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Uniting Discourses of Sustainability and the Social Environment: Modeling Connections Between Seemingly Disparate Fields

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UNITING DISCOURSES OF SUSTAINABILITY AND THE SOCIAL ENVIRONMENT: MODELING CONNECTIONS BETWEEN SEEMINGLY DISPARATE FIELDS

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Table of Contents

Chapter 1: Introduction

If New York is the city that never sleeps, Westport, Connecticut is the town that eats an early dinner and then calls it a night. As a high school student in Westport, there were many weekends when my friends and I would try to find something to do on Main Street, despite the knowledge that we would most likely be unsuccessful. A typical evening went as follows: at 7:30, four or five of us would meet at Starbuck's and park in the adjacent municipal lot. There were often three cars among the group of us, depending on who had the foresight to arrange a carpool. We would walk around the area, traveling the same two block loop over and over again because it was the only path with both streetlights and sidewalks that didn't abruptly end at a busy intersection. Our walk usually lasted for about 45 minutes, during which we walked into the few stores that were still open, looked briefly at the merchandise, and stood in the corner talking until the shop owner indicated that we needed to socialize elsewhere. 8:30 PM usually marked the point at which we would admit defeat. Getting back in three separate cars, we would then drive to the 24-hour diner, even though the walk would have taken 20 minutes and, frankly, would have given us something to do. At this point, the traffic lights at the major intersections of the town's only four-lane roadway had switched from tri-colored signals to flashing yellow lights, adequate for the mere handful of cars still out and about.

Nights like this made me wonder a lot of things about my town. Why did so few people require so many cars when we all lived at most ten minutes away from one another? Why did we have to meet in the Starbuck's when none of us wanted coffee? Perhaps most importantly, where were all of the other people? Surely we can't have been the only teenagers searching for activity, although maybe all of the others had already

learned their lesson and given up on Main Street after dinnertime. As a teenager trying to stay out for as much of my remaining time before curfew as possible, even the traffic signals seemed more willing to admit their defeat than I. Their yellow flashes seemed to acknowledge the fact that there were no destinations to pull people away from their homes and into the town.

It is these experiences that have caused me to reflect on the elements of a space that influence patterns of human behavior. In answering my own questions from above, it appears that all of our complaints had common roots. We felt that we had to drive in part because there was no transit infrastructure and very few sidewalks to aid another mode of transportation. We also drove because it simply did not occur to us to walk. It was not an accepted or normalized way of getting around town. We had to meet in the Starbuck's because it was the only place with seating that wasn't a formal restaurant. Unless we wanted to sit outside on an unlit bench at the edge of a parking lot, this was the best option. It was the features of the town that shaped our decision of how to arrive, where to meet, how far to walk, and when to leave. We were agents confined by the parameters of our environment**.** Just as all organisms use feedback from their surroundings to determine suitable behaviors, we too, as beings within a broader context of the physical world, relied on continued interactions with the streets, cars, stores, and other people to determine what behaviors were possible (Chiel & Beer, 1997).

The problems that my friends and I faced were primarily based on our need for a place to socialize. We wanted to be able to spend time together and enjoy each other's company in a space that was conducive to sustained interactions. Our particular experience, far from simply reflecting the social desires of several suburban teenagers,

brings up larger issues: our use of multiple cars points to the pollutants and greenhouse gas emissions, and our car transit in general reflects a lack of physical activity resulting from driving instead of walking. Addressing one of these concerns by limiting the need for cars would in turn alleviate the others. Additionally, creating a space with more available activities would not only decrease our need to drive to multiple places but would also increase social vibrancy and create a stronger sense of local community. These different issues of the environment, health, relationships, and community are typically dealt with through different planning efforts and using different methodologies. However, if they stem from similar causes, they should all have interconnected solutions. It is through this lens of inter-relatedness that I will approach the multi-faceted planning issues encountered in public spaces.

Spears, Houston, and Boarnet (2013) state, "Just as studies that focus on the built environment do not typically account for psychological factors, most attitudinal studies do not control for the effect of the built environment" (p. 41). It is this disconnect in the majority of planning literature that I will address through this thesis. People never act in isolation from their physical environment or from other people. Talking about spatial concerns while ignoring social implications misses much of the picture for how people will function in relation to their contexts. It is merely patterns of discourse that separates one field of study from the other: In reality, issues of environmental sustainability and conservation dovetail with the psychological underpinnings of human behavior. Planners need to start uniting discourses in order to find the most effective solutions for better public spaces.

It is, of course, impossible to fully consider all of the interacting factors that

contribute to a space's formation. In creating a hypothetical model for an ideal space, I will not exclude considerations of the bureaucracy that often accompanies planning decisions. Local governments and other ruling bodies, while pivotal in implementing many of the physical changes to a space, can also be the largest roadblock (Speck, 2013). In the current work, I will hypothesize the ideal situation in which governing bodies are fully cooperative.

Environmental Sustainability

When looking at relationships between multiple interacting forces, it is important to start by defining each concept independently. Environmental sustainability is one of the main aspects of a beneficial space, but there are many different ways to define what it means to be environmentally sustainable. There are energy perspectives that focus on the least destructive ways to produce and use power, resource models that emphasize non-detrimental consumptive patterns, and agricultural and societal considerations that aim to minimize the impacts of human crop production and built cities. All of these frameworks share the underlying principle of biological capacities; the planet has a finite amount of resources as well as a limited ability to absorb the consequences of human actions. Every ecosystem has an upper limit to the amount of life that can thrive given available supplies. Human activity often alters this limit, carrying out activities that deplete resources faster than they can be replaced (Portney, 2003).

In 1987, the United Nations' Brundtland Commission outlined an international agenda focused on preserving the biosphere. The Commission states that sustainable development requires a "strategy for improving the quality of life while preserving the

environmental potential for the future…the present generation must not narrow the choices of future generations" (Portney, 2003, p.8). Future generations cannot succeed without a viable physical environment and our current generation faces the responsibility of conserving as many of these resources as possible.

In his book *Green Metropolis*, David Owen (2009) cites Manhattan-dwellers as the United States' best example of the environmentally sustainable lifestyle. The city is more populous than 38 states but produces a lower level of per-capita energy emissions than any state in the country. Owen attributes this lack of carbon outputs to a dense arrangement that hinders automobile transit. He also says the low emissions levels are due to compact living spaces that require fewer energy inputs. It is the general organizational patterns of the city that make its inhabitants live in a more environmentally sound way. Owen emphasizes the importance of sustainability as a context and not as a technology in isolation. He argues, "Every house, office building and appliance…is just a single small element in a civilization-wide network of deeply interdependent relationships, and it's the network, not the individual constituents, on which our future depends" (p.40). He also says:

> New York City proves that tremendous environmental gains can be achieved by arranging infrastructure in ways that make beneficial outcomes inescapable and that don't depend on radically reforming human nature or implementing technologies that are currently beyond our capabilities or our willingness to pay… unconscious efficiencies are the most desirable ones, because they require neither enforcement nor a personal commitment to cutting back. (p.44)

Owen's focus on the importance of the individual's surroundings on human behaviors closely mirrors the language of the Bruntland Commission (Portney, 2003). The United Nations report looks at individuals within the context of their local governments, since these are the institutions most directly responsible for enforcing change. These are the bodies that create infrastructure and create policies that dictate overarching behavioral patterns. The actions of the individual are largely determined by available choices, as established by laws and regulations. (Once again, the model that I propose in this thesis relies on political cooperation, but it will exclude discussions of the bureaucratic processes involved in implementing change.)

Jeff Speck, a city planner who advocates for sustainable design and growth, cites David Owen's work in the book *Walkable City* (2012). Speck also sees environmental sustainability as the structural elements that positively influence human behavior to create fewer emissions. Speck builds on this idea by proposing that sustainability is best measured by average carbon output and energy use per person. In prior decades, climate specialists compared total emission levels in one region to levels in another region. According to these diagrams, dense, walkable cities had higher carbon outputs while car-based suburbs appeared to be more environmentally sound. However, Speck found that considering the emission level per person illustrated lower per capita carbon use in dense cities than in rural neighborhoods. According to Speck's operationalization of sustainability, it is the per capita emission among residents of a space that most accurately represents environmental friendliness.

