Performance Design
for a
Medical Office Building
by
Richard D. Hebard

Class of 1984

Department of Architecture
College of Architecture and Planning

Ball State University
Muncie, Indiana
<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREDITS</td>
<td>p. 5</td>
</tr>
<tr>
<td>SUMMATION</td>
<td>p. 7</td>
</tr>
<tr>
<td>DESIGN OBJECTIVES</td>
<td>p. 9</td>
</tr>
<tr>
<td>DESIGN METHOD</td>
<td>p. 11 - 13</td>
</tr>
<tr>
<td>PHASE ONE</td>
<td>p. 1-0 thru 1-7</td>
</tr>
<tr>
<td>PHASE TWO</td>
<td>p. 2-0 thru 2-37</td>
</tr>
<tr>
<td>PHASE THREE</td>
<td>p. 3-0 thru 3-33</td>
</tr>
<tr>
<td>PHASE FOUR</td>
<td>p. 4-0 thru 4-8</td>
</tr>
<tr>
<td>PHASE FIVE</td>
<td>p. 5-0 thru 5-20</td>
</tr>
<tr>
<td>PHASE SIX</td>
<td>p. 6-0 thru 6-10</td>
</tr>
<tr>
<td>PHASE SEVEN</td>
<td>p. 7-0 thru 7-27</td>
</tr>
<tr>
<td>PHASE EIGHT</td>
<td>p. 8-0 thru 8-17</td>
</tr>
<tr>
<td>PHASE NINE</td>
<td>p. 9-0 thru 9-13</td>
</tr>
<tr>
<td>PHASE TEN</td>
<td>p. 10-0 &amp; 10-1</td>
</tr>
<tr>
<td>HYPOTHESIS</td>
<td>p. 14 - 17</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>p. 18 &amp; 19</td>
</tr>
</tbody>
</table>
Credits

At the end of my formal training in architecture it is difficult to recall all those people that have had significant influence on the formulation of my perspective, perception, and philosophy towards architecture. In my experience I have spent laborious hours with some who have given me little, while in contrast, moments with some who profited me greatly.

Early in my education professor Alan Collins, a sculptor, opened my mind to form. Through his guidance I was able to develop an appreciation and sensitivity to form that I have been building on ever since. I have found that many acquaintances from design disciplines other than architecture have helped me strengthen my position and viewpoints sometimes even more than fellow architects.

Of the professors at Ball State that have worked with me I hold a great respect for Mr. Wells and Mr. Palmer; Jack, for his vast historical knowledge of architecture and its relevance today, and Sonney for his ability to take a students abstract thought and give him/her meaningful direction.

In relation to my thesis year the people I would like to express my gratitude are; professor's Meyer, Wittig, and Wyman. Bruce was quite helpful in translating what I wanted to accomplish in my thesis by explaining the best use of my time in that direction. Arno provided me with insights in regards to human behavior from a psychologist's viewpoint that were continually helpful in my exploration. Jack was quite instrumental in orchestrating my thesis year. He listened to my ideas, gave me guidance, yet kept from forcing me into any single direction. A quality I admire most in professor Wyman is his ability to pick up on a students' level of thought and provide direction without infusing his personal bias into the project. I believe the results and the diversity of projects this past thesis year should be partially attributed to professor's Wyman and Meyer, because of their open minds.

Above all I would like to thank my parents Dr. & Mrs. H.G. Hebard for their continual support in the joint pursuit of my career. They have been able to listen to and understand my ideas, however bazaar, constantly believing in me. Their excitement for me and my education in architecture has been continued strength over the past seven long years. To them I owe whatever successes may eventually come my way.
SUMMATION
The subject: The human being reacting to the built environment.

The issue: The design profession's lack of sensitivity to the human being in the built environment.

The thesis: To investigate an approach to a design method, generated by balanced integration of basic elements which are keenly important to the understanding of human interaction with the built environment. Pursuant to this method, the complete design of a medical office building was selected. The rationale for choosing a medical facility being: the diverse crosssection of users in a variety of emotional and physical conditions that must be satisfied in the design solution.

The objective: To incorporate current sociological and psychological research into the early programmatic phases of the design process: further attempting to formulate design solutions based on a balanced pallet of design elements rather than aesthetic bias, economic blandness, or functional sterility.

The method: A systematic evolution of writings based on the "needs" of each major space with graphic diagrams depicting the verbal description of those spaces. The writings and diagrams were further evaluated, manipulated, and refined in conjunction with area study models. As feelings and needs began to solidify about particular portions of the building, entire schemes were fused together, drawn, and built in model form. Refinement of numerous schemes led to the final presented solution.
The process of healing in our society has become scientific and mechanical. An individual becomes ill and makes an appointment to visit the doctor. Once examined they are diagnosed, treated, and released, all within an hour. The average doctor's office has an internal order and feeling that becomes just as unsympathetic to the patients needs as the methodical system most typically utilized for treatment. The patients come to the office in a variety of conditions and states of mind, from highly emotional, tense and upright, to depressed, vulnerable, and weakened physical states.

The doctors office should be responsive cognitively to the variety of patients with their diverse problems. The patient has come for not only professional advice and treatment but also a sympathetic ear to their discomfort, and solace. I feel a new order must be devised that provides the patient with a sense of individualized attention. A system that allows the patient to feel accepted, not shut into spaces and shuffled from one cubical to another. Functional efficiency, while important and a necessity, must not overlook nor ignore the physical needs of the patient. The system should provide more interaction with the staff before the approach to zoning and circulation. Foreshadowing the next transition in the movement through the office should set the patient more at ease in contrast to the 'closed-door' effect experienced in the typical waiting room of a doctors office. The patient tends to be hesitant about the whole operation of the office. Development of this perceptual thread I feel is important to the success of the entire building from the standpoint of the user.

It must be noted that the built environment is no panacea for negative human interaction. The entire patient response to the building can be tainted positively or negatively according to numerous complex interactions set up within the built environment. The intuition and understanding of the designer to predetermine the major interaction locations and to fully satisfy their "needs" is a large step towards balanced, sensitive design. The spatial milieu provided sets the stage for the desired behavioral responses by the users. The built environment cannot dictate the behavioral reactions, all it can be expected to accomplish is positively influence the human responses to other users and their surrounds.
At the beginning of this thesis my main objective was to arrive at a design method that broke away from more traditional programatically oriented processes and emphasize the desired human behavioral needs. It is somewhat ludicrous to think that we as designers can create environments that provide each user with a defined perception causing behavioral change or reaction. I tend to align myself with Gaston Bachalard in his book "The Poetics of Space". He states that designers of spaces should be like poets, a poet develops a feeling and images are described but each reader draws out his/her own diverse emotional responses. The poet doesn't dictate the reader's response. The poet only sets the stage. As designers I feel we should create a 'perceptual milieu' that allows the inhabitants of the built environment this freedom of response that Bachalard speaks of. The difficulty lies in establishing exactly what this 'perceptual milieu' is comprised of.

