

The Geography of the Classroom

by

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B.A., University of Victoria, 1988

A Thesis Submitted in Partial Fulfilment of the
Requirements for the Degree of

MASTER OF ARTS

in the Department of Psychological Foundations in
Education

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to the required standard

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ABSTRACT

Awareness of classroom as space is promoted. Design features of classrooms and classroom layout are examined from an empirical and philosophic base. Various ways of exploring classroom space are presented. A workshop process, a psychological mapping technique, and experiments derived from metaphors are discussed. Participants include two groups; 5 teachers and 5 student-teachers. The generation of an experimental mind-set and sense of possibility are recounted. Implications for those involved in teaching stress utility and pleasure of the process as a teaching strategy.

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Dedication

To all those who gave me support and shelter: my parents, my grandma, Christina, Jane, Debbie & James, Dorion & Leanne, Brian, Papa Mike & Marilyn, and especially Gabriel who is so suspicious of the whole enterprise.

This document is about ways of seeing that classroom space. There are many ways of viewing space within the disciplines of geography, environmental psychology and architecture. How do teachers view space? How aware of the flexibility of space, can teachers use space differently? What possibilities exist for creating desired learning environments?

Space is an elusive "hidden dimension" that prompts behavior and elicits responses. We behave differently in courtyards, cathedrals, crowded elevators and empty lots. The classroom as a space is highly institutionalized. And though there have been numerous studies on the design of other "institutional" settings such as office spaces, shopping spaces, and health care spaces, little attention has been paid to classroom spaces.

Whether school classrooms are designed to encourage "learning" is usually examined from two perspectives: one is the design of the physical environment and the other is the design of the social environment. Specific seating arrangements also have been examined with the intent of reporting on their effectiveness -- often measured by student participation. Experience tells us a lot about how teachers actively manipulate

Orientation

Teachers and students spend a great deal of time in classrooms. The classroom as a setting is a very familiar one. This document is about ways of seeing that classroom space. There are many ways of viewing space within the disciplines of geography, environmental psychology and architecture. How do teachers view space? Once aware of the flexibility of space, can teachers use space differently? What possibilities exist for creating desired learning environments?

Space is an elusive "hidden dimension" that prompts behaviour and colours responses. We behave differently in courtrooms, cathedrals, crowded elevators and empty lots. The classroom as a space is highly institutionalized. And though there have been numerous studies on the design of other "institutional" settings such as office spaces, shopping spaces, and health care spaces, little attention has been paid to classroom spaces.

Whether school classrooms are designed to encourage "learning" is usually examined from inconclusive, and now dated, comparisons of traditional versus open-space school buildings. Specific seating arrangements also have been examined with the intent of reporting on their effectiveness -- often measured by student participation. Experience tells us a lot about how teachers actively manipulate

the layouts of their classrooms: decorating walls, calling for desks to be arranged in a circle for group discussions, pairing desks up for partnerships, moving a disruptive student from one desk to another . . .

This document does not follow the standard format of a research paper. But how do teachers come to make these alterations of the standard room layout? What experiments do teachers conduct with the features of their rooms? What are the possibilities in designing the classroom setting? All these are questions that teachers, those training to be teachers, and those who study the teaching process will hopefully consider. The power and the potential of the classroom environment should not be ignored or underestimated.

This research is largely concerned with teachers' perspectives of their classrooms as "space". Perspectives are presented in this document via illustrations or "maps" of classrooms. This space is both actual, and psychological. It is also a documentation of a process of promoting new views and deeper perceptions. If teachers are encouraged to view classroom environment metaphorically, and alter room layouts, what possibilities are created?

Two groups, five teachers, and five student teachers were subjects in this study. The student teachers participated in a workshop designed to heighten awareness of the classroom space. They each produced a map of a classroom. The teachers were interviewed and asked about how and why their classroom layouts came to be. They also produced maps -- but these were abstract representations on how a classroom

could be seen. Finally, the teachers completed an experiment on redesigning their classroom settings and provided a description of the experiment.

This document does not follow the standard format of educational research. It is a presentation of lived ideas, as well as procedures and results. The reader may participate in the process of "seeing" the classroom setting. Because breaking free of the standard mental view of a classroom is so strong a theme in this work, the reader too is invited to join in. The goals are to heighten awareness of the classroom as a designed space and to promote survey experimentation. (Even if that experimentation is not carried out in the physical realm.)

Each segment is given a thematic title. If the segment provides academic background it may begin and end with a thematic quotation. Segments of a creative nature do not use these quotations. Their purpose is to offer "fuel" for the imagination's journey. Some segments present the map material generated by the subjects. The segments in bold face provide the reader verbatim instructions as received by the participants of the study. Generally, the contents are structured loosely -- and present themes and rationales in a non-linear fashion. Included, are graphic representations of participants' conceptions of classrooms. They are testimonial, rather than explanatory. The final segments provide the background literature that inspired this group-exploration of space and concluding comments and implications.

Research Procedures

Ideas about classroom space were presented and explored in a workshop setting. The workshop involved five student teachers, took place in Prince George, B.C., and lasted approximately 45 minutes.

1) Subjects were requested to sit in a circle on the floor as the objectives of the study were presented.

2) A handout was distributed (as above). Subjects were requested (nonverbally) to survey of the environment and select a space. The group was instructed to again survey the environment and construct a space communally (speaking if they wish). Both experiences generated discussion.

3) Subjects were provided with blank paper and instructed to draw a map of classroom and their location in that room.

4) A handout was distributed. Subjects were requested to provide a brief narrative account of their spaces, experiment and perceptions (changed?) through e-mail or a written response.

Ideas about classroom space were discussed more specifically with five individual practising teachers. The discussions occurred in Nelson, B.C. and lasted approximately 45 minutes each.

1) Subjects were provided with blank paper and asked to draw their room conceptually, as it could appear given a specific theme word.

2) A handout was distributed (as above). Subjects were requested to provide a brief narrative account of their experiment and perceptions (changed?) through e-mail or a written response.

3) Subjects were contacted after the experiment and questioned about the success of the exercise as a means of giving teachers awareness of their classrooms as space.

Purpose of this project: to explore various ways of seeing classroom space.

Goal: to stimulate awareness of classroom spaces.

Postcard

When I write I start with where I am. This is a postcard. This is what you might see. This is the best view, the famous view, the memorable perspective. In a classroom, I do not start with what I am doing or who I am. Where am I? A swift appraisal of atmosphere and relationship -- sunny day, next to Rob.