Speck (2012) and Owen's (2009) ideas about carbon use and density go together to form an overarching definition: Environmental sustainability is the extent to which the

area or region, as a system, compels human actions that minimize resource degradation for present and future generations.

Social Health

Just as all humans live within a physical space, all people also live within a social environment. Social interactions are part of daily life and are so ubiquitous that they often go unnoticed. These interactions can take many forms including direct conversation, fleeting eye contact, indirect knowledge of another's presence based on litter or footprints, and deliberate avoidance. Humans have evolved within the context of social groups and are more successful with the help and companionship of others. For this reason, people are evolved to generally trust other people. Despite continual news stories about antisocial behavior, people tend to assume that the world is a decent place and that others are generally competent and honest. However, a breach in this trust activates vigilance, another adaptive quality that enhances individual well-being. Indications of untrustworthiness elicit careful monitoring and high alert to ensure individual safety as well as protection of the social group (Fiske, 2004).

Social health arises when interactions indicate trustworthiness and minimize the need for vigilance. When individuals feel at ease within the larger environment, social health can arise. The pinnacle of social health is a sense of belonging. People seek out secure relationships and are drawn to situations in which they feel included and involved (Fiske, 2004). Social well-being, while it generally depends upon a basic level of coexistence between individuals, also encompasses active, positive cooperation. Jane Jacobs (1961), a proponent of measuring the success of cities based on their social

vibrancy, said that the benefits of lively street activity comes from "small-scale, everyday public life and thus [sentiments] of trust and social control" (p. 364). Formation of social health entails the integration of individuals with unique goals and interests into a coherent, synergistic collection of relationships. Social health ultimately comes about within a community when interactions are both positive and practical. The ideal settings are those that encourage contact between different users, or at least allow users to coexist.

Individual well-being

Individual well-being has many facets that all serve to determine a person's overall wellness. Individuals are able to thrive when they are in command of their emotions and are able to attain stability. Physical health as well as cognitive functioning is also important for an individual to obtain an optimal sense of well-being. While considering the individual as an actor within space and as an indicator for a space's effectiveness, I will additionally define individual well-being as each person's sense of control within the environment (Montserrat, 2008). This sense of control is related to the different aspects of well-being: people typically opt to be in situations in which they can be in command of their own moods and thoughts and can understand their surroundings. Additionally, people seek out situations in which they have a perceived ability to regulate stress levels.

Throughout this thesis, I will discuss individual well-being within the context of a social environment. By taking this approach, I am adopting Fiske's (2004) ideas about the importance of social context in determining how an individual will behave in certain situations and react to particular stimuli. Fiske outlines the classic definition of social psychology as the investigation of "how the thoughts, feelings, and behaviors of

individuals are influenced by the actual, imagined, or implied presence of other human beings" (p. 4). In keeping with the overarching idea that people and the physical environment are intimately tied, I will extend Fiske's perspective to include the individual within built spaces.

Public Space

All of the above factors operate within physical locations. They depend on spatial interactions between people, the environment and other physical elements. In the present analysis, I will look at the dynamics of public spaces. It is not the zoning regulation that determines whether or not a space is public. Instead, it is the cultural conceptualization of the place as well as the level of democratic control held by its users. In his analysis of New York City's Bryant Park, David J. Madden (2010) says, "Publics are never preassembled—they always must be specifically formatted" (p. 191). In recent years, Bryant Park has transformed into a space for consumption, relying on surveillance and police presence to ensure that users are of an "acceptable" social class and exclude less affluent individuals. Commercialization of a space often limits user-ship to those who can afford to shop there. Casual sitting and impromptu socialization have been displaced by sponsored events. The movement away from places of democratic control amongst users to one in which the role of the user is relegated to surveillance and commerce has shifted the meaning of places of public discourse. However, it is often in the contestation of these increasingly commercial spaces that qualities of public-ness resurface. In the search for improved usability, spaces gain more personal meaning and symbolic significance. Setha Low (2000), anthropologist and ethnographer, says, "The designed landscape acts

as an environmental mnemonic for communicating past and present meanings to daily users and urban residents" (p. 239). It is the searching for a definition of a place that inscribes it with meaning. The ability for all members of the community to search for a sense of place is an element of this public-ness.

It is the physical and visual access that draw potential users in, far more than the technical ownership, and which make a space part of the public. Theoretically, a corporately owned plaza in front of an office building should elicit the same types of interactions and human behaviors as a city owned municipal square. The ease of access—both physical and visual—will define the public nature of a space far more than ownership. For example, one case I will examine considers a downtown shopping and municipal district. The area contains town-owned seating areas as well as privately owned stores. The streets in the downtown proximity are owned and maintained publicly, but sidewalks fall under the jurisdiction of shop and restaurant owners. Despite these different levels of ownership, I will examine the spaces that are intended to draw users from the surrounding community: as long as people obey the laws of the town and the rules of the established business, people cannot be asked to leave or be barred from entering. In a second case study, I will examine the central building at a small college campus. The school owns the building, but anyone can enter, exit, and use the space. Unlike a dorm building that requires a school-issued identification card, no affiliation with the school is required in order to enter.

Uniting Multiple Domains in a Single Discourse: An Overview of the Thesis

Issues of the environment, health, relationships, and community are typically

dealt with through different academic lenses and separate analytical strategies. However, their related causes and shared underpinnings indicate the possibility of holistically contrived solutions. It is through this lens of interconnectedness that I will approach the multi-faceted planning issues encountered in public spaces. The model that I propose outlines the causal relationships that interact with one another and the inextricable links that connect fields of discourse. None act in isolation and all have multiple effectors. Montserrat (2008) claims, "Physical changes in the urban environment create new patterns of sociability as they attract different spatial practices and social groups" (p. 18). We are agents confined by the parameters of our physical surroundings, a conceptualization that can allow for useful analysis of the ways in which spaces can most effectively foster general positivity for people and the environment. The model that I propose places people's interests and needs within the context of existing sustainable design paradigms. Likewise, the model puts environmental concerns within social and individual psychological contexts.

I begin this analysis with a more detailed theoretical explanation of how discourses of the environment and people interact. In Chapter 2, I lay the theoretical groundwork for the thesis. I use this chapter to explore the interconnections between environmental sustainability, social health, and individual well-being by first looking at each factor within the context of public space. I use existing literature to develop a framework for the interactive factors that impact the health of a space. In many cases, these relationships are cyclical and result in feedback loops in which cause and effect become mutually perpetuating. First, I propose a model in which nature, mixed-use spaces, walkability, and density all create environmentally sustainable spaces while simultaneously interacting

with one another. I then propose a second model for spaces that facilitate social health that utilizes many of the same factors involved in environmental sustainability. This model also demonstrates a level of interconnectedness and mutual causality between larger domains. The final model diagrams the causal relationships involved in the creation of spaces that foster individual well-being, again with many interacting factors and multi-directional causalities. The last part of this chapter seeks to integrate all three models by considering overlaps forming a single diagram. The final model illustrates the interconnected nature of all of the elements discussed throughout the chapter.

In Chapter 3, I apply theoretical material to a case study to exemplify the common factors shaping environmentally sustainable as well as socially and individually conducive public spaces. I analyze the downtown area of Westport, CT, a small suburban town 50 miles northeast of New York City. Westport is currently undergoing several revitalization projects that aim to create a more unified downtown area. The town has selected the RBA planning group to create a mockup of how they foresee the space developing. These preliminary plans provide a point of comparison between what does and what could exist. Moreover, the potential plan is an idealized reconfiguration of the current land use, illustrating the professional goals of an established firm. I first review past documents in an effort to understand how Westport's planning department conceptualizes the built space in the downtown area. I then compare these to RBA's patterns of discourse in their proposal. By looking at RBA's discourse in the context of my proposed model from Chapter 2, it is evident that the firm sees inter-connections between sustainability and people but does not sufficiently consider implications for social health.

