatments throughout the firm will help to create a transparent connection between

An atrium links floors together, but is not enough to tie a firm together as a whole unit. A sense of belonging to the whole is enhanced when the atrium contains internal vertical circulation and runs the length of the building. Locating internal circulation within the atrium increases interaction and reminds employees that they are members of a large firm, not just one floor or work group. Design by Mary Gorman.
floors in which members are able to see the entire multi-leveled workplaces. (Fig. 1)

Activity-based linkage
An area of activity common to all employees is a wonderful tool to use to tie all members of an organization together. This activity could be housed in the same location on each floor and possibly linked together by vertical circulation. This “housing” approach implies a locational, vertical public-use area separating itself from other “private” areas. This single activity could also be located only on one floor. However, the activity that occupies this place should be important enough to draw all members of the organization to this location. (Fig. 2)

Thematic Design
A uniform (as in the army) defines an organization as one entity with one shared goal. When the organization's environment is the uniform then the organization becomes one. Variation of a single design theme applied to the architecture throughout the space of a firm parallels the "single entity, single goal" concept of an organization and helps to remind an employee or client that, wherever they are, it is within the confines of the firm. (Fig. 3)
Wayfinding

Overview

Legibility of the environment affects the users' ability to interpret the built environment so they can maneuver within it or find specific locations. Although this issue primarily concerns first-time users, regular employees can be confronted with difficulties in wayfinding, especially during emergency situations.

Issues

Improve the general ability of first-time users to interpret and use the environment.
Create an environment in which employees can easily adapt to relocation and change.
Provide emergency egress which is logical and easily located.

Design Approaches

Landmarks
Within the office landscape, the location of certain 'landmarks' can be a great aid in wayfinding, be they consciously placed by the architect or not. Objects such as elevator banks and fire stairs often serve as landmarks in large multistory buildings because they are assumed to remain in a constant position over all floors. The architect can and should consider providing other landmarks which are specific to the client floors, and which can serve as benchmarks for orientation due to their prominence and location throughout

Landmarks within the office, especially those which can be viewed from multiple floors, such as this stair tower within an atrium, help the user to quickly locate themselves within the plan by serving as a familiar benchmark. Design by Hairuddin Munir.
Example: The atrium can act as a wayfinding device, allowing the user to see multiple destinations. Design by Mary Richter.

Figure 1. Major destinations within the office can be seen from the user's initial viewpoint.

Example: Using repeating layout units with characteristic attributes can make spatially differentiated zones. Design by Mary Richter.

Figure 2. Differences in colors and textures in private portions of the office can help to define boundaries and paths for the visitor.

Figure 3. A trail can be indicated either by distinct boundaries, or by repeating markers within the open office landscape.

the office layout.

Visible destinations
Locating key areas within a building so that the user can see to one location from the other is one way to facilitate wayfinding. Being able to sight a destination from the current location makes it easier to choose a route through unfamiliar territory that lies in between. When more than one route is available, being able to see the destination from the point of decision between two routes makes the choice easier. (Fig. 1)

Spatial differentiation
Differentiating spatial attributes and features, (color/texture punctuation) such as surface texture, size, and color in different zones within a space can help to distinguish these zones. Design variations help to give each area within a building its own distinct identity, making it easier to locate or direct others to. Also, specific functions of building features which repeat over many areas might be distinguished or "punctuated" by a standard repeating color or feature. (Fig. 2)

A trail
This concept involves the defining of a specific path (A) to an often used area, by distinguishing the path from the remainder of the office. One continuous, traceable feature might be present along the path to guide the user, or the path might be treated in a different way, architecturally. The most obvious example of this type of trail is a closed corridor, which connects two points directly. Periodic reinforcement (B) of the trail, through repeating markers or patterns can be helpful, to reassure users that they are going the right way. In this way, the route from the reception area to a primary conference room, for example, might be marked with a "trail". (Fig. 3)
Imageability (cognitive mapping)
The overall plan of the office should be such that consistent patterns are set up which can be interpreted and used to develop and overall image of the office layout. While this might not be necessary in a smaller office, where a general overview of the organization can usually be seen at one time, it is strongly needed in large, multi-story office plans. When possible, the image of the plan should carry over from floor to floor to aid in overall wayfinding. When users can make sense of the patterns used to organize the spaces within the office, wayfinding is facilitated (Fig 4).