Figure 1. Lines of a Room

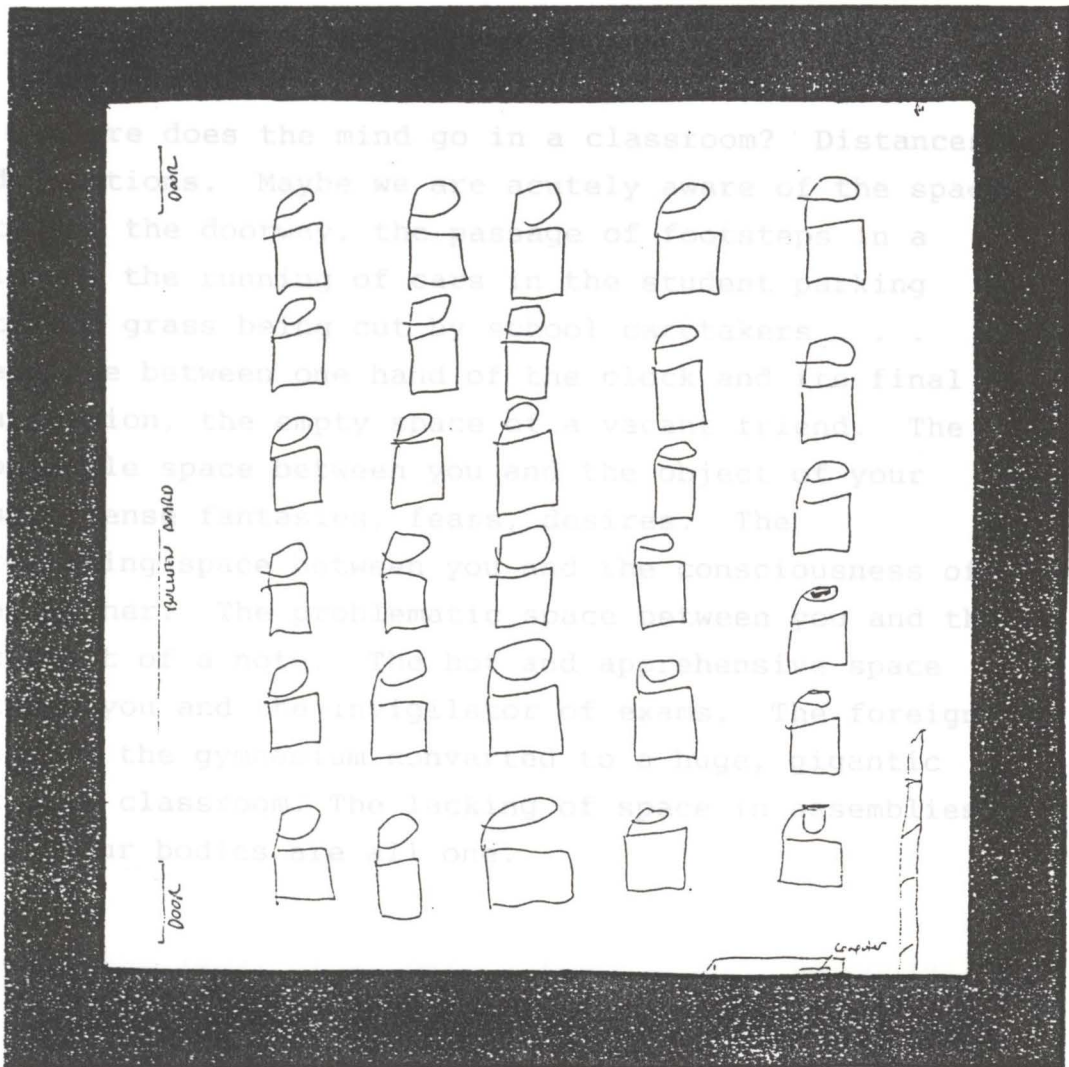


Figure 1. Views of a Room

Physical Spaces

Where does the mind go in a classroom? Distances and locations. Maybe we are acutely aware of the space outside, the doorway, the passage of footsteps in a hallway, the running of cars in the student parking lot, the grass being cut by school caretakers . . . The space between one hand of the clock and its final destination, the empty space of a vacant friend. The impossible space between you and the object of your most intense fantasies, fears, desires. The threatening space between you and the consciousness of the teacher. The problematic space between you and the recipient of a note. The hot and apprehensive space between you and the invigilator of exams. The foreign space of the gymnasium converted to a huge, gigantic box of a classroom. The lacking of space in assemblies where your bodies are all one.

I was interested in the perceptions of student-teachers. Imagining that clearly-defined roles keep an invisible strapper on the use of space, the ambiguous status of student-teachers as learners, "practising" teachers, and teachers-to-be, seemed to place them in many roles and mental positions at once. I wondered how aware they were of the manipulations and

Picture a Classroom

A classroom is a special type of space with which everyone is familiar. Almost everyone in our culture has spent several years in a variety of classrooms and can easily describe what a classroom is -- a room with desks and books and a teacher.

Olson, "Teacher Process"

There is a certain tyranny at the ease with which we picture a classroom. Effortlessly, an image is created. I believe this mental picture, based on familiar experience comes to shape our behaviours and expectations. We know what a classroom is supposed to be -- a learning space. But we may also expect a classroom to be used as a container. Or a conformity-box. Or a display of the teacher's ego, education, ability to control. A janitor told me once he knew the level of success a teacher had: he could tell at the end of the day when the classroom was empty.

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flexibility of their space. Whether that be actively observed or passively felt.

One author, Margaret Olson (1989), examines the mindset of novice (first year) teachers as they struggle with the difficulties of organizing a room physically in order to create a learning space. She writes of the need to clean out and reconfigure an assigned room in order to make it "one's own" felt by these novices, as well as their discomfort in sharing an "already claimed" room. The very natural response of marking territory seems evident. However, Olson probes more deeply and arrives at several insights. She understands these novices in the arranging and hoarding of teacher's resources are strangers in a familiar space:

They are homecomers expecting to find the classrooms to be the familiar, comfortable space that they experienced as a student. However, they are returning in a different role, one they have never experienced before, and they are unprepared for the foreignness of their position in this "familiar territory". (p. 175)

Driven by insecurity, "the first year teacher gathers props to help him or her be seen as a teacher. The teacher's desk can take on paramount significance, symbolizing status as a teacher" (p. 182).

Olson (1989) ends optimistically, feeling that as novices begin to think as a teacher, gaining comfort in that "role" they "begin to see the needs of the students' and make room for them as well" (p. 182).

The room can be a shared learning space. I was curious about classrooms both as territory and as learning space and sought to discuss room ownership and room organization with experienced teachers and student-teachers. Like Olson (1989), I observed a vast difference in perspective in these two groups. It surprised me. The student-teachers knew the stress of teaching in another's room, and in some cases, many other's rooms. It was their sense the room belonged to the established teacher; no one else, not the students. In contrast, a teacher/substitute teacher I spoke with allows the students to assert their own claims on the space. After all, she explained, they've put in more time there. She needs only their respect. Seating plans are ignored, unruly students may move their desk and sit with one friend. (Some students chose to sit with or near her.) The attitude works well: she is always called to sub in "difficult spaces", the foods room, stage, band room and gymnasium where opportunities for unauthorized activity are great and tempting.

The student teachers had not thought about how they would like to organize their own classrooms (either as teachers or students). They did not disturb the classrooms they found themselves in: sitting where they always sat, and teaching where their sponsor teachers had. I received a similar "always this way" impression throughout a school tour. It is difficult to imagine arrangements that are different from those with a proven track record or why they may be necessary. Experienced teachers had observed the "success" of standard arrangements and expressed fears of unproductive time.

So, even teachers who act and think as teachers, may not be creating a learning space that is different from those novices using "the exterior props, the displays, books and curriculum guides as a means of teaching" (Olson, 1989, p. 182). This may not seem so bad. But, at some level, space becomes relationship. I may see classrooms with teachers and students in them as crashsites of many voices, histories and desires. That is one picture. In the pages that follow, other images develop and rooms appear differently than they

typically do.

This document is a result of my research on the space that others see -- architects, urban planners, geographers, artists, philosophers, and psychologists. I discovered the approaches of cartographers, stage-directors and Zen disciples had enormous appeal to me. The space of a classroom seemed enormously exciting and . . . mysterious. I hoped I could entice others in this process. Here I share their views and renewed perspectives.

Briefly: I travelled to Prince George and worked with a group of student teachers there. I put together a brief workshop to heighten spatial awareness and then we discussed that experience and various aspects of room layout. These student-teachers also drew classroom maps. In Nelson, I contacted practising teachers and met with each as individuals. They too, drew maps of their rooms and after exploring metaphoric arrangements space could take on, reconfigured their drawings. Both groups were left with a further task of changing the design of their classrooms.

We only see what we look at.