Chapter 4 applies the same theoretical basis to a smaller scale environment by looking at Vassar College's Main Building and attached College Center as an example of a public space. For this case study, as with my analysis of Westport, I use a temporal comparison of Main Building in the early years of the school's operation versus its current space allocations and functions. In the previous century, Main Building contained the entire school in an effort to contain the female students and protect them from the corrupting urbanity of Poughkeepsie. The school was meant to shield the women from unsuitable external forces while providing all of the elements necessary for an upstanding 19th century education. Main Building's current configuration and inclusion of the College Center allows for even greater mixed-use, further making the campus self-sufficient and non-dependent on cars. Additionally, the College Center takes on an identity as the social center for the campus. By applying my proposed model from Chapter 2, it appears that the discourses used to frame the original Main Building excluded considerations of environmental consequences. Current uses of Main Building, on the other hand, appear to benefit the environment but not individual people as much as they once did. I use this chapter to place an individual building within the context of the established model of sustainability and social/psychological well-being

In the final chapter, I discuss the overall importance of the proposed model, recapping pivotal points of interaction and feedback between the multiple domains I have been analyzing. I then return to each case study and highlight the major findings in each as well as the illustrative purposes of the two examples. I conclude by suggesting the extent of applicability to prospective planning projects.

There are several important aspects to this thesis. The present body of work draws

on existing ideas and seeks to extend them to broader contexts. It searches across disciplines to bring information together into a unified picture of public space. Throughout this thesis, I aim to illustrate the importance of planning for both the natural environment and the people within the space. The model that I propose places people's interests and needs within the contexts of existing sustainable design contexts. Likewise, the model puts environmental concerns within social and individual psychological contexts. This paper presents a universal idea for spaces in all different settings for audiences of all different demographic compositions. Theory will coalesce with praxis as I unite hypothetical work with real world examples of spatial planning projects. Ultimately, I will use theoretical work to develop a working conceptualization for how spaces can simultaneously benefit both people and the environment.

Chapter 2: Theoretical Content

How can a public space become environmentally sustainable while simultaneously fostering psychological and social well-being? Although environmental and human health appear to have different underlying causes, they are intertwined concepts and are intricately connected through a web of common characteristics and goals. My objective in reconciling these factors is to illustrate how small public areas, such as town centers and single buildings, are capable of becoming vibrant, utilized, and beneficial places. The first step in this process is to integrate theoretical underpinnings from several academic fields. This chapter reflects my conceptualization of a unifying model that can tie together many ideas about places, people, and resource conservation.

Environmentally Sustainable Public Space

The first concept map focuses on environmentally sustainable public spaces, one of three elements I aim to unite, and is illustrated in figure 2.1. Terms like "green" and "sustainable" are often batted around to make a proposal sound more appealing as towns and cities try to combat a world of climate change and carbon emissions. However, environmentally sound designs truly are important to the overall success of a space. Designs do not need to entail fancy materials or complicated engineering schemes. In fact, solutions that involve consuming a more sustainable version of a product are far less effective in reducing long-term carbon impacts. The best way to minimize consumption and its subsequent pollution is to create physical settings that eliminate the need for destructive patterns altogether.

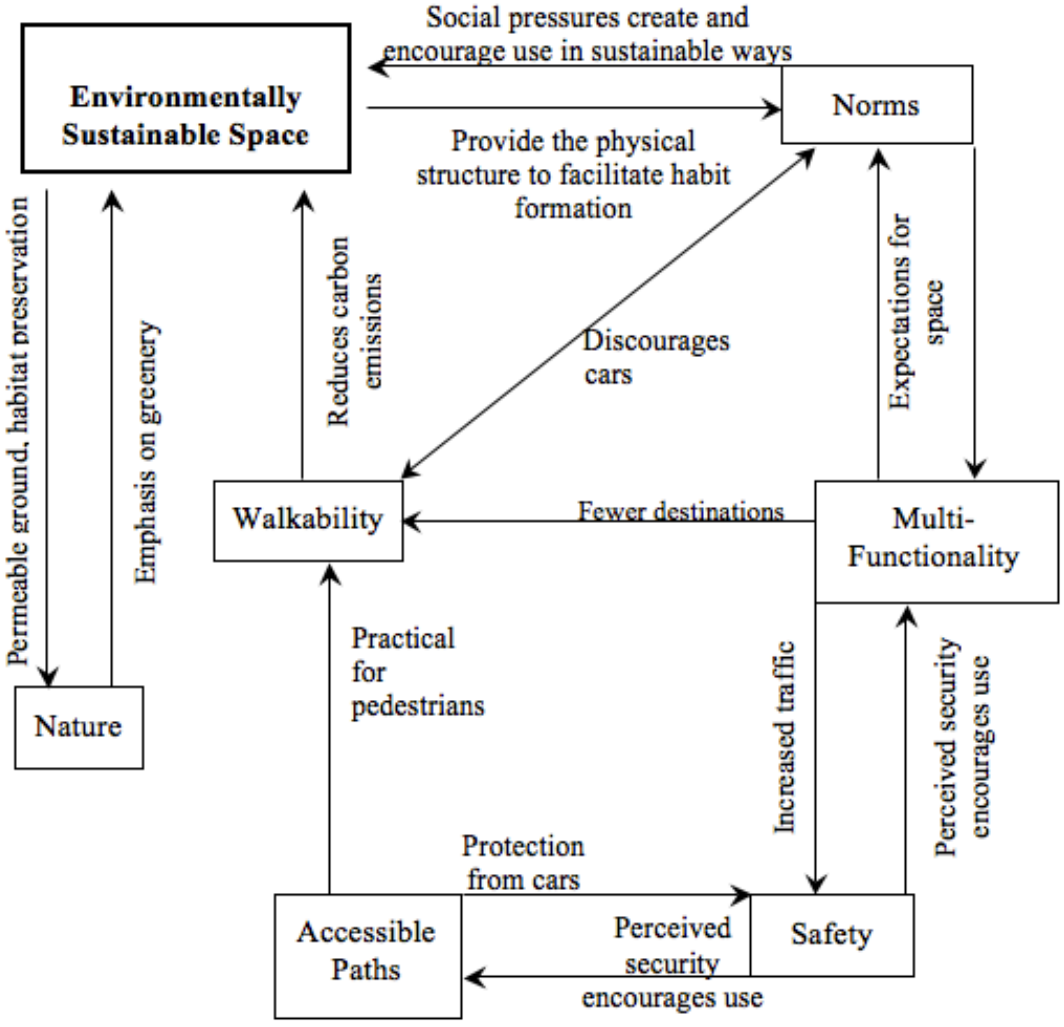

Figure 2.1: Factors driving the formation of environmentally sustainable spaces

For example, cars with better gas mileage consume fewer gallons of fossil fuels, but creating a space that allows people to function without cars is far more effective at reducing transportation-related fuel consumption and carbon emissions. This means that the simplest way to create a more sustainable public area is to make it walkable (Owen, 2009). Cities in the United States that rely the most on cars for transportation have correspondingly poor air quality. Since factories are no longer centrally located in cities,

automobiles have become the main contributors of air pollution and smog and play a large role in impacting global temperatures (Speck, 2012).

Replacing car use with walking serves to reduce the amount of emissions released into the atmosphere. Driving a fuel-efficient car is far less effective than creating a space that needs fewer cars altogether. The easiest way to make this change is to create a place that makes walking both easier and more desirable than automobile transit (Speck, 2012). When walking becomes the favored way to get around, car use is less appealing. Even if visitors have to initially drive to the space and walk once they get there, as is often the case in suburban environments where town centers are isolated from residences, the final destination should facilitate easy travel on foot between all of the different aspects of the space in order to minimize the desire and need to use a car a much as possible.