After discussions with my outside critics I began to realize the only effective and realistic way for me to express human perceptions was through describing desired human behavior. The term 'perception' relates to a personal specific response whereas 'desired human behavior' refers to a general overall less defined response.

In order to structure my descriptions of desired human behavior I adapted a 'list of needs' for the built environment composed by Manual Marti. (see appendix p.p.1-2) The eight major divisions provided me with a reference point when writing about the human behavior in relation to quite specific building spaces. By referring to this list I felt my descriptions would evolve in a balanced fashion versus overemphasizing certain aspects, i.e. functional, psychological (see page 1-2).

I began my study by establishing a "key of building areas". (see page 1-7). This key provided organization in looking at the relationships between major areas within the building; it also allowed me to weight spatial relationships as to their level of importance to the design analysis.

The next stage of development was to utilize the organization of the 'spatial key' and begin to write about the relationship between one particular space within the building and all the other spaces I deemed had any major influence on that space. At this point I introduced a technique of diagraming that became a conceptual tool to record and
visualize the verbal description of the spatial relationships. These diagrams were clustered together at the end of a study on a particular area. (see p.p. 2-8) The cluster represented conceptually, in a graphic way, the interaction of that one area in relation to the building as a whole.

In phase 3 analysis of each major space was conducted in a similar fashion. Following the external spatial study I began to look at the internal components of each major area. (see p.p. 3-2) Trying to determine what effect desired human behavior would have on the internal aspects of a space and eventual form, the technique of conceptual diagramming was used again to complement and represent the verbal descriptions.

Once the internal study was completed I then revised the original external diagrams 'fusing' the internal conceptual diagrams with them. (see p.p. 4-2) This graphic manipulation was a means of incorporating the notions developed during the internal study into the larger context of spatial relationships.

The fifth phase of my study was again a graphic manipulation. (see p.p. 5-2) This time what I wanted to accomplish was to bring all the conceptual ideas developed in the earlier studies into graphic diagrams that represented entire building schemes. The method I utilized to diagramatically fuse these somewhat separate notions together is outlined on p.p. 5-0, 5-2.

An evaluation of each of these entire building diagrams followed in the sixth phase. In this evaluation I took into consideration site contextual demands as well as programatic demands that might effect the building's orientation. After the critical analysis of the original three schemes were generated, I began revising the schemes, taking into consideration the positive and negative discoveries made during the evaluations. These revisions happened in a more spontaneous brainstorming fashion versus the methodical system used up to that point. Since I view this whole process as a means of generating ideas and keeping these ideas organized I don't feel this revisionary phase was in conflict with the whole process. Revised scheme six became the conceptual diagram that formed the basis for the remainder of the study.
The seventh phase of my study (schematic design) evolved into a different format than the previous work. The writing was directed toward more traditional architectural elements, i.e. lighting, order, proportion, scale etc., in relation to the human component. The organization of this phase followed a sequential movement thru the building by both the user/patient and staff. (see p.p. 7-2 - 7-23) The reason for using a sequential study was again to generate the design process in close association with the human component versus preconceived notions of what the building form ought to be. How effective this has been is yet to be determined. It is quite difficult to attain a constructive behavioral response when the user is placed in a hypothetical scenario.

Stage eight (Design Development) involved a series of schemes. These schemes became the progression of thought towards the final solution. I feel that each subsequent scheme reflects a refinement of form that parallels or complements the previously defined verbal and diagramatic descriptions of the entire building.

The final design solution is basically the latest scheme to evolve. It is therefore inappropriate to think of the latest solution as the final, but rather, the most refined of this phase. I feel a continuation of study on the internal spaces now that the wholistic form of the building has been refined, would reveal a closer representation of the initial writing and diagraming. At that point, further development of the external form and its relation to the interior refinements would be necessary. This continual focusing of issues involving the human interactions with the built environment to me is the real worth of this design method/approach. In continued research on design methods and techniques of implementing them I am certain more reliable and effective solutions will evolve.
The rationale for using the term 'performance design' to describe this ten phase design method is simply: the built environment should perform to the needs of the users. To perform according to Webster means... "to carry out an action or pattern of behavior". How the built environment is perceived by the user, their behavioral response; this is the level of desired performance to be achieved by this design method. In this first phase I have broken down the needs of the user into eight categories. With respect to these needs each major space in the building was evaluated. The qualitative key on page 1- was developed to maintain organization to the exploration of these issues and weight them respectively.

GRAPHIC INTERPRETATION

Phase one,...an organizational process. The grid pattern represents the balanced control of the overall organization. The individual squares contained in the large square depict each phase. The whole would be incomplete without one of the parts, which defines the dependance of the solution on the balanced development of each phase.
<table>
<thead>
<tr>
<th>HUMAN PHYSICAL NEEDS</th>
<th>BUILDING FUNCTIONAL NEEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• anthropometrics</td>
<td>• provision for activity recall in space</td>
</tr>
<tr>
<td>• age</td>
<td>• control of topological movement</td>
</tr>
<tr>
<td>• sex</td>
<td>• order / efficiency</td>
</tr>
<tr>
<td>• hygiene</td>
<td>• flexibility</td>
</tr>
<tr>
<td>• context</td>
<td>• zoning</td>
</tr>
<tr>
<td>• safety / security</td>
<td>• circulation</td>
</tr>
<tr>
<td>• sensory systems (control)</td>
<td>• type of construction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENVIRONMENTAL NEEDS</th>
<th>NATURAL NEEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• climate control</td>
<td>• orientation</td>
</tr>
<tr>
<td>• lighting - natural / artificial</td>
<td>• context</td>
</tr>
<tr>
<td>• enclosure</td>
<td>•бл.q. functional location</td>
</tr>
<tr>
<td>• body, impact on site (context)</td>
<td>• seasonal impact on site layout</td>
</tr>
<tr>
<td>• energy efficiency</td>
<td></td>
</tr>
<tr>
<td>PSYCHOLOGICAL NEEDS</td>
<td>SOCIOLOGICAL NEEDS</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>- privacy</td>
<td>- cultural fit - symbols of social organization</td>
</tr>
<tr>
<td>- personalization</td>
<td>- creed - fundamental beliefs</td>
</tr>
<tr>
<td>- territoriality</td>
<td>- race</td>
</tr>
<tr>
<td>- image</td>
<td>- demography</td>
</tr>
<tr>
<td>- isolation</td>
<td>- economic status</td>
</tr>
<tr>
<td>- status (role)</td>
<td>- social class</td>
</tr>
<tr>
<td>- identity</td>
<td></td>
</tr>
<tr>
<td>- habits</td>
<td></td>
</tr>
<tr>
<td>- authority</td>
<td></td>
</tr>
<tr>
<td>- calming/stimulating</td>
<td></td>
</tr>
<tr>
<td>- emotion - release</td>
<td></td>
</tr>
<tr>
<td>- interaction</td>
<td></td>
</tr>
<tr>
<td>- aesthetics</td>
<td></td>
</tr>
<tr>
<td>- regulatory needs</td>
<td></td>
</tr>
<tr>
<td>- space and type cost - occupancy rating</td>
<td></td>
</tr>
<tr>
<td>- fire construction ratings</td>
<td></td>
</tr>
<tr>
<td>- economic controls</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- maintenance factor</td>
</tr>
<tr>
<td></td>
<td>- quality</td>
</tr>
<tr>
<td></td>
<td>- investment returns</td>
</tr>
<tr>
<td></td>
<td>- cost (operational &amp; initial)</td>
</tr>
</tbody>
</table>
Components Spatial Relationships