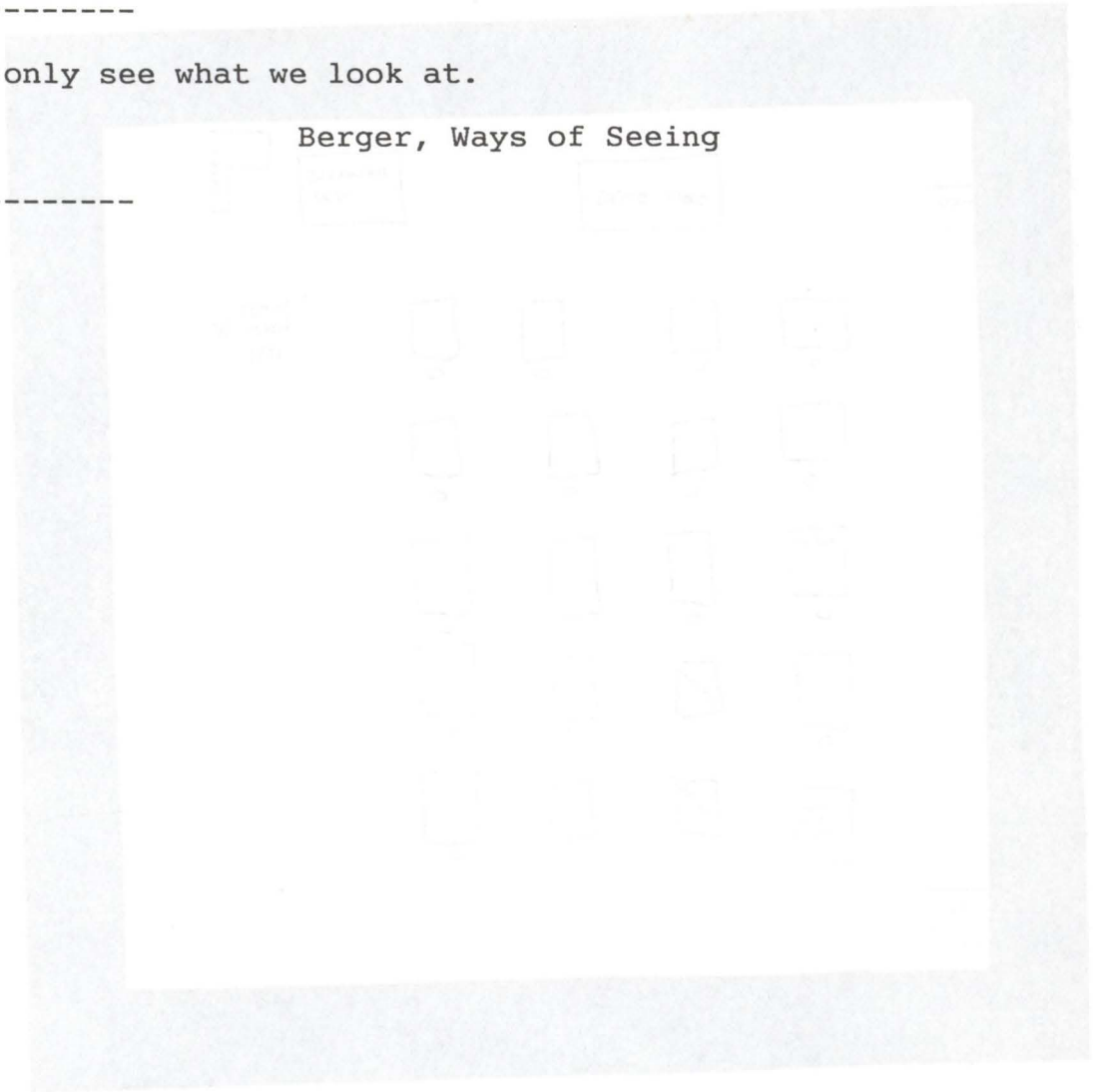


Figure 4 Views of a Room

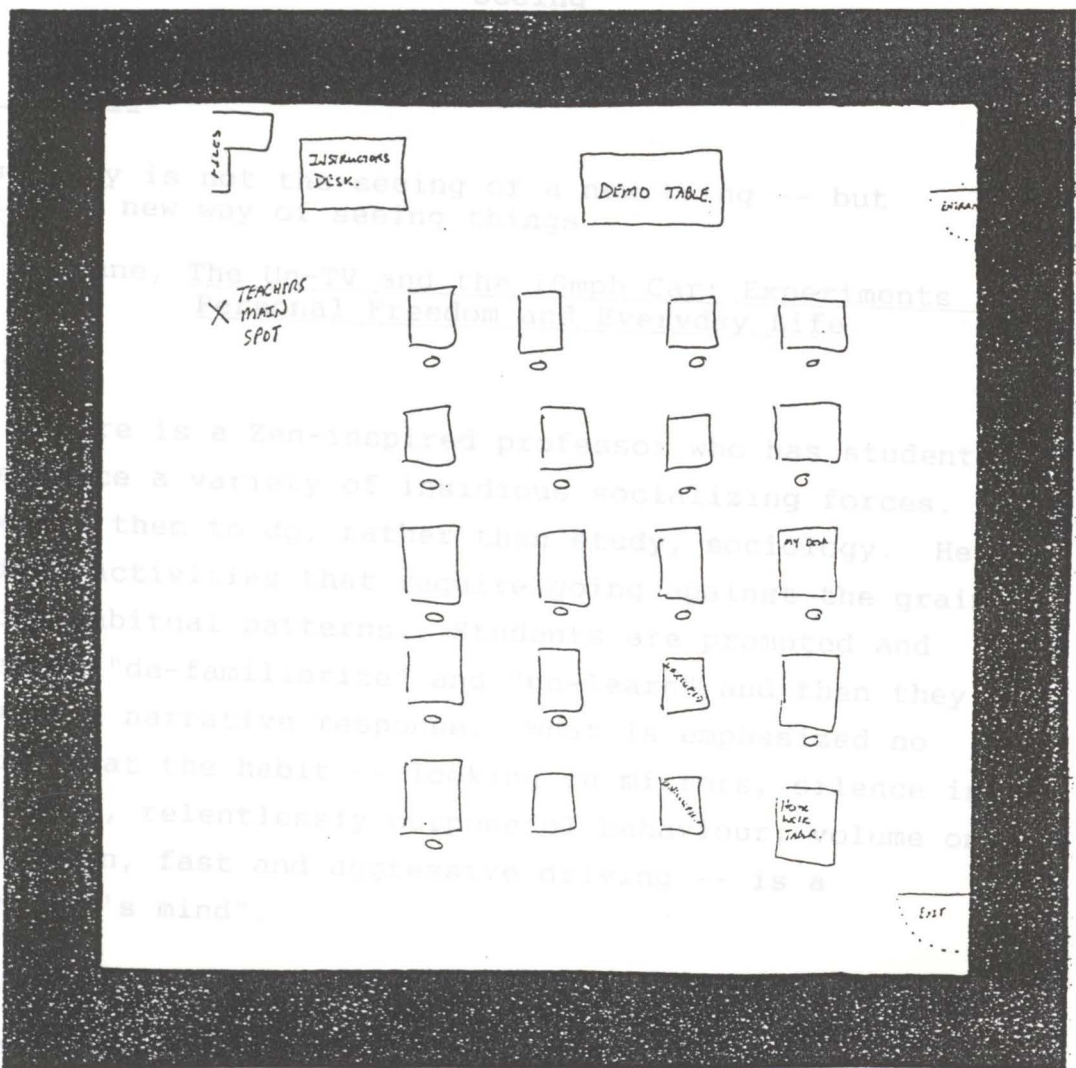


Figure 2. Views of a Room

enough to see that these are in part institutionalized. (Gibson, 1977, p. 10)

... offers chance
 flashes of new perspective. To experience ourselves in
 this way (the instructions are to watch, to watch
 without waiting for something) (Gibson, 1977, p. 10)

... In
 the proper use of intellect, you don't look for answers

Seeing

Discovery is not the seeing of a new thing -- but rather a new way of seeing things.

McGrane, The Un-TV and the 10mph Car: Experiments in Personal Freedom and Everyday Life

There is a Zen-inspired professor who has students experience a variety of insidious socializing forces. He wants them to do, rather than study, sociology. He designs activities that require going against the grain of our habitual patterns. Students are prompted and urged to "de-familiarize" and "un-learn" and then they provide a narrative response. What is emphasized no matter what the habit -- looking in mirrors, silence in elevators, relentlessly purposeful behaviour, volume on television, fast and aggressive driving -- is a "beginner's mind".

This is a somewhat meditative stance. We are striving to let go of our beliefs and assumptions long enough to see that these are in part institutionalized. No perspective, just observant existence, offers chance flashes at new perspective. To experience ourselves in this way "the instructions are to watch, to watch without watching for something" (McGrane, 1994, p. 15). McGrane quotes Tibetan Buddhist Chogyam Trungpa: "In the proper use of intellect, you don't look for answers

you just see . . . " (p. 16).

School, is one dominating force in the lives of students. Mcgrane (1994) attempts to have his students stand aside long enough to observe: "There is a deep theory and a deep structure of socialization already firmly in place in the gestures of the school and the academy" (p. 5). What he sees and focuses our attention upon is primarily visible, available to the senses, but has political and philosophic meaning:

Just look at the architecture and choreography of our educational space, the proxemics of bodies in a physical, social, and symbolic space: the CLASSroom. For twelve years or so we've been coming into large rectangular boxes, sitting in almost militarily precise rows, facing forward and remaining silent -- listening to some authority figure in the front of the room. (p. 6)

How could looking at the "architecture and choreography" of our classroom space occur? It seems any sort of space we inhabit is overly familiar. It's difficult to remain aware of something we exist in the midst of. Once any place is found comfortable it fades from the front of our awareness, until some "crisis" draws it to attention. The everyday world of a classroom may be thrown into high relief -- though briefly -- by changes and invasions of territory, desks, body spaces and roles. Giving a presentation, up there in the frontal plane of all, the zone of the teacher, is one such experience. Or, similarly, a teacher may

be made anxious by students becoming mobs, their desks forming walls, creating physical and symbolic barriers.

In the workshop I constructed, I tried to achieve this "break" with the normal acceptance of space by heightening awareness of it. I needed to mentally and physically draw attention to it. Workshop participants (student-teachers) were challenged to use the space -- find positions and locations -- in order to experience it in a new way, a new context. In part, it was an invitation, but a sense of purpose was also attempted. The mind sharpens its focus under conditions where something might be a stake. I was hoping their experience, immediate and personal, would stir them to insights and recollection of classroom space.

"Beginner's mind" doesn't know in advance what it is going to see. "Expert's mind" has a hypothesis.

Mcgrane, The Un-TV and the 10mph car: Experiments in Personal Freedom and Everyday Life

Now, what if the classroom is a theatre? There are many ways to see this. The Empty Space has been

----- used as a setting. Props are usually supplied.

Space has the potential of being reshaped and decorated for each new scene, performance, or production.

 Staub, Creating Theatre: The Art of Theatrical Directing

Walking into a theatre heightens our awareness of space. It may be a formal venue, it may a shadowy school stage, it may be a bravely altered community hall. We may be actors, stage hands, or audience members. We are all willingly venturing into some unknown.

Imagining a classroom portrayed on stage, what would we see? An area transformed to a box: desks and rows and right angles. A blackboard with a student desk squarely facing it is a classroom stripped down to its essence. A desk more obviously at odds with this configuration is probably a classroom too, though it might be a classroom and something else. This a stage connotation, a "barebones" suggestion, it speaks as a haiku does; volumes sliding and settling into relationship.

Now, what if the classroom is a theatre? There are many ways to see this connection. It has been constructed as a setting. Props are usually supplied. A teacher is "performing", adopting the posture and costume and role. There are variations of this character -- guru, dictator, entertainer, midwife, rugged individualist, trickster . . . The students accept their roles, self or externally assigned. There is action, a script, an audience, attention, diversion, applause . . . Playful, as the analogy is, optimally both are places where something compelling is happening "now".