What elements are essential in the creation of these walkable spaces? First, the area must contain several uses that are located within feasible walking distance from one another. It must be practical for pedestrians to get from one place to another via the provided paths. These paths should be clearly defined to demonstrate their walkability to users, and they should also be conveniently located near all possible destinations within the space. Mere proximity is not enough to make two destinations walkable in relation to one another; the two must be linked via paths that provide delineated corridors that are separated from vehicular traffic. A sidewalk that abuts a busy street is far less appealing than a sidewalk bordered by a buffer of parking spots. The motionless cars act as a barrier to walkers, and an increased sense of safety invites more pedestrians (Speck, 2012). It is also crucial that these paths have a sense of continuity to them. This allows for easier comprehension by the user and makes the paths more appealing to use. When walking

from place to place, people are more likely to take the path that they are able to easily distinguish from the surrounding area. This ensures additional protection from cars while concentrating people along specific paths. Walking paths that are a safe distance from cars appear more appealing to potential pedestrians (Lynch, 1960). This interaction between safety and accessible, usable paths is bidirectional: just as protection from cars makes an accessible path safe, a path that is perceived to be safe appears more accessible. By creating paths that are easily identifiable and clearly defined, pedestrians are far more likely to utilize walking corridors than to get back in cars to move from place to place.

Walkability also stems from multi-functional spaces. When there are multiple destinations in a single area, there is increased motivation to walk from one place to another instead of driving from point A to point B. For example, a single store located in isolation along a busy road with no sidewalks does not provide an ideal environment for pedestrian flows. When multiple facilities are located with close proximity to each other, it becomes more appealing and often more convenient to walk from one to another. A shop that is located near other stores, food vendors, and recreational facilities only requires a single car trip to accomplish multiple tasks (Platt, 2006). When it takes more time and energy to get back into the car and move several yards to a new parking spot than it does to walk from one destination to another, people will use their cars less and walk more. Conversely, spaces that only offer a single use require that visitors drive there to use only one facility. Visitors then have to drive elsewhere to accomplish a second task. This necessitates multiple car trips and increased gas consumption and emission production. Even though access to these activities would ideally be independent of

vehicular transport all together, reducing the number of spatially separated destinations contributes to increased environmental sustainability.

A major factor in shifting movement patterns from automobile to pedestrian activity is the development of sustainability norms. Haustein and Hunecke (2007) found that infrastructure helps discourage car usage, but only if the changes confer behavioral changes. When people perceive cars to be necessary for mobility, cars become the prioritized form of transportation. Even more important for designing spaces is the idea that when people perceive cars to be *easier* for mobility, they are preferred over walking. General ease of car transport then creates a norm that excludes walking as a way to move from one place to another. Former French King Louis Philippe said in 1798, "Americans are in the habit of never walking if they can ride" (Speck, 2012). This observation still holds true. For example, Los Angeles, California's transportation networks are automobile centric. Neighborhoods are spread out, highways are abundant, and pedestrian traffic is not common. As a result, car travel has become the reflexive option. Even when it is feasible to walk from one destination to another, LA residents are more likely to get back into the car and drive. Social norms surrounding the heavy use of cars have resulted in pervasive driving.

As in the example of Los Angeles, the more frequently people perform an action, the more routine and habitual it becomes and the more likely people are to form norms around these habits. In this sense, walkability and norms help to shape each other: physical layouts that facilitate or even necessitate walking create pedestrian habits. These habits, if performed often enough and among a large enough proportion of the population, become norms (Klockner & Matthies, 2004; Kjell, 2011). Moreover, a

society that has established walking as a norm will discourage car use through the use of social pressures. When driving from one end of the space to the other is seen as socially undesirable, sustainable transit becomes a characteristic that is part of the space's physical and cultural identity. It should not be more convenient, safe, or "normal" to drive than to walk from one location to another within a public space.

Another important application of norms within sustainable spaces is in the context of multiple uses. When it becomes typical to have spaces with multiple functions, people will come to expect these types of development patterns. This cyclical cause and effect creates feedback that only serves to further perpetuate sustainable development. When multi-functional locations become normalized, this norm further creates a demand for more multi-use spaces.

An additional important factor that contributes to sustainability is the integration of nature. Trees are typically thought of as producers of oxygen and consumers of carbon dioxide, lauded as a tool to absorb some of the emissions that humans have created through fossil fuel combustion. The typical park or small stand of trees found in the suburbs, let alone the occasional tree amidst fields of pavement in highly urbanized spaces, are not enough to make significant impacts in atmospheric composition and climate change trends. However, presence of green spaces can help to create norms surrounding environmental sustainability; people notice when nature is integrated into the surroundings, and this can increase appreciation for the environment in general (Gallagher, 1993). Moreover, manmade spaces that are designed in an environmentally sustainable fashion are beneficial to the natural landscape. Surfaces that are permeable to rainwater, such as grass or specially designed paving materials, help to preserve natural

water tables and groundwater supplies. Presence of vegetation prevents the erosion of soil, particularly in shoreline areas, and prevents the flooding that often occurs when storm water accumulates on asphalt. Green spaces can act as a buffer zone against rising tides that threaten to overtake low-lying developed areas. Nature also provides habitats for native animals, a key to conserving and protecting biodiversity (Scott, 2013).

When single spaces are used for multiple purposes, there are inherently more users visiting the space. This increase in people conveys feelings of safety, since more populated areas generally seem more protected against antisocial behaviors (Gallagher, 1993). This causal relationship also goes in the opposite direction: spaces that are perceived as safer attract more users. A variety of visitors mean that the space is more likely to be used in different ways and towards different ends. While safety and multi-functional spaces influence each other in several other causal relationships, these are slightly outside of the scope of environmental concerns. As such, I will return to these factors in my discussion of spaces that create social health.

I have laid out my conceptualization of the interactions that create environmentally sustainable spaces. This reflects one of three factors that I aim to unite through an analysis of public spaces and an evaluation of their effectiveness.

Spaces for Social Health

Figure 2.2 Illustrates my proposed conceptualization of the interacting elements that contribute to a socially conducive public space. To reiterate, this is a place that is accessible to the public and does not bar entry based on residence or personal

characteristics (see discussion in Chapter 1). In order to be a space that promotes social well-being, it must encourage interactions and diminish feelings of isolation.