- human/specimen function/quantitative description

- essential relationship
- complementary relationship
- non-essential relationship
- non-desirable relationship
- non-acceptable relationship
## Spatial Relation and Component Quantitative Data Sheet

**Project:** Medical Office in Brookston, Indiana

<table>
<thead>
<tr>
<th>Area</th>
<th>Component Description</th>
<th>Quantity</th>
<th>Area (sq ft)</th>
<th>Max. Area (sq ft)</th>
<th>Layer</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Area</strong></td>
<td>Waiting</td>
<td>1</td>
<td>500</td>
<td>3,000</td>
<td>1</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Waiting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Washing</td>
<td>1/2</td>
<td>200</td>
<td>1,200</td>
<td>2</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hygiene area</td>
<td>1</td>
<td>100</td>
<td>600</td>
<td>3</td>
<td>1/6</td>
</tr>
<tr>
<td><strong>Reception</strong></td>
<td>Reception</td>
<td>1</td>
<td>200</td>
<td>1,000</td>
<td>4</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Medical reception</td>
<td>1</td>
<td>50</td>
<td>300</td>
<td>5</td>
<td>1/6</td>
</tr>
<tr>
<td><strong>Staff Lounge</strong></td>
<td>Staff lounge</td>
<td>1/4</td>
<td>250</td>
<td>1,500</td>
<td>6</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hospice Lounge</strong></td>
<td>Nursing</td>
<td>1/2</td>
<td>300</td>
<td>1,800</td>
<td>7</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>1</td>
<td>150</td>
<td>900</td>
<td>8</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Examination</strong></td>
<td>Exam room</td>
<td>1</td>
<td>200</td>
<td>1,200</td>
<td>10</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment Room</strong></td>
<td>Treatment</td>
<td>2/2</td>
<td>300</td>
<td>2,000</td>
<td>11</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consultation</strong></td>
<td>Consultation</td>
<td>2/2</td>
<td>300</td>
<td>1,800</td>
<td>12</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Staff Office</strong></td>
<td>Staff supply</td>
<td>1</td>
<td>150</td>
<td>900</td>
<td>13</td>
<td>1/6</td>
</tr>
</tbody>
</table>

*Table continues on next page.*
Phase two is the study of spatial relationships between one major building area and the combined effects of the remaining spaces. The qualitative key of phase one provides a point of reference for each analysis. The spaces of most importance in this study are the doctors' offices, nurses station, staff lounge, reception area, and waiting room. The evaluation of these spaces is pursuant to the 'needs' established in phase one.

**GRAPHIC INTERPRETATION**

The upper-left square represents phase two of this design method. The waving lines radiating from the center express the unresolved external issues which have an effect on the eventual form of the spaces. These radial lines are interrupted by a segment of a continuous concentric ring. This ring is illustrative of the development of the built environment as it becomes refined through the successive phases. This first segment depicts how the requirements of the surrounding spaces push and pull on the space in question causing adjustments and alterations to accommodate them.
**NURSES STATION / DOCTOR'S OFFICE**

**Physical:**
- The physical link/connector between these areas handles moderate traffic; it should not be too far or it would become a burden to slip over and acquire some needed piece of information.
- Anthropometric fit: the nurses station requires space to accommodate 3-4 persons at one time; the doctors office is 2-3 persons fit. The transitional space needs to accommodate 2 persons tightly.

**Psychological:**
- Private → semi-public
- Personalization: each area maintains a large amount of personalization because they are hubs of organization.
- Status: the doctors office should retain a level of respect and the access route to his space should reflect the transition from A → B.
- This corridor realizes little interaction unlike the exam in corridor... the space should strengthen movement not static conversation.

**Function:**
- Each of these spaces is the area where the respective staff organize their daily routines from.
- The nursing staff doesn't frequent the doctors of quit as much as the reverse. The doctors review charts near and about the nurses station, especially since the lab is an integral part of this station.
- Movement between would occur when the nurse needs an answer on a question; moderate traffic.
- Zoning: the nurses station is integral to the examination suite whereas the doctor's offices are removed.
**Staff Lounge / Doctors Offices**

- **Physiological:**
  - **Audience:** The doctor's office is already located in an environment that is in contrast to the work zone. It doesn't require any building/deciding level of stresses.

- **Psychological:**
  - **Status:** The office is the highest point of the corporation. It demands some importance in the transition to areas of lower hierarchy.

- **Functional:**
  - The doctors' offices are their only real private spaces — the activity in the lounge area is semi-public.

- **Security:** Security is private, the doctor needs "distance" from the computer/telephone/conference/conduct business that requires separation but not total seclusion.

- **Individuality:** Personalization: the movement to the office and from it would maintain more significant meaning to the doctor. If he could add amenities which doctors personalize, this would be a memory.

- **Awards:** Awards, diplomas, certificates, bond objects, trophies, etc.

- **Lamp:** Lamp
**Doctor's Offices / Examination RM's**

- **Physiological:**
  - The need for variation in sensory stimuli is important. The doctor needs to be able to move away from the routine.
  - The transitional space should be representative of A) Private \( \rightarrow \) B) Semi-Public.
  - Safety: The transition should be barrier-free since it is between yes, no steps possible. Slight incline if deemed necessary.

- **Psychological:**
  - Privacy — personalization — status: all these are relevant issues in the transition to the doctor's office. To be able to feel like this area belongs to him! An area where he can place personal effects — photos, prized objects, etc.
  - Emotional release: The transition to this area should evoke a change in state of mind — as far as possible — divisions, unique elements, quality spatial effects that pull the mind away for a brief moment.
  - Image: A strong statement about the doctor's professional ability — his character — personality should be reflected in the area approaching the office itself.

- **Functional:**
  - The doctor frequently circulates between these two areas. Trying to base decision-making in business with diagnosing patients' illnesses.
  - Efficiency: The doctor should be able to flow between A and B comfortably, few obstructions.

---
- Functional:
  - The doctor needs to be able to casually walk with a patient to this area - this area is used for serious matters and private/formal interaction with the patient.
  - Efficiency is not imp. the functional priority is that this transition to the conference rm and the rm itself be conducive to allowing emotions.
  - Zoning: the movement from the doctor's office area to conference could possibly be adjacent vs. across the work zone.

- Psychological:
  - Emotional release - a significant factor to incorporate - the corridor should allow patients minutes to wander/gaze/adjustment time.

