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Revolutionary Rooms

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Revolutionary Rooms
Community Hubs Redefined

- Collective
- Private
- Public
- Individual
Residence halls are a social center on college campuses. The common spaces within a residence hall are a space for informal collectivism. However, they have become increasingly task specific and redundant. How do social constructs influence design? Should common spaces within the residence hall typology influence the design of the entire domicile? This thesis develops a methodology that prioritizes sociospatial relationships in the design of residence halls. This was accomplished through the exploration of college culture, sociospatial relationships, and notions from sister typologies.

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### Terms Used

- **Bursens**: student housing organized and run by monks in Germany.
- **Collective Space**: a space in which collective activities happen.
- **Domus Pauperums**: hostel for poor students at Oxford University.
- **Formal Collectivism**: the practice of giving a group spatial priority over each individual in it through fixed programming.
- **Formal Space**: a formal space as defined by Julia Nugent is one that is rigid and does not allow for multiple activities in one space.
- **Functional Distance**: the distance that is actually traveled rather than the measured physical distance.
- **Informal Collectivism**: the practice of giving an individual spatial priority over a group through multiple flexible variable programming.
- **Informal Space**: a space that is flexible and does not allow for multiple activities in one space.
- **Paedagogies**: student-run housing at Oxford University.
- **Seidlung**: settlements that were garden city-esque in design and focused on mass production.
- **Zellenbau**: parallel blocks aligned north to south at right angles.
Residence halls are social centers on college campuses. Most people have fond memories of college, and a lot of that nostalgia originates from the housing experience. Hanging with friends in the lobby, studying in the little office down the hallway and chance encounters in the hallway are the shared experiences of Dorm life. However, today, many students do not get this experience. Contemporary student housing design overlooks a student's needs for informal interactions and has begun to prioritize Themed Communities or Living Learning Communities as the new trend in residence life. This is when students live in a community based on generalized interests or needs. As a result, students have become the subject of design inquiry into the role of individual experience within the collective resulting in a loss of student interest in university housing.

Dorms first emerged in Bologna, Italy where students attending universities had nowhere to sleep. Through the 1900s, this typology evolved filtering through the ideas of efficiency and process given to us by CIAM and the Greys, and semiotics and interaction given to us by Team X and the New York Five. CIAM emerged with a preference towards defining the collective at the expense of the individual. During this period Dorms changed from being a place to sleep to a more domestic style of living.

We must now ask ourselves, what happened to those social interactions and opportunities that were once beloved; the ones that occupy our memory of college life. Did the evolution of the dorm typology, now called residence halls, sacrifice the individual through prioritization of distinct user groups?

In contemporary practice, residence halls are designed in four styles: traditional style with common bathrooms, suite style with shared bathrooms, apartments with kitchens and living rooms, or a combination of two or more of these. Although some of these styles allow for the individual to find expression within the collective, the overall building organization may not be in communication with these goals. This had led to a dismissal in understanding how common spaces influence design in relationship to the individual.

Common spaces have become over the top as seen in luxury Residence Halls where items like pools, rock climbing walls, and dining halls from other uses on campus are placed within the commons spaces. We no longer have areas of informal collectivism. This had led to a few questions. How do social constructs influence design? And with this in mind should common spaces within the residence hall typology influence the design of the entire domicile? Through the exploration of college culture, socio-spatial relationships, and notions from sister typologies, I will propose a new methodology in Residence Hall design as well as call for the abandonment of Luxury Residence Halls.

To understand how to go about designing residence halls, one must look at the series of interactions that architects have investigated that have resulted in their projects: Criteria of Site Location to Site

Site to Building

Building to Common Space

Common Space to Room

Room to the Individual

Thesis Statement

Common Space: Social Hubs Defined

“Students find it less intimidating to enter a space where many things are happening”

-Julia Nugent

Julia Nugent is a principal at HMFH Architects where she leads the firm’s Higher Education practice. She has been practicing for more than 30 years and is a long-time faculty member of Boston Architectural College. Nugent is a member of the Society for College and University Planning with LEED accreditation. Her work focuses on planning and design for student life with an emphasis on how architecture can support academic success and student development. In her Post Occupancy Evaluations of residence halls, she speaks on formal and informal collaborative spaces.

A formal collaborative space as defined by Julia Nugent is one that is not flexible and does not allow for multiple activities in one space. This idea has a few implications. For one, if a formal space is designed in a manner that does not allow for multiple activities, it will be seen as a formal space and will not be used for informal activities. However, students who are not interested in gaming would never go into that room because they would not feel comfortable there. In large multiactivity spaces where items such as televisions, kitchens, and study areas are present, students will bounce from group to group spreading thoughts and ideas. (Nugent 02).
Dorms first emerged in Bologna, Italy where students attending universities had nowhere to sleep. In response, students began living in rented homes that were eventually taken over by the universities. During the next few hundred years, dorms spread to England and Germany. A few centuries later in the 1450s, Oxford had student-run housing called \textit{paedagogies} and for their poorer students, they had hostels called \textit{domus pauperums}. In Germany, their schools had \textit{bursens} which were organized and run by monks. In 1636, we saw the emergence of dorms in America at what are now called the Ivy League schools. By the early 1900s we began to see women in dorms, and by the 1960s, we began to see the emergence of minorities in dorms.

Through the 1950s, this typology evolved through the ideas of efficiency given to us by CIAM who believed in the precise planning for students and the 20th-century architects, who were not divorced from its users and their daily lives, and a move towards the New York five who studied architecture as a process of language, and Team X who believed architecture to be more social constructs.