Brook (1981), who directs theatre, is much concerned with the experience of immediacy. He argues, persuasively, that much of the theatrical experiences available are a perversion of "immediate": they are "deadly" theatre. Packaged for passive spectators, this theatre is dull and unchallenging for all involved. As an exercise it may have success, but that success is meaningless. Essentially it sparks no two-way current, or has "real" life. In a similar manner, compromised by the need for classroom order and progression through a curriculum, teachers deliver learning that is not

always "active". I am certain most teachers want learning to come to life, and accept active learning to be of vast importance. In various ways we seek to vitalize, dramatize, or actualize lesson content. We want it to be "immediate".

I find it exciting to see the classroom as a "set", and like conventional sets, as open as the imagination and reality allow. As a set, the classroom space signals and shapes our actions. Brook writes, "I often found that the set is the geometry of the eventual play, so that a wrong set makes many scenes impossible to play, and even destroys many possibilities for the actors" (p. 101). Changes to the set create possibilities. As a set, what do our classrooms have to offer? With some effort we can be mindful of these possibilities. And once mindful of these possibilities, perhaps directors in our classroom setting? An initial approach of a director illustrates one dynamic: "then he sat behind a desk, speaking to the actors from a distance, allowing neither smoking or conversation. This tense climate made certain experiences possible." (Brook, p. 125)

When we first encountered our classroom space, it was rigidly arranged, tables in four parallel rows that were to serve as desks for twenty-six students. But once we took Brook's statement as a directive -- regarding this classroom as our "empty space" -- the analogy between theatrical and educational environment became easy to physicalize. (Burroughs, 1990, p. 10)

A teacher of modern dramatic literature, Burroughs (1990) dwells specifically on Peter Brook's conceptions of "immediate" space and how that may translate and apply to her own classroom space. In her view experiments in space are "political acts"; she teaches from a "feminist perspective". But like those with other theoretical perspectives she discovers change for change's sake is also vitalizing: "Continually redesigning classroom space undermined the predictability and daily confounded expectations of what could occur during the class hour" (p. 13). She describes a few student-initiated uses of space, the activities conducted, and the intensity of student response to material so presented. Her conclusion is "the key to this successful pedagogical experience . . . originated with our willingness to experiment with language, bodies, and -- most importantly -- with space" (p. 12).

To make learning immediate, I considered carefully what my own use of space was to be in the workshop. I was a stranger armed with the fact I was conducting important academic business. Yet I was also trying to see . . . whatever might be.

I found myself in a large elementary school classroom that was being borrowed as an instruction room for all the student-teachers involved in the program. Individuals had already claimed the space with coats, packs, and coffee cups. Appropriate, communally-constructed visual aids hung from the walls. The long wall contained all of the windows, across which I drew the blinds. Tables were pushed together creating rows, but leaving a wide aisle down the room's centre (church-like) to another couple of tables pushed together in a kind of "alter" in front of the board. I pulled many tables back into the far wall of the room. I shut doors, and cleared the floor space of belongings.

In response to my adjustments the five participants selected chairs and drew them voluntarily toward where my location seemed imminent -- the front and centre table. I asked them if they were

comfortable? Should we begin? Swift looks were exchanged and this group wordlessly pulled themselves into a perfect circle, leaving a chair available for their one peer who had not yet joined us. I had access to my "props"; a leather case, some piles of paper, some sternly held notes. I had them sit on the floor, putting aside the chairs. As the last participant joined the circle, I stood leaning back slightly on the teaching alter. I read the following induction. Because of my own anxiety, my voice slipped out in quiet but seemingly intense tones.

What is essential is a body, usually a human body, in visible space. A body and a space are the sole preconditions of the art.

Staub, Creating Theatre: The Art of Theatrical Direction

In a moment, I am going to allow you to privately select your own spot in this classroom. Look around and without speaking locate yourself wherever you wish to be in this room. When each of you has found a space we will move on.

Please remain now until you are in your own space. In a moment I will ask you to rearrange yourselves once

again. You have just created a private space. This
time I want you to create a group. Induction

I'm asking you to sit on the floor because I want you
to be aware of where you are at this moment.

I want you to be aware of where I am at this moment.

I want you to be silent.

We are all occupying this space right now.

This classroom has been designed, architects have
created it.

This space is revealing, it tells the truth about a way
of seeing.

A stranger, completely innocent to the purpose of this
space would be able to make certain guesses about it.

That stranger would see that this is a map of our
biases, our ideas, our bodies.

In a moment, I am going to allow you to privately
select your own spot in this classroom. Look around
and without speaking locate yourself wherever you wish
to in this room. When each of you has found a space we
will move on.

Please move now until you are in your own space.

In a moment I will ask you to rearrange yourselves once

again. You have just created a private space. This time I want you as a group, to create communal space, a space that meets your needs as a group. There is no longer any need to remain silent. I'm hoping this group can organise this space in a short time.

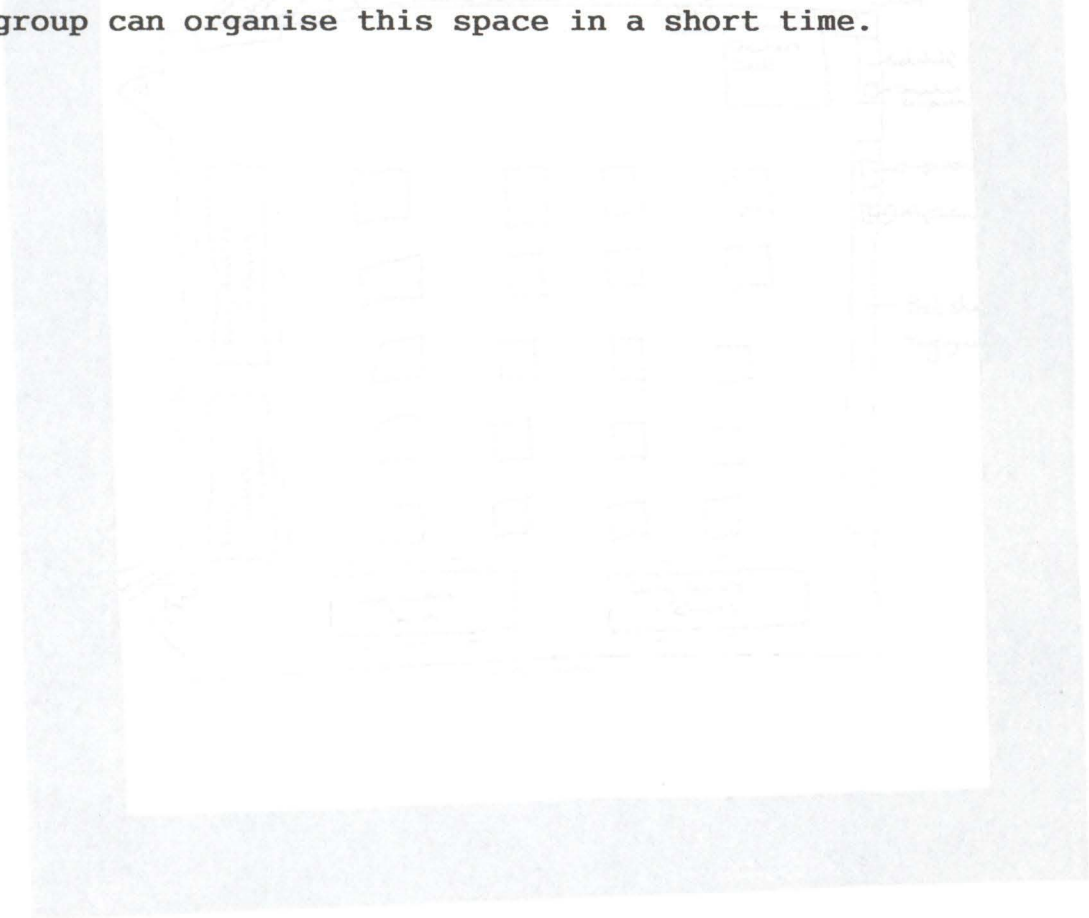


FIGURE 1. [Faint text, likely a title or description of the sketch above]