- Anthropometric:
  - The conference rm should be able to accommodate 4-6 people. The accessible corridor should also fit a small group.
  - Age - the elderly are going to be conformed w/ a majority in this area. The transition should be easily negotiated/safe.
**Doctor's Offices / Reception**

- **Psychological:**
  - Privacy - the doctor needs moments away.
  - Authority - he must maintain control over the entire office, not the office running him. From his office he needs separation - closed door if he is in the hallway. 90% of the day there is little need for anyone to barge in on him.

- **Functional:**
  - the doctor's need to have limited physical connection to reception area.
  - doctors → nursing staff → reception, whatever contact there is is filtered through the nurse on patient matters.
  - There are numerous operations which involve the business end of the operation as well as communication with specialists and hospitals.
  - Receptionist/Secretary need access to the doctor for various decisions - a quick trip down the hall across the work field means time away from the front desk.
  - A note/quiz to the nurse or an interoffice phone call seems appropriate.
  - Flexibility in procedure for emergency problems.
64  DOCTOR'S OFFICE / PARKING / SERVICE ENTRY

- Physiological:
  - the transition should be easily maintained for winter cold
  - the clinical walk may be developed to allow visual variety on approach.

- Psychological:
  - if the doctor maintains a separate entry from the main entry - he will be able to keep a tight schedule - allow patients to fill up in the waiting rm - he wont annoy them by making them feel like they have been waiting for he and the doctor hasn't even been in the office seeing patients - he can sneak in.
  - a distance should be kept away from the service entry otherwise the space will be cheapened by hierarchy of activity.

- Functional:
  - convenience - if the rear service entry is in close proximity to the doctor's office, he could quickly drop off personal belongings - change jackets etc - before entering work zone.
  - increased efficiency
DOCTOR'S OFFICES/CLUSTER
38, 48, 54, 60, 72.
STAFF LOUNGE / NURSES STATION

- Physiological:
  - comfort: the nurses station is generally a stand-up operation, typing, the move to the lounge is for a brief moment of relaxation.
  - sensory stimulus: the nursing staff may need a moment throughout the day to get away from the illness and prototrope signs and smells that may confront them.

- Psychological:
  - status: the nurses need the feeling of equality — the lounge is a move to an area inside the office where everyone is equal — to a degree.
  - calming: the transition to this area may be utilized for tension/anxiety release.
  - interaction: other than medical talk.

- Functional:
  - the activities in each of these areas are in sharp contrast: the relationship is one of change of pace rather than integral as far as efficiency is concerned.
  - circulation: there is no real need for these two spaces to be anything but indirect.
  - key way point: not all the way committed to relaxing.
RECEPTION/NURSES STATION

Physiological:
- This is probably the most heavily trafficked area in the office—both patients and staff function in this area. Any negative feedback must be provided to keep tension/frustration/confusion levels down.
- Volume as well as width for release.
- Privacy for various activities that need to occur along the space might promote easier movements.

Psychological:
- Interaction—many decisions/communications occur in the space. The corridor/areas are for quiet interaction/staff. There not time to remove themselves to an office or conference.
- Territoriality—strong boundaries necessary. The corridor space between is neutral zone.
- Image—full of life, energy; examine stimulating.
- White noise—wear some background music.

Functional:
- The interaction between these spaces is like hub to hub.
- Each area is involved in a vital function of the office. The reception area is handling the business interactions with the patient while the nurses station is the center of physical examination and treatment.
- There must be a strong fusion of activity in order for these centers to work efficiently and harmoniously.
- Too close or too far would result in chaos—a proper blend should be sought.
- The patient might not even come in contact with the nurses.
**Nurses Station / Examination Suite**

- **Physiological:**
  - Visual access is imp. for communication purposes.
  - Corridor as to patients held in examination rm.
  - Safety - the exam corridor must be on the same level as nurses station due to "preoccupied" movement.

- **Psychological:**
  - The patients need to feel that their privacy is going to be maintained, which becomes an imp. factor when locating openings to exam rns.
  - Image - this area is scrutinized by the patients as they enter the exam rm.; a professional appearance is desired. - Friendly - authoritative.
  - Habits - this transition becomes very habitual for the nursing staff. - Variety & avoidance of monotony is a factor.
  - Interaction - the doctors & nursing staff have brief chats in this area. - Space should be provided.

- **Functional:**
  - This relationship is of extreme imp. the nursing staff prepares shots, medications, etc. from the station and carries this to the respective examining rm.
  - Circulation - free unobstructed.
  - Order/efficiency - these spaces require a high degree of efficient, ordered movement between.
  - Heavy trafficked areas.
NURSES STATION / TREATMENT / SURGERY

- Physiological:
  - The treatment/surgery room is the most technical of all the areas in the office. The nurses station is the major organizing 'technical' hub of the office — the adjoining corridor should allow this technical link to be felt in regards to sensory inputs — a difference from the typical exam room.

- Psychological:
  - These spaces being the most technical when linked should carry that psychological connection. Tech → Tech. If this is maintained, the staff's mental attitude will alter when approaching this connection.

- Functional:
  - In relation to the examination suite area, this treatment/surgery room should be the most direct with the nurses station.
  - Treatments are time consuming for the nurse, and are usually done during office hours when the doctor is not present — that means the nurse has a lot of control over the area — its organization/efficiency.
  - Flexibility since the treatment room doubles as a small surgery room, the transition to the OR must also be flexible to handle the rapid actions of surgery/supplies/surgery.
Functional:
- The primary reason the nurse would be using this space is for patient education. Explaining to patients charts, diagrams, etc., their problem and trying to explain the importance of diet, scheduled exercise to a diabetic along with the new type of insulin injections.
- The relationship to the nurses station is relevant because this is the nurses base of operation.
- Efficiency is not an important factor in this situation. Proximity is not needed.

Psychological:
- The patient in this space needs privacy the access corridor should not echo this.
- Since the patient is in a state of unknowing the transition should be of a nature they can identify with. What might convey this identity?
  - Known objects
  - Views of the surrounding environment
  - Simple arrangement of forms/figures to which they are accustomed.

Physiological:
- Visual control of the area is not quite as important for the exam suite.
- Comfort — movement to this room be physically inviting/friendly. The patient is probably not at ease.
NURSES STATION / STORAGE / SUPPLY

- Physiological
- Safety — no doors to the supply rm
- because of the heavy traffic
- the link in spaces should be sterile,
dirty, maintenance (factor)

- Functional:
- the nurses station needs the most efficient
direct relationship to the supply rm, above
all other connections the supply rm might have.
- the nurse takes samples/medications from
supply, prepares them @ the station, then carries them to the exam room
for administering.
- organization / efficiency is premium
in both areas.
- possibly develop storage area into
divisions — bulk, samples, supply.
**Staff Lounge / Staff Toilet**

- **Physiological**:
  - Hygienic - freshen up while taking a break during the daily schedule.

- **Psychologically**:
  - If these spaces are integral someone may feel uncomfortable going in or exiting the toilet if other staff members are present in the room.
  - There needs to be a definite separation of space.
  - Privacy is important.
  - Not in a dead end hall.
  - Preferably separate from office functions that way a person doesn't have to commit themselves to walking down the hall as visibly.

