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Olivia Willingham April 9th, 2023

Communal Space Across Time: Comparing the Architecture of Ostia Antica and Drop City

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Introduction: Architectural Anthropology and Communal Living

Social anthropologist Tim Ingold proposes that focusing on the "four As," otherwise known as anthropology, archaeology, art, and architecture, provides a solid basis for understanding the human experience of "making," the creation of something, whether it be a physical object like a building or something intangible like music or community.[1] The second "A", archaeology, often considered a branch of anthropology, focuses on art and architecture made in the past that is then analyzed in order to better understand the cultures from which they came. Ingold notes that less research has been done on architectural anthropology than the anthropology of art. He provides his own definition of architecture under an anthropological lens, saying, "I propose instead to think of architecture as a discipline that shares with art and anthropology a concern to explore the creative processes that give rise to the environments we inhabit, and the ways we perceive them."[2] The primary role of architecture within a society is as functional space built for the different aspects of everyday life, and architecture typically takes on a secondary role as a form of cultural expression. Studying architecture serves as an avenue by which to gain a better understanding of a community.

I intend to add to the architectural anthropological literature by exploring the making of communal architecture. This essay studies communal living as a way to understand how humans choose to build space that reflects the needs and values of their community. Communal architecture treats space typically considered private by the mainstream as a public realm. In *Ideal Homes?: Social Change and the Experience of the Home,* the authors assert that existence within the home is generally a private, intimate experience, stating, "[w]hile the home may provide people with a site of retreat from the public gaze, it is also the stage upon which people

[1] Ingold 2013, 10
[2] Ingold 2013, 10

project the most intimate image of their 'selves' to the world."[3] Anthropologists seek to understand the intimate "selves." Architectural anthropology of communal architecture explores the making of and existence within communal living space, a public zone for aspects of private life.

This thesis compares two case studies: the architecture of Ancient Roman Ostia Antica, which contained communal architecture called *insulae* built to alleviate the problems of overcrowding in the city, and the architecture of Drop City, an American commune with a mission to provide free living space and resources to anyone who needed it. These particular case studies were chosen due to their extreme differences. The communal architecture differs visually and structurally. The architecture of Ostia Antica was expertly built, highly organized, and imperially regulated, while the architecture of Drop City was built without regulation by the members of the commune and the occasional outsider, many with very little architectural knowledge (Fig. 0.1). These architectural differences were due to the differences in the two case studies' social organization. Ostia and Drop City differed in time period, location, and culture. They were also built for different reasons: the Ostian *insulae* were built to support Ostia's existing values and social organization, providing diverse options of affordable, space-saving apartments to the residents and visitors of the overcrowded, economically diverse port city. Drop City, on the other hand, was intended to serve as an alternative to the American mainstream lifestyle, free land and food for all who visited, and as an artists' commune with a focus on creating collective art. Drop City was not fully successful in achieving these goals, particularly struggling with the ability to provide food and comfortable living space to its residents. The founding members of Drop City ultimately removed the "free land for all" clause in the land

[3] Chapman et al. 1999, 196

deed in the early 1970s. The commune was generally successful in creating a communal atmosphere for about eight years. Numerous researchers that created ethnographies on the American hippie communes of the 1960s and 70s noted that there was very little social conflict at Drop City. Writer Hugh Gardner concluded in his study of thirteen American communes that Drop City was "a community offering few material amenities but many social ones in an atmosphere of unrestricted individuality[…] For many young American wanderers in 1970, this was a pretty fair definition of Utopia."[4] While Ostia's *insulae* provided comfortable living space to a wide range of the city's population, Drop City provided space to those who prioritized communality and individual freedom over comfortable living space.

Architectural Overview

The organization of Ostia's architecture was dense. Many buildings shared walls to save space within the city. Imperial codes enforced certain regulations on the design of the city's architecture. After the Great Fire of 64 AD, additional imperial codes were added that were specifically designed to prevent another widespread fire. All of the buildings had to be constructed with red brick, no higher than five stories, and set away from the street in order to prevent fire risk and to promote the flow of foot traffic. Many of the buildings' upper floors had staircases that led down to the street level. The upper floors of many of these buildings no longer remain, but the existence of stairs and other evidence in the buildings point modern archaeologists towards the understanding that much of the *insulae* were quite tall. The vertical floor plans of these structures limited the space they took up within the densely-packed city.

Architects today divide Roman Ostia Antica into five broad regions called *regios*, and the *insulae* blocks are numbered. The buildings within each *insula* block are numbered too, and a

[4] Gardner 1978, 44

systematic naming pattern is used to identify each structure. For example, the House of the Painted Vaults is situated in *regio* III, *insula* V, and building number 1, meaning that the code for this structure is III.V.1. The structures investigated in this thesis are the House of Diana (I.III.3-4), House of Jupiter and Ganymede (I.IV.2), House of the Painted Ceiling (II.VI.5-6), *Piazzale delle Corporazioni* (II.VII.4), House of the Painted Vaults (III.V.1), *Case a Giardino* (III.IX), and the House of the Painted Vaults (III.V.1) (Fig. 0.2). *Regio* I, containing the House of Diana and the House of Jupiter and Ganymede—which was later converted into a hotel in the late second century AD—was situated in the northwestern part of Ostia and contained a diverse array of structures, including shops and workshops, warehouses, baths, temples, bakeries, hotels, bars, and restaurants (Fig. 0.3). *Regio* II, containing the House of the Painted Ceiling and the *Piazzale delle Corporazioni*, was located in the northernmost region of the city. The *regio* contained very little living space and was instead primarily composed of public buildings and baths, shops, and warehouses (Fig. 0.4). *Regio* III was located in the westernmost part of the city. Although most of the *regio* primarily contained shops, the westernmost section of the *regio* included the *Case a Giardino*, a section of living structures made up of a *domus* and seventeen *medianum* apartments (Fig. 0.5).

Drop City's architecture was not formally regulated like Ostia's architecture was. The communards were free to build structures as they pleased. The first structures on the commune were built by two of Drop City's founding residents, Richard Kallweit and Clark Richert. The founding members of Drop City faced a choice when starting the commune: they could either build structures that were simple and easily replicable or structures that were visually distinct but lacked the ease of replicability. The Droppers chose the latter. These structures generally followed the "type" of architect Buckminster Fuller's geodesic dome shape, but many did not

follow these designs exactly. The Droppers experimented with the shapes of their buildings. There was also very little budget for building materials, and the most cost-effective way to create these structures was to use multiple different materials, incorporating whatever supplies they could get for free or at a low cost, including scrap metals, bottle caps, chicken wire, the roofs of junk cars, and concrete mixed with sand. The architectural result was a visual medley of buildings across the commune's arid farmland (0.6).

The two case studies had drastically different architecture and organization. Some of the goals of the architecture, however, were similar. Under different social constraints, each case study executed these goals in different ways. Although some examples of communal living do not have private space at all, both of these case studies did, and the architecture of both was designed to clearly indicate what was public and what was private space. Both of these case studies used art or other forms of interior decoration as a way of visual communication. Some buildings within Ostia used different types of floor mosaics in correlation with the status of different household members that generally occupied the room. The subject of various Ostian wall paintings and mosaics also indicated the intended usage of a room. As an artists' commune, much of Drop City's architecture was imaginative and visually striking, created by the many artists that resided on the commune. The commune also included public art installations. Both Ostia Antica and Drop City needed to support a large, transient population; Ostia's population in the late second century AD is estimated to have reached about forty-thousand, [5] while Drop City's population averaged about fifteen to twenty people,[6] forty at its peak.[7] These communities had relationships to a larger societal context. The city of Ostia served as an important port city

[5] Laurence 2020, 60
[6] Fairfield 1972, 206
[7] Gardner 1978, 40

within the Roman Empire. Drop City became quite famous in the United States, and when the communards struggled to survive, they frequently relied on the generosity of outsiders for help with food and bills. This thesis compares the ways in which the communal architecture of these two case studies supported the communities' values and survival and why Ostia survived for centuries while Drop City stood for less than a decade.

Ostia Antica | Drop City

Figure 0.1: A side-by-side comparison of the *Case a Giardino* (III.IX) and Drop City from afar. Note that the view of the *Case a Giardino* showcases the complex's linearity and the uniformity of its red brick exterior, and the image also reveals various architectural types within the complex, including the *domus*, *medianum,* and *tabernae.* The view of Drop City communicates the commune's myriad housing structures, each created with different materials, shapes, and colors. In comparison to the *Case a Giardino's* tightly-packed buildings that share walls with the other structures (except for the *domus*), Drop City's domes appear spread out and the commune mostly empty, arid, outdoor space.

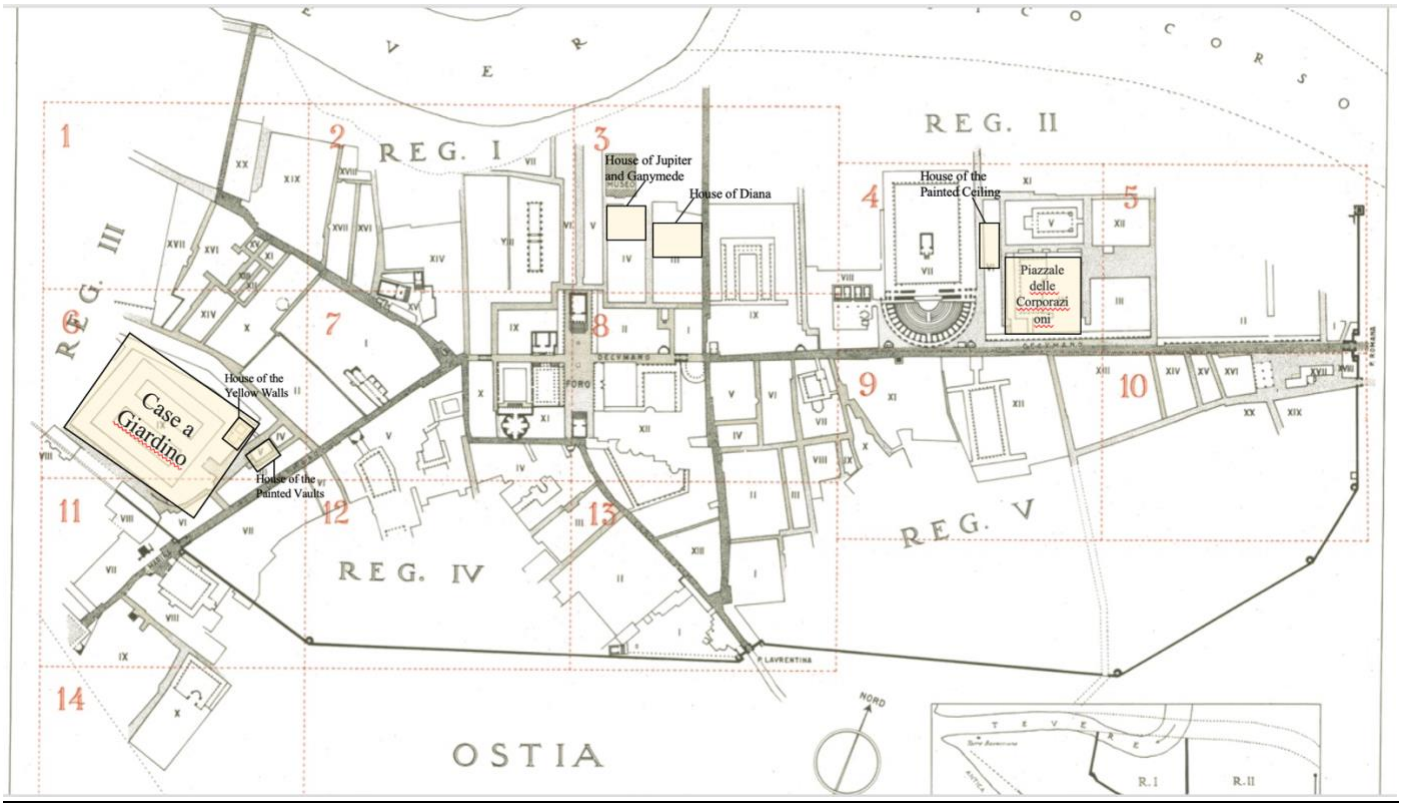

Figure 0.2: An overview plan of Ostia, divided in regions called *regios*. The boxes on the plan highlight the architecture that serve as examples in this thesis. This thesis focuses on *regios* I, II, and III, which are in the northwestern half of the city. The boxes are not exactly to scale but give a sense of where each structure sits in relation to the rest of the city. Note that the House of the Yellow Walls is technically a part of the *Case a Giardino* complex. The *Piazzale delle Corporazioni* is not a building but a trade center.