Residence Halls Defined

Residence Halls are no longer a typology seen in Europe. Now, they are mainly seen in the United States. In order for these typologies to act in a manner that works, groups and departments known as Residence Life are managing the upkeep and activities within the building. Nationally, Residence Life around the United States provide a residential experience through collaborative efforts that support the holistic development of students in the educational and social aspects of dorm life. Residence Life is the department that creates a residential experience. Residence Life seeks to enrich the lives of its students through enhancing living and learning experiences. The goals that are to be achieved include:

- Cultivate academic success by engaging students in scholastic achievement and integrating in and out of classroom learning. (Koonz, 2016)
- Advance opportunities for the personal development of students by providing safe, secure, and well-maintained facilities, promoting healthy living, and focusing on overall well-being. (Koonz, 2016)
- Provide inclusive communities by helping students understand and embrace diversity, while celebrating the value of human difference. (Koonz, 2016)

The goal is for students to become more productive members of society. Because of the students and their close-knit community, there is a sense of belonging and social cohesion. They will have healthy interpersonal relationships, advanced understandings of their academics, their first step in the door of their dream careers, and an understanding of financial literacy.

With this in mind, one must question whether the building is in compliance with these issues. Why are the common spaces not designed in a manner that complements the people that live and work within and their goals?
Informal Collectivism: Social Hubs Redefined

Informal collectivism is the practice of giving an individual spatial priority over a group through multiple fixed or variable programs nested in a collective space. This can also be called common spaces.

Common spaces are the most important part of a residence hall. This is where the greatest sense of community is created. Strategic placement of common spaces can become a catalyst of academic, personal, and social growth.

Visual Connectivity

The first element in a successful common space is its location. Common spaces should be placed where one can see and be seen. This calls for a space which can be a destination and a part of the circulation. This becomes a common space in which people can either pass through or stay (Cotter 31).

Open spaces are more likely to be active than closed spaces. Isolated rooms at the end of a hallway discourage student life because one may feel as though they are intruding on others. The fixtures and layout of these spaces should be designed as a physical and sound barrier, but allow for a visual connection.

Multiple Activities

Secondly, common spaces should be home to multiple activities. This will draw in different people and encourage interaction among different social groups. In order to accomplish this, common spaces should be a variety of sizes to welcome the different activities. Spaces typically only seen for service such as laundry, vending, or recycling areas should be designed with other programming to become hubs of social activities. Common spaces should right through to house multiple activities. This space should not be so large as to encourage activity (Nugent 3).

Quality of Space

Lastly, common spaces should have a good quality of space. This comfort is based upon light, color, and materials. The best lighting schemes are those that combine daylight and hidden artificial sources of light. Color schemes should be warm and include materials such as drywall, wood, and stones are softer to touch and acoustically. If color is used, then it should be used to articulate architectural features or to create a specific mood. Quality of space involves the selection of material. A physical activities such as dancing or bicycling are happening, furniture determines the manners in which students interact (Nugent 5).

Study rooms are the most frequent common spaces within residence halls. Study rooms need to be controlled environments. To achieve this, it should be visually connected to more activated spaces. This will allow for it to be free from noises such as telephones, plumbing, and video games. In order to encourage interactive without limiting privacy study rooms should be larger in size with smaller nooks (Heilweil 392). The intent of the design of collective space is to conduct an investigation of specific design processes using “if-then” scenarios. The end result will be a residence hall on a specific campus that demonstrates this process.
Informal Collectivism: Case Studies

To understand how to go about designing residence halls, one must look at the series of interactions that architects have investigated that have resulted in their projects. These are:

- **Criteria of Site Location to Site**
- **Site to Building**
- **Building to Common Space**
- **Common Space to Room**
- **Room to the Individual**

I will be filtering the ideas of visual connectivity, multiple activities, and quality of space through the design process to the right. This will ensure that the idea of Informal collective space flows at every scale. An informal collective space is a space that is flexible and allows for multiple activities in one space.

While looking at how this is done through architectural history, we can begin by looking at CIAM. CIAM believed in the Neue Sachlichkiet or new objectivity which emerged after WWII in which there was need for rational appropriateness due to the lack of economy. They believed in the minimal dwelling for residents. The Grey’s called for vernacular architecture that was not divorced from its users and their daily lives. Buildings should represent the location in which they were placed and the culture. The New York Five who studied architecture as a process of language. They used phenomenal transparency, a clear separation of public and private spaces, the deep structure within the syntax of architecture, and the symbolic.

Team X who believed architecture to be more social constructs. At The Heart of the City conference, members proposed a city based on the qualitative thought of the urban core. Team X and their ideas come out as the prevailing logic that fits this thesis.

To understand how to go about designing residence halls, one must look at the series of interactions that architects have investigated that have resulted in their projects. These are:
The first precedent examined is a residence hall designed by Steven Holl. Simmons Hall is a joint venture combining MIT’s desire of focusing on use and function and Holl’s desire to have a building that would be memorable.

Because Simmons Hall was to be a small city within a building, its need to be near the center of the MIT campus was not necessary. Instead, the hall was placed on a site between a road and rail lines flanked by a field and parking lots. Holl wanted a memorable building. The result of this was a design that begins with a series of voids that create a porous structure that resembles a sponge. These voids would soak up light and filter it into the social spaces for students. These social spaces were the most important to MIT. The common spaces consist of a dining hall, a library, fitness rooms, a music room, a chapel, a concert hall, a cafe, and lecture rooms spread throughout the building. This building fails to create individual experiences because of the formal social spaces. All of the extra programming within the residence hall is encouraging stagnation. Students will only leave the building to attend class, and because of this there will be a loss of social interaction on the campus level.
Steven Holl was given a site on the edge of MIT’s campus. On the rear is a parking lot, in the front there is a street, and the sides are flanked with an academic building and more parking. Because of its isolation on campus, activating the first two levels was important. With an understanding of how the building and site interact, Holl looked at the building and how to organize space within it. He envisioned a building that would stand out on campus. The voids that he created became the focal points for social spaces. The vertical circulation also became part of these social spaces.