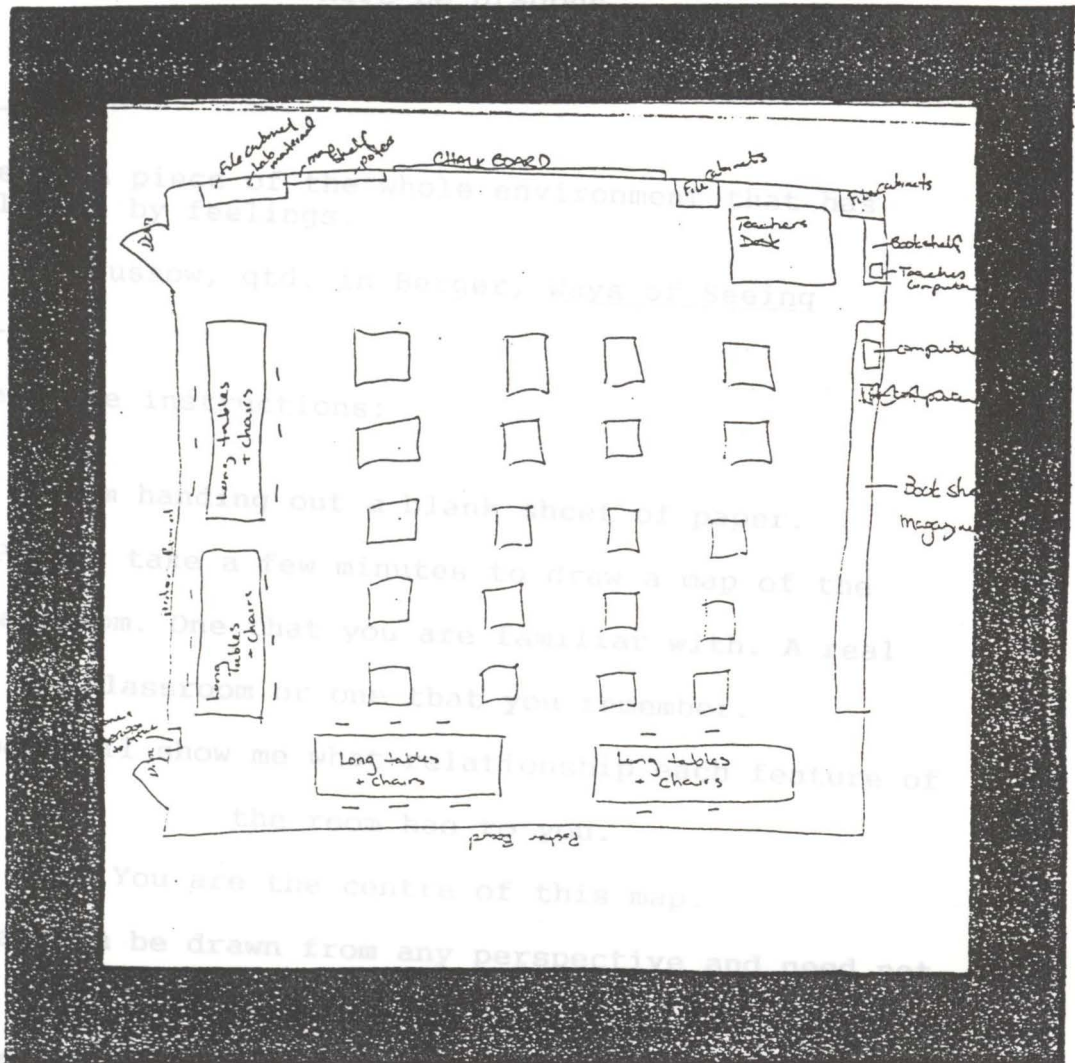


Figure 3. Views of a Room

Here Be Dragons

 A place is a piece of the whole environment that has been claimed by feelings.

Gussow, qtd. in Berger, Ways of Seeing

 Here were the instructions:

I'm handing out a blank sheet of paper.

Please take a few minutes to draw a map of the classroom. One that you are familiar with. A real classroom or one that you remember.

The map will show me what relationship each feature of the room has to you.

You are the centre of this map.

The map can be drawn from any perspective and need not be realistic or to scale.

Please label any features I might have trouble identifying.

I didn't get the maps I was expecting from the student-teachers I put this to. I imagined sloppy maps, ones that would show only the spot of the room most familiar, and most important. I imagined these

maps constructed with haste and humour. Instead, map-makers worked with great seriousness and care. Their maps showed details such as filing cabinets, the swing of a door, and wastepaper baskets. At first glance the maps seemed much the same: uniform boxes filled with democratically spaced- and sized-boxes. They were each floor plans, with the drawer's perspective (and spirit?) hovering front and above. And they were successfully portrayed standard classrooms -- superficially.

One night the drawings had more to say to me. Together, they seemed frighteningly empty. The functional features drew attention upon themselves, rather than relationships. But then I saw relationships. Where people were represented in maps they were abstract, often empty "O's". To represent the self: a heavily filled in "O" in a forest of "O's", or an "O" identical to all others, but labelled with a pointing arrow and "me". One map had happy faces -- some imbued with curly hair, some given names and these were contained within square shapes. Squares -- this is how desks were represented, symmetrical, neutral, sterile. One stands in for a person, "my desk" and others are "UNOCCUPIED". A large one is "INSTRUCTORS

DESK. An impersonal "x" marks "TEACHERS MAIN SPOT".

Mapping

The labelling and focus on the physical seems to draw life out from these spaces. One map, the happy-faced one, conveys a whimsical light-spirited quality. Desks are carelessly askew, undefined lines zig zag about, there is a garland of musical notes hovering and letters spell out S U N S H I N E.

All people are geographical beings.

Sack, "The Power of Place and Space"

Mapping

No map can perfectly depict reality, but in not doing so it is all the more useful.

Board, in Charley & Haggett, Models of Geography

You and I are here. We draw different maps of this place because our perceptions, complexly entwined with our experiences and nature differ. A child sees a sandpile, not the panorama. The bush people see large animals in the distance as miniatures; the desert tribe only spheres and circles of sky. A hastily sketched road map to a friend's barbecue is foreshortened, distorted by familiar and the inconsequential. Impossible maps can still take you to where you need to go. If you learn their language.

Depicting the real and the actual through the language of maps has troubled cartographers. Maps, as communication, are also "propaganda", whispering messages of power and importance; becoming also world views. The Mercator projection, our common map of the world, visually increases the land masses of the

"British Empire". Canada, Australia, and South America are disproportionately huge compared to Latin America, which lies across the equator. War-time maps enlarge the threat of the enemy, emphasizing size and proximity to borders and resources in a manner that does not indicate the political and economic reality of such threats. The researcher believes the different ways which the Modern cartographers are re-examining old maps and designing new. They are inviting us to new relationships and forcing different associations. A "turnabout map" places the Southern hemisphere in the "top/superior" position (Murray, 1984, p. 238). Arno Peters, a modern map-maker has inspired much applause and criticism in his quest for "truer geographical dimensions" (Spicer, 1989, p. 42). To do so means shifting the centre of the world (Europe and the rich nations of the northern latitudes) in order to emphasize the third world. Native American maps produced as aids for the early explorers were considered childish and inaccurate, and often missing the point, when compared with European efforts (Belyea, 1992, p. 267). Now, as a form of culturally-specific communication they are re-valued.

Maps communicate and reveal the subjective. Where do we exist in this territory? Shapes and names and distances. Distortions and absences and details.

Map-making ability has been studied. "Boys' maps tended to be more superficial in content whereas girls gave more attention to limited detail" (Matthews, 1984, p. 334). The researcher believes the different ways which the genders come into contact with their environment effects their abilities. Map-making activities are also used by psychologists. They look for patterns of behaviour as well as meaning. A true centre of campus appears on the periphery of student maps, in favour of an area of high traffic, a student "centre" (Holahan, 1978). In another collection of "psychological" maps, the composite curve of the river Seine flows in far less severe course than reality in the minds of Parisians. (Milgram, 1976, p. 104)

Cone and Perez (1986), educational psychologists, conducted an interesting study on peer relations that made full use of maps and mapping. They sent objective observers to map out how classroom space and furniture were used in different classrooms. Selected students were interviewed and the researchers:

made observations of the order in which students drew the elements of their maps and noted which major components of the room they did not include Finally we gave them three miniature animals -- a pig, monkey, and tiger, -- and requested them to place each animal wherever they liked on their map. (p. 81)

These researchers reported that students tended to draw objects and parts of the room belonging to the opposite sex later and in a smaller scale. The symbols of the hero, fool and trickster were distributed in amusing and stereotypical fashion. The aim of these researchers was to explore the supposition of peer groups manipulating and controlling the use of space in their classrooms -- despite the teacher's equitable hopes for that space.

I asked participants to draw maps of classrooms to expose a view. "Language is better suited to the narration of events than to the depiction of simultaneous spatial relations" claims Yi-Fu Tuan, a human geographer (1977, p. 77). The maps of experienced teachers provided here are conceptual views. I spoke to each of these teachers in Nelson individually. Most drew a "standard" floor plan, with care and seeming fondness. We played about with the ideas of terrain and ownership; how these rooms were

experienced by students.

Re-evaluation of this space was prompted by solving the problem "If you had a single light bulb to use where in this room would you place it?" (Someone asked this of me.) The concerns were visibility and security and mood, but, under this was a sense of examining what and who is this classroom for. Most highly valued by all these teachers was "light" -- natural sunlight pouring through the ceilings and windows rather than "official light". (As well, it was the design feature students told me they wanted most in their classrooms.) I found this rather fitting.

The maps that follow began with "If the classroom were . . . "

Cartography is both a science and an art.

Board, in Charley & Haggett, Models of Geography

Terrae Incognitae

Open space has no trodden paths or sign posts. It has
no fixed pattern of established human meaning.