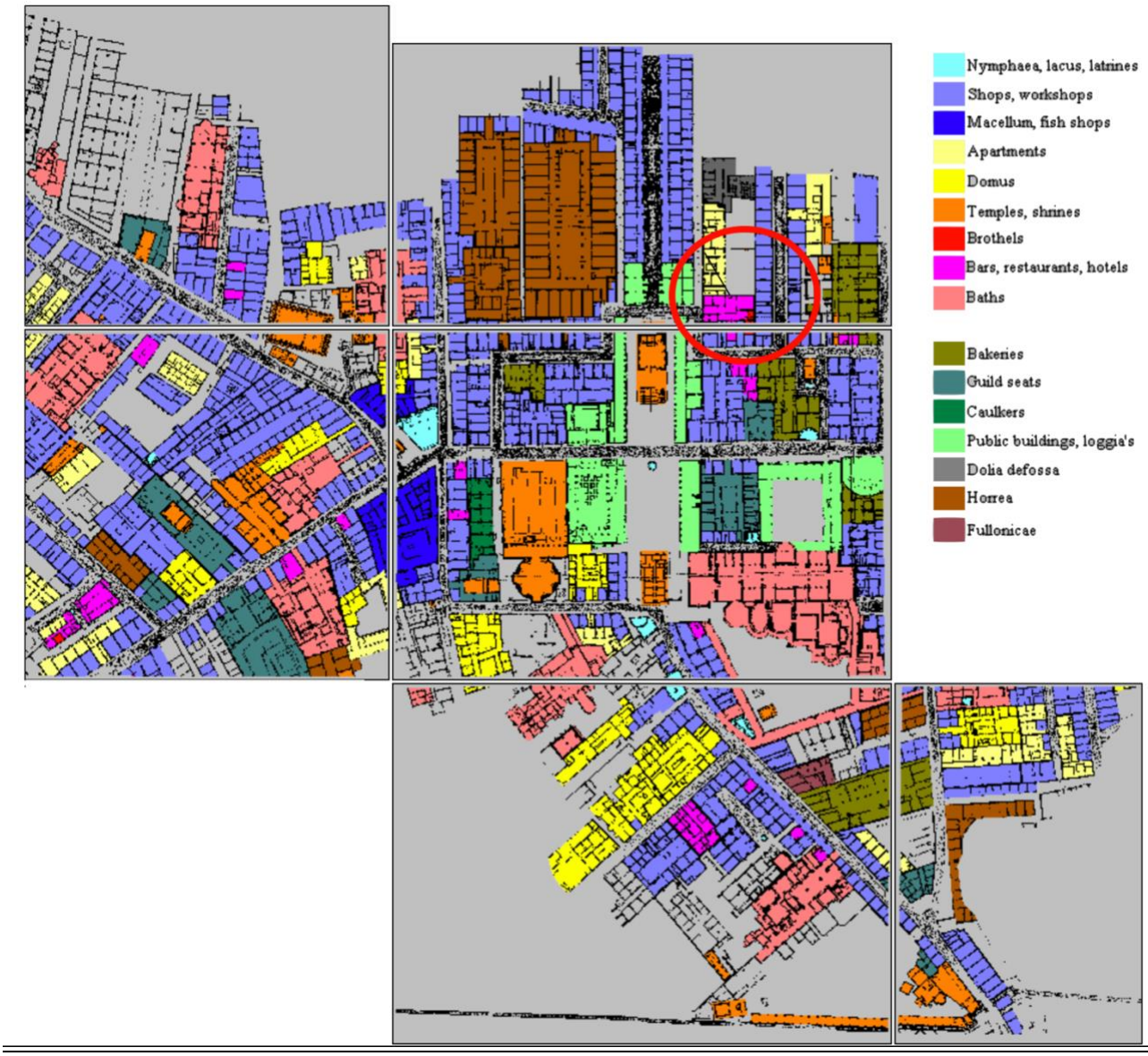

Figure 0.3: A color-coded plan of *regio* I. This plan shows that *regio* I was composed of hundreds of buildings generally grouped together by type. The majority of the buildings in this section of the city were commercial: shops, workshops, public warehouses (called *horrea*), bars, restaurants, and hotels. Other structures included public structures like baths, temples, and other public buildings, and living space. The section of the *regio* containing the House of Diana and the House of Jupiter and Ganymede has been circled in red.

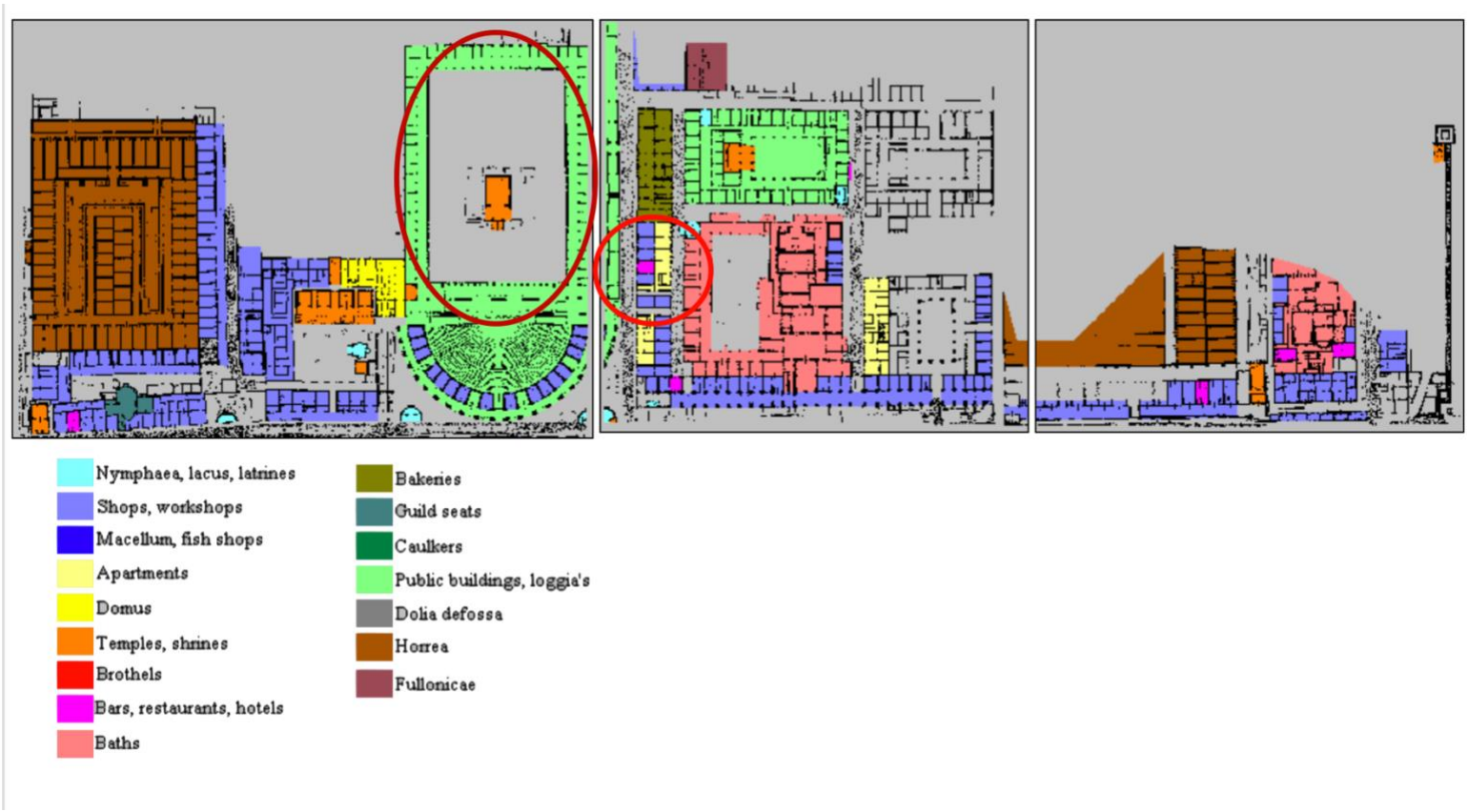

Figure 0.4: A color-coded plan of *regio* II. This plan shows that *regio* II was composed of far fewer buildings than *regio* I. Within the plan, four sections stand out: an area of *horrea*, the trade center *Piazalle delle Corporazioni* circled in dark red and the adjoining theater, the smaller building in light green named the *Caserma dei Vigili* which served as the fire-fighting brigade, and finally a large section of baths called the *Terme di Nettuno.* The House of the Painted Ceiling, a building constructed with shops on one side and apartments on the other, is circled in bright red.

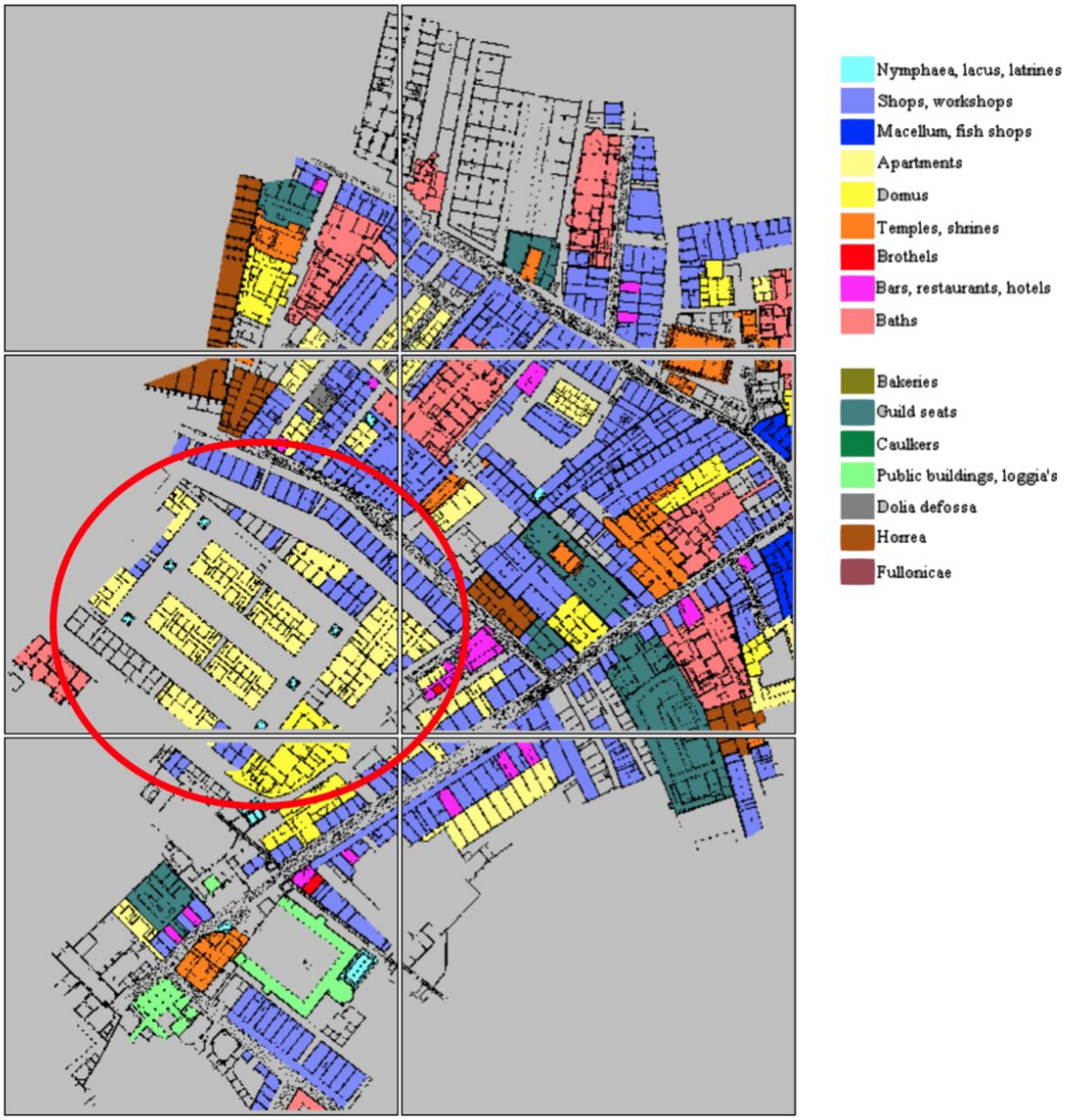

Figure 0.5: A color-coded plan of *regio* III. This plan shows that *regio* III primarily contained shops, some with adjoining apartments or public baths. The *Case a Giardino* is marked with a red circle.

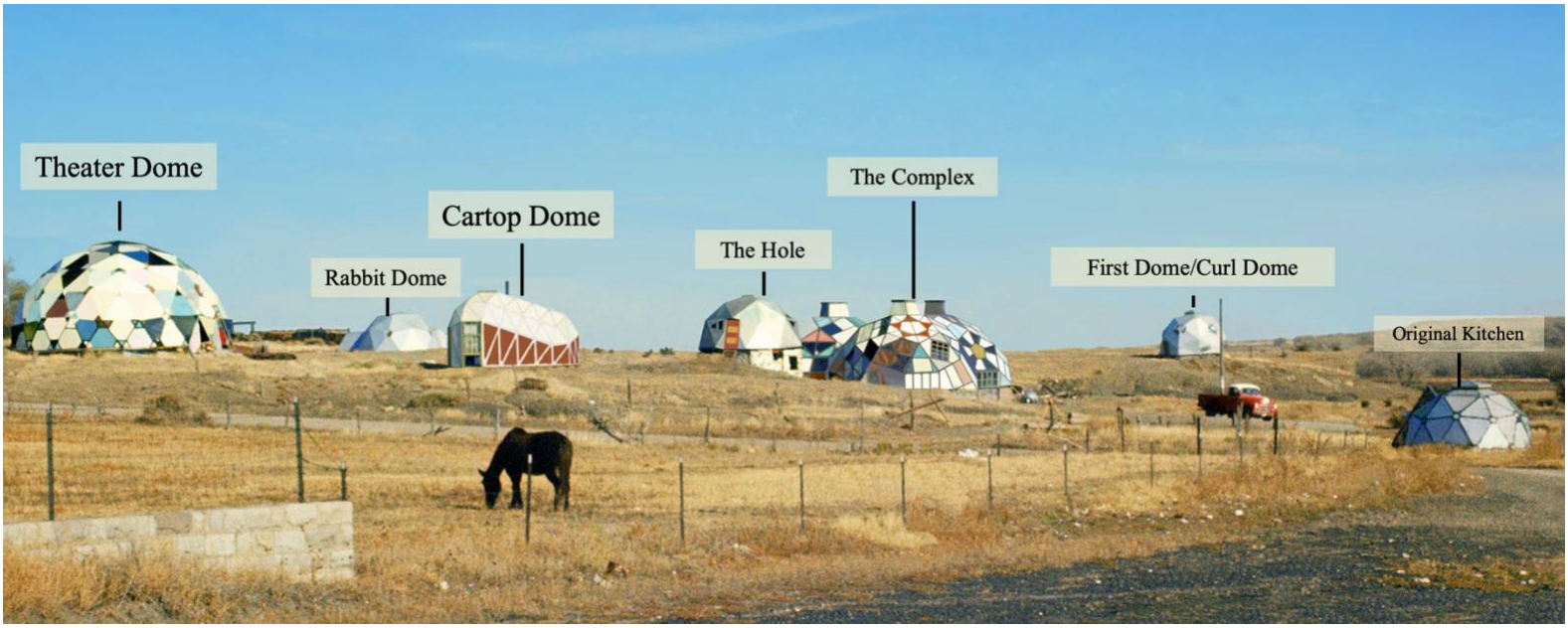

Figure 0.6: An image of Ostia from afar with the names of all of the visible buildings marked. The buildings are all quite visually different. The Rabbit dome, original kitchen dome, and the Theater Dome are the most similar to Fuller's original concept of the geodesic dome. The first dome is a shape that Kallweit called "a truncated dodecahedron," and the cartop dome—literally created from the tops of cars—was an irregular, elongated shape due to the choice and shape of the materials. The Hole was formed from a base of shale exploded with dynamite and railroad ties, and the top half of the structure took the shape of a geodesic dome. The Complex was one of the most impressive buildings on the commune, formed from three interconnected domes. This large building contained a kitchen, bathrooms, a living room area, and a TV room. Many of the buildings were repainted numerous times. Images exist of The Hole painted black and the first dome painted blue.