These social spaces dissolve as you move upwards towards the residences. However, the proportion of room to common area is still high. The common spaces are placed on the circulation paths and have direct access to vertical circulation.

Within the rooms, students are given a desk, dresser, and a bed. Each room has nine operable windows to let in fresh air and light. There is limited ways to move the furniture, which can make the spaces feel like a hotel rather than a dorm room.

At the site level, Simmons Hall does not allow for informal collectivism. This begins to change as it changes scale. At the building level, informal collectivism happens on the first two floors, this becomes more apparent as we move from the building to the common space all the way to the individual rooms.
The second precedent examined is a residence hall designed by Tod Williams and Billie Tsien. The duo was commissioned by Haverford College to add 160 dormitory rooms to the school. The campus is a registered arboretum, so the design had to keep nature in mind.

The design started with dealing with unusable fill on the site. Historic trends had been to remove it from the site but the architect’s decided to use this fill to create an earthen berm. They created a berm that allows for access to the second floor of the buildings which in turn eliminated the need for stairs or elevators.

Because the campus has roots in the Quaker lifestyle, a consensus was the method of decision making that determined the shift from double rooms to single rooms. This shift was informed by the current residents, students, who were surveyed on the campus. The decision was to allocate the common spaces to be placed at the center of the building, an open courtyard at the center of lounges and kitchens on either side.

Because of the desire to keep nature entangled in the design, large sliding glass doors can be opened to connect inside and outside in every courtyard. Materials such as light grey brick and dark brown cladding visually connects the buildings to the surrounding masonry structures.

Tod Williams
Billie Tsien
Kim and Tritton Hall
@ Haverford College
TWBT architects was given a site on the edge of Haverford’s campus. On the rear is a wooded trail, in the front there is the academic buildings, and the sides are flanked with green space and wooded areas. Because the site was located on unusable fill, the architects decided to use that to create a berm. This berm allows access to the second floor of the building and eliminates the need for elevators and stairs. With an understanding of how the building and site interact, Tsien looked at the building and how to organize space within it. The design became one in which the common areas are placed in the core of the building allowing for the rooms to be placed on the perimeter. The proportion of room to common area is about half and half. This is different from the traditional double loaded corridor.

Each room has an operable window to let in fresh air and light. Each room is for a single resident. They are furnished with a desk, a dresser, and a bed.

The combination of the single rooms and common areas at the core allows for students to be both collective as well as individual.

The twin buildings allow for interaction of more students, this is emphasized by the berm that connects both buildings. Inside the core to shell organization enhances collectivism by giving each person ownership of the collective space. The only drawback is that rooms do not allow for individuals to interact with one another.
The third precedent examined is a residence hall designed by Studio Gang. This building is placed at the North end of the complex and opens up the university to the greater Hyde Park community. Because the architect wanted semi-private and public outdoor spaces, it is designed by placing four narrow buildings in an urban fabric.

The architect designed the halls after gaining an understanding of the existing House system that the university has adopted. A house system is when three floors are taken and shared amongst a group of students of different years (Gang).

The Houses are designed around three story communal hubs that support the social and academic success of its residents. These hubs are host to studying, eating, and recreational areas. Each House is designed to allow for semi-private and shared spaces. Plans for household chores and group activities are planned by Resident Assistants and take place here.
Studio Gang was given a site on the edge of The University Of Chicago's campus. The north and east facades face the city and the south and west facades face nonacademic buildings on campus. The exterior is made to be an abstraction of the school's neo-gothic style. The design is to be a corner stone of the urban edge with building heights that complete the urban edge. With an understanding of how the building and site interact, Gang looked at the building and how to organize space within it. The design became one in which the common areas are based on the existing house system. Each common space is three stories tall, placed in the core of the building allowing for the rooms to be placed on the perimeter. There is a low proportion of rooms to common areas. They are placed in the center of a traditional double-loaded corridor. There are many types of rooms here. There are both single and double suites as well as apartments. The combination of the rooms and common areas allow for different levels of interaction among the residents who live here on single floors as well as across floors. This site allows for informal interaction in between the two buildings. The stacked house system allows for interaction across multiple floors and different neighborhoods. Even the rooms allow for interaction as they have multiple people living in it.
As stated by Heilweil, formal common spaces had led to forced interactions. As a result, feelings of alienation, hostility, and a loss of a sense of place have occurred. Therefore, the prevention of these conditions can be corrected through the understanding of relations of patterns of adjacency and traffic flows, and how these lend themselves to environmental programming. Hallways become important because they are not only a social hub, but they influence environmental planning. Traffic flows, also called circulation, help determine who meets whom, how often, and how casually. Circulation between two spaces can be measured in Functional Distance. Functional Distance is the distance that is actually traveled rather than the measured physical distance. Using this logic, it can be determined that separate and poorly connected distant remote areas are more functionally distant than distant remote areas that are well connected. Students will use the entrance closest to their room, therefore, limiting the amount of entrances can help direct traffic flow into precise areas. This will help increase incidental socialization (Heilweil 385).

Most American colleges can be classified in two manners: Liberal Arts or Technical. A liberal arts school consists of majors that provide an overview of the arts, humanities, social sciences, mathematics and natural sciences. Technical school provide courses in a range of practical subjects, such as information technology, applied sciences, engineering, agriculture, and vocational skills. Other types of institutions are junior college, military schools, nursing school, gender specific and historically black colleges and universities (HBCUs).