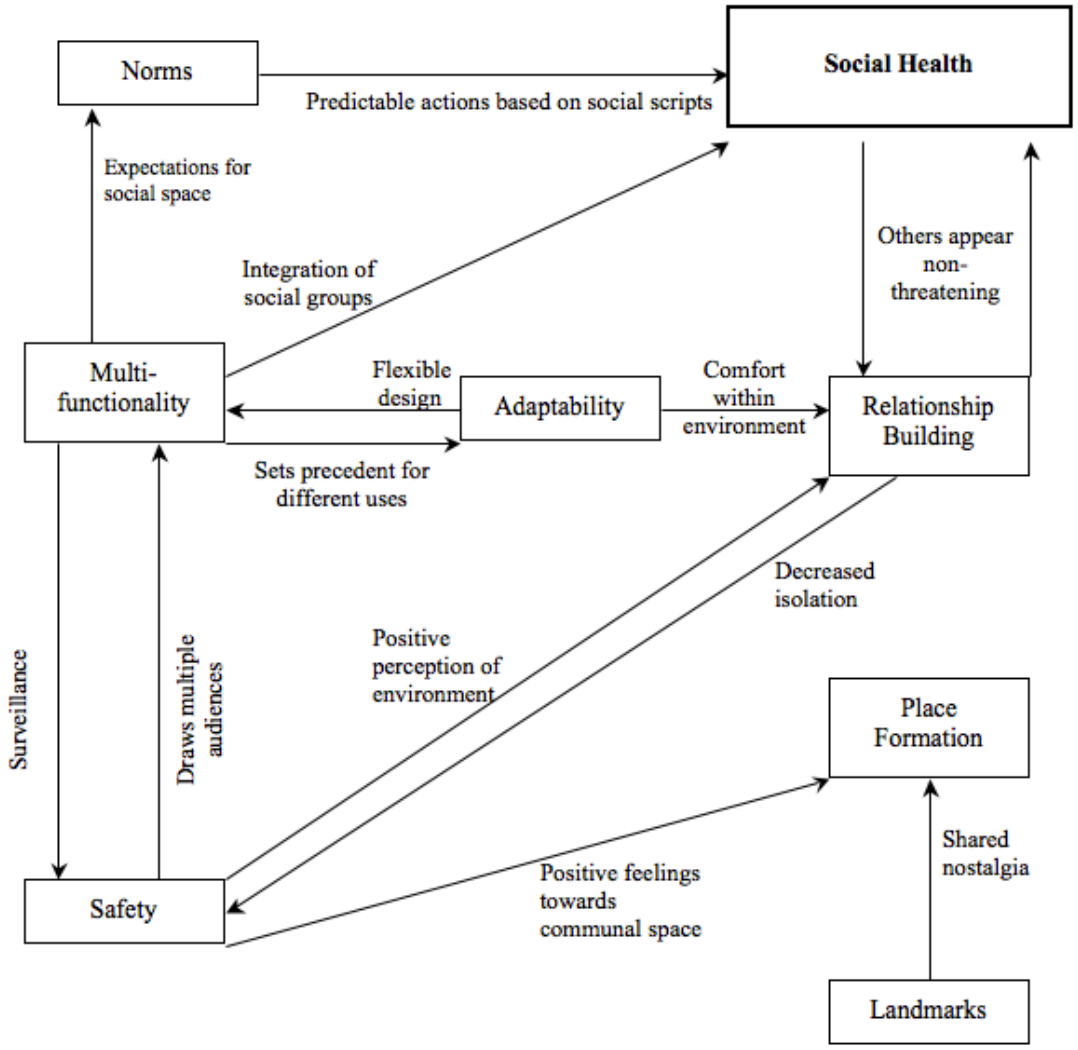

Figure 2.2: Factors driving the formation of socially beneficial spaces

In order for a public space to fulfill its purpose, it first and foremost must attract people. People are drawn to places that promote aspects of well-being; when presented with the option, people will typically prefer to spend their time in places that promote both social and individual well-being (although these two factors are often closely

related). Social health, conceptualized here as the feeling of belonging and safety that arises from real or perceived relationships with others, serves as a driving factor for much of human behavior. There are two aspects involved in social well-being: individuals are driven to belong within the social environment as well as avoid unsafe feelings that are associated with disserted areas and isolated spaces. These needs motivate everything from the activities people decide to engage in to the aspects of their personalities that they reveal to strangers (Fiske, 2004).

The desire for feelings of belonging to a community is a strong incentive for partaking in social life. One way to attain social health is to avoid isolation by building relationships with other people who are nearby in the space. Even if these are not lasting friendships, what is important is the impression gained by individuals of their place within a larger social network. Fleeting interactions are often enough to convey the feeling that one is not alone. When people are able to build even temporary relationships with one another, their feelings of social well-being increase and notions of isolation decrease. This feeling of belonging further incites social interactions, since an impression of personal safety within the environment facilitates additional social interactions (Fiske, 2004). A space that confers feelings of calm lowers heart rate and generally reduces stress reactions. When people achieve these physiological indications of safety, they are far more likely to begin to consider other people as potential targets for social interaction (Gieryn, 2002). Objects (including people) are less threatening on the whole, creating a greater chance of perceiving others as friendly and worth attempts at social interactions.

Studies show that vast open spaces make people feel less secure in their surroundings. Conversely, enclosure on one side presents an opportunity to orient oneself

with a clear view of goings-on while eliminating an unmonitored space behind the viewer (Lawson, 2001). Other studies show that people feel most secure in slightly enclosed spaces that present wide views of the area (Dempsey, 2012). These results have been widely replicated, particularly in spaces where people start out feeling unsafe. When people feel guarded against their social surroundings, they are more likely to sit with their backs to a wall or enclosure so that they can survey the entire space. Conversely, if people feel trustful towards the other people in the environment, they are more willing to sit with their backs unprotected. The other people in the environment thus metaphorically and physically "have each other's backs." The English garden serves as an example of this structural model: hedges form corners that are conducive for benches and subsequent occupation. Those seated in the corner have a view into the whole garden without sacrificing exposure from unseen directions or distances. This physical arrangement of space imparts feelings of personal security, which, once achieved, allow for more positive impressions of other people within the space (Dempsey, 2012). More positive perceptions of others can be highly beneficial for a social environment: social others are no longer threats to personal safety but instead are people with intentions. These perceptions of personhood encourage interaction and relationship formation.

When people feel that they have control over the space they are occupying, they are also more likely to feel comfortable within the environment. William H. Whyte (1980) demonstrated this principle in his study of the Seagram Plaza in New York City. Through naturalistic observation, Whyte found that people would move chairs three inches to the left before sitting down. This small, seemingly trivial movement may not be necessary for moving the chair out of a pathway, for example, but it does impact people's

feelings of ease within the space. This small movement conveys a feeling of agency. It is therefore beneficial for some elements to be adaptable and under the user's control. This conveys additional comfort within the environment that, again, leads to an increase in the desire to interact with other people within the space.

Spaces with adaptable elements leave some of their design open ended for the user. While understanding the purpose of the place is beneficial for minimizing confusion and stress, (see the next section of this chapter) sufficient amounts of flexibility in the design will contribute to the multi-functionality of the space. When people can alter the arrangement of chairs, for instance, options for patterns of use increase. Now, instead of having to fit desired behaviors to the available spaces, users can create conducive spaces based on the present interaction. People can separate chairs into dyads or triads for smaller conversations, or an individual can pull apart a single chair to engage in private activities. Even the ability to alter minor elements such as chair position can do a lot to create multiple ways of using the space (Whyte, 1980).

Just as adaptable elements lead to multi-functionality, multi-use public spaces also create conditions that make adaptability more likely. When a space allows for multiple purposes, this sets a precedent for users to further modify their environment. A park that allows for socializing, sitting, and walking, for instance, conveys a setting that lends itself to multiple types of interactions. A different behavior that would require slight modifications to the physical arrangement seems more acceptable within this kind of environment. Conversely, consider a public location that only has the spatial configurations to allow for one type of activity or interaction. This space is far less likely to convey the possibility of adapting the space for a different use because there is no

available model for flexibility Creating multi-functional spaces that encourage adaptable uses further increase comfort within the environment, relationship building, and ultimately social health (Gallagher, 1993).

Safety within a space further arises from notions of security as experienced through emotional ties to community. In neighborhoods or areas with a core group of individuals (shop owners, residents, maintenance workers, etc.) who habitually frequent the space, feelings of protective ownership begin to emerge. These regular occupants feel affection for the neighborhood and as a result become protective of the people within the space. As a result, outsiders and visitors are welcomed so long as they don't bring disorder and disruption to the regular flow of activity. Even in an area largely utilized by strangers, the core group of daily occupants can wield hefty control over social climate (Jacobs, 1961). One way to establish a reliable cohort of regular space-users is to incorporate housing into a commercial or downtown area. The addition of residents creates a group of people using the space on a different schedule. Instead of only drawing consumers during the normal 9-5 business hours, neighborhoods with residents have an additional consumer base that can support nightlife. When people live in a downtown area, people with diverse schedules use the same space, increasing pedestrian traffic patterns into the night. The residential regulars take over as a veritable defense force for the safety and well-being of the streets after shop owners go home for the evening.

In her analysis of life in a Greenwich Village neighborhood in New York City, Jane Jacobs cites many instances in which these "regulars" prevent potentially violent situations from breaking out (Jacobs, 1961). This runs contrary to the bystander effect: social psychological studies have demonstrated repeatedly that people tend to not offer

help in instances where they are not directly implicated, do not know the victim, or think someone else will take action. Jacobs' findings differ in that the bystander effect is minimized in places where people feel an attachment to the space and a sense of ownership over its well-being. This creates a built-in surveillance system in which watchful eyes monitor interactions to reduce conflict. The safety ensured for the area due to minimized bystander effects reflects the safety and subsequent well-being created by watchful regulars.