Chapter One: Why Live Communally?

The range of historical and global communal living situations hold very few universalities, ranging from American dormitories to Buddhist monasteries to refugee camps to the Israeli *kibbutz*. Writer and ethnographic researcher, Geoph Kozeny, whose work has largely centered on researching this lifestyle, defines the social phenomenon under the term "intentional community," which he describes as "a group of people who have chosen to live together with a common purpose, working cooperatively to create a lifestyle that reflects their shared core values."[8] The formation of communal living is ultimately governed by one idea: shared life between non-family members, which can include shared housing, income, childcare, or food and water and other amenities. Though examples of these communities vary greatly, it seems that most of these communities are formed based on shared cultural norms, ideology, or necessity.

The history of communal living dates as far back as prehistory, characterized by the ancient nomadic hunter-gatherer groups that shared their food, shelter, and childcare. In fact, many evolutionary anthropologists credit the evolution of ultrasocial behavior[9] in humans for a number of other human traits: our long life spans, acute control over our environments, and our success in hunting high-reward prey such as deer or boar. These traits contributed to the increased expansion of our brains, due to the better nutrition derived from cooperative hunting and gathering and to the longer juvenile period and lowered child mortality promoted by alloparenting[10] in these cooperative social groups. Over time, human social groups evolved in complexity as social cooperation continued to be selected for, human social organization becoming multilevel, larger, and more fluid.[11] The different levels of social organization are

[8] Kozeny 1995, 1
[9] *Ultrasocial behavior*, living and cooperating with kin and non-kin alike. Coppeto 2023, 28
[10] *Alloparenting*, Juvenile care provided by non-parents. Coppeto 2023, 29
[11] Coppeto 2023, 18

customarily categorized under three general terms: the category with the most individual members, known as a tribe, is typically characterized by shared language and ethnohistory. A band, perhaps 35-80 people, is based on subsistence cooperation. The smallest level of human social organization is the household, defined by members sharing a living space, typically with mating partnerships and their offspring. In most communal living situations, household members typically include non-kin and are much bigger than the global average of 4.9 people per household.[12]

Within some cultures, communal living is typical. Members of the Nayar caste in South India, for example, generally live in a communal living complex called a *tharavad*.[13] Children are raised collectively by the women of the community in these complexes, whilst Nayar men do not claim children. In another example, the Yanamamo tribe in South America live together in long houses. Children grow up with many parental figures and do not ascribe the same biological hierarchy as Western cultures do, evidenced linguistically; the Yanamamo word for "father," for example, is identical to their word for "uncle."[14] The majority of communal living situations in the world, however, are viewed as an alternative to the mainstream society rather than a cultural norm. Communal living situations might be designed out of shared ideology or necessity.

Some intentional communities exist as a space to practice specific religious ideologies, like the Hindu *ashram*, Buddhist and Christian monasteries, or Amish and Mennonite communities. When dedicating themselves to their faith, the members of such communities follow clear guidelines for everyday life dictated by their religious beliefs and supported by their fellow community members and the built environment in which they live. Other intentional

[12] VanOrman and Jacobsen 2020, https://www.prb.org/resources/u-s-household-composition-shifts-as-the-population-grows-older-more-young-adults-live-with-parents/
[13] Coppeto 2022
[14] Coppeto 2022

communities include those based on socialism, labor, and agrarian lifestyle like the Israeli *kibbutz*, the Oneida tribe, and the British Diggers, as well as many hippie communes of the 1960s and 70s. Though many individuals are born into these communities, the residents are somewhat defined by their continued choice to participate in communal lifestyle. For example, the Amish period of freedom for young adults, called "rumspringa", challenges the common assumption that Amish lifestyle is completely restrictive and therefore an unappealing result of cultural brainwash.[15] Not all communal living, however, can be defined by the individual's desire to participate.

Communal living situations may also be created to alleviate necessity. In the face of economic hardship or destruction, people are often forced together. Driving down the interstate nearly anywhere in America, one might spot a homeless camp or "tent city" off the side of the road. Many communal living situations are built by governments or other agencies. Tenement housing built for workers in England during the Industrial Revolution, for example, served as cheap housing built to encompass the numerous families that came to work in the major cities. A surge of government-built communal living situations occurred during the interwar period, particularly in Europe, after thousands of dwellings had been destroyed during World War I. A decade later, the rise of the Great Depression created more displacement. Architects were hired to build structures that provided new safe living situations for hundreds of families. Some of these designs were especially intended to fix issues within the existing communities. The University Homes project in Atlanta, for example, built and funded under President Franklin D. Rooselvelt's initiative to create affordable housing for Black Americans, was designed to get Black Atlantans out of the city's slums. The area was quite successful, eventually including a

[15] Mazie 2005, 746

health clinic, community center, and even a party venue, amenities not typically available to most poor Black southerners at the time.[16] This form of communal living, which began in order to fulfill basic necessities, became much more beneficial to the residents than intended, empowering residents to take more control over their health and community.

The Ostian *insulae* was a form of apartment living built as an alternative to the *domus*, the single-family home, to help solve issues of overcrowding in the city. These buildings saved space by building vertically and contained communal rooms, which removed the need to build multiple private rooms of the same function. Spaces like kitchens, living rooms, latrines, courtyards, or reception halls were frequently designed to be used collectively. According to legal documents found in Ostia, many of the private apartments likely housed unrelated individuals.[17] Furthermore, many Roman households also frequently included non-kin, like slaves, multiple generations, and adopted kin.

Most of the residential domes at Drop City were two stories and typically held five to ten people.[18] The residents in these private domes often chose to live with friends or biological family, opting against sharing space with strangers. Those who were in couples or had children tended to live apart from those who were single. Some of the Droppers took on specific roles in order to support the rest of the commune, such as being a primary cook or builder for the rest of the commune. When the population of Drop City was small, decisions were generally made by group consensus.[19] As the population grew to a more unmanageable amount, Drop City became very unorganized. One resident, a former Hells Angel named "Butcher," tried to create more social organization on the commune, but he ultimately gave up after one of the Droppers publicly

[16] Neighborhood Union 2023, https://digitalexhibits.auctr.edu/items/show/355
[17] DeLaine 2020, 100
[18] Fairfield 1972, 202
[19] Fairfield 1972, 207

poured out a bag of sugar that Butcher had bought for the commune. The Dropper who had poured out the sugar privately claimed to researcher Hugh Gardner that he had done so as an act of defiance against Butcher "trying to run everything."[20] Most of Drop City's members took little interest in the commune's social affairs, desiring only that the rules on the commune remain minimal. The Droppers were young, their average age less than twenty-one years old, and the majority of them intended to stay for less than a year on the commune.[21] For most of the commune's lifespan, social conflict remained minimal, but as Drop City began to fail to support its residents, hostility grew.[22]

The question "why live communally" can be answered with numerous responses. For some, communal living is the cultural norm. Some choose communal living for religious or other ideological reasons. Communal living may also be the best living situation in order to survive. Ostia's *insulae* were built out of a need to save space, and most residents chose to live in the apartments because they served as an affordable form of living space within the economically-stratified city. Some lived in Drop City because they supported the commune's values of community, collaboration, and individual freedom. Others used the commune as a rest stop on their way to other communes or as a free safe haven for displaced people like runaway teens, army dodgers, and drug addicts. The architecture of each case study was intended to support this transient and diverse population, and the design of the architecture contributed to the division of private and public space, indicated the spaces' intended usage, and used art as a form of cultural and ideological expression.

[20] Gardner 1978, 44
[21] Gardner 1978, 40
[22] Fairfield 1972, 204

Chapter Two: Architecture of the Communal Environment

Although the case studies in this essay are from different time periods, cultures, and locations, many of the architectural tools they used were quite similar. The architecture at both Ostia and Drop City needed to clearly and cost-effectively divide public and private space. The designs supported the specific values of the communities. The architecture in Ostia was conducive to the city's economic structure and diversity. The various spaces were designed to provide amenities, air, and natural light to the residents, and the decoration indicated usage and residents' social status. At Drop City, the residents sought to create living space that was safe and functional, while also making an artistic statement and allowing for individual free expression. In both cases, the spaces utilized light, air, and artistic decoration functionally and aesthetically to accomplish these goals.

Roman Ostia became a port city in 54 AD under Emperor Claudius, resulting in a boom both in the city's economy and its population.[23] By the second century, Ostia's population reached nearly fifty-thousand, and was composed mainly of tradespeople and their families, and the landscape was dominated by *insulae, tabernae,* and warehouses.[24] *Insulae* were blocks of multi-story buildings containing individual apartments. Under Trajan, the height of these buildings was limited to about sixty feet and was never built above five stories tall. This architectural type was conducive to the city's highly-dense population, allowing more residents to efficiently occupy space than did the structure of the Roman private home, called *domus*.

Ostian architects experimented with different designs of *insulae* throughout the city, and the rooms available for rent ranged significantly based on the tenant's means. Many of these

[23]Clarke 1991, 267
[24] Clarke 1991, 268

buildings varied in the levels of privacy versus communal space offered to residents within the building. Some structures, such as the House of the Painted Vaults (III.V.1), had no communal space, only private floors for each client, while others, such as the *Case a Giardino* (III.IX), had spaces with communal gardens or central reception halls that were available to the various tenants living in Roman communal architecture.

The *medianum* style of apartment was particularly popular. Under a basic definition, all of the rooms of this type of apartment connected to a central room, called "the *medianum*". These apartments often contained two large reception rooms, public spaces in which residents might interact or conduct business with outside clientele, and private rooms off of the *mediana*. Some of these apartments overlooked a communal garden, such as at the *Case a Giardino* (III.IX) (Fig. 2.1), which was comprised of a *domus* called the House of the Muses and seventeen *medianum* apartments, eight of which were nearly identical to one another and the other eleven appeared to be more experimental, varying on the original designs of the *medianum*. This four story complex is thought to have had toilets on at least three of the four floors, and running water on the second.[25] Twenty-one separate staircases ran from the external street to the apartments on the upper floor, offering upper floor tenants direct access to the public space below.[26] The communal space at Ostia, like gardens and reception halls, provided access to amenities necessary for the health of the tenants like natural light and free-flowing air. Sharing spaces like a communal garden created more available light and air while still allowing the structures to save space by wall sharing.

Drop City was built centuries later in the United States. On May 3rd, 1965, four artists by the names of Gene and JoAnn Bernofsky, Clark Richert, and Richard Kallweit purchased six

[25] Delaine 2020, 97
[26] Delaine 2020, 97

acres of goat pasture a few miles away from Trinidad, Colorado for a total of five-hundred dollars. From afar, Drop City is composed of colorful geodesic domes reflecting in the sun, sitting atop a muted landscape. The unusual architecture of Drop City contributed to the commune's notoriety. As one of the first American hippie communes, the communards at Drop City embraced their own peculiarity as a way to advertise the commune to potential residents and as a way to entertain outsiders. The appearance of these domes was unlike anything most people had seen before.

The first domes were primarily built by Richard Kallweit. Although he initially intended to build simple, A-frame houses, his vision of the commune shifted when he was struck with architectural inspiration from a talk by architect Buckminster Fuller. Kallweit, sometimes accompanied, scrounged for materials from around Trinidad. He collected two-by-four pieces of wood from a sawmill in Trinidad, mixed cement with river sand to increase the supply of concrete, took materials from old railroads, barns, and deserted houses, and found materials like scrap metal and tar paper in the Trinidad garbage dump.[27] The first dome Kallweit built did not quite achieve the desired shape of a geodesic dome (Fig. 2.2). According to writer Peter Rabbit, an early member of the commune, "It [the first dome] was supposed to have been a two-phase geodesic dome but it wound up being a truncated dodecahedron."[28] Kallweit acknowledged that the first dome failed to look like Fuller's designs, and so he decided that the dome should be considered one of his own original designs instead. The structure was used as living space. The building's exterior was mostly concrete and glass, containing geometric skylights to allow in natural light. The community struggled with overcrowding, and not enough living space existed to provide privacy to all of the residents.