In addition to universities, students can be described in four ways. This is based on their involvement in academics and college life.

- **Academics** are involved with the ideas or learning via school, classes, papers, and contact hours.
- **Collegiates** are concerned primarily with extracurricular activities in the form of Greek life, sports, and student organizations.
- **Non-conformist** are concerned with the idea of learning, but not with the university because of its bureaucracy.
- **Vocationals** are concerned with the ways in which college can help them get a job (Heilweil 392).
Sister Typologies
Multifamily Housing

Residence halls are considered a type of multifamily housing. Because of this, one can look at them to get an understanding of public/private relationships, sociospatial relationships, and efficiency. By understanding the methodologies used, one can expand their understanding of how others have looked at informal collectivism.

The five buildings I am studying are:
- Unite de Habitation
- Hook of Holland
- ATBAT Collective House
- Keeling House
- Habitat 67
Unite d’Habitation was built after World War Two as a place for those displaced by war in Marseilles, France. This was one of the first buildings of its magnitude for Le Corbusier. He began his design by placing multiple uses in one building rather than spreading program across the landscape. Because he was known for his villas, Le Corbusier incorporated that into the design of the units within the body. This allowed for private spaces to be given to the inhabitants (Kroll 2016).

Le Corbusier took a new approach to how communal spaces are designed here. Because there was such an emphasis on the accommodation of private spaces, a majority of the common spaces were placed on the roof. The roof was also comprised of a running track, a club, a school for kindergarten, a pool, a shallow pool, and a gym. He also uses a free facade which allows for the facade to not be dependent on the structure. This means that the facade no longer has to reflect the program inside.
Siedlungs, given to us by Team X, emerged at the edges of European cities. These settlements were garden-city-esque in design and focused on mass production. They were to have a larger density, be two to five stories, and have green space for its residents. They were built to be easily replicable meaning everyone gets the same thing. Large siedlungs would have public services such as schools and hospitals. The basis of construction would be concrete floors, cinderblock walls covered in plaster, and wood framed windows. (Fountain 01) These also featured the Frankfort kitchen which not only maximizes the space in the kitchen, but also increases the efficiency of the space by minimizing the stress on the woman.

Hook of Holland was designed by JPP Oud is the first of the siedlungs designed. It was designed around the idea of rational appropriateness and the minimum dwelling. Each unit gives to its residents exactly what they needed and not much more.
Team X members took social sciences and put them at the forefront of their architecture. There was a change from the minimum dwelling to habitat based on geography, anthropology, and civilization. Dutch and English architects proposed a city based on the qualitative thought of the urban core. The urban core is considered the social space. The city is to be a series of social relationships. It was to be the physical design of human relationships.

Shadrach Woods took into account the human need of air, sunlight, and green space. A courtyard, galleries, and private rooms emphasized the Team X idea of levels of socializing. Galleries are “streets in the sky” as coined by Alison Smithson, a leader of CIAM. These streets are reminiscent of alleys at kasbah. Private and public spaces are clearly defined within the space. This is most notably seen in the design of the balconies. Each tenant has access to their own, but cannot get to another tenants or view into another unit’s balcony (Fountain 01).
Figure 1.46
Denys Lasdun was born in 1914 to an engineer. He went to study architecture at the Architectural Association in London. Lasdun worked with the Royal Engineers Airfield Construction Company during the Second World War. By 1959, Lasdun established his own practice. By the time of his death, he was considered a pioneer of post war modernism (Libera 2016).

The Keeling House project is a set of four wings connected by a common elevator core. The angles of these wings were based upon maximizing natural light into the four wings. By 1955, Lasdun established his own practice. By the time of his death, he was considered a pioneer of post war modernism (Libera 2016).

Denys Lasdun
Keeling House
London, England
Habitat 67 began as a thesis project of Moshe Safdie in 1961. Under its original name “A Three-Dimensional Modular Building System,” the master plan consisted of a school, shopping centers, and over 1000 units. However, after its acceptance into the World Exhibition, the Canadian government reduced the number of housing units to 158 and eliminated the common spaces. Although it is the only one still standing, Habitat 67 is one of many to be built. The 146 residences with different sizes and configurations are made of one to eight concrete units, each made from 354 prefabricated concrete forms that are identical. Safdie’s goals in designing this complex were 1) affordable housing and 2) a suburban home feel in an urban context. He wanted the complex to be multileveled and for the tenants to have access to a garden and fresh air (Merin 2016). This increased visual connectivity and informal linkages can be used as part of the design strategies of neighborhoods within a residence hall.
Outcomes

With the information taken from this chapter, there are a few conclusions that can be made. First, there are multiple ways that the underlying principles of visual connectivity, multiple activities in a single space, and quality of space can be used to create a methodology for design. For Steven Holl, his methodology was influenced by combining his wants for a iconic building with MIT’s needs for an abundance of common areas. Lighting and common spaces along vertical circulation is a good leading to common space relationships.

Tod Williams and Billie Tsien used a methodology that incorporated the site and student culture. This was also used by StudioGang in their methodology. This allowed for neighborhoods and rooms to become extremely interactive.

Second, an understanding of common space, and how they can become formal and informal has been defined along with sociospatial relationships and college culture. Lastly, study halls are looked at to see what they can become formal and informal.

With this information we can go about creating a system of options to be used in the design of a residence hall as we work our way through the underlying principles.
The city of Savannah in Georgia is one in which both its use and its design is formal. Streets are set up in a quadrant with squares placed on every few blocks. Wayfinding and navigating through the city is simple. In use, it is formal. City squares are flanked with restaurants and boutiques. There is not a diverse set of programming.