Tuan, Space and Place: The Perspective of Experience

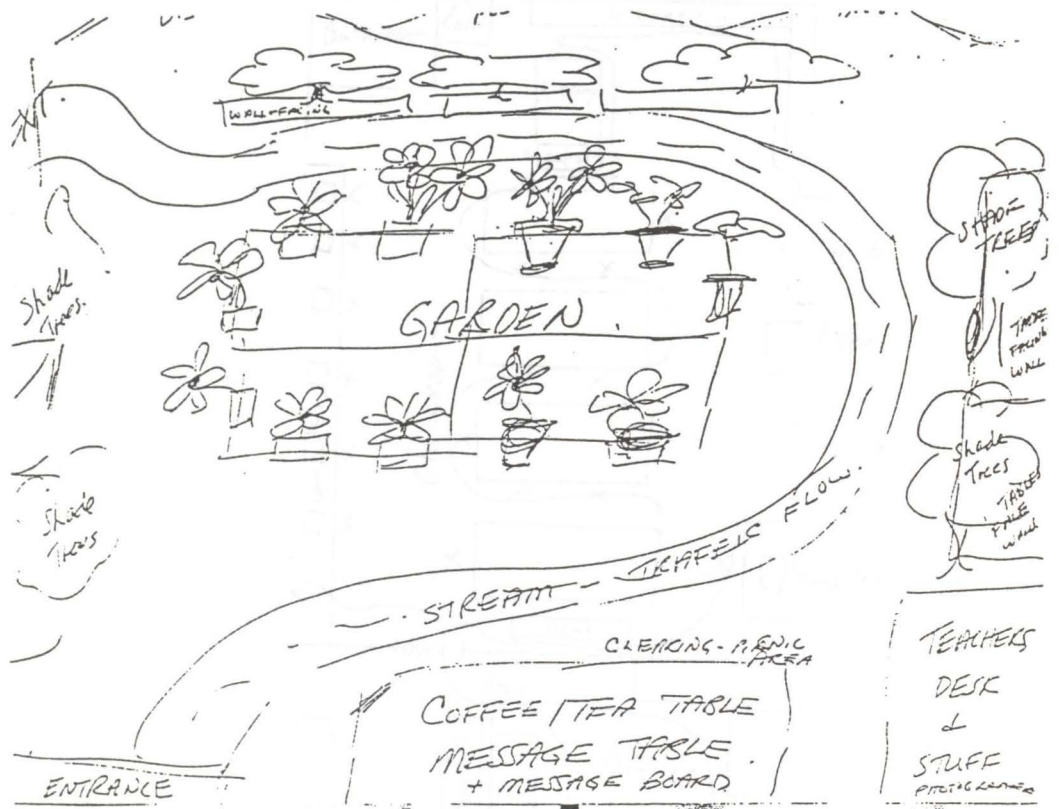


Figure 1. Classroom as Landscape

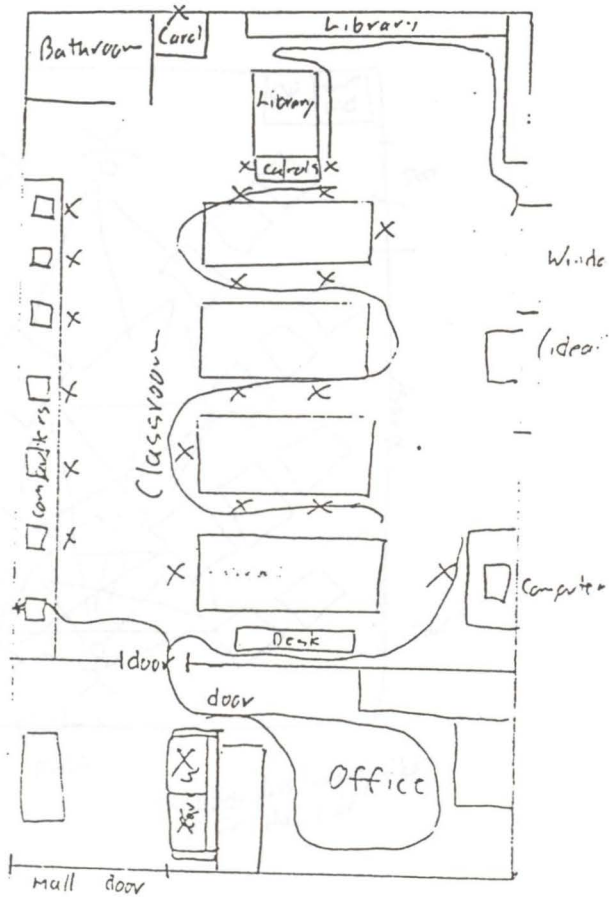


Figure 2. Classroom as Warplan

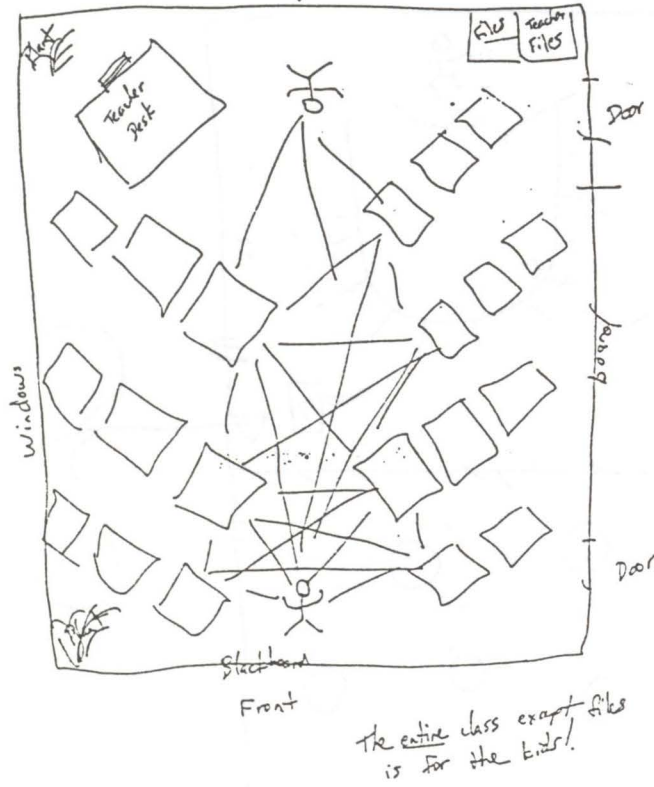


Figure 3. Classroom as Voices

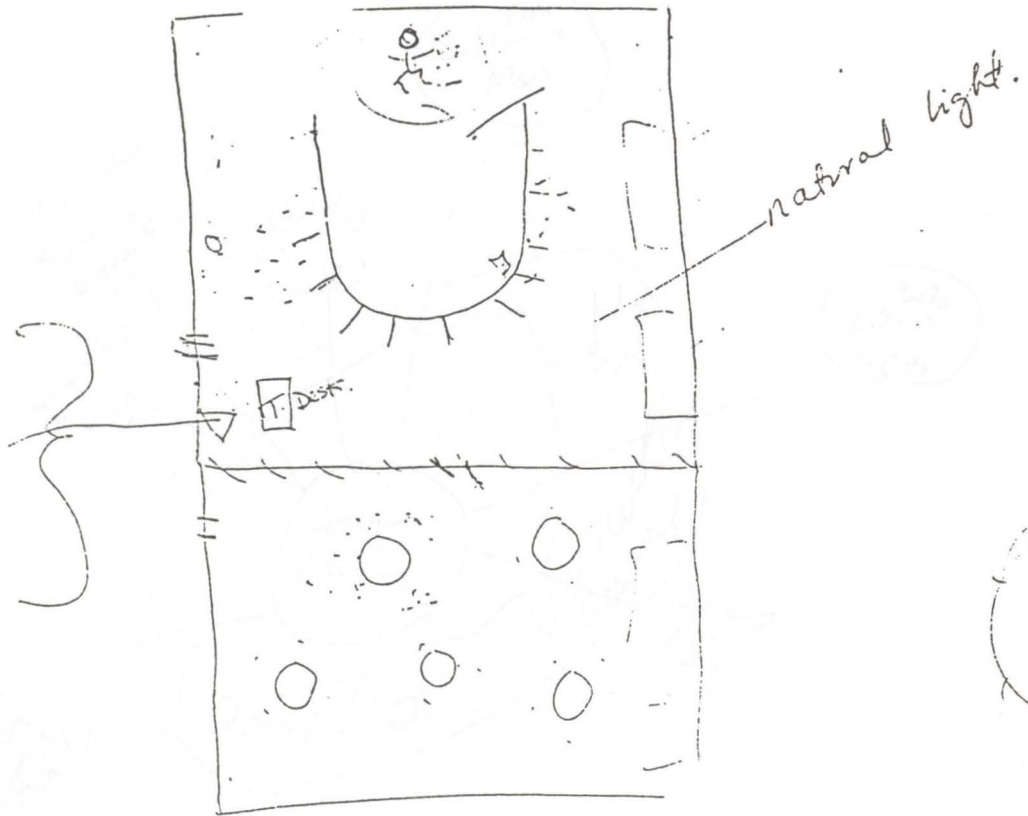


Figure 4. Classroom as Emotions

...and the
...are illustrations of the "dreaming"
... "dreaming" is an indigenous term (other words used to
... translate the same idea are "stories" or "histories",
... and it is meant to be understood metaphorically rather
... than literally.