[27] Rabbit 1971, 20
[28] Rabbit 1971, 20

Over time, more domes were built on the property, many more similar to the design of Fuller's geodesic domes than Kalweitt's first structure was. The second dome built was the Kitchen Dome, crucial to the survival of the community. Drop City also gained a Theater Dome, a film workshop, a large structure called "The Complex" that contained communal space like a living room, kitchen, and TV room, play domes built for children, and private domes built solely for the occupancy of individuals, families, or groups of friends. Although these structures were all domelike, they did not truly fit into a series of architectural types like there were in Ostia. The domes' appearances were quite varied from one another. For example, the building The Hole was a twenty-foot tall black dome attached to a rock base that was exploded with dynamite and then stabilized by railroad ties.[29] The Complex, on the other hand, was multi-colored, formed by multiple conjoined domes and made mostly of glass and metal (Fig. 2.3)

Various members of the commune helped build the structures that were sometimes for themselves, sometimes for the community. This shared work aligned with one of the commune's core values: Drop City's members were expected to support the community by free will. The result, however, was that the more permanent residents of the commune performed most of the work for the community, while the majority of the Droppers simply reaped the benefits, including living in living space that they had not helped build.[30]

Private versus public space in communal living

How public and private space are divided in a communal living space provides insight into the social organization of the community. Some communal living situations abolish private space altogether. Lord Jim, a member of a hippie commune in Taos called The Family, which

[29] Sadler 2006, 9
[30] Gardner 1978, 45

housed forty-four people in a four-bedroom house, said, "Privacy? Another silly notion. Who needs it[?] I've never once felt the need for what is termed 'privacy.' Privacy, or the view that the human needs to be physically and completely alone without anyone else present, has no validity."[31] More restrictive communes, like The Family, or group marriage communes more commonly abolished the concept of private living space, believing that a lack of privacy promoted a sense of unity amongst the communards. However, the abolishment of private space was frequently unsuccessful in American communes. According to a 1971 study on rural California communes, few of the communes in the study completely lacked private space beyond the first year of the community's lifetime. Eventually, some members typically chose to develop space for private experience, such as spiritual practice or time with immediate family.[32]

The communal architecture in both Ostia and Drop City did have private space. However, the differentiation of public and private space in these structures relied on a social contract. Many of these differentiations were not physical blockades, like walls, doors, or gates between private and public space. The architecture in Ostia and Drop City used light, surface pattern, and floor plan design as tools to help distinguish private space within the communal architecture. The usage of lighting, decorative appearance, and spatial organization as visual communication within the community indicated that in both Drop City and Ostia, private space could be implicitly recognized and respected rather than explicitly enforced.

In Ostia, the House of the Painted Vaults (III.V.1) contained multiple floors of private living space. The *insula* did not contain any interior courtyards or porticoes that would have created more light and fresh air. Instead, the building was free-standing, and so windows could be built into each external wall of the building, allowing light and fresh air to filter into every

[31] Fairfield 1972, 319
[32] Hayden 1976, 332

floor.[33] The floors did not connect to one another. A stairway on the ground connected to the apartments on the upper floors.

Although the floors were private from one another, some rooms on each floor were more accessible than others. Each floor contained a long corridor which separated the living and dining rooms from the bedroom, kitchen, and service area (Fig. 2.4).[34] On the floor plan, we can also see that the dining areas (10-12) connect, and a window visually connects one of these dining rooms to the corridor taken by the enslaved workers within the household. The pattern on the floor also changes based on room function. Next to the living and sleeping rooms, the corridor is a more complex, white tessellation pattern, but next to the dining areas and kitchen and service, the corridor changes to a less complex herringbone pattern. The part of the corridor more often visible to outsiders has a finer pattern, as do the pavements within the areas designed to receive guests, like in the living room and dining rooms.[35] This visual differentiation alludes to a social distinction between the spaces designed for company, those spaces designed for household members, and those designed primarily for slaves. The spaces that are socially outward-facing appear more luxurious, whether that intention is intended to elevate the household's own status or is out of a sense of heightened hospitality towards guests is unclear.

The division between private and public spaces was less tangible in most other *insulae* in Ostia. At the Case a Giardino (III.IX), an aforementioned block of buildings along the shoreline named for the communal garden within the *insula*, the space contained a *domus* and seventeen *medianum* apartments, including the House of the Yellow Walls (III.IX.12) a *medianum* whose use of light and floor plan denoted private space quite clearly. The House of the Yellow Walls

[33] Clarke 1991, 293
[34] Clarke 1991, 293
[35] Clarke 1991, 293

co-owned a party wall[36] with the House of the Graffito and the House of the Muses.[37] Though the floorplan indicates that the three apartments were incredibly close together, the co-owned party wall offered a sense of privacy while still efficiently using the space (Fig. 2.5). Within each of the apartments, the usage of light helped distinguish private space even further. The House of the Yellow Walls had an asymmetrical *medianum*, large reception spaces on the outer part of the apartment, and small private rooms in the inner part of the apartment (2.6).[38] The smaller, more private rooms did not require as much natural light as the reception rooms. The placement of the smaller rooms towards the inner part of the structure and against the party wall the building shared with the House of the Graffito made these rooms much darker than the large reception spaces that had windows. These private rooms received less light, creating a sense of exclusivity. Less light also would have been more appropriate for the private affairs of the bedroom, such as sleep or intimacy.

Darkness was used in Drop City to create a sense of privacy within the domes, while light was used to highlight important sections of the interior. Though most of the communards spent much of their time outdoors, skylights were used in the roofs of most of the domes. Natural interior light allowed for basic activities like cooking, eating, and socializing and promoted the production of art inside the structures. The building's natural light was sometimes used artistically, as one photograph in the *Denver Post* showed (Fig. 2.7). Clark Richert leans against *The Ultimate Painting*, a collaborative work of art that contributed to Drop City's early notoriety. Richert and *The Ultimate Painting* are posed directly beneath a large, geometric skylight which

[36] Party walls are walls that divide two neighboring properties, creating more privacy between the properties. The ownership of the wall is shared between the two properties. "party wall," Legal Information Institute, Cornell Law School, last updated July, 2020, https://www.law.cornell.edu/wex/party_wall#:~:text=A%20party%20wall%20is%20a,owned%20subject%20to%20an%20easement
[37] Clarke 1991, 307
[38] Clarke 1991, 307

creates a hexagonal spotlight on the subjects of the photograph. Within this black and white photograph, the skylight and the lit subjects of the photograph contrast starkly with the dark walls of the unfinished dome. The lighting is used to highlight the important parts of the image for the viewers, but it also indicates that this light was probably functional, allowing the artists on the commune to see their artwork better while working indoors.

The divide between public and private space at Drop City was socially agreed upon. Especially during the height of the commune's population influx, many people slept in public spaces, particularly the Kitchen Dome. However, private domes did exist, and the rules for occupying private space at Drop City were simple and completely by informal agreement rather than formally sanctioned by the commune. The more permanent residents designed and built the majority of the commune's architecture. It was common for Droppers to build their own private dwellings in Drop City, and they were free to experiment with the structures' forms. Private domes were most often occupied by members who had stayed on the commune the longest or by people who had built the private dome themselves. Other private spaces on the commune were temporary, such as a yellow school bus occupied by a Dropper named Richard and his wife.[39] All of the spaces at Drop City were built by individuals that were working with scrounged materials and often little architectural knowledge, a stark contrast with what we assume to be the professional design of the buildings in Ostia.

The personalization of the domes added to the sense of distinction between public and private space. One member of the commune, affectionately known to the younger communards as "Crazy Jack," lived in a bright red, igloo-shaped dome with his girlfriend.[40] Jack's ideas of privacy were somewhat different from the mainstream, evidenced by his choice to spend one

[39] Gardner 1978, 45
[40] Fairfield 1972, 206

interview entirely in the nude.[41] His private dome, a different color on the exterior from much of Drop City's whites, grays, browns, and light blues with only hints of brighter reds and yellows, stood out as much as his personality. In contrast to Drop City, an artists' commune with an emphasis on creation and free will, the residents of the *insulae* at Ostia Antica experienced artistic expression in the home through interior rather than exterior decoration, like mosaics and wall painting, because the exteriors of their living spaces were limited by imperial building codes.

Creative Innovation and its Functionality

The buildings of Ostia and Drop City would have been more economically efficient had they been designed without artistic decoration. The Ostian *insulae* were built to be space-efficient, profitable apartments, and Drop City had a limited budget and access to materials. However, the appearance of both the Ostian *insulae* and Drop City's domes were strikingly innovative, with elaborate wall designs and architectural shapes. Ostian builders created architecture that utilized artistic design functionally, and Drop City's art promoted the values of the commune and piqued outsider interest.

In Ostia, the layout of the architecture and the interior design communicated the ways in which the space was intended to be used. Archaeological evidence at Ostia reveals that the architects experimented frequently with different architectural details, including painted optical illusions, visual perspectives, and wall and floor mosaics. Some of the decoration at Ostia, especially the figurative mosaics and wall paintings, indicated the function of the room or even

[41] Fairfield 1972, 206

the structure in its entirety. The function of a room or building provides cultural information by indicating what activities are important enough to necessitate built space.

Italian archaeologist Guido Calza theorized that the mosaics and the graffiti on the walls of the House of Jupiter and Ganymede (I.IV.2) indicate that the building was used as a hotel for pederastic activity in Ostia.[42] The building was likely a luxury apartment before modifications in the late second century AD that sealed the structure's secondary entrance and created more rooms upstairs. These upstairs rooms were designed so that the activities taking place could be heard by anyone in the building. The room apparently intended for guests had no permanent door, and the house's public circulation system contained writing etched into the walls that told of explicit sexual encounters between men within the house.[43] Furthermore, the mosaics depicted pederastic activity. The rear wall of the House of Jupiter and Ganymede's great hall depicts a sensual gesture between the two mythical features (Fig. 2.8). A seated Jupiter reaches towards Ganymede's chin, in a motion popularly depicted in Ancient Greek pederastic courting scenes, called the "chin-chuck." Ganymede leans back and gazes up at Jupiter, the positioning of his body indicating that he may reciprocate the affection of the chin-chuck by grasping the god's wrist. Leda, a mortal woman and lover of Jupiter who was replaced by Ganymede, occupies a small corner of the scene, reminding the viewer of Jupiter's interest in male and female lovers alike. Analyzing the architecture offers insight into the building's role in Ostia's community. The grand hotel is not to be mistaken for a common brothel but rather an upscale establishment that allowed for Ostia's wealthy, established members of the community to engage in pederastic behavior. Inside the building, the public nature of the mosaics and the door-less guest room also create a sense of normalcy and community.

[42] Clarke 1991, 320
[43] Clarke 1991, 325

The members of Drop City not only utilized art as a tool for communication within community but also with the outside world. Before the commune had even been conceived of, two of the early Droppers, Gene Bernofsky and Clark Richert, stood on the roof of their shared apartment building in Kansas, dropping painted rocks onto the sidewalk below.[44] The intention was to create art that stopped people and surprised them, which Bernofsky and Richert called "Droppings." Soon, the Droppings changed from painted rocks to other objects. According to a recent interview with Richert, the pair's favorite interaction involved attaching a boot to the end of a rope and dropping it a full three stories.[45] Richert and Bernofsky appreciated human interaction with art as an inherent part of the art itself, and the artists looked to extend this idea further.

Buckminster Fuller, the same architect that had inspired the creation of the geodesic domes at Drop City, developed on a philosophical idea he called "synergy." Strictly speaking, "synergy" refers to a total being worth more than each of its components. One example of synergy might be an orchestra, which can produce much more complex works together than the individual musicians can do so alone. Richert and Bernofsky translated this idea to visual art—and later to the creation of Drop City—believing that collaborative art is better than art created by an individual. As Peter Rabbit, poet and early Dropper writes in his book *Drop City*, "Curley Bensen and Drop Lady [Gene and JoAnn Bernofsky] had a dream to build a community of people who would learn to live together in a state of healthy tension and love. The name of this place was to be Drop City, the Ultimate Dropping."[46] Drop City was designed as a place to create collaborative art, but it was also a collaborative artwork itself. The striking, otherworldly

[44] Blauvelt et al. 2015, 390
[45] Blauvelt et al. 2015, 390.
[46] Rabbit 1971, 17

appearance of the domes and the public art installations against Drop City's dull landscape contributed to the sense that the commune was a work of art.

One of the earliest and perhaps most iconic works of collaborative art created at Drop City is called *The Ultimate Painting* (Fig. 2.9). The painting is circular, with geometric three-dimensional shapes visible across the entirety of the canvas. The artwork is solely made up of different shades of the three primary colors, with about one third of the painting made up of mostly blue tones, the bottom portion mainly yellow, and the other section mostly reds and pinks. Visible throughout the composition are the polyhedron and zonohedron shapes Drop City's geodesic domes. The artwork is a "spin painting," that appears animated when rotated under a strobe light. While still in college, Clark Richert had created a number of these spin paintings. The first Droppers, Richert, the Bernofskys, Richard Kallweit, and filmmaker Charlie DiJulio, created *The Ultimate Painting* and filmed its rotation in the Theater Dome at Drop City.[47] Primarily by word of mouth, *The Ultimate Painting* quickly gained notoriety throughout the art world. After popular American psychologist Timothy Leary visited Drop City, he was asked in an interview, "So you just came from Drop City? Did you see *The Ultimate Painting*?"[48] The presence of art at Drop City contributed to its monumental reputation, comparable to the manner in which decorative tiling was used in the House of the Painted Vaults to promote the reputation of the homeowner.

The importance of art to Drop City was further reflected in its architecture. The commune included a film workshop and a Theater Dome, as well as installations of artwork throughout the commune made by Droppers and outsiders[49] alike. Although the majority of the public buildings

[47] Blauvelt et al. 2015, 391
[48] Gildar 2015, 391
[49] The art from outsiders were given as gifts to the commune, not purchased.

at Drop City doubled as living space, the Theater Dome was designated solely for the creation of art and was never to be used as a living space, even when Drop City's population was becoming difficult to manage. This rule—one of the very few rules at Drop City—indicates that the Droppers considered the creation of art, and the importance of the separation of artistic creation from all other aspects of their lives, to be more important than living space.

This ability of architectural design to reflect human ideals is a significant factor in the design of communal living. Ostian architecture balanced the demand for private space, the need for available light and air, and the appearance of the interiors to guests, servants, and renters through floorplan design and interior decoration. Ostian decoration also informed the usage of the buildings, creating spaces for very specific use, like the guest room as a space for pederastic intimacy in the House of Jupiter and Ganymede. In contrast with Ostian architecture, which reinforced the city's social norms and hierarchies, Drop City had few rules, and Dropper architecture reflected the commune's lack of formal law. The architecture was eclectic, created primarily from scrounged materials and according to the personal tastes of individual residents. Although A-frame houses might have been the easier, more replicable, and even the more functional option, the unique appearance of the geodesic domes contributed to the sense of the commune as a work of art.

Appendix

Figure 2.1: Floorplan of the *Case a Giardino*. Most of the visible buildings are *insulae*, except for the *domus* the House of the Muses, which has been marked in blue. The House of the Yellow Walls, an apartment that is described in greater depth later in the thesis is marked in yellow. An internal courtyard, thought to be gardens, surrounds the eight interior apartment buildings. Many of the complex's buildings had some view of the gardens.