- **Functional**:
  - The relationship between these two spaces can be looked at as complementary to each other functionally.
  - Efficient access to toilet from other work areas in office.
Physiological:
- The need for refreshing visual stimuli from the work zone is important to staff comfort and long-term efficiency. The transition zone could be an abrupt change in the environment.
- The author's qualities should be an expansion from the tight fit of the work zone to the possibly inefficient, overused, or not used relaxation zone.

Psychological:
- There should be a marked change in the staff's people as they transition one zone to another.
- One cannot determine whether this is to be a build-up or build-down experience. It is the changing experience that is the goal.
- The staff consists of a broad range of ages. The transition cannot conflict with this section's appreciation of environment.

The activities in the exam room are completely unorganized and inefficient. The movement of staff and patients is similar. The staff lounge is a distinctively different area.

Zoning:
- The exam area is a tight unit of efficient, controlled movement.
- The lounge should be far enough away to promote a unique atmosphere apart from the work zone.
- Accessibility to the lounge from the exam area should be indirect, visually secluded. The patients shouldn't see a staff member making coffee at the desk while they have been waiting 30 min in the warm...
Staff Lounge / Conference / Educational FM.

Physical:
- The anthropometric fit of each space is in sharp contrast: intimate vs. semi-public.
- The change in need should be transitional for the patient exiting the conf/and the staff should zip back into the work zone.
- Comfort - the movement physically between these spaces should resemble the comfort level away with intimate vs. semi-public.

Psychological:
- Presence - the mental attitude of the staff has a strong effect on their appreciation of the preceding space. If they have been involved in tense emotional conferences & could be most annoying/disturbing to be abruptly confronted w/the lounge atmosphere, the adj. space relationship is different.

- A calming view into the natural surrounding after leaving the conf area seems appropriate, not the waiting/sec/work exam.

Functional:
- The relation between these spaces in activity is limited to similar changes of atmosphere from the general work area.
- Circulation - the staff could either move from a to b thru c or direct.

Zoning:
- Adjacent
- Indirect
- Indirect

If the location was adjacent the conference rm could double as an increase volume area for lounge for certain activities.
- Office parties, large meetings, etc.
# Physiological:
- Hazards - the external portion of this relationship must be easily maintained in adverse weather conditions - indoor/protected.
- Sense of stimulus - even though it is the service entry this doesn't mean the visual/sensory quality of the transitional space need be bland! daily use influences the perception of the total.
- Physically handicapped would appreciate the main entry - this entry could utilize steps and could mean a short walk if necessary.

# Psychological:
- Image - the staff need to feel as though they are important also - not just the patients. the stylistic elements/the detail/the quality of the experience of entry for staff should be carefully studied.
- Interaction - walking to work, etc. (after lunch, etc.) with fellow staff can be an important interaction. the space/area can be used as the core an area should accommodate group process needs.
- Hauser - this short experience is one that becomes a constant daily experience - habits are formed as to what is noticed by the person. care should be taken to make this meaningful - a good feeling when leaving or coming.

- Functional:
  - It would be a complementary union of activities if the staff area of parking had an access route to office other than the main entry.
  - Possibly same as service entry. this would allow a small core/ward area to be adj the large and would make for a clean transition into the functioning activities of the office.
Physiological:
- Visual, physical access are important
- Height of the cabinets is uncomfortable
- This can be a very bland part of the receptionist's daily visual diet
- An innovative approach to changing this might improve enjoyment of the workplace
- This could improve productivity and efficiency

Psychological:
- Habits — the receptionist develops her own personal way of doing things
- This provides some allowance for new ways of doing things
- Personalization — everyone likes to adjust things to fit themselves
- Ultra-stimulus — receptionist knows exactly where "K" for "Kline" is in her mind, she has already located it

Functional:
- The relationship is an integral part of the office process
- When a patient is scheduled for an appointment, the chart is placed in the general filing and placed in the current working bin
- The efficiency of this operation is vital to office flow
- Proximity to each other is essential, underscoped similar to a kitchen work triangle
18. RECEPTION/INSURANCE/SECRETARY

- Physiological
  - Close fit - everything should be located within arm's reach.
  - Comfortable - many hrs in one location.
  - Acoustic separation from normal office noise, too much distraction.

- Psychological
  - Since this relationship should be in close proximity but yet non-obtrusive, there should be some type of barrier to keep the secretary from feeling she is in the flow of office operation.
  - Isolation - because of the tediousness of this type of work - brief moments of visual release might improve attitude/behavior - stress level of this function.

- Functional
  - this relationship is vital to the record keeping of the office.
  - There is need for an area set aside for a stenographer/medical secretary to type up diagnoses on charts, billing, insurance.
  - Being such a key function this space must be orderly/accessible by doctors, nurses & receptionist.
  - Efficiency - proximity to charts for refilling.
Functional
- the major relationship between these phases is on the patient's exit of examination area - they need to pass by the reception desk to discuss financial matters.
- this activity requires small counter space and isolation away from flow of circulation.
- it may be a sit down situation, e.g., the patient pays by take your money and get along.
- place to set purse & other personal items while making transactions.

Psychological
- privacy - this is a very telling area of interaction and needs to be handled wisely. If the space is designed in such a way as to enable the patient to allow their private time to resolve their financial obligations then it may mean something to them later on.
- authority - the matter of formality is human, and similar to taking a loan from the bank, an agreement must be met - the receptionist must control the situation - the arrangement may acknowledge this control.
- interaction - one to one / eye to eye level
- personal space
Reception / Conference / Education

**Psychological**
- Privacy is critical - even in the transition back to reality - at the Rec. area.
- In the case where the room was used for friendly communication / education with the doctor, the exiting from the atmosphere should be maintained in the environ.
- The zone between Rec. & Conf. should contain an image which is:
  - from public
  - from semi-public
  - to private
  - Rec. / Waiting
  - Semi-private / Waiting

- The relationship between the spaces is similar to the exam. / rec. in that, these patients probably will see money for the visit.
- The receptionist may call the patient into the conf. rm. to assist the doctor.
- The educational materials may be administered by the medical secretary or nurse.
- Controlled acoustic / visual
- Elderly stage - most frequent users (and)
  - for severe illness
- Young adult - educational
- The return from this area is most sobering (back to the reality of life - the transition in physical movement might be in response to this - anticlimactic.
- Don't just toss them into the waiting rm.

- Function

- Semi-public threshold
- Semi-private boundary
- Public waiting
- Semi-public waiting rm
113 RECEPTION/STORAGE & SUPPLY

- Physiological
  - Some of the bulk supplies are heavy, the female cleaner may have difficulty transporting this, a cant at some point, this might be a more efficient system altogether.

- Functional
  - The receptionist/secretary should have easy access to business supplies, old files, etc.
  - Indirect circulation is sufficient.
  - Although reception area & nursing staff need ready access, the need for control of patients passing by this area is critical—visual/physical not a frequently trafficked pattern of movement.
Reception/Staff Lounge

- Physiological
  - The movement to the lounge might be for a break in daily routine.
  - Hypothesis: change in visual/audible/tactile stimulus is most appropriate—a complete break from the reception area.
  - Comfort — relaxation — an area to stretch out, put the feet up and interact w/ each other.