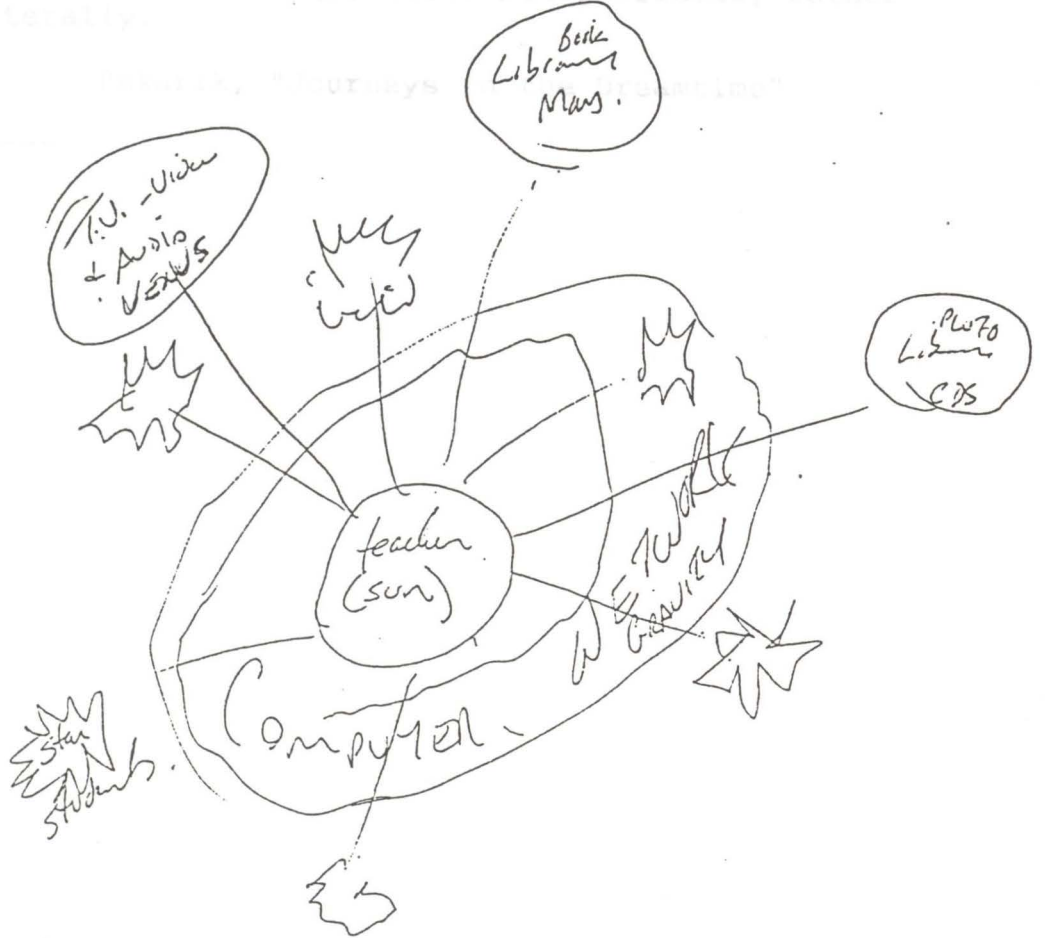


Figure 5. Classroom as Universe

 Research Paper
 Paintings are illustrations of the "Dreamings".
 "Dreamings" is an Aboriginal term (other words used to
 translate the same idea are "stories" or "histories",
 and it is meant to be understood metaphorically rather
 than literally.

 Pekarik, "Journeys in the Dreamtime"

disciplines of geometry, psychology and architecture.
 I found that research offered ideas about space,
 specific observations on effective and desirable space,
 and described the effect of space on behaviour. I also
 discovered a number of principles to assist designers
 in the design of space.

Researchers have designed workshops to explore
 space with teachers (Harty, 1974; Vosko, 1991;
 Wainman, 1987) and many (Harty, 1974;
 Vosko discusses territoriality, seating
 arrangements and sightlines with two specific
 applications -- "space-related improvement" and the
 adult learning setting. He provides interesting
 observations from his work renovating places of worship
 to show the relationship of territory, landscape and
 the location of learning is appropriate. Harty,
 a scholar of psychology, promotes a new approach. He
 notes that students are often the victims of innovative
 design when consultation with them is taken seriously.

Finally, Weinstein, Research Base (a) psychologist,
 There is a multitude of perceptions regarding the
 use of space. As people we are all designing, "if
 manipulating, and being shaped by space -- and the angles
 of approach are labyrinthine. I drew heavily from the
 disciplines of geography, psychology and architecture.
 I found that research offered ideas about space,
 specific observations on effective and desirable space,
 and described the effect of space on behaviour. I also
 discovered methods of exploring this elusive concept.
 efforts to keep the class "alive imaginatively". A
 Researchers have designed workshops to explore
 "space" with teachers (Ryan, 1974; Vosko, 1991; and
 Weinstein, 1987) and many (Sommer, 1977) have suggested
 it. Vosko discusses territoriality, seating
 arrangements and sightlines with two specific
 applications -- "space-related inconveniences" and the
adult learning setting. He provides interesting
 observations from his work renovating places of worship
 and practical checklist for instructors who want to
 insure the location of learning is appropriate. Ryan,
 a school psychologist, promotes a team approach. He
 notes that students are often the source of innovative
 change when consultation with them is taken seriously.

Finally, Weinstein, an environmental psychologist, forces us to wonder why each classroom looks so similar no matter what the grade level. She suggests, "If buildings are telling the truth, then the educators must be lying" (p. 187). Some basic steps are outlined in designing an unconventional but effective environment.

Teachers have described imaginative uses of their classrooms. (Heck, 1978; Sommer and Olsen, 1977; Veix, 1976). Viex exuberantly recounts the effects of efforts to keep the class "alive imaginatively". A great assortment of things have been added to his rooms -- thick tree trunks, gravestone rubbings, puppets, and massive creations students developed in shop. He cautions us about the "emotional temperature" of the room, reminding us: "Inanimate objects like rooms tend to become bossy, to take over, to impose themselves on teachers and students. Teachers and students should dominate the physical environment of the classroom, not the reverse" (p. 314). Heck, another enthusiastic teacher, feels it is her responsibility to create a "lush" environment, one that allows for exploration of curricular material. She works the idea that her classroom is a "set" and brings in specific "props" to

help create a theme or pique student curiosity and imagination. She outlines steps that she uses in transforming her room to a time and place via one dominant backdrop. Sommer and Olson (1980), at the university level, describe more typical efforts to bring comfort to the classroom but address the frustrations involved in working with academic institutions. They wryly observe the excitement and greater participation of their students and that "there is no way to maintain green plants" (p. 15). Academic studies offer some insights to how classroom space effects those who use it. Gifford (1976) reports on the numbness of students to their rooms. He conducts an experiment in a university setting where the positioning of furniture and demands of the lesson were made deliberately awkward. Students were accepting and in most cases oblivious: "The tables came to seem magically immobile" (p. 7). It is suggested that for psychological reasons what is "institutionally owned" may not be within the students' area of control. Another study, (Ahrentzen and Evans, 1984) involving observation and student report, links specific measures of classroom spaciousness to distraction and sense of privacy. The researchers note

"In the classroom, students must often try and behave as if in solitude when in actuality they are not" (p. 440). Interestingly, the preference of corners to more formalized study areas for privacy was noted. So was teachers' differing satisfaction with a room. Cotterell (1984) used diaries to track anxiety caused in students by open-plan schools. He observes though some lesson modifications occur, (less lecture and seatwork, more independent activity), that teachers seem helpless to create approaches that really take advantage of the new (wall-less) setting. Teachers felt unease and powerlessness in the new place, but their sense of ownership in regular rooms can result in domineering behaviour. Academic research examining all aspects of space designed for children is systematically presented by Weinstein and David, (1987). Their text focuses on the "built environments" of child care centres, homes, playgrounds, and schools, and what effect they have on child development. In contrast, Nabhan and Trimble, (1994) focus on children's experience of the "natural environment". The two geographers ruminate on why children need "wild places" and present the findings of many others. Where kids grow up, and how they play in their settings, as well as the

profound links to land we succeed and fail to create is sensitively explored. The authors remember and observe accurately the child's perspective. Spencer and Blades (1993) speak of "geographical imagination" and maintain that places do effect children deeply and become a basis for social integration, civic participation and memory.

There is another volume of work that takes a scientific approach to space as distance -- the study of proxemics. This work provides handy insights on variations of seating arrangements. Sommer (1977) cautions that there is no ideal classroom layout, just that it meet the needs of the lesson style. Straight rows are really only good for "sit and listen", for example. Escholz and Rosa (1972) report that students feel "the horseshoe" and "the circle arrangements" are the most comfortable while recognizing at some inner level the rows or seminar table set-ups were more effective. Lee (1976) establishes that students "take up seating positions according to the relationship they wish to establish with the teacher," (p.93) and dwells on the angles and proportion of students within a teacher's view from the "direct, frontal plane". Smith (1979) quotes Sommer: "The front rows contain the most interested students, those in the rear engage in illicit activities, students in the aisles are mainly concerned with quick departures, most

absentees come from the rear quadrant most distant from the windows . . . " (p. 644). Two interesting findings reported here are that though seminar tables produced greater participation, more students participated in traditional class setups, and female teachers spend more time than males will in front of their desks.