Jane Jacobs illustrates how attachment to a location can create protective instincts towards the space. This attachment to particular places often arises from an affinity for built features: particular landmarks, organizational patterns, and visual cues create a mental image that individuals can use to conceptualize the space's identity as well as their role within the physical environment. This connection to a space transforms a mere geographical location to an emotionally charged locale; David Lynch postulated that a space becomes a place when users are able to attribute meanings based on physical organization (Lynch, 1960). These meanings, while likely to be different from person to person, have the power to link people to each other through shared nostalgia and notions of attachment or belonging. This shared affinity, though articulated differently between individuals, creates a collective memory of the shared spaces. These common ties to the space and to one another foster social health through connections to locations

One tool that planners and architects can use to create collective attachment to a place is through the use of landmarks. Landmarks provide distinct images for people to connect to and in order to develop nostalgia for a place. In particular, Lynch talks about the interactions between landmarks and paths. Landmarks do not have to be fanciful

buildings or large statues. They can be as simple as ordinary street intersections that convey particular meaning to the user. Several people who approach the intersection from the same path may develop a shared interpretation of the space based on similar spatial relationships and habitual associations (Lynch, 1960). A landmark can be something as basic as a historic marker that, for diverse people with many different origins and destinations, has become a remembered and anticipated part of the route. It is the distinctive brick building that the pedestrian passes every morning, or it is the row of trees lining the road of a favorite bike path. Landmarks create emotional attachment to locations. When most of the habitual users of the place have formed emotional connections to these landmarks, shared bonds to the built environment arise (Low, 2000). These shared connections bind residents, community members, and regular visitors to one another through physicality.

Spaces additionally foster social well-being when they promote integrated use by different social groups. When members of different social groups regularly interact with one another, the "other" seems far more relatable. Higher levels of interaction minimize perceived differences between "us" and "them." Physical environments can provide the needed platform for social mixing through mixed uses. When a space presents multiple points of attraction, different audiences converge. Although this has the potential to increase unintelligibility within the space because of increased heterogeneity of uses and users, if the aforementioned conditions that confer safety are in place, this unintelligibility should cause minimal stress (Fiske, 2004). By creating several reasons to attend the same location, social integration can occur naturally. Anne Lusk (2006) calls the spatial elements that create integration "social bridges." These include structural tools

that encourage helping behavior, as when two strangers must share a common path or accommodate one another's spatial needs. These can also occur through mixed-uses in which different people must occupy the same area for separate (but possibly related) reasons. According to Lusk, "social bridges" can also take the form of observed interactions between other occupants of the space. This provides further reason to construct wide scopes of visibility: watching seemingly different people interact can further foster an image of the space as inherently inclusive, thus drawing more visitors and increased integration.

The final factor that I will consider in the web of contributions to social well-being is the concept of social norms. Norms, or social and cultural expectations for particular situations, facilitate predictions about people's future behaviors. The ability to form expectations for others' behaviors reduces cognitive load and reduces stress levels, freeing up the capacity to mentally attend to other tasks. Spatial clues can create predictability by providing socially recognized cues for behaviors. Ticket windows, for example, encourage formation of single-file lines (Lawson, 2001). The fact that people can reasonably expect that a violent mob will not break out in an effort to buy movie tickets suggests the social benefits of these cues: expectations for others' behaviors makes the social environment more comprehensible and less overwhelming. Social spaces can also confer scripts, or organizing frameworks that prescribe standard actions for a given situation (Gallagher, 1993). Restaurants, for example, activate the socially accepted sequence to wait for a table, order food, pay, and leave. Having a standard framework for the subtly different locations within the "restaurant" category minimizes cognitive load: the individual does not have to rediscover the expected behavioral

patterns at each new restaurant. These scripts often convey information about how to move within a particular type of space (one can reasonably predict that all visitors to a building will enter through the door and not through the window). This creates intelligibility of both the space and other people's actions (Penn, 2001).

Salient social scripts allow people to follow social expectations for standard types of environments, but they also create behavioral expectations for that individualized space. When a way of interacting within a given space becomes expected or a pattern of use becomes typical, people shift their behaviors to align with perceived expectations (Spears, Houston, & Boarnet). In this regard, the implementation of built in multi-functionality is important for creating norms for behaviors within the space. A public space that normalizes multiple uses ensures that many different types of social interactions and uses can occur within a common area.

By being able to predict how people will behave, at least in basic ways, interactions with others become more feasible. It is easier to interact with a predictable person in a comprehensible situation than it is to attempt to converse with or even exist within the same space as another person within a completely unknown environment. The unpredictability that would arise from these situations would make social interactions far less appealing. The individual may be too focused on trying to understand how to behave within the environment. Additionally, others' behaviors are confusing when a script does not exist for the setting. Others appear safer and less threatening when they are predictable, creating a greater sense of harmony when multiple users simultaneously access a place.

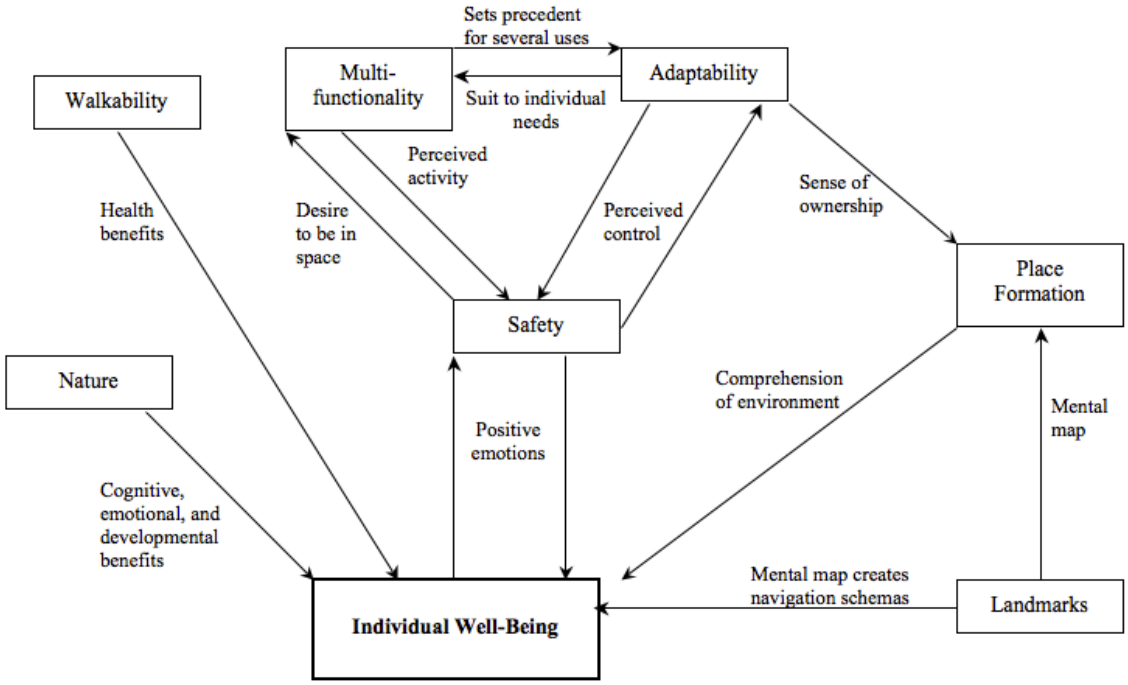

Figure 2.3: Factors contributing to spaces that foster individual well-being

In forming a theoretical model for personal well-being I aim to keep the individual within the context of the social environment. As a result many of the causal relationships that I will propose will bear resemblance to those discussed from Figure 2.2. However, the concepts that I map in Figure 2.3 place a larger focus on individual psychology than on social psychology.