- Psychological
  - The transition from reception area to this space is looked forward to at scheduled and sporadic times throughout the day.
  - Active / Authoritative — this space might be set up where everyone could interact on the same friendly level.
  - Doctor > Nurse > Receptionist > Secretary
  - Personalization — even though each work area has personal touches, the receptionist/secretary might have their favorite corner/cast lounge place to put the coffee mug — territoriality

- Functional
  - A space for casual interaction between staff.
  - Preparation of lunch / coffee break.
  - General office meetings might take place here.
  - This relationship can be indirect, both physical, visual, audible.
  - The receptionist and secretary might need to be able to watch the front desk for the first appointments or on a slow day.
  - A space to be in out of the rigid flow of the office, unique

Unique control/neutral
**Waiting RM / Examination Suite**

- **Physiological**
  - Visual access to space prior to actual movement may reduce anxiety.
  - Distance from waiting rm should be kept in min. for elderly/handicap.
  - The actual interface must be improved over existing solid door opened by nurse — admitted to exam.

- **Psychological**
  - The time has finally come, the patient is asked to come to the exam rm — anxious, the patient "feels" follows obvious.
  - Transition — they are moving from one place to another, to measure, to comfort.
  - People want to feel like they are getting very personal attention, not just a service.
  - The transition from space to space must be carefully planned — people have a need to identify with each space they are in — if only for a moment.

- **Functional**
  - Acoustic visual separation are necessary for privacy/security of patients.
  - Efficient movement for staff to keep pace full process — bringing them in from waiting rm—prepared and ready for doctor. While he is finishing with last patient — he may be waiting 3 exam rms @ once.
Waiting Room / Conference Room

Physiological:
- The movement to this space should be felt as if it were coming away from the normal hectic office space.
- The stimulus picked up by the patient in this space should feel separate / detached from the sensory input from the waiting / exam interface.
- Tactile, visual, audible separation from routine circulation system.
- Comfort - relaxation must be the images and sensations - not schedule, appointment.

Psychological:
- The need for a private secluded space for the patient to realize the significance of a serious illness - even death.
- The movement from the waiting room to the conference room may be used as an intermediate stage where the doctor meets the patient on a less intimidating level - tentatively - concerned.
- The interface may need to be expressive of that stage / action.

- Habit - this may be a movement not expected in a typical office visit - capitalize on this - strike an impressive professional image - sell the doctor before telling the patient the diagnosis or treating the patient.
- Interaction - strong plus in this space.
- Breakdown this interface in the waiting area.
Waiting RM / Reception

- Physical
  - strong visible & audible interface
  - control area to discuss private matters w/patient
  - eye-to-eye level interaction between patient & receptionist

- Functional
  - reception needs to be located between entrance/waiting room and along the path of the return from examination area.
  - it is a control station as much as a formal greeting area.

- Psychological
  - the receptionist is the patient's first interaction; over the phone and in the office, there is a need for reciprocation, acceptance, assurance.
  - isolation may be a desire for some patients wanting contact only when they desire it.
  - habit — people who have been to doctors' offices know the system, they might expect this, it may make them uncomfortable if this office is different, very sequential.

- Image — the first impressions of the doctor and his ability are forming while the patient is viewing into the reception area. These should be fitted w/strong organization, clean. The counter where they lean should be quality material — tactile.
Environmental:
- Provide enclosed/covered waiting areas from parking to waiting/registration.
- Consideration for a drive-thru drop-off should be evaluated—overall.

Functional:
- This piece of the sequence becomes the let in the sequence and last?
- What are the physical sensory stimuli to be captured to set the tone of what is to follow for the patient?
- Major link from "personal space" to "general public space"?

The activity of successfully navigating this transition is aided by a well-developed pattern of movement.

Psychological:
- This transition is full of building tension for the patient—mental distraction which allows release of emotion/thought might lead up to the entrance sequence—encourage that the entrance vestibule is then the waiting area would be a transition into a new dimension.

- Calming or any stimulating potentially reverse notion.
**WAITING RM / PUBLIC TOILET**

- Functional
  - Public toilet serves both waiting rm
  - Decisions and patients in exam
  - Acoustic separation from waiting as
  - Wall or door would be complimentary
  - Location inside of technical area of
  - Office
  - Must provide for handicap elderly
  - Adjacent to lab area
  - Control more controlled by receptionist

- Psychological
  - Need for privacy important
  - Habit not subconscious
  - Image impressions toward
  - Privacy, cleanliness, appearance
  - Adjust physical appearance

- Proposal
  - Possible separate toilet facility
  - In entrance area
  - Circulation adjusted so easy
  - Access to toilet w/ expansive
  - Effort - asking permission etc.

- Physiological
  - Men - mothers/children - conflict!
  - Very important, annoying
  - Elderly person vs. bladder traffic - conflict!
  - towel, colony cause increased
  - Need: relief provided w/o much
  - Social inconveniences - eating where?
Phase three is the study of the internal components of each major space for the medical office building. They are as follows: reception, waiting room, nurses station, conference room, staff lounge, doctors' offices, and examination suite. Again referring to the 'needs' list established in phase one, each space is evaluated.

**GRAPHIC INTERPRETATION**

The upper-central square represents phase three of this design method. The heavy waving radiating lines depict the internal issues effecting the eventual form of the space. The lines converge towards the central square which is expressive of the design process maintaining a focusing nature rather, than a linear progression from the programmatic stage to the final solution. The undulating segment of the concentric ring is again being altered according to the internal demands of the space in question.
- **Functional needs:**
  - The receptionist is expected to control the incoming flow of patients, handle phone calls/appointments, and receive payments from patients as they leave.
  - The work zone of the receptionist must be efficient/ordered. To accomplish this, it must be designed to fit the need.

- **Psychological:**
  - Interaction - to promote better interaction with each patient, the receptionist might be placed at eye level with the patients.
  - Related - close the glass doors for acoustic privacy, and the patients in the waiting room are really out of sight.
  - Design the reception area to provide the acoustic privacy needed by the receptionist without causing the patients to feel shut off.

- **What is the exact reason for needing acoustic privacy?**
  - Documentation, test, private medical examination.

- **Conclusion:**
  - Acoustic privacy is required for patient safety and satisfaction.
Reception Desk / Reception

- Spatial needs / possible amenities

- Capacity to cause the interaction to be on a more friendly basis, the barrier needs to be eliminated or at least diffused.

- Dimensional

- Access - the receptionist must be able to pass freely from waiting room zone to the internal areas of the reception room - e.g., filing/Charts/patient.

- Physical/psych barrier!
to allow a portion of the reception area to become strongly associated with the waiting rm w/o the sono-tone. behavior there must be certain controls, i.e. what keeps little children from wandering into the reception area?