Vorrath and Brendtro (1974), in their group process manual discuss the dynamics of eight configurations. They feel the most beneficial layout places the leader among, but just outside a circle of participants. In this position a desk symbolically removes and elevates. Forsyth (1983) reviews literature on leadership. An interesting perception is that those who counter this leader's opinion are respected when seated at the other head, but are discounted as "deviants" if they are seated anywhere else. The "Steinzor" effect is also described: the tendency for members of a group to comment immediately following the person sitting opposite them. Also keenly aware of the psychology of group arrangements is Mackintosh (1993). A designer of formal theatre space, he offers commentary about a variety of audience positions. These effect the sense of community and good humour as well as provide actors a sense of control, and house "fullness".

Moving away from space as distance, and as a shaper of behaviour, other writers examine space more as communication. Deeper insights on human nature and political use of space are provided. Hall (1969) defines the concepts of public versus personal space and sees space as a communicator of culture. (There are entertaining accounts of Arab use of space compared to Japanese, for example, or British and German.) To Henley (1977) space is body space, and body language: it communicates the politics of male/female relations. Joiner (1976) studies furniture arrangements in offices suggesting the space created communicates status. One interesting observation of his is that professors tend to create friendly "equalizing" office spaces and display status through towers of publications instead.

The full metaphoric implications of how humans use space are utilized by other authors. Domahidy and Gilsinan, (1992), use the "stage metaphor" when describing a city planning commission in action. They note the civic dynamics created on "the front stage" "the back stage" and "a deeper back stage", and conclude that the "back stage" aspects of policy-making are necessary.

Sommer and Steiner, (1988) give a delightful history of "turf politics" in a state legislative building. Many anecdotes reveal how size of office, centrality, efforts to personalize, and parking places become projections of image and power. "We are all equal in the john" (p.561) one politician is quoted. Cooper (1976) suggests space, particularly "home", is a projection of subconscious ideas of "self" and identity. She suggests that architects and designers may influence another's space, by asserting their own families, dreams and shadows through it.

Space so heavily imbued with meaning becomes "place". "Scapes" and places are explored by a number of thoughtful geography professors. Sack, (1993) shows how place and self are complexly constitutive -- he urges us to question the personal and general meaning in any landscape whether natural or constructed and staged. Lawton, (1983) includes time as part of the complex interrelation of self and location and is supportive of geography's embrace of psychology and human development. Porteous (1986) examines the many ways the human body contributes to how we see, design and name our spaces. Bloomer and More, (1977) provide a sensible, stimulating, well-illustrated presentation of this "body theme. Eyes, brains hearts, and "nether" regions are important concepts in our spatial

designs. So too are the concepts up/down, front/back, right/left and here-in-the-centre.

Finally, Tuan, (1974; 1977; 1991a; and 1991b) is without question a major authority on the symbolism and meaning inherent in our environments. He has contributed a deep well of ideas about psychological structures, world views, cosmography and language all play with locations and constructions.

An overwhelming, and diverse literature exists out there. Space is physically expressed, instinctively assessed, and mentally manipulated. I've come to see that a classroom is "real" space, and "lived" space, and "subliminal" space; these words and maps a sliver of translation.

most accounts from one and no responses from the other. Participants later informed Experiment 1 that the experiment was difficult to maintain as the daily data. Several weeks after teacher-participants in Nelson were interviewed, they responded to the following handout.

Instructions: Instead of the usual classroom, you are to design a classroom space from that perspective. If you wish, alterations of classroom features may be done with student input. The duration of the arrangement may be brief (within a single period) or over several days.

Metaphoric terms: **Battleground**

Stage

Home

Island

Playground

Myth

Holyground

Palace

I was expecting brief, hurried notes from each teacher for community and relaxation. She also saw drawbacks in but instead received detailed accounts from three, a very

brief account from one, and no response from the other. Participants later informed me that motivation to complete the experiment was difficult to maintain -- the daily demands of teaching interfered with intentions and time so quickly evaporated. One teacher wrote "[I was] surprised that I could drop my 'I gotta do this thing for Cheryl' attitude and instead within seconds realize the value of doing this".

One participant worked in a tiny alternative education classroom (set up at a local mall). The computer stations and shelving were fixed and there was relatively little to be done with any of the room's features. After contemplating this environment he offered the following metaphoric description:

The room is like a garden where students can be thought of as neglected "plants". This garden has been given care, sun and nurturing so that the plants have begun to live again and blossom.

Metaphors selected for room design were "Holyground", "Palace", and "Stage". The participant who chose "holyground" reconsidered her existing classroom and saw how the areas, and functions of those areas, could be renamed. For example, she noted the coffee and tea corner she has set up is a meeting spot -- a "bathing" area where students met for "community and relaxation". She also saw drawbacks in

her existing environment: "I think the room is too cluttered for the Holyspace idea". She writes:

I think I might consider more inspirational quotes (at least newer ones) that are more "relaxing" than Herculean in their emphasis on "success" and over-coming . . . I'd like to move to images and pictures that are serene rather than those wordy posters I think the most important change is to simplify, simplify, simplify, the look of the place.

The participant who worked with the "Palace" design reported:

Your project has got me thinking of a room arrangement during the feudalism section whereby the nobility will sit closer to the King (teacher) in the full group setting with lesser nobility and serfs sitting further away, as a means of reinforcing the hierarchal class structure.

This participant struggled with incorporating a design that made sense -- with feudalism -- but also worked with the other teachers, students of assorted grade levels, and resources (standard desks and tables) that shared the classroom. A sense of frustration was conveyed, and a new plan -- a fusion of cooperative student-groupings working within a "manor" theme, was developed for the next time the feudalism unit is covered.

The participant who chose "Stage" as a theme for classroom design also chose to involve the students in the set-up. She writes:

I was able to change the classroom space dramatically, by using three sheets. I suspended a queen size sheet from the ceiling, lengthwise,

and gathered and suspended one twin sheet at either end of the larger one. The curtain ended up being about thirteen feet wide. The sheer size of it was more effective and powerful than I anticipated . . .

My students, who are seven and eight years of age, moved desks and chairs to create space for the audience. They set up a desk and a cash register to sell tickets at the door. Real money was used to purchase the tickets. The students voted on a name for the theatre and created a sign: The Chestnut Theatre.

She further describes the process of organizing the students and her surprise at their production, audience and performance abilities. Also a surprise was "that the classroom could be changed as easily as it was".

Although a challenge, using the classroom in a new way seemed fairly enjoyable for participants:

I felt refreshed and excited to be in a changed space. It was fun to do something out of the ordinary. The students were excited, motivated and creative as they helped to alter the room and prepared to use the space in a way that it had never been used before. The creative process released much energy into the classroom.

Last Word

We are aware of classrooms as spaces where the activity of teaching occurs. Through the workshop process of altering, exploring, and discussing, student-teachers in Prince George achieved a sense of the meaning of how they used that space (both as teachers and as students.) Through the process of observing, describing, and mapping out metaphoric concepts, teachers in Nelson also came to see that space as interesting and flexible.

Once aware of the flexibility of space, can teachers use space differently? This study suggests that not only can teachers use space differently, there is much value to participating in any activity that generates new ways of thinking.

The following observations were made:

- 1) All participants spoke of how much they enjoyed being stretched or pushed into a new perspective. Enthusiasm, a renewal of energy, and even whimsy were a result.
- 2) Anxieties regarding lack of time, lack of resources, lack of creativity, and need to maintain classroom order were expressed.
- 3) Participants seemed inspired: they were considering continuing experiments, next month, next time, and next year.
- 4) The process of "doing", rather than "telling" or "talking" was highly valued.

- 5) Experimenting generated a larger sense of the meaning of teaching. Integration, open-mindedness, non-interference, questioning, and imaginative mind-frame were reported.
- 6) The terms "metaphor" and "metaphoric" scared everyone.
- 7) The idea of experimenting with secondary school classroom space (as opposed to elementary school rooms) was particularly novel. Participants were unsure whether such activity was appropriate, or desperately necessary in senior grades.
- 8) All participants expressed support for the need to practice different room configurations and arrangements. Teachers valued the strategy; student-teachers welcomed the awareness.

I am grateful this effort provided so much pleasure and food for thought. Possibilities were imagined and created - - which was the main goal of exploring this topic, in this manner. It is especially significant that new perspectives of a room were connected to a shift of what teachers considered important. (I think this speaks to the remarkable "creative" powers of teachers.)

But it is not the "what" of these possibilities that demands attention, but rather that they were sparked and are useful to those who operate daily in learning environments. If teachers experience renewal and the results and process are enjoyable, it may be important to encourage these opportunities. Though it appears that the activity of manipulating classroom features and design would particularly benefit student-teachers, teachers were far

more aware of the consequences changes incurred.

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Perhaps more formal experimentation with classroom space from teachers-in-training, would produce teachers with an aptitude for attempting different space uses. Such experimentation would also provide those learning to teach with not only a useful tool, but a means for alternate teaching perspectives. The ability to see in new ways is beneficial exercise for us all.

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