The green at the University of Cincinnati, is designed formally, but its use is informal. Students are greeted with a basic grid system that is interrupted with a series of winding pathways that make the space more dynamic. In use, it is informal. There is no set programming which allows for multiple activities to happen with in this site.

The Continuous Movement by Super Studio is informal in both its design and its use. It really has no formal design. It is just a raised flat surface. It also has no formal use.

The city of Savannah in Georgia is one in which both its use and its design is formal. Streets are set up in a quadrant with squares placed on every few blocks. Wayfinding and navigating through the city is simple. In use, it is formal. City squares are flanked with restaurants and boutiques. There is not a diverse set of programming.

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Washington DC is formal in its site to building relationship. Each monument is laid out to be either on axis or terminates one. In its use, it has become a destination for both the government and tourist. The Caltrans District 7 Headquarters by Morphosis is formal in its design and informal in its use. Thom Mayne formally laid out the site as an extension of the building itself. However, no uses are assigned to this space.

Centre Culturel Tjibaou is informal in both its design and its use. Piano designed it in such a manner that parking is in the back. When one parks, they have to wander to the front to enter the building. As they move to the front there is no set programming that is encountered along the way.
Facade to Structure

The Seagrams Building is both formal in its design and its relationship to the structure. The structure is pushed to the exterior of the building making it part of the facade. This was a fairly new system created by Mies van der Rohe. It is also formal in its design. The facade is a uniform, repetitive system (Fountain 01).

The facade at Kait Kobo is a storefront system free of the structure. This makes it formal in its design but informal in its use in terms of the structure. The structure itself is formal. There is not set grid to the columns which creates unique spaces within.

The facade at the Seagrams Building is both formal in its design and its use. Because Le Corbusier created a facade system free of the structure, the facade can be designed to do whatever it wants. That makes it informal in its design and its use (Fountain 01).

Facade to Program

Mckim, Mead, and White were at the forefront of the skyscraper movement. Here, the facade was designed to represent what is happening on the inside. It first starts with the basement. On top of that is the ground floor which is for retail shops. The office structure is the mezzanine level. The facade on this level is identical windows. The top floor which holds the mechanical systems is fully covered on the facade (Rizutto 01).

The Guild House is formal in how it reflects the interior program on the exterior, but informal in how it is designed. The exterior represents the floor plates and living spaces happening on the interior of the building. The facade becomes informal because of the use of the broken arch on the front facade along with the column in the middle of the entrance (Fountain 01).

Works by Le Corbusier are informal in both their design and their uses. Because Le Corbusier created a facade system free of the structure, the facade can be designed to do whatever it wants. Its relationship becomes informal in its use because multiple types of windows can be used and they do not have to reflect what is on the inside (Fountain 01).
Program to Room

The Central Office Beheer has a formal relationship between its programming and the rooms that it is comprised of. However, the design is informal allowing rooms to open up into an interior courtyard (Fountain 01).

The Paris Opera House is a building in which both the programming is formal and the rooms that are in it are formal. Rooms are placed upon a series of perspective paths that guide visitors from room to room until they are in the theater (Fountain 01).

Kai Kobo has an informal relationship between program and room. First, there is no set programming, although the building is currently an office. This is only enhanced by the lack of formal layout of rooms within the space.
CHAPTER III

Room to Individual

The Frankfort Kitchen is a formal relationship between a person and a room. In fact, this design was based on max efficiency of a person in this space. It is an extremely choreographed experience.

House NA is a series of informal spaces in one room. It is also informal in its design. Each room is a floating platform where many actions can take place. One can eat, sleep, socialize, etc.

The Brick House 1908 in an informal room with a formal design. There is multiple activities in this room allowing its users to do many things, but there is a formally designed way in which these actions are choreographed.

Figure 2.16 Plan of the Frankfort Kitchen

Figure 2.17 Interior Photo of the Brick House 1908

Figure 2.18 Interior Photo of House NA
Site Selection Criteria

College

A site relationship to its building is important to create informal collectivism. This was a weak relationship in the case studies because of their lack of multiple activities and visual connectivity, and should be corrected for this project.

The following are the criteria for the College:
- must be experiencing rapid growth
- >8,000 students
- must have at least two existing residence halls, but no more than five
- comprehensive university*  
- Public Institution*

The following are the criteria for location:
- weather must consist of all four seasons.
- It must be 20 to 40 miles from an urban center.

Site Context Defined
The site for this project must be in a place where the climate is a Humid Subtropical Climate. This climate is considered mild and lies in between 20º to 40º degrees north or south of the equator. It is considered mild because all four seasons are distinct. Temperatures in the summer range from 86º and 100º and winter temperatures range from 41º and 54º. However, winters in this zone can be severely cold. These areas also received an average of 48 inches of rain annually. This is also Climate Zone 3 in the IECC.

This type of climate will benefit the project because it has given us an opportunity to design spaces for informal collectivism on the exterior of the building. With that in mind, these spaces can be designed programatically to respond to the seasons. Outdoor common spaces can then become a way in which the building can interact with the site, and the site with the campus.

The site for this project must be on a suburban campus 20 to 40 miles from an urban center. I extended my radius from city centers to suburban peripheral cities. This will create a self-contained campus which will help foster a sense of community and aid in informal collectivism. Students will also have access to a city without actually having to be in one. Suburban colleges are usually safer and have access to nature. At a school of this size, academics and a social life are what entertain you giving these informal collective spaces more importance (CB).
Liberal Arts Universities are ones in which the primary degree in an undergraduate degree in the arts, humanities, and social sciences. Research universities who offer a both undergraduate and graduate degrees. However, the focus of teaching is through research. Military academies are ones in which degrees in business, engineering, technology, and the physical sciences. Most degrees here are completed in five years. The site for this project must be at a comprehensive university. This type of college or university is one in which both theoretical and vocational training is offered at the undergraduate, graduate, and doctoral level (Meyer). This type of university has a diverse set of students due to the diversity in academic programs. This will help with creating informal collective spaces that are not tailored to specific uses based on academics. This will increase ones self awareness.