Signage and maps
A sign can communicate the name or identity of a given area. It can provide directions or warnings to guide users into, or out of, certain places. The primary locations of signs should occur at decision points, that is where a choice of different routes must be made.
One form of sign might be a map of the floor, showing the location of various zones, specific departments, or emergency exits. (Fig 5)

Example: Each of the circular half-walls and overlooks act as landmarks to the bays and to primary circulation paths. Design by Peter Weston.

Figure 4. The image of a plan should carry over from floor to floor to facilitate wayfinding. Consistent patterns in the plan can be used to develop an overall image of the plan.

Figure 5. Signs guide the user to their destination.
Defensible Space

Overview

In a work environment, employees and sometimes clients need to have a space that can be called their own. It is a place that others will know not to enter because it is clearly marked as a personal space or territory.

Issues

A need to define personal space.
A need to control access to workspace by others.
A need for easily discernable public and private areas.
A need to temporarily mark or claim space.

Design approaches

Physical markers
Through the use of office furniture and partitions, a definite boundary around the individual work place can create a personal territory.

Symbolic markers
A change of materials or levels can create a territorial zone which causes one to question whether or not to enter the space.

Temporary territory
A place that does not belong to any particular person may be claimed temporarily. By placing personal belongings at a work place, the territory has been marked and others know not to use it. This would apply to users of the library, group spaces and clients that require personal space.

Clear boundaries are created around the reception desk which separate it from surrounding circulation and allow it to act as a transition between the public (outside) and private (the firm) zones. The receptionist might be surrounded by busy traffic, but will still be able to maintain needed space and territory because of the effective placement of the partitions. Design by Mike Bahr.
Group Integration

Overview

There are two organizational philosophies common to law office planning:
1) Arrangement of staff by law specialty or
2) Deliberate mixing of individuals from various law practices so as to avoid cliques. Group integration enables employees to perceive themselves as members of a community and not as discrete individuals working for a nameless organization. All individuals should share a feeling of belonging to groups whether in a functional department or in close sets of "neighbors" that are mixed from the law firm's many departments. In either case, care must be taken so that any working group's functional interaction is not hampered.

Issues

Prevent the creation of practice cliques.
Create groups that will foster informal interaction between practices and enhance the feeling of community between these groups and within the firm.
Maintain the integrity and efficiency of the functional workgroups within the firm.

Design approaches

Disperse and mix
The success of this principle depends on the dispersal of lawyers across disciplinary lines.

The "bay system" used in some offices require a mixing of practice groups and the creation of an integrated neighborhood system to bring together groups of employees that would not otherwise interact. The creation of a successfully "integrated neighborhood" depends on many factors such as circulation paths, shared amenities, and a common shared identity.
Example: Primary circulation around and secondary circulation through groups give them definition and create boundaries. Design by Kristie Minser.

Figure 1. Individuals must feel a sense of membership in their place of employment.

Figure 2. Circulation can be used to create group identity.

Figure 3. Cluster neighborhoods break down practice barriers and re-distribute spaces.

Without this mixing, it would be difficult to keep practice cliques from forming as it is quite natural for people to create their own groups around perceived common identities. If there is no evident and simple identity to latch on to, then groups formed will be based on proximity or affiliation (Fig. 1).

Variation on a theme
While it might be appropriate to follow a consistent pattern with regard to materials, furnishings and decor throughout the office, some changes can serve to define groups and give departments their distinctive character. Subtle changes in design or the creation of landmarks along circulation routes can help to define groups.

Circulation defines groups
Clear paths of primary, secondary and even vertical circulation can help define groups. Group definition can be strengthened by their orientation within and relationship to circulation paths in much the same way that neighborhoods are defined with respect to street systems (Fig. 2).

Physical clustering
While the physical clustering of individual workstations can aid in the definition of neighborhoods or communities, this alone is not sufficient to create functional groups. It is important that the clustering of groups support formal and informal communication in order to be successful (Fig. 3).

Clusters around a common core
Work groups may be defined by their relationship to common areas or shared amenities. A functional and physical center can serve as a landmark unique to each group and can further enhance group identity and character.