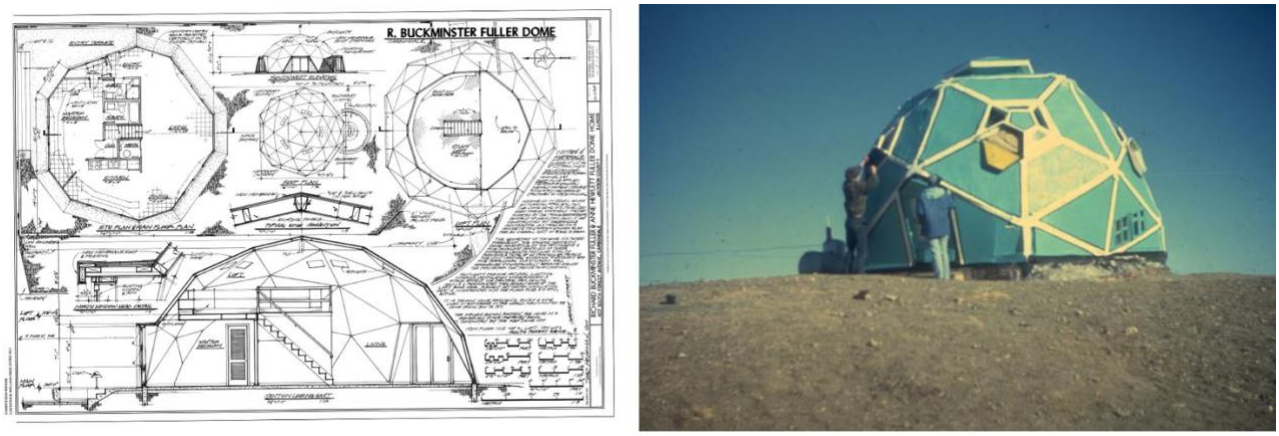

Figure 2.2: Plans of a geodesic dome from Buckminster Fuller (L) compared to the truncated dodecahedron shape of the first dome (R). Note that the truncated dodecahedron shape is formed from triangle shapes and five trapezoids that join around a pentagonal window, while the Fuller dome appears to be entirely composed of triangle shapes. Furthermore, the base of the Fuller dome design is the widest part of the structure, while the widest part of this structure is not the base but a few feet above the base, as the walls narrow towards the bottom of the structure.

Figure 2.3: The Hole (L) and The Complex (R) in 1967. The Hole is built into the side of a hill. The base is not a dome shape; it looks instead like the base of a stone column. The top part of The Hole is similar to Fuller's geodesic dome design, composed entirely of triangularly shaped pieces, including both right triangles and equilateral triangles. Some of these triangles are indicated in color; the red outlines indicate right triangles, while the yellow outlines indicate equilateral triangles. The Complex's structure experiments with the geodesic dome structure in a different way. The Complex is composed of three interconnected geodesic domes. A part of the structure visible to the viewer also uses elongated trapezoid shapes, indicated in blue, that encircle a pentagonal shape.

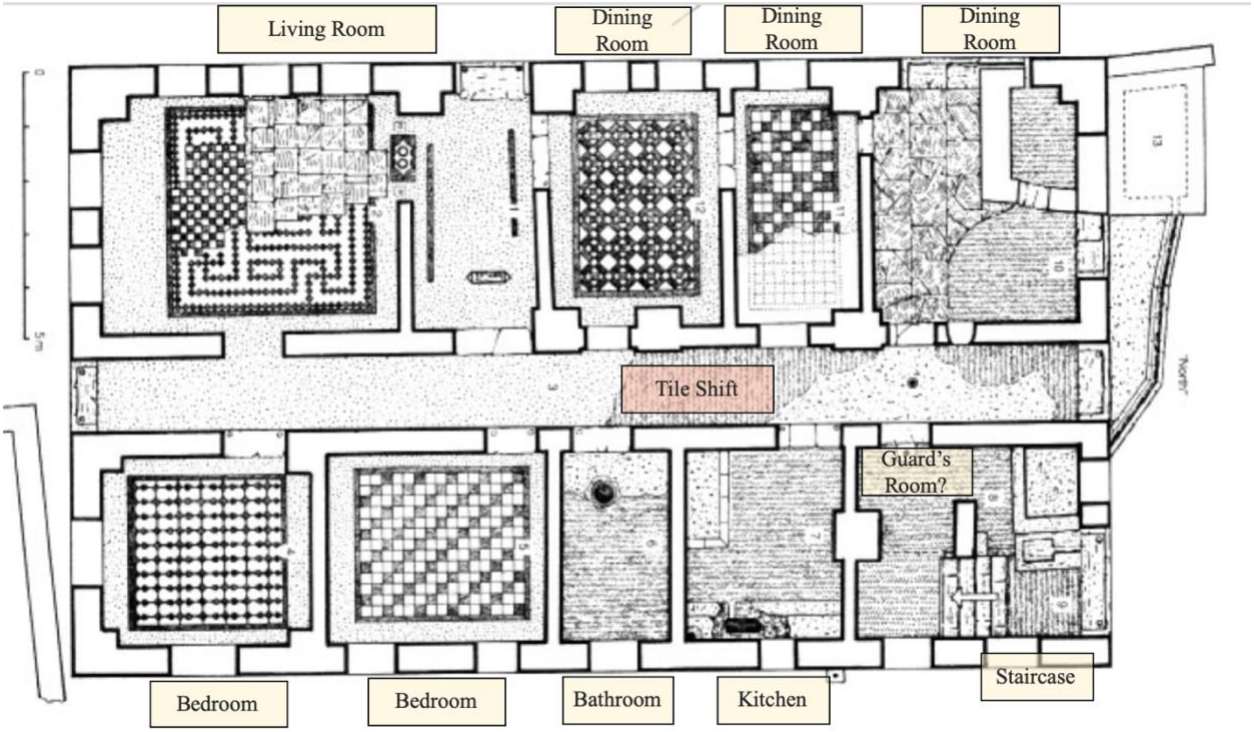

Figure 2.4: Floorplan of the House of the Painted Vaults labeled with rooms functions that have been theorized by archaeologists. Note the decrease in the mosaics' complexity in rooms that were most likely to have been used by slaves.

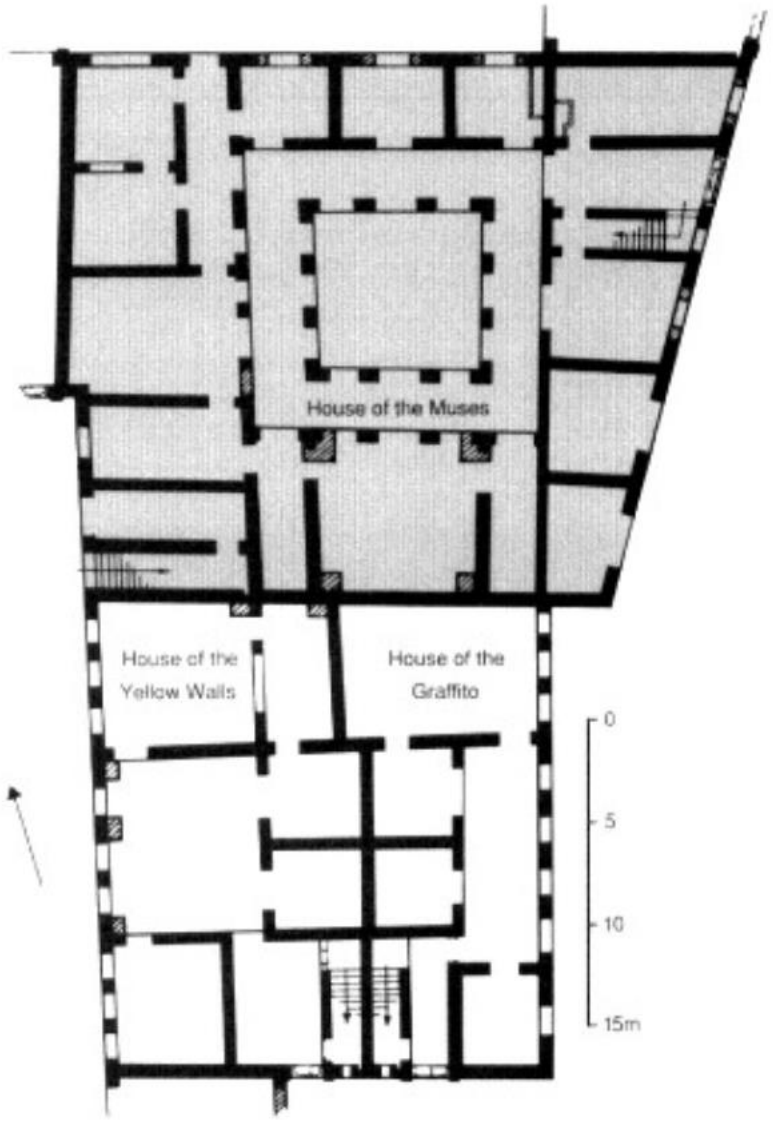

Figure 2.5: Floorplan of the House of the Muses, the House of the Yellow Walls, and the House of the Graffito. The House of the Yellow Walls and the House of the Graffito share one long wall with each other and each share half of another wall with the House of the Muses.

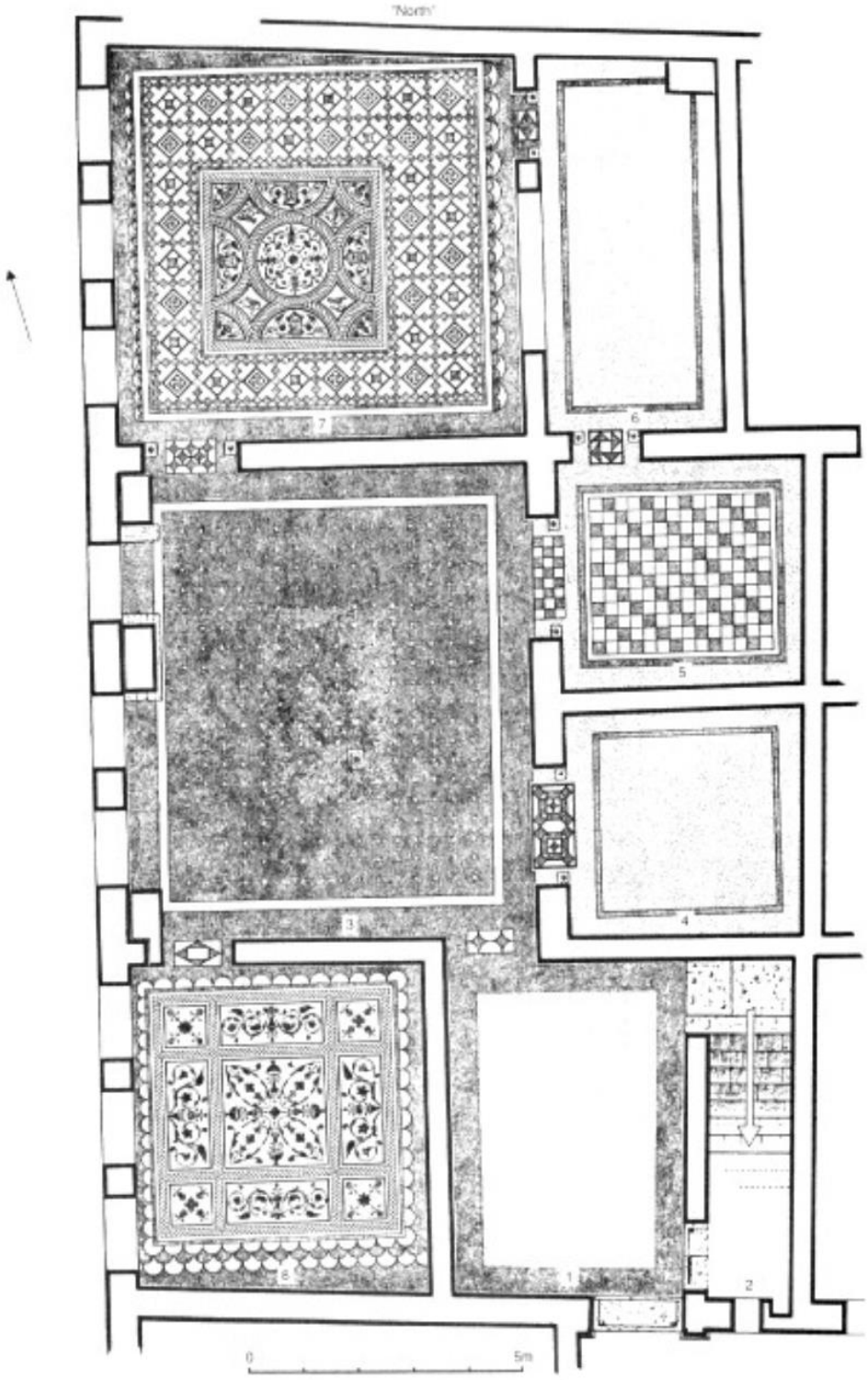

Figure 2.6: Floorplan of the House of Yellow Walls. Note that the larger reception rooms (L) have windows, while the small private rooms (R) cannot have windows because they share a wall with the House of the Graffito.

Figure 2.7: Clark Richert poses with The Ultimate Painting in the Theater Dome. The image reveals quite how dark some of the domes' interiors could be. The wood flooring that does sit directly below the skylight is cast into darkness. Drop City did have electricity, and so it is possible that some of the domes used electric lights to help light the interiors. The skylights and other windows were also intended to create more light inside the structures.