Site Selection
Small to Medium

The site for this project must be at a college or university whose enrollment is in between 5000 and 15000 students. Satellite campuses with enrollment whose enrollment falls within the small to medium category may also be considered (College Data). This type of college will benefit the project because the site creates a strong sense of camaraderie among its students. Most buildings are in walking distance which allows for more campus “hotspots”. These social centers can become the informal spaces within a residence hall.

Site Selection
Comprehensive Universities

This site must be at a comprehensive university. This type of college or university is one in which both theoretical and vocational training is offered at the undergraduate, graduate, and doctoral level (Meyer). This type of university has a diverse set of students due to the diversity in academic programs. This will help with creating informal collective spaces that are not tailored to specific uses based on academics. This will increase ones self awareness.
Weather must have seasonal variation. The following sites were selected for consideration. Of these selections, for the process of site visitation and analysis, the state of Georgia is chosen because of its proximity:

- Alabama
- Florida
- Georgia
- Kentucky
- Mississippi
- North Carolina
- South Carolina
- Tennessee
- Virginia
- West Virginia

It must be in a suburban area. Starting with the major cities, I worked my way outwards and found suburban universities. Major Cities in Georgia. Being in a suburban area allows for mixed populations without the interruption of non-campus programming:

- Atlanta
- Kennesaw State University-Marietta
- West Georgia University
- Life University
- Columbus
- Columbus State University
- Augusta
- Augusta University
- Medical College of Georgia
- Macon
- Mercer University
- Georgia State University
- Savannah
- Savannah College of Art and Design
- Savannah State University
- Armstrong State University
- Athens
- University of Georgia

Site Selection

Process of Elimination

The site for this project must be at a college or university that is considered a public institution. These are colleges or universities that operate under the supervision of state governments and are funded in part by tax dollars and subsidies from the state (Staff).

This type of college will benefit the project because there is an increase in diversity of students. Because a majority of private institutions have a higher cost and higher admissions requirements, they become tailored for a specific type of student.

Site Selection

Public Universities

Figure 3.09

Cost vs. Financial Aid (per semester)

Figure 3.10

Average Total Aid          Average Cost

Figure 3.09 Acceptance Rate Graph

Figure 3.10 Cost of Attendance Graph

Average Total Aid          Average Cost
It must be a medium sized college.
Universities with student enrollment between 5000 and 15000 were chosen to continue.
- Kennesaw State University- Marietta
- West Georgia University
- Life University
- Columbus State University
- Augusta University
- Medical College of Georgia
- Mercer University
- Middle Georgia State University
- Savannah College of Art and Design
- Savannah State University
- Armstrong State University
- University of Georgia

It must have less than 8000 students.
This allows for more significant interaction within the dorm.
- Kennesaw State University- Marietta
- West Georgia University
- Life University
- Columbus State University
- Savannah State University

It must have no more than five Residence Halls but no less than two. This allows for the opportunity to diversify the types of residence halls on campus.

It should be a comprehensive university. This allows for more significant interaction within the dorm.
- Kennesaw State University- Marietta
- West Georgia University
- Life University
- Columbus State University
- University of Georgia
Site Selection Criteria
Site on KSU Marietta

The following are the criteria for location on campus:
- It must be on the campus master plan as a renovation or proposed building site.
- It must be in a five-minute walking distance from a campus hotspot.
- It must be in an area where the existing residence halls do not have enough space to fit student needs.
- It must be on previously disturbed land.
- The site must allow for the building itself to become an informal collective space.

Site Selection
Campus Master Plan

The site should be one that is in line with the future plans of the campus. This lends us the opportunity to work on previously disturbed land, or land that has already been set aside for a building to be placed on it. For this project, we are looking at existing residence halls that are on the plan to be renovated, long-term sites designated for residence halls, and undesignated building sites.
It should be noted that the university is experiencing rapid growth. This growth has led to an inadequate amount of student housing. Placing the new residence hall near one that has an overflow of students will allow for the building to respond to student needs. Each percentage of occupied space is as follows:

- Commons: 271/288 = 93.1%
- Courtyard: 350/373 = 94.9%
- Howell Hall: 269/281 = 95.7%
- HV100: 263/284 = 92.6%
- HV200: 304/318 = 95.6%

Data by Chris Bruno

Because residence halls should not contain any superfluous programming, it is important for the site to be placed near additional programming aspects on campus. The master planners of this campus have noted that the students have chosen campus hotspots. Hotspots are areas of increased social interaction. On this campus they are the student center, Stingers dining hall, the green between Howell Hall and Norton Hall, and the Atrium Building.

Site Selection
Campus Hot Spot

Site Selection
Overflow Opportunity

Figure 3.12 Campus Mater Plan

Figure 3.13 Campus Mater Plan

Figure 3.14 Campus Mater Plan
The idea of informal collectivism should also take place at macro scale. The residence hall should be placed on a site which would allow it to become an informal collective space. In order to achieve this, the activities happening around the site should be diverse.
CHAPTER IV

Site
Site Analysis
This site shows what it means for a space to become an informal collector. Multiple Activities are happening along a circulation paths.
Here, we can see that there is more intense light during the summer. Finding ways of cooling these areas becomes important. In the winter, there is a more even spread of light.