Contact with nature can provide significant benefits to the occupant. Studies have found that 15 minutes of exposure to urban environments can begin to worsen mood, but that this effect can be reversed with both physical and visual access to green space (Tsunetsugu, Lee, Park, Tyrvainen, Kagaway, & Miyazaki 2013). These benefits are

particularly present for workers who hold jobs in necessarily indoor settings, such as hospitals and offices. Baur, Tynon, and Gomez (2013) also found that workers who have to work indoors exhibit greater levels of emotional stability when the workplace has easy accessibility to green space. The knowledge and visual reminders of nearby greenery can increase positive affect, particularly when these spaces are well integrated into the urban fabric. It is important for individuals to have green within the visual scope. Whether this is in the form of occasional trees or a large park, it is important that users of a space can receive reminders of nature's presence (Platt, 2006). Dempsey (2013) proposes that the most beneficial urban layout is one that provides dense spaces to encourage use of local services and decrease car travel but also wisely utilizes open spaces and nature.

Beyond emotional benefits, nature has been shown to provide substantial cognitive and developmental benefits. Children who are unable to play outside have demonstrated inhibited social skills, decreased behavioral and motor skills, as well as fewer social connections. Conversely, children who live near nature or have regular access to nature have higher levels of cognitive ability as well as decreased levels of psychological distress. Wells (2003) found that children who grow up near nature are better able to mediate psychological stress that arises from life events. In short, access to nature lowers the impact of stressors on children.

Health benefits also arise from walkable spaces. Living in a place that avails itself to walking allows people to more easily achieve the recommended half an hour of exercise each day. Doctors recommend incorporating physical activity into the day as part of a lifestyle instead of going out of the way to jog or make a trip to a fitness center. Integrating exercise into daily life is a more reliable way to establish a routine; when

walking becomes a mode of transportation instead of a prescribed method for getting exercise, it is far easier to integrate movement into a daily schedule. Increasing physical activity is crucial in an age when obesity rates are on the rise and heart disease and diabetes are commonplace. Doctors find that inactivity is highly correlated with heart disease, hypertension, strokes, and colon and breast cancer. The regular movement associated with a walkable city could be one way to help fight the American obesity epidemic. Several studies have further illustrated the connections between car-based cities and obesity. For example, 60% of San Diego residents who live in areas rated as minimally walkable are considered overweight, compared to the 35% of San Diego residents who live in areas rated as highly walkable. In another study, every additional 5 minutes spent driving was associated with a 3% increase in likelihood of obesity. These studies were controlled for confounding variables such as age and income (Speck, 2012, p. 41). This compelling evidence suggests that creating a walkable city, along with increasing environmental and social benefits, will also benefit the physical health of individuals.

Safety also improves with increasingly walkable areas. More walking means inherently fewer cars. Taking cars off of the roads decreases the probability of vehicular accidents, which are currently the number one cause of death among people under the age of 34 (Speck, 2012, p. 45). In addition to limiting the number of cars present or the speeds driven, *Walkable Cities* asserts that the layout and density of city streets is more important than both of these factors. Germany, for instance, has main roads with no speed limits. However, the country less than half as many traffic fatalities per capita than does the United States. Speck says that the solution lies in shorter city blocks, which mean

more intersections, increased density, and more activity. When drivers feel that there are more dangers to look out for, they are more alert. Fewer accidents are likely to occur when drivers are aware and attuned to the people and cars around them instead of assuming safety, as typically happens on the open road (Speck, 2012).

When people feel safe within an environment, levels of stress hormones are decreased, creating more physical and emotional well-being. Additionally, increased levels of well-being can serve to decrease the threshold for stress. This means that more positive moods can reduce the physical and emotional impacts of stress. In the context of road rage, heart attacks tend to be related to time spent in traffic and length of commute. After car trips as short as 45 minutes, blood pressure and heart rate are likely to be raised (Speck, 2012, p. 45). More time in the car leads to more generalized unhappiness and dissatisfaction with life. Conversely, visual and physical access to nature serves to reduce the stress caused by urban environments (Gallagher, 1993). These lower stress levels, in turn, increase feelings of safety due to lower levels of physiological arousal: when the body is not on high alert, surroundings appear less threatening than they would in the presence of stress hormones (Fiske, 2004). Lawson (2001) illustrates this effect of stress on behavior within the environment when he discusses ease of cognitive processing within a space. When levels of stress are high, people are more likely to activate instinctive behaviors such as reflexes and stereotypes. These reactions make sudden noises, strangers, and visual stimulation seem less safe due to the body's stress responses (jumpiness, tenseness, high alert, etc.). When people do not experience high levels of stress, reactions are under more conscious control. People are more likely to respond to novel situations with thought instead of reflex.

Lawson (2001) employs the theory on optimal levels of arousal to discuss the impact of stressors and sensory stimulation on performance. When levels of stimulation are too low, there is little motivation to interact with the environment. When levels of stimulation are too high, stress interferes with performance ability. It is widely accepted that an ideal, intermediate level of stimulation optimizes performance. In applying this idea to the physical environment, places that provide too little stimulation provide no incentive for interaction with and within the space. However, places that are over-stimulating drive people away. A moderate amount of sensory stimulation is ideal for attracting users to a space and engaging them within the physical location.

Adaptable spaces are an ideal way to create a place that contains a little bit but not too much arousal. Movable furniture, for example, provides marginal excitement at the possibility of changing the setting but it also provides enough of a sense of control that the changes are not overwhelming to the space's user. Kossowska (2005) asserts that people have inherent preferences for order, predictability, and cognitive closure. By being able to engage with adaptable elements in the environment, users are able to modify the space to achieve needs and also to reach the desired cognitive closure elicited by aspects of the environment that suggest change and uncertainty. This degree of perceived power over the surroundings contrasts with rises in stress levels due to lack of environmental control. This prevention of rising stress levels maintains feelings of safety within the space. The relationship between feelings of safety and control act in a feedback loop to maintain one another: when stress levels are low, people feel as though they have control, and when people feel that they have control, their stress levels remain low. Adaptable

spaces, then, allow people to feel in control and thus safe. Furthermore, when people feel safe, they feel more able to control the space and take advantage of its adaptability.

Mixed-use spaces are hugely beneficial for creating environments that feel safe. Multi-purpose destinations draw diverse crowds and encourage constant traffic. Spaces that contain people tend to appear safer. The feeling of a community or of watchful protection over a place often arises out of varied activity (Jacobs, 1961). Likewise, a space that appears safe for multiple types of users encourages varied activities, since feeling secure in an area encourages occupation.

The relationship between adaptable and multi-functional spaces in the context of individual well-being is very similar to earlier discussions of this same relationship in the context of social health. Spaces that have many functions set a precedent for several uses, thus encouraging adaptation of existing elements to differing needs. Uses of adaptable space, as well as benefiting groups by providing seating for conversational dyads and triads, for instance, also allow the individual to use the space according to personal needs. An individual visiting a park, for example, can pull a single chair away from a cluster to enjoy the scenery in seclusion, if that is what is preferred.

Adaptable spaces do more than confer safety and multi-functionality; they also instill a notion of place by fostering a sense of ownership. Lynch (1960) says that a space turns into a place when it is organized enough for users to endow their own meanings to the physical environment. Scannell and Gifford (2010) call this phenomenon "place attachment" and define it as "the bonding between individuals and their important places" (p. 1). In a review of the literature, Scannell and Gifford found that there is a difference between territoriality and attachment to a place. The former term refers to ownership and

control of the space, while the later speaks more to the desire to stay near a particular space. The authors suggest that territoriality is more connected with aggression and defense of the space. This discrepancy highlights the importance of separating control *over* a space and control *within* a space. When people attempt to take control over a space, they seek complete ownership, potentially aiming to control the people within the space. However, when people desire control within a space, they want to feel a sense of agency over their own surroundings in order to feel secure within the setting and to feel attached to the place.

Place formation is pivotal in increasing people's understanding of the space. When people are able to better understand the space, cognitive load can be allocated away from spatial comprehension efforts and towards other cognitive tasks. People want to understand the spaces they occupy: when presented with unknown configurations, spatial users tend to divert to an area with increased visibility in order to better conceptualize their relative locations (Penn, 2001). This suggests a tendency towards spaces that make sense or offer cognitive clues. Spatial comprehension can arise from scripts conveyed by stereotypical buildings. Churches, for example, are unambiguous buildings that immediately communicate their purpose to the occupant (Lawson, 2001). Spatial cognition also comes from more experience within the space, which in turn increases attachment to the location (Ryan, 2006). More knowledge about the space and about the benefits of the space is more likely to increase feelings of attachment.