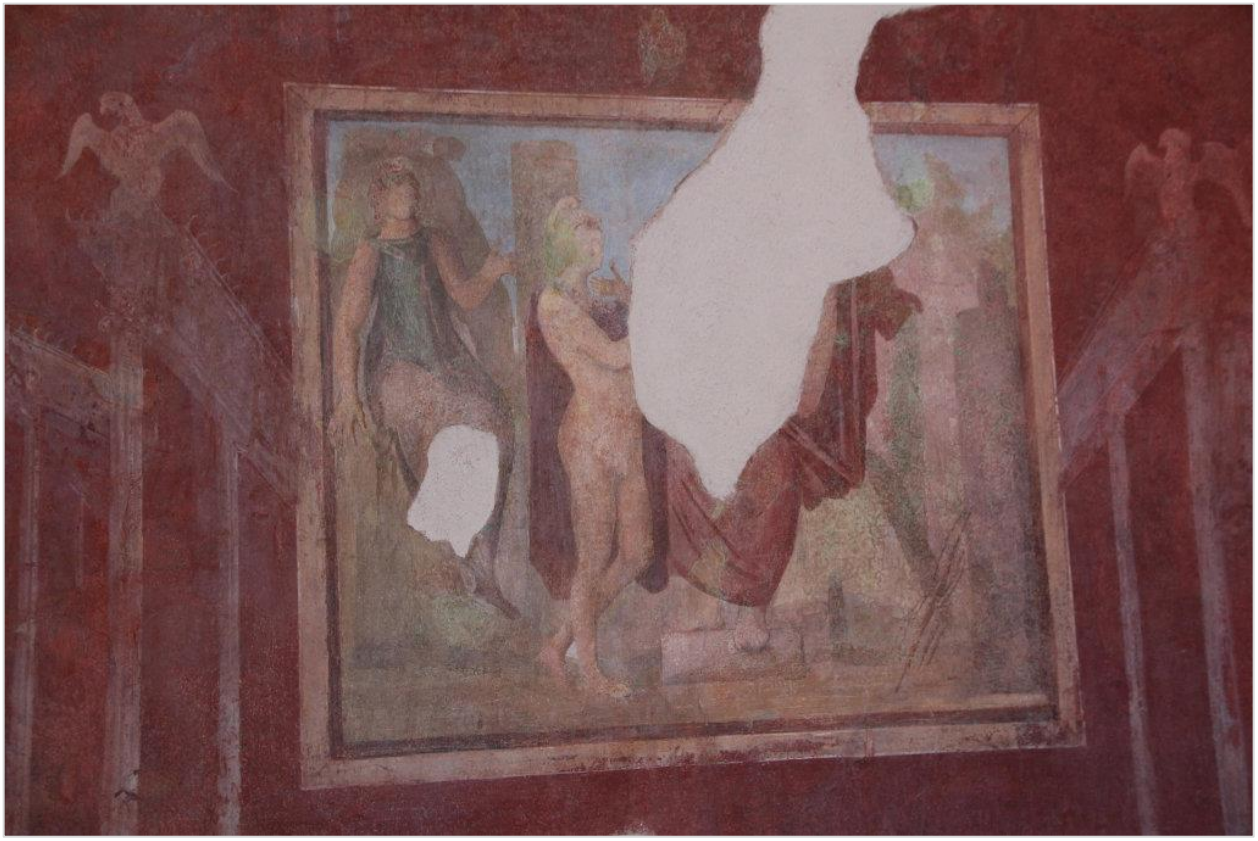

Figure 2.8: Now damaged, the image on the rear wall of Room 27 in the House of Jupiter and Ganymede showing a "chin-chuck" between Jupiter (R) and Ganymede (L). Ganymede's right arm reaches toward Jupiter, and the god extends his hand towards the cupbearer's chin and neck. The power dynamic between god and boy is revealed through Ganymede's comparative lack of clothing. A woman (far L), possibly Leda, looks on.

Figure 2.9: The Ultimate Painting. JoAnn Bernofsky painted most of the small, geometric details across the painting. This striking work of art was temporarily on display as a part of the Walker Art Museum's museum exhibition on Hippie Modernism in 2015.

Chapter Three: Life in the Communal Environment

Residence in both the Ostian *insulae* and at Drop City was marked by transience. One of the primary functions of the architecture at both Ostia and Drop City was accommodating the constant ebb and flow of the population. The Roman Empire bustled with trade, transporting goods like various food and clothing throughout the large empire.[50] Ostia was one of the wealthiest Roman cities in Italy.[51] The development of Ostia as a port city created economic opportunity that led to an influx of immigrants and a transient population of merchants and sailors to the city. Even freedmen once in service to some of these important families experienced heightened social status in the city.[52] This commercial, imperialist culture with flexible social mobility primarily based on wealth was not unlike American culture, particularly during Drop City's lifetime at the dawn of the country's "back-to-the-land" movement.

Some Americans credit Rome as a foundation for American values, including the United States' economic structure. Similar to Ancient Rome, the United States is diverse, imperialist and militaristic, capitalist, socially stratified, and built on slave labor. The hippie movement was a product of the widespread objection against these values. The American 1960s was marked by a contradictory sentiment of hope and fear. Following the close of World War II in 1945, the country experienced a long period of economic stability, sustained under the guidance of President Eisenhower, who held office for most of the 1950s.[53] However, the country was still experiencing growing pains from history's bloodiest war. The social conditions created by the war empowered women and people of color to levels unprecedented in recent American history. During the war, soldiers of color experienced a sense of unity and respect not felt at home.

[50] Jones 1974, 55
[51] Duncan-Jones 1982, 121
[52] Salomies 2020, 160
[53] Isserman and Maurice 2000, 7

Women had filled the jobs left empty by the men who'd gone to war, and many of these women wanted to continue working. Those in favor of the status quo pushed for Jim Crow laws and the idea of the "nuclear family"—a household composed of a working husband, stay-at-home housewife, and children—on American citizens. Those against participated in protest movements throughout the country, including the Civil Rights Movement, Second-wave feminism, the American Indian Movement, the gay rights movement, the environmental movement, and the anti-war effort. As thousands of Americans publicly denounced the country's social structure, economic structure, and militarism, some sought to build community independent from mainstream society. Thus, the 1960s communal living movement was born in the United States.

Some argue that hippie communitarianism appeared abruptly, while others have suggested the movement was birthed from a degradation of the urban hippie communities.[54] Communal living, however, was a longstanding American tradition. Many of the indigenous American tribes in the precolonial era held a different perception of land ownership and individual property than the European settlers that came to the country looking to homestead. The Dawes Act divided indigenous ancestral homeland into individual farmland, forcing indigenous Americans to claim what they could and allowing European settlers to privately occupy much of the new land as well. [55] Colonial America also saw examples of communitarianism, particularly amongst various religious groups, like the Quakers, the Amish, and the Mennonites. The country saw another surge of religious communitarianism during the nineteenth century with the rise of utopic communities built on communal living, including the Shakers, the Mormons, the Oneida, the Ephrataites, the Harmonists,[56] the Fourierists, and the

[54] Miller 1992, 74
[55] National Park Service 2021, https://www.nps.gov/home/learn/historyculture/native-americans-and-the-homestead-act.htm
[56] Muncy 1987, 587

Owenites.[57] Of these communities, those that implemented private property and nuclear family did not survive as long as the communities that didn't.[58] Many of the hip communes of the mid-twentieth century were built by founders with a foreknowledge of the country's rich history of communitarianism. All of Drop City's founders, in fact, had family ties to communal tradition.[59] In both Drop City and Ostia, communal living was intended to be a solution to the societies' respective social issues. The communal architecture was built to alleviate issues like overcrowding in Ostia or the negative psychological effects of the mainstream culture in the United States.

Accommodating the Population

A particular problem faced by the architects of these communities was how to efficiently accommodate a large, fluctuating population. Overcrowding was an issue in both Ostia and Drop City. Furthermore, no single architectural solution was used to effectively accommodate every member of the population. Both Ostian and Dropper architecture solved this issue with the creation of diverse housing options and the creation of shared space.

The people of Ostia were diverse in nationality, trade, and class status, and the population was constantly in flux. Based on data collected from inscriptions, at least 300,000 people had lived in Ostia at some point over the course of the first through third centuries, and the estimated life expectancy was around forty years.[60] The city also served as a temporary residence for merchants, sailors, and seasonal workers. An estimated one to five thousand Ostians were housed

[57] Lee 2016, 2
[58] Muncy 1987, 587
[59] Miller 1992, 76
[60] Licordari 2020, 165

in public buildings, like the Theatre.[61] Ostia's architecture accommodated this constant fluctuation of the population through the *insulae*. As the *insulae* was rented space, not a permanently-owned household, with the majority of the inhabitants paying for less than a few months' rent at a time, these apartments offered housing that sustained Ostia's economically diverse, overflowing population, including its temporary residents. The quality of the apartments available to citizens of Ostia depended on their ability to pay the rent. The *insulae* model contrasts with systems that use family inheritance, which guarantees that a family of an esteemed background may have access to a lavish property even in the face of economic trouble. In Ostia, members of important, wealthy families, often with prominent military status, were the only ones who could afford the large, lavish ground-floor *insulae* apartments, typically called *cenacula*.[62] The wealthiest clients paid at least six months' rent at a time.[63] The general public paid less money over shorter periods of time for apartments with fewer and smaller rooms and fewer amenities. The House of Diana (I.III.3-4) contained a wide range of apartments, varying in size, available light, and privacy. The ground floor of this *insulae* included six *tabernae*—or shops—with mezzanines facing the street and two internal multi-room apartments (Fig. 3.1).[64] The floor above contained a well-lit private apartment with four rooms and three well-lit private apartments with two rooms. This first floor also included a poorly lit multi-occupancy apartment, which held a communal living room with a single small window at the end of a narrow corridor, and a row of incredibly small, private rooms. The private rooms in this multi-occupancy apartment, with barely enough space to fit a bed, may have been very temporary living space,

[61] Packer 1967, 86
[62] DeLaine 2020, 95
[63] DeLaine 2020, 97
[64] DeLaine 2020, 100

rented only for a few days at a time, an arrangement that was not unheard of in antiquity.[65] The House of Diana's variety of living options thus allowed the building to accommodate an array of clientele, an effective business practice in a city with such a diverse and perpetually changing population.

Drop City, too, had to manage a large, fluctuating population, and it was this population that ultimately led to the commune's downfall. As the commune gained notoriety, the population sometimes grew to a number that was impossible to sustain. In 1969, the commune had all but fallen apart completely, unable to offer food, utilities, or a sanitary place to live. Researcher Richard Fairfield visited the commune in the winter of 1971-72, learning that the remaining members of the commune had all but completely closed their gates to outsiders. Drop City's founding members ultimately sold the property in March of 1973.[66] Throughout the commune's existence, the population of Drop City was constantly in flux. Most residents lived there for less than a year, and in its later years, Drop City's rapidly growing population was no longer composed primarily of artists, poets, and other free-thinkers who wished to experiment with different styles of living. An overwhelming number of runaway teenagers, drug addicts, and other disadvantaged people came to the commune seeking safety and refuge.[67] No formal leadership existed at the commune, and no taxations of money or labor was required of its residents.[68] Many of the newcomers did not contribute to the needs of the community, like money to pay bills, cooking, cleaning, childcare, or building living space. The land on which the commune was built was unfarmable, and the communards survived by a combination of begging,

[65] DeLaine 2020, 100
[66] Fairfield 1972, 46
[67] Gardner 1978, 39
[68] Gardner 1978, 41

outside donations, and the money they made from selling their artwork.[69] This lack of a formal system was apparent in the commune's living spaces, and this heterogeneity of ideas and community contribution conflicted with survival at Drop City.

In accordance with the values of the commune, the members of Drop City were free to build whatever they liked on the commune. Some chose to build private domes for themselves. Some contributed to creating buildings intended for public use. Many of the people involved in creating these buildings, however, did not have experience in construction or architectural design. Clark Richert and Richard Kallweit, who worked on many of the original domes together, did have a background in architecture. Richert had dropped out of pursuing an art degree at the University of Colorado to help create Drop City. After he had already built the first structure—a shape Richert called "an expanded dodecahedron"[70]—Richert and Gene Bernofsky attended a lecture by Buckminster Fuller, the original creator of the geodesic dome.[71] Fuller's conceptual shape inspired the Droppers' creation of the geodesic domes as housing. When the commune's domes were put on the cover of *Time* magazine in 1964 (Fig. 3.2), Fuller's reputation skyrocketed, and the architect in turn rewarded the Droppers five-hundred dollars and an award he had made up called "The Dymaxion".[72] Some of the domes were quite impressive and offered incredible amenities. Fairfield describes a two-story double dome that included bedrooms, an office, a library, a kitchen, living room, and a workshop for the five to ten residents that the dome housed.[73] In spring 1971, some of the Droppers also worked on a large dome intended as a crash pad for the influx of people coming to the commune during the summer,

[69] Fairfield 1972, 205
[70] Blauvelt 2015, 386
[71] Blauvelt 2015, 386
[72] Blauvelt 2015, 386
[73] Fairfield 1972, 202

although this crash pad was not mentioned by visitors who came to the commune later than 1971, indicating that this project may have been abandoned.[74] As the commune grew older, however, and more people and buildings alike were established on Drop City's arid six acres of land, the communards experienced worse issues with living in the domes.

These geodesic structures, mostly made by amateurs and created primarily from scrounged materials like concrete and scrap metals, did little to provide heat to the residents during the harsh Colorado winters.[75] There was also not enough built space to safely and sanitarily house all of the residents. Many people stayed in public spaces, like the Kitchen Complex. Peter Rabbit, a former Dropper, tells one story about the commune in its early days in which a young woman and her child lived together in the Kitchen Complex. The woman was addicted to LSD and relieved herself in the kitchen rather than use the outhouses.[76] However, the Droppers' standard of living while living in the domes of Drop City was not completely lost. The communards had managed to pay for gas utilities in the Kitchen Dome, as well as year-round water and electricity, important amenities to contribute to the cooking, sanitation, and creation of art on the commune.[77] Steve Baer, an architect famous for his experimentations with shapes and solar electricity, introduced solar power to some of the buildings at Drop City,[78] another example of the ways in which the Droppers became reliant on outside help, including with the construction of their architecture.