These materials enhance the quality of space. The color schemes are warm, neutral, and softer to touch. This enhances the space and makes it more welcoming.
Most of the wind comes from the Northwest. This will help with passive cooling of the building. Windows can become operable. Adding plants will help cool the air and reduce humidity.
**Building Placement: Option 1**

**Benefits:**
- Creates a quad to the north and a collective space to the south
- Creates multiple entrance opportunities
- Has two frontages that face common spaces
- Allows for a collective space shared between the three residence halls
- Has a relatively small footprint
- Has a lot of natural sun
- Fills “dead” area
- Is near a lot of human sound

**Drawbacks:**
- Has little connection to the campus
- Leaves open end on the south east side
- Round upon circulation paths
- Trees on the south end become collateral damage

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**Figure 4.11 Site Organization Diagram**

**Figure 4.12 Building Site Analysis**

**Figure 4.13 Green Space Building Analysis**

**Figure 4.14 Collective Space Building Analysis**

**Figure 4.15 Frontages Analysis**

**Figure 4.16 Entrances Analysis**
Building Placement: Option 2

Benefits:
- Creates multiple entrance opportunities
- Allows for a collective space shared between it and HV200
- Fills dead area
- Falls within site lines
- Has a lot of natural light
- Has a relatively small footprint
- Opportunities for natural ventilation

Drawbacks:
- Has little connection to the campus
- Leaves open end on the west side
- Has size footprint that leaves common spaces
- Does not create multiple collective spaces
- Not near human sound

Figure 4.17 Site Organization Diagram

Figure 4.18 Building Site Analysis
Figure 4.19 Green Space Building Analysis
Figure 4.20 Collective Space Building Analysis
Figure 4.21 Frontages Analysis
Figure 4.22 Entrances Analysis
Building Placement: Option 3

Benefits:
- Creating a quad to the north and a collective space to the south
- Creates multiple entrance opportunities
- Has three frontages that face common spaces
- Creates a collective space shared between the three residence halls
- Connects to the campus
- No dead space
- Falls within site lines
- In a quiet area
- Has a lot of natural light
- Trees to the south act as collateral damage
- Near human sound
- Opportunities for natural ventilation

Drawbacks:
- Very large footprint
Building Analysis

Building Styles

In contemporary practice, residence halls are designed in four styles:

- traditional style with common bathrooms
- suite style with shared bathrooms
- apartments with kitchens and living rooms
- or a combination of two or more of these.

The size of these rooms are based on the size of the bedrooms within them. A single is a room in which one person lives within a single space. A double is a room in which two people live within a single space. The formula for these room sizes is as follows:

Single: \(100\text{ft}^2 = 100\text{ft}^2 \text{ per person} \) (Heilweil 402)

Double: \(180\text{ft}^2 = 90\text{ft}^2 \text{ per person} \) (Heilweil 402)

The bedroom in a Traditional style residence hall is one in which the individual rooms have no common space placed within it. Instead, more private areas such as bathrooms are placed as a common space within the neighborhood. Traditional style rooms are more community-oriented and social. (Heilweil 404)
Building Analysis

Suite Style

The bedroom in a Suite style residence hall is one in which the individual rooms have a shared bathroom. Suites allow for a semi-public area within them. Suites have become more favorable because of their privacy (Heilweil 405).

Proposed

Current

Figure 5.06

Hornet Village Suite Plan

Figure 5.07

Proposed Suite Style Floor Plan

Building Analysis

Apartment Style

The bedroom in an Apartment style residence hall is one in which the individual rooms have a bathroom, kitchen, and living room placed within the dwelling. Apartments have a different level of comfort than a suite in residential style because some of the common spaces become personal areas. There is more ownership of these spaces because less people use them. The neighborhood however is still home to other common areas such as game rooms and study areas.

Proposed

Current

Figure 5.08

Commons Apartments Plan

Figure 5.09

Proposed Apartment Style Floor Plan
Common spaces are the most important part of a residence hall. This is where the greatest sense of community is created. Strategic placement of common spaces can become a catalyst of academic, personal, and social growth.

Visual Connectivity

The first element in a successful common space is its location. Common spaces should be placed where one can see and be seen. This calls for a space which can be a destination and a part of the circulation. This becomes a space in which people can either pass through or stay (Cotter 31).

Recycling Room

Laundry Room

Game Room

Open spaces are more likely to be active than closed spaces. Secluded rooms at the end of a hallway discourage student use because one may feel as though they are an intrusion. If there needs to be a barrier, then it should be made of glass (Nugent 5). This creates a physical and sound barrier, but allows for a visual connection.

Multiple Activities

Secondly, common spaces should be home to multiple activities. This will draw in different people and encourage interaction among different social groups. In order to accomplish this, common spaces should be a variety of sizes to welcome the different activities. Spaces typically seen for service such as laundry, vending, or recycling areas should be designed with other programming to become hubs of social activity. Common spaces should be large enough to house multiple activities, but small enough to encourage activity (Nugent 3).

Quality of Space

Lastly, common spaces should have a good quality of space. This comfort is based upon light, color, and furniture. The best lighting schemes are those that combine daylight and hidden artificial sources of light. Color schemes should be warm, and materials such as dried, wood, and stone are softer to touch and acoustically. If color is used, then it should be used to articulate architectural features or create a specific mood. Furniture in these spaces should be comfortable and flexible. In spaces where multiple activities are happening, furniture determines the manners in which students interact (Nugent 5).

Study rooms are the most frequent common spaces within residence halls. Study rooms need to be controlled environments. To achieve this, it should be visually connected to more activated spaces. This will allow for it to be free from noises such as telephones, plumbing, and video games. In order to encourage interaction without limiting privacy, study rooms should be larger in size with smaller nooks (Heilweil 392).