- cause the rec area to appear as though it were a part of the waiting rm. space when it physically is not.

- when we see a small chain link fence around a grassy area the interpretation is "don't walk on the grass it wouldn't be proper." The small fence is really not physical but ethical.

- ethical barrier - does not eliminate possible movement it just cause a person to feel uncomfortable if they pass beyond a "neutral zone."
MEDICAL SECRETARY DESK / RECEPTION (a)

Psychological:
- The working space of the medical secretary could move in one of two ways - towards complementing the orderly, efficient working procedures of the sec. or contrasting.
- Visual noise could be most distracting and bring productivity level down. Alternatively, the view could provide needed release from tedious tasks.
- Orientation - if a solid wall and transparent wall are provided, the secretary can orient her desk in many combinations.

Functional:
- The activity in this area of reception is isolated from patient care. It is probably the only space in the office that is not directly related to daily patient flow.
- This work can be done on an off hour and does not require close integration/supervision by the staff.
- The actual work done in this area is heavily repetitious, but yet vital to the entire office operational machine.
- Flexibility - it would be desirable to provide ability to move loose furniture around in the space to adjust for personal preferences; modern equip i.e. computers/word processors.
MEDICAL SECRETARY DESK / RECEPTION

- Dimensional needs:

- To provide the necessary isolation from regular office flow while maintaining privacy to reception components - files, etc.

- A unique separation must be developed.

- Acoustic separation both ways.

- Isolation should not cause contamination.

- Frequent interaction between receptionist and secretary is imp while maintaining undisturbed working parameters for both. Within reason side amounts of it.
- Functional:
  - the internal relationship of this interface to the reception area as a whole is one of convenience, privacy;
  - each component must work in union with the others; otherwise, the reception area would turn into a separate and inefficient unpleasant in terms of casual interaction.

- Patient Payment Area

- Reception

- 3D rendering of reception area with detailed annotations and symbols.
• The filing is the heart of the patient history of the medical office. Each patient's file is documented to the nth degree of exactly what has been done by their doctor to maintain their physical health.

• Security - due to the importance of these charts, they are secured in fireproof filing cabinets, and as an extra precaution might even be locked up at night to safeguard against theft.

• To keep all current accounts on file, 6'0" x 1'6" x 6'0"
cabinets must be provided.

• Because of the integral role in the daily office routine, these files play - they must be strategically located for access by 

[Diagram of filing office layout with labels such as receptionist, legal secretary, rolling file door, and more.]
SEATING ARRANGEMENT / Waiting rm.

* Psychological:  
  - the proximity of seating is crucial  
  - to the comfort of particular groups  
  - of society, factors involved are:  
    - Fixed feature space  
    - Semi-fixed feature space  
    - Informal space  
      - Intimate distance: 0-12"  
      - Personal distance: 12"-24"  
      - Social distance: 24"-36"  
      - Public distance: 36"-72"  

* Functional:  
  - Seating must accommodate at least 10 persons min - 15 max.  
  - the type of seating must accommodate majority, middle-aged, elderly,  
    young mothers w/children, also comprise a fair % of patient flow.  
  - Flexibility - if the chairs could be  
    adjusted to fit the circumstance  
    it would be a more comfortable wait.  
  
Adj: For: view outside, inside, court,  
- group small family  
- friendly conversation  
- privacy  
- move in or out of the sun.  

- to allow patients the privacy they desire or  
the interaction is going to  
make the waiting room a  
successful space.
SEATING ARRANGEMENT/WAITING RM.

- Seating needs:
  - 2 small families @ once 6-7 persons
  - 3-4 separate elderly people
  - possibly interacting
  - 2-3 young adults
    - teenager
    - young married couple
    - mother w/baby

- Quick movement thru office - possibly slower
- Waiting to be picked-up by relative.
Cultural fit: the people of the region are generally an easy-going, polite, slower-paced society; unlike, say, Cheyenne. This fact affects the layout of the waiting area in relation to the exam entry. The patients will be content to wait anywhere in the room, knowing when it is their turn they will be notified.

If the exam entry uses a door, visual orientation will be easier if they become comfortable with the idea of transitioning to this next space.
NURSES STATION / EQUIPMENT / ACTIVITY

- Functional:
  - The nurses station itself is composed of lab equipment; i.e., bloodwork, etc.; refrigeration for medicines; sterilization unit; storage area for cleaning preparations; storage cabinet space for storage of most commonly used supplies: microscope & specimen prep. areas; communication area; (internal/optional); sink &/or space not fixed.
  - 3-4 people can be using this area simultaneously; ample room must be provided to work without congestion.
  - The doctor will review a chart in this area; communicate with specialists; and record dictation to be typed on the patient's chart at later time by Medical Secretary.

- U-shape
  - Right no flow thru
  - Left no flow thru
  - Less obstructed flow by
  - Flow around
  - If desired item is on opposite side difficult to incorporate pass thru as for urine sample.
  - Tight on desk area.
NURSES STATION / VISUAL CONTROL / EXAM AREA

- Functional.
  - The nursing staff must be aggressive and efficient in order to keep up with the doctor during peak periods of the day.
  - Most offices have developed a signaling system—by this way the doctor can tell the nurse when she is needed in the exam area, and the general reason so that she can move from the nurses station, somewhat prepared.

  - visual control
  - exam suite

  - vision is blocked—nurse must step out into the corridor to check.

  - floor plan above the door indicates patient need requested by doctor or nurse.
NURSES STATION / ACCESS/ FLOW

- All have plenty of counter space but where does the doctor sit for dictation?
- Stools are most appropriate seating items.
- Position out of the flow of traffic.

SECTION 4 CONTROL ISLAND
Nurses Station/ Lab/ Toilet

- Functional:
  - The patient toilet must be adjacent to the lab area in the nurses station in order for the patient to place their urine sample in a pass-thru area where the attending nurse can easily analyze with the lab equipment.
  - This is an integral part of an examination in many instances and needs to be as efficient as possible.

- Psychological:
  - A certain level of privacy is needed for the patient—the whole procedure is awkward enough—so the arrangement of the space can alleviate some of the patient's discomfort.
  - If they never connect the interior wall of the toilet bay (or the pass-thru to the lab) to a space they associate with being the interior of the nurses station, they will be a little less distressed about leaving a specimen on a counter.
Conference Rm: Furniture & arrangement

Functional:
- Since the room serves multiple purposes, the fixed features and moveable furniture need to be flexible to accommodate the health education activities, the informal interview w/ the doctor, the highly emotional setting of the doctor discussing good or bad diagnoses w/ the patients.

- Components of the conf. rm are:
  - Page cabinets for storage of educational material—handouts, films, etc.
  - Viewing screen—pull down from ceiling.
  - Medium size conf. table w/ chairs
  - A few lounge chairs (comfortable), possibly a sofa.
  - Task based area where a small presentation can be laid out.
  - Visual access to the audience—auditorium release—contemplation.