The design of Drop City serves as a stark contrast to Ostia's careful city planning. In response to overcrowding at Ostia, the *insulae* model grew in popularity, following capitalist

[74] Fairfield 1972, 203
[75] Gardner 1978, 41
[76] Rabbit 1971, 22
[77] Gardner 1978, 41
[78] Blauvelt 2015, 322

theories of supply and demand. Drop City was quite different. Its values, lack of formal leadership, and much smaller size meant that the decisions of an individual might affect the whole commune, which in turn contributed to issues with the functionality of the domes. This social structure also led to the medley of architectural styles on the commune, adding to the idea that the commune was intended to be a work of collective art, showcasing various styles. The diverseness of the buildings' exteriors contrasts with the appearance of the *insulae*'s exterior, which were consistently laid with solid, brick-faced concrete.

Figure 3.1: Floorplan of House of Diana with ground floor (L) and first floor (R). Each room with a known function has been color-coded according to the key above. The ground floor holds shops and various sizes of private apartment (the private apartments are called "Room" in the key). Note that the section of multi-occupancy rooms is marked 16 and the communal living room is marked 17.

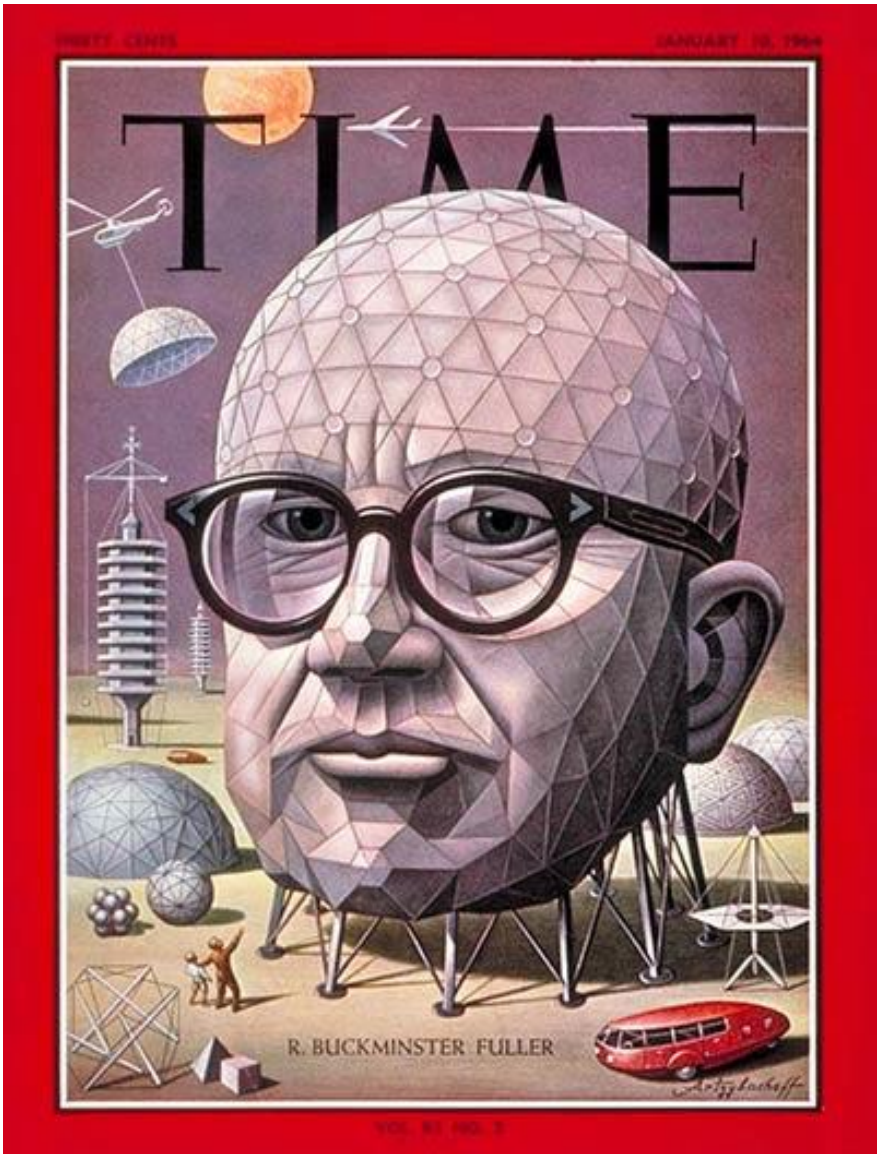

Figure 3.2: January 1964 cover of Time magazine depicting Fuller's head structured like a geodesic dome surrounded by other geodesic dome shapes. The ground on which the domes stand looks similar to Drop City's farmland, and the domes' colors and shapes are similar to some of the domes built at Drop City.

Chapter Four: The Role of Communal Living in Society

Most forms of communal living exist in a relationship with the society outside of their own community. Communards may rely on the outside society for food and other amenities, or they might be required by the government to abide by certain law, even when these laws conflict with the community's values. Some communities have relationships with their neighbors—good or bad—that affect daily life within the community. Furthermore, even within the communal living situations that intend to provide an alternative to mainstream society, the cultural values of the mainstream society still affect the communards. Additionally, intentional communities can affect the outside society. These communal living situations, like the Ostian *insulae,* can support the cultural practices or economic success of the outside society. The communards might provide unique, useful goods that they can trade with the outside society. Communal living can also have a negative reputation in mainstream society, conflicting with societal norms, and even serving as scapegoats for mainstream issues. Both Ostia and Drop City affected and were affected by the contexts of their respective broader societies.

Imperial Rome and the 1960s United States differed in time and place, yet they also shared political and economic similarities. Both the Roman empire and the United States were diverse, socially stratified, wealthy, and imperialist. The urban environment was more densely populated, diverse, and a center for commerce and cultural exchange. Although most business took place in the cities, many people chose to live outside the stressful urban environment when possible, commuting when necessary.[79] These communal living situations, however, were built for drastically different reasons under their respective societal contexts. Communal living in Ostia supported the city's diversity and trade. Ostia's large population was composed of various

[79] DeAngeles et al. 2020, 427

ethnic groups incorporated into the empire under Roman imperialism, and this diversity shaped the landscape of the city. Furthermore, the architecture closely followed the rules imposed by the Roman emperor. Ostia also bolstered the economy of the Roman empire. At the street level, many of the *insulae* were connected to shops, promoting the city's commerce. Certain business activities, however, like brick-making and quarries, had no place in the city and took place in the *Suburbium* of Ostia instead, the rural land outside of the city.[80] Communal living in the United States, on the other hand, was intended as a countercultural escape from the imperialist, capitalist, and oppressive mainstream American lifestyle. Instead, communes like Drop City developed their own value systems, and the communities were built specifically to support this alternative lifestyle. Drop City did not completely cut ties with the mainstream society, however. Although the members of Drop City had intended to be self-sufficient, the Droppers frequently relied on outside help for food, utilities, and architectural design.[81] These communal living situations' broader societal contexts shaped life within them.

Data taken by analyzing a collection of epigraphic signatures in Ostia reveals that the city was incredibly diverse.[82] Ostia had a large immigrant population, composed of Greek immigrants who were experienced seafarers and shipbuilders, Spanish and African merchants, builders from Gaul, and servants from across the empire.[83] In the *Piazzale delle Corporazioni* (II.VII.4), a center of trade in Ostia particularly for the import of foreign goods into Rome,[84] inscriptions in the mosaics indicate that merchants from North Africa, Gaul, and Sardinia passed through Ostia. For example, one mosaic from the walls of the *Piazzale delle Corporazioni* depicts two ships

[80] DeAngelis et al. 2020, 429
[81] Blauvelt et al. 2015, 387
[82] Bennett and Laurence 2020, 174
[83] Bennett and Laurence 2020, 188
[84] ostia-antica.org 2023, https://www.ostia-antica.org/piazzale/p-contents-intro.htm

from Carthage (Fig. 4.1). The inscription in the mosaic translates to English as, "To Imperator Caesar, the son of the divine Hadrian, grandson of the divine Trajan Parthicus, great-grandson of the divine Nerva. Titus Aelius Hadrianus Antonininus Augustus Pius, pontifex maximus, tribune of the people for the fourth time, consul for the 3rd time, pater patriae, (set up) by the Carthaginian shipowners from Africa."[85] Built in a highly-trafficked trade center of the city, the mosaic elevated the Carthaginian shipowners' business' status. The mosaic indicated that the shipowners had enough money to commission a mosaic in the *Piazzale delle Corporazioni*. The mosaic communicates what they do as a business, showcasing their specialization in maritime trade and travel. Furthermore, they dedicated the mosaic to a member of the Roman imperial family, demonstrating their loyalty and connection to the leaders of Rome.

The effects of Roman imperialism on architecture of Ostia is demonstrated by the fact that Ostian builders followed the decree of Rome's emperors. The Roman imperial family had a longstanding relationship with Ostia. The emperors Tiberius, Caligula, and Claudius all traveled through Ostia, but it was Nero that began developing plans for Ostia,[86] later built upon by Trajan, Hadrian, and Antoninus Pius. After the Great Fire of Rome in AD 64, Nero established a new set of building codes, that including replacing all wooden building materials with brick. Trajan built upon Nero's reforms, widening the streets and lowering the maximum height of the walls. Many of the buildings that still stand in Ostia today follow these codes. They are brick-faced buildings set away from the edges of the street.[87]

Drop City's architecture was not influenced in the same ways that Ostian architecture was. The Droppers did not incorporate formal leadership nor any preexisting cultural patterns

[85] Ghislaine van der Ploeg 2020, 183
[86] Laurence 2020, 63
[87] Ghislaine van der Ploeg 2020, 189

into the creation of their architecture. Although some American communes did incorporate cultural influences like indigenous American architecture, the Droppers looked to create a brand-new style for the commune. Not unlike the Carthaginian mosaic in the *Piazzale delle Corporazioni*, individuals did make their mark on the appearance of the commune. Outsiders also had some influence on the development of the commune. Architects like Buckminster Fuller, Steven Baer, and Steve Durkee contributed to the designs and even the construction of some of the buildings at Drop City. The communards tried to balance self-sufficiency and reliance on the outside world.

The Droppers incorporated the architectural styles of different architects that they aligned with philosophically. In the 1960s, many Americans struggled to think of the future as anything other than nuclear war and mutually assured destruction. However, architect Buckminster Fuller offered a different vision of the future, which the founding members of Drop City found inspiring. In an interview, Clark Richert quotes Fuller's words, "People call me [Fuller] optimistic because I believe there's a chance for survival." Richert continues in his own words, saying, "[Fuller] said scarcity is not the problem, the problem is distribution and the obstacles to distribution are usually political. So Fuller was actually fairly antipolitical."[88] The ideas behind creating Drop City tightly aligned with Fuller's. The commune was antipolitical, and the intention to create "free land for all" was thought to potentially help solve this problem of distribution, even minorly. Drop City was intended to provide food and shelter to all those who visited and even had a collective bank account accessible to anyone on the commune, resources that were politicized and limited to many in the country. The decision to build architecture based

[88] Blauvelt et al. 2015, 386

on Fuller's geodesic dome designs was not simply aesthetic. The choice to build geodesic domes also demonstrated a support of Fuller's ideas.

Steven Baer was another architect directly involved with Drop City's architecture. Two of his architectural ideas became primarily incorporated into the commune's architecture. Baer designed a shape called the zonohedron, a flexible geometric shape that connected at multiple joints. Some of Drop City's geodesic domes were created with Baer's geometric theories in mind (Fig. 4.2).[89] Baer also experimented with the harnessing of solar power. The use of solar power was intended to help lower the cost of maintaining Drop City and increase their self-sufficiency. Baer was supportive of the Droppers' ideas and visited the commune multiple times during its early days, helping design and construct some of the first domes.

Artist Steve Durkee also passed through Drop City.[90] Durkee was a structural artist and self-proclaimed hippie who later founded a different hip commune called the Lama Foundation.[91] Durkee used "intermedia," different materials and senses made with audio-visual technology, to create his experiential artwork.[92] Drop City was also a form of experiential artwork. Residents and visitors to the commune experienced the bright colors and clash of smells and sounds that was life on the commune. The difference between the three inspiring architects was their direct involvement with the commune and communal living in general. Fuller publicly praised and financially rewarded the Droppers for their effective execution of his architectural ideas, but he quickly distanced himself from the commune in order to save his reputation when Drop City's reputation began to crumble. Baer and Durkee visited and contributed to the physical architecture on the commune. Steven Baer, however, was not interested in experiencing

[89] Blauvelt et al. 2015, 320
[90] Blauvelt et al. 2015, 389
[91] Blauvelt et al. 2015, 375
[92] Blauvelt et al. 2015, 375

communal living for himself. His relationship with the Droppers was as an outside benefactor, providing the commune with assistance and materials in exchange for a space to experiment with his architectural ideas. Durkee was inspired by the ideas taking place at Drop City; he lived in Drop City for a while and then started the Lama Foundation.[93]

The architecture in Ostia reflected certain Ostian societal values, particularly the emphasis placed on commerce. The various *insulae* frequently included shops, called "*tabernae*," on the ground floors of these apartment buildings. There was therefore little separation between the spaces built for private life and commercial life, perhaps suggesting little psychological separation between the home and business, as well. The House of the Painted Ceiling (II.VI.5-6), for example, was split evenly between *tabernae* and *mediana* (Fig. 4.3). Divided laterally, the western half of the building contained five shops along the *Via delle Corporazioni*, literally "Corporation Street". The eastern half of the building, along the *Via della Fontana*, was a *medianum* apartment.[94] Doors on the respective western walls of room 2 and room 4 connected these rooms to the adjoining *tabernae*. The functions of the *tabernae* correlated to some of the decoration within the private rooms. Room 1 contained Bacchian imagery, including *kantharoi* on the western wall and panels showing Dionysiac figures playing tambourines, appropriate for a room located directly across from the bar located in the row of *tabernae*. This decorative connection further implies the connections between everyday life and commerce.

Business, however, was not likely to take place directly within the *insulae*. In contrast to the atrium houses of Pompeii, which often contained reception halls in which business deals or meetings called *salutationes*, in which patrons met with clients, were conducted, spaces like the

[93] Blauvelt et al. 2015, 389
[94] ostia-antica.org 2023, https://www.ostia-antica.org/regio2/6/6-5.htm

Ostian *medianum* apartment were not built for private, formal reception with the home, as evidenced by the absence of an axial entrance in these structures.[95] The public nature of many *insula*'s larger spaces limited the privacy with which business could be conducted, further placing commerce at the forefront of the public eye but also limiting the spaces in which more sensitive business matters could be discussed.