The intent of the design of collective space is to conduct an investigation of specific design processes using ‘if-then’ scenarios. The end result will be a residence hall on a specific campus that demonstrates this process.
Hallways become important because they are not only a social hub, but they influence environmental planning. Traffic flow helps decide whom meets whom and how casual these encounters are. Functional Distance is the distance that must be traveled rather than the sheer physical distance. Because of this, separate and poorly connected areas that are adjacent are more functionally distant than distant remote areas that are well connected (Heilweil 392).

Building Analysis

A neighborhood or House is a grouping of residents. Residents are grouped in 25 to 40 people bundles based on stair placement, the number of residents can handle, and the number of residents for effective community building (Heilweil 410). This community feeling corresponds with the nod line. The nod line is the line at which people are comfortable to nod at one another. In a residence hall, the nod line is 10 feet.

This residence hall has taken on a tripartite system in which three neighborhoods are placed on a floor. This allows for three smaller communities within a bigger one. Hallways become important because they are not only a social hub, but they influence environmental planning. Traffic flow helps decide whom meets whom and how casual these encounters are. Hallways become important because they are not only a social hub, but they influence environmental planning. Because of this, separate and poorly connected areas that are adjacent are more functionally distant than distant remote areas that are well connected (Heilweil 392).
Spatial Program and Organization

Program Organization

Spatial organization in relation to sociospatial relationships calls for:

- small, individual spaces to foster involvement and interaction
- buildings with no more than five stories
- no more than 500 students
- halls holding 10 to 12 rooms opening up to a common space

CHAPTER VI
Collegiates focus on socialization therefore spaces such as lounges and kitchens will draw students in. Nonconformists focus on their education and because of that will use spaces like study rooms. Vocationals are not focused on learning or socialization, therefore they are not drawn to a specific collective space, however, a kitchen is one that will be used.

To maximize the usage of collective spaces in each neighborhood, they will be tailored to the students who use them. All four types of students will need a bathroom and laundry facility. Academics will migrate towards spaces that allow for studying and socialization. Lounges will be a primary collective space that will be used by these types of students.

Spatial Program and Organization
Program Organization + Student Types

Spatial Program and Organization
Collective Space + Student Types

Academics
Collegiate
Non Conformist
Vocational

Primary
Secondary
Tertiary

To maximize the diversity of student types in this residence hall, different neighborhood typologies will be used. Academics will prefer a suite because they want the ability to socialize but will also want a more private room to learn. Collegiates will want to live in a traditional living community. This because of their need to socialize. Nonconformists will want to live in a suite. They will need a space to learn, but will want a more private space to seclude themselves. Vocational will prefer apartments. Here they will have privacy to continue to be apathetic towards learning and socializing.

Academics will focus on learning therefore spaces such as classrooms and study rooms will be used. Nonconformists focus on their education and because of that will use spaces like study rooms.

Vocationals are not focused on learning or socialization, therefore they are not drawn to a specific collective space. However, a kitchen is one that will be used.
The site becomes an informal collector. It is formally designed with multiple activities happening in the programmed green space north of the new residence hall. To the south there is more gardening space, grilling, and on the lower level, there is open space for students to do what they please.
Facade to Structure

The goal is to create a facade system free of the structure. The facade can be designed to do whatever it wants. That will make it informal in its design and its use. This gives greater control in lighting and materiality as well.

Facade to Program

Because the facade can be designed to do whatever it wants, each neighborhood can respond differently to the needs of its residents. This will make it informal in its design and its use. This gives greater control in lighting and materiality as well. Natural light should be filtered into the collective spaces.
Program to Room

The goal of this project is for each neighborhood to consist of collective space and bedrooms. The collective space is surrounded by the bedrooms and takes up about half of the floorplate. This will enhance the collectivism as each collective space is placed upon circulation paths and has multiple programming pieces within.

Room to Individual

The goal of the design of each bedroom type was to increase the amount of interaction happening between individuals. In an apartment four people can interact. In a suite two to five people can collect, and in a traditional room, two people share a space.
Conclusion

This design proposal posits a framework of inquiry to understanding collective space as a design tool for residence halls. The project begins to demonstrate one of many possible solutions to integrate these criteria into design, but seeks to reevaluate how residence halls are designed for future inquiries.
Glossary

Terms Used

Collective Space: a space in which collective activities happen.

Formal Collectivism: the practice of giving a group spatial priority over each individual in it through fixed programming.

Formal Space: A formal space as defined by Julia Nugent is one that is not flexible and does not allow for multiple activities in one space.

Functional Distance: the distance that is actually traveled rather than the measured physical distance.

Informal Collectivism: the practice of giving an individual spatial priority over a group through multiple fixed or variable programming.

Informal Space: a space that is flexible and does allow for multiple activities in one space.

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Books

Essays
Fountain, Briana J. “The Case Study Program and Team X.” Kennesaw State University, 2012.
Fountain, Briana J. “Gas-Neue-Sachlichkeit.” Kennesaw State University, 2012.
Fountain, Briana J. “Modernist/Glycophyts.” Kennesaw State University, 2012.
Fountain, Briana J. “La Cortisus.” Kennesaw State University, 2012.
Fountain, Briana J. “Kentor.” Kennesaw State University, 2012.

Powerpoints
Rizutto, Anthony. “Structuralism and Systems Theory” Lecture, Cultures IV, Kennesaw State University, Marietta, Ga, September/October 2015.

Online Publications

Works Cited
Revolutionary Rooms
Community Hubs Redefined