Psychological:
- The interior atmosphere of this space should be conducive to deep contemplation w/ few distractions of any kind.
- Serious matters are being discussed and thought, quietness would tend to add to the anxiety level.
- Interaction—this conf. rm, above all others in the office, should invite strong human interaction. A space where the patient and staff are communicating on a one to one level.
**Staff Lounge / Entry Locatios**

- Functional:
  - Circulation - in order for the lounge to become an integral part of the office routine, it must be located off of various working corridors. These corridors are access routes to the lounge from work stations.
  - The activity in the space seems to demand locating the lounge on the lobby periphery.
  - The entrance to the lounge could be consolidated before actually entering the lounge area - allowing more room for the lounge to develop into a pleasing milieu of activities.

- For the lounge to be a successful space, it must maintain a balance in access, relaxing views, working space for refreshment preparation; comfortable seating - (private / interaction).
staff lounge/ view

- Functional — the need to assure incoming patients, pulling into the parking area, is important, so that they can return to their desks when necessary after lunch, etc.

- Psychological: the change of environment is helpful throughout the day. If the staff can relax and enjoy a pleasant space, views outside to get a feel for the time of day, orient themselves to the weather conditions, etc. They will return to their workstations somewhat refreshed.

access to the external environment would be a stronger set, than just allowing visual contact.
STAFF LOUNGE Furniture Arrangement

- **Furniture** Need:
  - Table w/ six chairs
  - Lounge chairs w/ foot rests (3-4)
  - Work station: Kitchenette
    - Refrigerator
    - Sink
    - Microwave oven
  - Coffee area & counter
  - Full length couch — quick nap!
  — resting area.

- **Psychological**:
  - The arrangement should accommodate mixed use — private / semi-private (lounge chair) and full staff relaxing (round table)
  - Similar interaction density while maintaining more personal space.
  - Pleasant interaction distance — loosen up allow a little more personal space.
  - Very limited use area
  - Allow area more flexible in use.

Promotes better interaction possibilities among staff members.
DOCTOR'S OFFICE / Entry

- Psychological:
  - the entry into the office itself can have various effects on the visitor. This is a fixed feature item — the furniture can alter but not the entry.
  - the relationship of the entry to the internal components of the office can be formal, casual, friendly, intimate (personal) i.e. an adjoining suite.

- quite intimidating

- casual
- angle in desk, room
- friendly relaxed atmosphere
**Doctor's Office/Desk and Credenza**

- **Functional:**
  - The desk is the doctor's major working space in the office. The medical doctor has a well-defined area in the office. At times, the doctor does research to assist him in a diagnosis; this is also done in his office. A small library for books and journals would be valuable.

- **Psychological:**
  - The doctor's office is equal to the president of a major corporation. The image evoked by the space should provide a sense of authority, professionalism, friendly concern (not too aloofness).
  - The office should provide an area for the doctor to add his personal dimensions.
  - Privacy - the arrangement of this furniture should denote how the room must be designed to give the doctor the amount of privacy he needs.
  - Association of knowledge/library
    - With the balcony/library or a background to the doctor when viewed by a patient.
DOCTOR'S OFFICE/SEATING

- Functional:
  - In order to confer w/staff members
    privately and deal w/business men,
    the doctor needs a number of chairs
    in his office.
  - The amount of floor space provided
    around these chairs might be an indicator
    of the importance placed on a visit by
    whoever.
**DOCTOR'S OFFICE / Private Waiting**

- Functional:
  - the location of the private waiting area in relation to the entry to the office is dependent on the internal layout of the office.
  - the major reason for the space is to allow someone to wait for the doctor but not inside of his office when he is not there.
  - this visual access to the seating would allow the waiting person the opportunity to judge whether the doctor's present visitor is about through.
EXAMINATION RM's / Furniture / Equipment

- Functional:
  - The examination rm. is the epitome of efficiency in the office. The location of counters, lighting, and technical equip. must fit the doctor's need. If the doctor is right-handed, the whole space is adjusted to complement this factor.
  - The component parts of an examination rm. are as follows:
    - Examination table
    - Small service sink
    - Counter space for layout of tools needed for a procedure.
    - Waste disposal
    - Cabinets - storage of bandages and other typical items
    - Chair for patient
    - Rolling stool for doctor or nurse.
  - The rm. must accommodate the elderly, handicapped, or young children. The rm. must work interchangedly; they cannot be designed for one particular group of society.

- Psychological:
  - The examination rm. can be an unnerveing situation for the patient. Worried about their particular problem; questioning of the doctor's diagnosis; left off disrobed in a foreign space; all these tend to make the patient very uncomfortable.
  - The examining rm. environment should be designed to alleviate this tension, anxiety. Although a clearly sterile atmosphere is real it does not have to feel anti-septic to the patient.
• Psychological content:

  - Image: The exam room should invoke a sense of calm acceptance of the situation, but the room should also complement the level of interaction with the staff. If the room maintains a pleasant atmosphere, the patient is more likely to feel comfortable in communicating with the staff in an easier manner.

  - Privacy: The patient may feel that they are displaying themselves to the world. Staff moving in and out, etc., may affect the patient's privacy.

  - Combination:谨慎.

  - Stools: as needed.

• Exam room:

  - Lack of privacy: If the patient (while waiting in the exam room) has plenty of sensory stimuli other than concentrating on them, they will be more apt to relax.

  - When the patient is lying on the exam table, if they are not comfortable, they may be distracted, the slightest amount from the procedure being performed on them, they will be less tense.
EXAMINATION RM/ Furniture arrangement

- Needed spatial relationship of components:
  - counter (low) on which the doctor can write information or chart/prescriptions
  - couch for patient
  - privacy of patient maintained
  - exam table
  - wall-mounted blood pressure unit
  - counter within reach of exam table
  - access needed to all sides
  - typical exam rm layout
- Functional:
  - The entries to each exam rm should be in fairly close proxemics to each other.
  - The entry sight lines should not be across from each other as in the double-loaded corridor, but rather, staggered.
  - Also dependent on internal rm layout.
  - This could be a problem.

- The individual rm entry might be dealt with similar to privacy walls in toilet rm.

- The location of the entry in the rm - as a working system is also important.

- The task then is to recreate the rm working orientation while providing variety in the "sense of the room" - variations on a theme.

- The doctor's techniques, movements, relationship is quite methodical/habitual. Each rm should maintain similar/identical orientation so that the doctor & staff can work efficiently and spend more time working w/the patient vs. adjusting.
Examination RM. Exam Suite Analysis

* End to End

This alternative has the best potential for creation of variety while maintaining the same basic organization. Entering the room at different locations while keeping the components similar.
Phase four consists of a graphic fusion of phase two and three. This is accomplished by incorporating the diagramatic internal components into the clusters developed in phase two, for each major space. These revised diagramatic clusters are conceptual diagrams which become the basis for the remainder of the design study.

GRAPHIC INTERPRETATION

The upper-right square graphically represents phase four of this study. The fusion of phase two and three is depicted by the internal and external waving radial lines which act on the building form. Still in conceptual form, the building is now illustrated by two adjacent undulating lines, which are manipulated by the issues addressed so far.