Trade was actually very important to Drop City as well. A number of the communes built during the communal living movement in the United States were intended to be isolated. Drop City, on the other hand, though built on rural farmland, was easy to find,[96] advertised themselves in neighboring towns,[97] and maintained a connection with the broader artists' market.[98] Clark Richert explained to Adam Gildar, "We [the Droppers] like the idea of self-sufficiency, but as an artist I did not want to be separated from the global art community. I think the artists there pretty much shared that sentiment. I suppose the art community is a branch of capitalism. There's capitalism and there's free enterprise. I think Drop City was free enterprise […Y]ou sell a painting, that's a part of trade, but it's not necessarily tied to the capitalist system."[99] Although Drop City served as an alternative in many ways to the standard American lifestyle, the commune stayed connected to the American economic system. The buildings were built from, as Adam Gildar puts it, "the detritus of capitalism,"[100] leftover materials from building sites and junkyards, even the roofs of old cars. Although the communards refused to devise a formal system of making money and paying bills, believing instead that "[money] comes when it is needed,"[101] they sold or traded their artwork on the artists' market.

[95] DeLaine 2020, 96
[96] Fairfield 1972, 202
[97] Rabbit 1971, 12
[98] Blauvelt et al. 2015, 388
[99] Blauvelt et al. 2015, 388
[100] Blauvelt et al. 2015, 387
[101] Gardner 1978, 40

Finally, the Droppers mostly relied on donations from the outside world to receive food, ultimately making a deal with a few of the grocery stores in Trinidad to take the food that was about to go bad.[102] Drop City's neighbors were quite tolerant of the commune, and local Trinidad law enforcement rarely interfered with the Droppers.[103] Peter Rabbit suggested that the Droppers survived by charming the outside world into giving them food and money by appearing helpless but entertaining, like children.[104] Drop City survived in part due to the support from members of the American mainstream society that Drop City's residents had chosen to live apart from. However, some of Drop City's issues, like struggling to pay taxes on water, electricity usage, and the land itself only existed due to the pressures of the American system. Furthermore, the anti-hippie laws introduced in the 1970s that prevented more than three unrelated individuals from living together became another legal issue faced by the commune.[105] The role of Drop City in American society was as a source of art and entertainment, but the commune also challenged some of the values of the mainstream society, causing conflict on the commune and with statewide law.

Both of these communal living situations served as syntheses of different philosophies and societal values. Not only did Ostia and Drop City accommodate their residents, these communities also influenced and were influenced by the larger societal contexts of Rome and the United States. Ostia was an important location for trade in Rome, promoting the wealth of the empire. Drop City made national news multiple times for their innovative forms of art and architecture. Drop City was space in which to test new ideas intended to change the world. In turn, each of these communities were influenced by various ideas, laws, and backgrounds from

[102] Blauvelt et al. 2015, 387
[103] Gardner 1978, 39
[104] Rabbit 1971, 12
[105] Blauvelt et al. 2015, 391

the broader mainstream societies. Ostia was influenced by Rome's cultural diversity, commerce, and imperial rule. Drop City stayed connected to American mainstream culture in order survive, relying on the charity of outsiders. Neither case existed in a vacuum, separate from their cultural context, nor should they be studied as such.

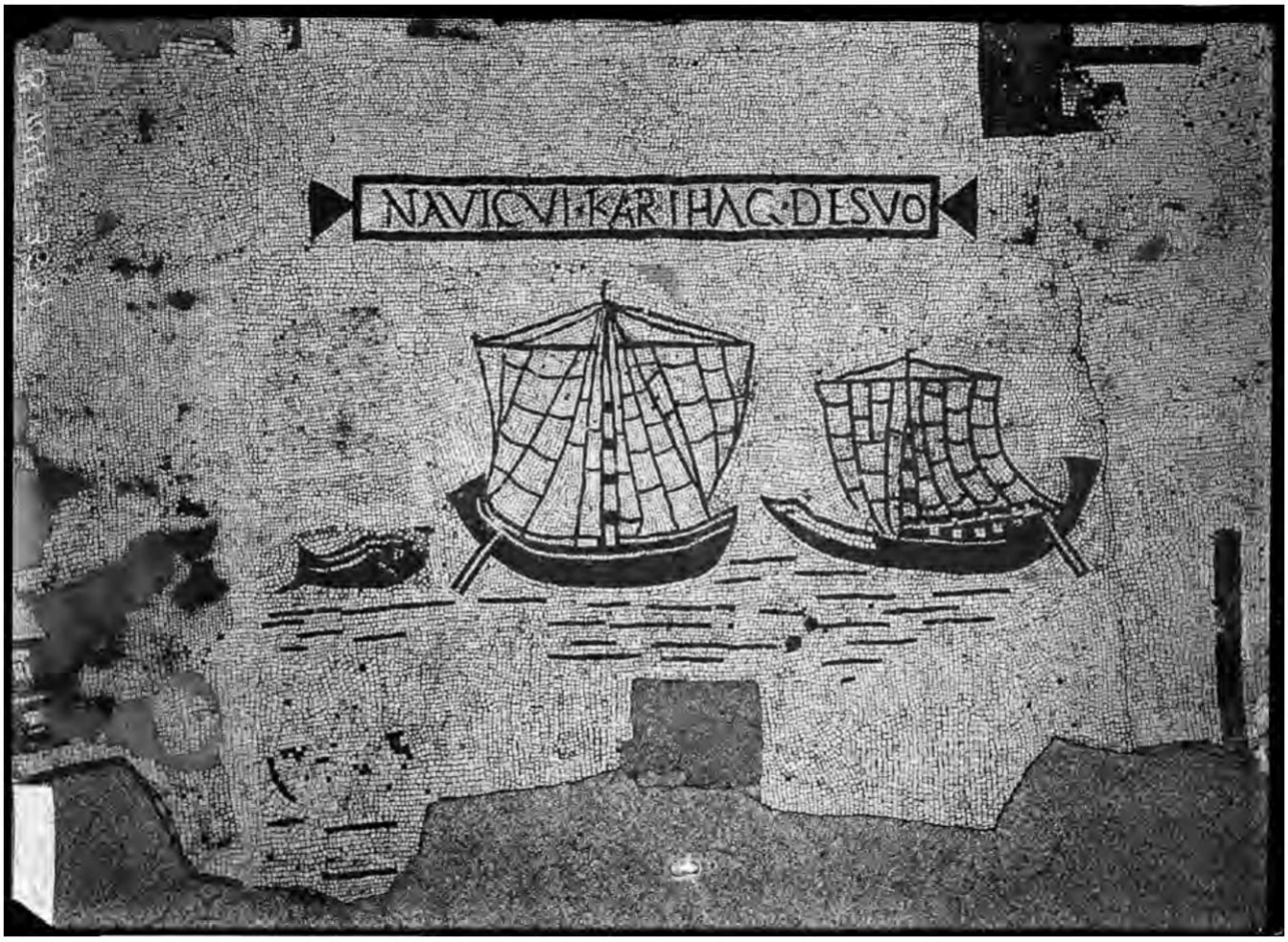

Figure 4.1: Mosaic of two Carthaginian ships on open water. The inscription and design are intended to be very visible, the dark colors contrasting with the mosaic's light background. The inscription is large, nearly as wide as the pictorial image and framed in thick, dark rectangle with a triangular shape on either side pointing to the words within.

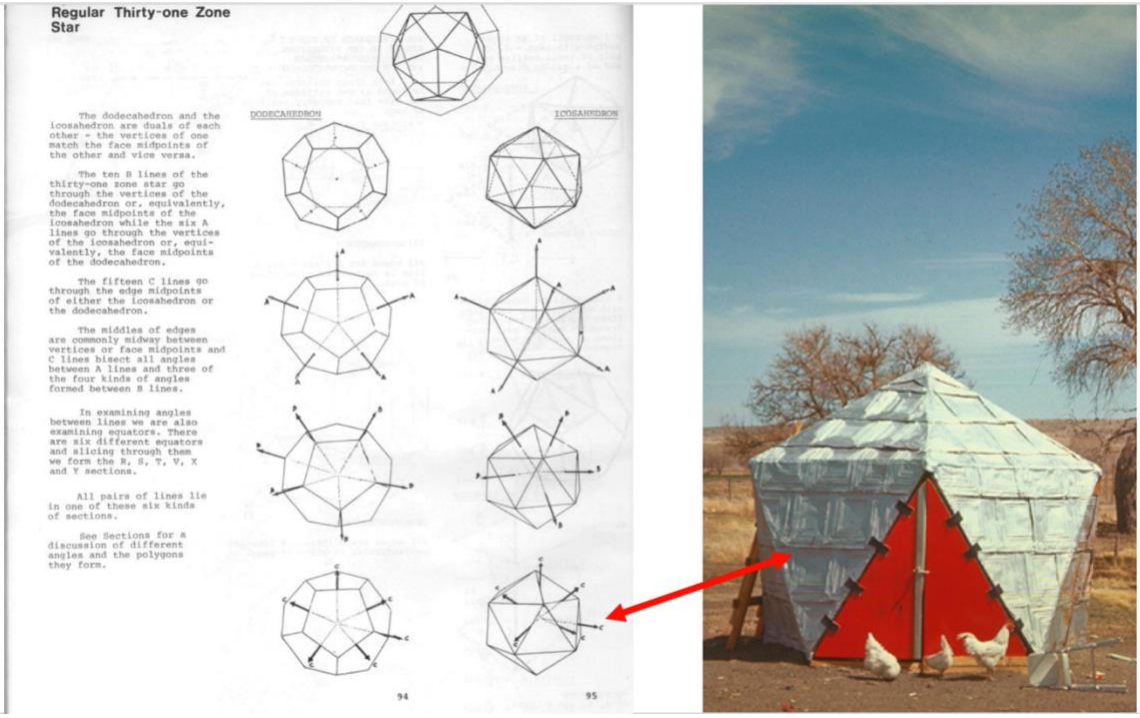

Figure 4.2: Drop City's Icosadome compared to a page from Steve Baer's pamphlet on zomes. Note that one of the shapes Steve Baer presents on this page of the pamphlet is the icosahedron, connected with a double-sided arrow to the image of the Icosadome. The building's pointed roof and large triangular sides look very similar to the icosohedron.

Figure 4.3: Floorplan of the House of the Painted Ceiling. The private rooms, shops, and bar are color-coded according to the key. Note that the bar is across from Rooms 1 and 3 within Room 2.

Conclusion: Organization and the Communal Environment

From across time and space, the reality of the two communities was completely different. This cross-comparison reveals that these two case studies utilized some similar architectural tools in order to build communal living space, but the architectural and social organization of the case studies were quite different, contributing to the downfall of Drop City and the prosperity of Ostia. Ostian and Dropper architecture was intended to accommodate a diverse population through unique and various designs for living space. The architecture saved space and building materials by incorporating communal areas. Access to free-flowing light and air promoted the overall wellbeing of the residents. Treating the architecture as a form of artwork promoted the reputations of the people living in each location. Beautiful, well-decorated Ostian homes promoted the social status of the homeowners, while Drop City's bright colors and experimental structures earned the commune the interest of the public eye and affection from its neighbors.

Although the architectural tools these cases used are similar, their organization, connection to the outside world, and ultimate survival were not. Ostia survived due to its logical and precise organization. The different parts of the city were strategically interconnected; some sections were primarily composed of commercial space like *tabernae* and warehouses, public spaces like baths and temples, or residential spaces like the *insulae* apartments or the *domus*, but even sections of the city that did mostly contain commercial buildings frequently had some living space, convenient for those who worked nearby. Furthermore, the imperial building codes were logical ordinances, intended to prevent widespread fire and overcrowded streets. The *insulae* contributed to the city's survival. Life within the *insulae* was inherently connected to life outside the communal structures. These spaces successfully alleviated much of the issue of

population overflow within Ostia and provided affordable living space for the merchants, shopkeepers, and other residents of Ostia that contributed to the economic success of the empire.

Unlike Ostia, which survived centuries, Drop City survived for eight years and was deemed a failed experiment by many who wrote about the commune. This failure was spurred by the lack of regulations and formal organization on the commune. The architecture failed to accommodate a growing population. The domes were too cold in the winter, and there was not enough space for all that came to the commune to comfortably live there. Most of Drop City's residents abandoned the commune in the early 1970s, and the founding Droppers were forced to abandon their ideals of "free land for all." The architecture did help the Droppers in some regard, however. The architecture helped garner interest in the commune from the outside world, which may not have occurred had the commune's appearance been less striking. Outsiders were crucial to Drop City's survival. Hugh Gardner describes the relationship between Drop City and outsiders as such, "[t]he flow of new people and visitors was in fact the life blood of Drop City's economy. When it was inadequate, the Droppers were quite adept at presenting themselves in Trinidad as a merry band of helpless orphans who needed mothering. […] In a sense, then, Drop City was still in the entertainment business."[106] Although Drop City was intended to be an experiment in self-sufficiency and living separately from the outside world, the Droppers' survival was dependent on their ability to beg for food, money, and goods like soap.

I confess that I began this project with a rosier view of Drop City than I end. I expected I might come away with the conclusion that communal living is more successful than the single-family, nuclear family household and psychologically more beneficial. I thought I might argue that although Drop City only survived for eight years, the commune was successful because it

[106] Gardner 1978, 40

did what it intended, providing a space for communality and individual freedom for its residents and that the architecture contributed to this success. I can no longer support this idea. The architecture, although it did use interesting shapes and resourceful materials, failed to provide comfortable living space, unable to keep the communards warm or to provide enough space for everyone to sleep comfortably, which contributed to growing resentment and hostility within the commune. In comparison with Ostia and the dozens of other examples of communal living that I looked at throughout my research, Drop City failed, and it failed because the Droppers did not effectively organize their resources, community, and architectural system. Communal architecture is most successful when designed systematically with specific housing types that directly support life within the community.

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