Related to this need to comprehend a space through organizational cues is the importance of landmarks in public areas. In addition to creating a shared nostalgia for all users, landmarks also serve to establish guide points to assist individuals with navigating.

This increases the area's intelligibility and users' sense of orientation, reducing confusion and anxiety. When landmarks suggest general use or behavioral patterns, this also adds to the space's coherence (Lynch, 1960). Flexibility, as discussed above, is still important within these recognizable places, but individuals rely on distinctive characteristics to distinguish between multiple parks, streets, and buildings. Distinguishable structures create points of interest for mental images. Platt (2006) suggests that people are more likely to explore an area if they can see a landmark to facilitate spatial orientation. Equally as important as the actual landmarks is the ability to conceptualize connections between key elements of the environment. In this sense, paths are important for more than affording transportation. A path plays an important role in facilitating comprehension of the space by conveying relationships between locations. Paths are key to creating spatial understanding of the space (Lynch, 1960). This is important for conveying individual well-being, since feelings of safety increase when individuals know where they are located and where they are going.

A Holistic Approach

The factors that contribute to beneficial spaces exist within a network of causational relationships. It is the interactions between these factors that create a robust public space that can provide maximum benefits for the greatest amount of people. Environmental sustainability, social health, and individual well-being should all benefit from the features of a public space, and none can be considered without the other when trying to maximize a space's potential. When each point of concern is considered in isolation, interactions between causal mechanisms become invisible.

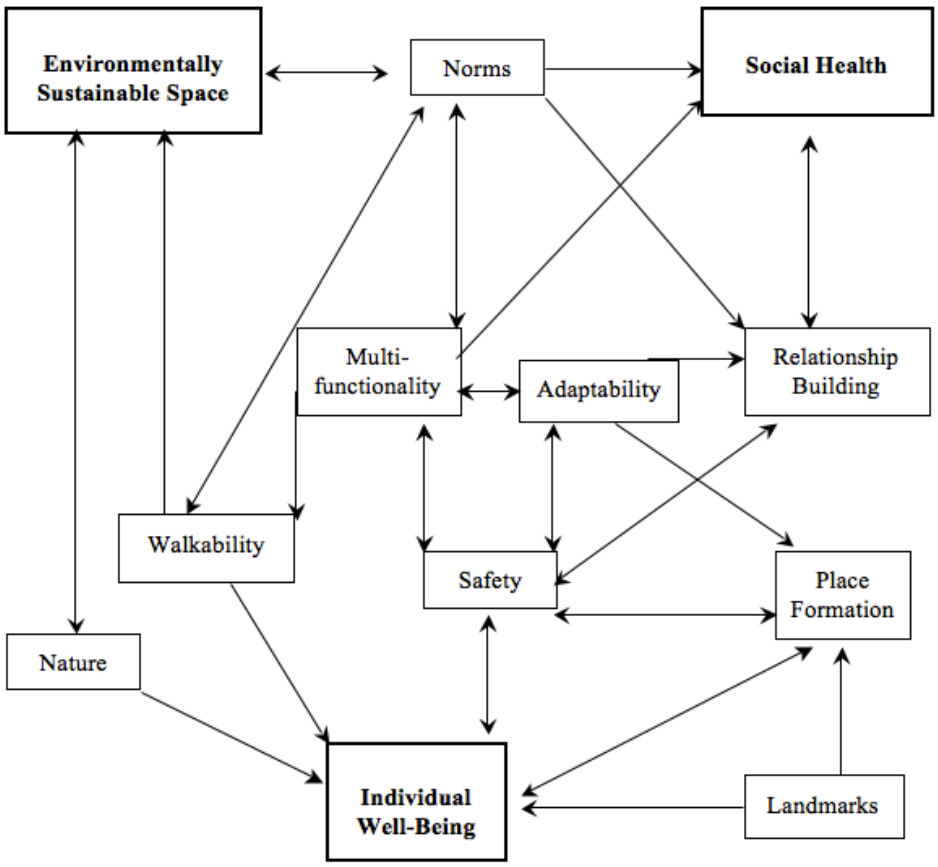

Figure 2.4: Points of connection between factors underlying environmentally sustainable spaces and spaces that foster social and individual well-being

For example, "Multi-Functionality" is an important element of all three domains of a successful space. Planning for a multi-functional space without thinking about how this impacts social health ignores the potential for integrated social groups. Although this phenomenon may occur organically out of the nature of multi-use spaces, incorporating social health into the goals of a space will ensure that measures are taken to encourage integration. Likewise, if planners ignore the effects of multi-functionality on personal well-being, plans may limit the extent to which individuals feel safe and desire to be in the space. If a space is multi-functional in a way that limits its walkability, the space's environmental sustainability will suffer. For instance, a multi-use space may have many

amenities in a small area but could have barriers between them preventing pedestrian transport. Presence of others still indicates activity and therefore safety, and other people will still provide social contact, but limiting walkability will exclude an entire way in which the space can succeed. This obscuring of potential overlaps between environmental and human concerns creates a falsely fragmented planning approach. It is through a holistic consideration of space that we can best imagine how to instill positive norms for more advantageous public realms.

Chapter 3: Westport, CT as a Case Study

After laying out a theoretical framework for the intersections between environmental, social, and individual concerns for a productive space, it is important to examine how these ideas apply to real places. By working with a case study, I will examine issues of the environment, social health, and individual well-being as they interact with one another in the context of a town. Additionally, I will look at the extent to which discourse about a place helps to uphold an idea of segregation between people and environmental sustainability and thus preclude an effort towards integrated solutions. Examining changes in planning strategies over time reveals pervasive trends: holistic considerations have begun to increase and improve, while proposed solutions continue to perpetuate the separation between psychological and spatial considerations

My target for analysis in this chapter is Westport, Connecticut, a small, coastal town located 50 miles northeast of, and connected via commuter rail to, New York City (see Chapter 1 for an anecdotal account of Westport's public space). As of 2010, the population was just over 26,300 residents within a 22.4 square mile area, resulting in a population density of 1,180 people per square mile (Westport Demographics, 2014). (Comparatively, in 2010 the density of Manhattan was approximately 69,000 people per square mile [Owen, 2009].) Despite its low density, Westport aims to foster a vibrant and accessible downtown area. The town's commercial zoning area centers on Route One, or the Boston Post Road. This is the only four-lane roadway in town and runs through the center of Westport. The Post Road intersects with the Saugatuck River in what is considered Westport's downtown area: Stores and restaurants are interspersed with municipal buildings, green space, and riverfront walkways.

Visual and physical access to the river have their benefits but also pose obstacles to the physical integrity of the downtown area. The built land immediately adjacent to the eastern bank of the river is made up of a small grassy buffer, about ten feet wide, and the rest of the space is asphalt for the hundred yards or so until the rear entrance of the stores. Land use along the river is almost entirely devoted to a parking lot, save for the one-way road running parallel to the river and abutting the small grassy buffer. The parking lot's impermeable, flat surface invited storm surges during Hurricane Sandy. When water levels rose during high tide, the river flowed into store basements and created structural damage to the buildings. Even though the storm was almost two years ago, the damage has not fully been repaired. Several shop owners were forced to move out, and potential business owners have hesitated to move in ever since: zoning and building codes have not been updated to preempt future damages.

Even though Westport has not revised town ordinances since Hurricane Sandy, the town does have a history of consistent reviews of the built environment. Every ten years since the 1950s, Westport has conducted Plans of Conservation and Development, or POCDs, for the entire town, including the Downtown area. Downtown Westport, or Westport Center, has historically been defined as the area between the Saugatuck River to the west, Imperial Avenue to the east, Thomas Road to the south, and Kings Highway North to the north (See Figure 3.1). This encompasses municipal parking lots, stores and restaurants, the town's library and police departments, the YMCA, and a small park. The area spans the four-laned Route One and includes several one-way streets as well as two-lane roadways (Westport Planning, 1997).

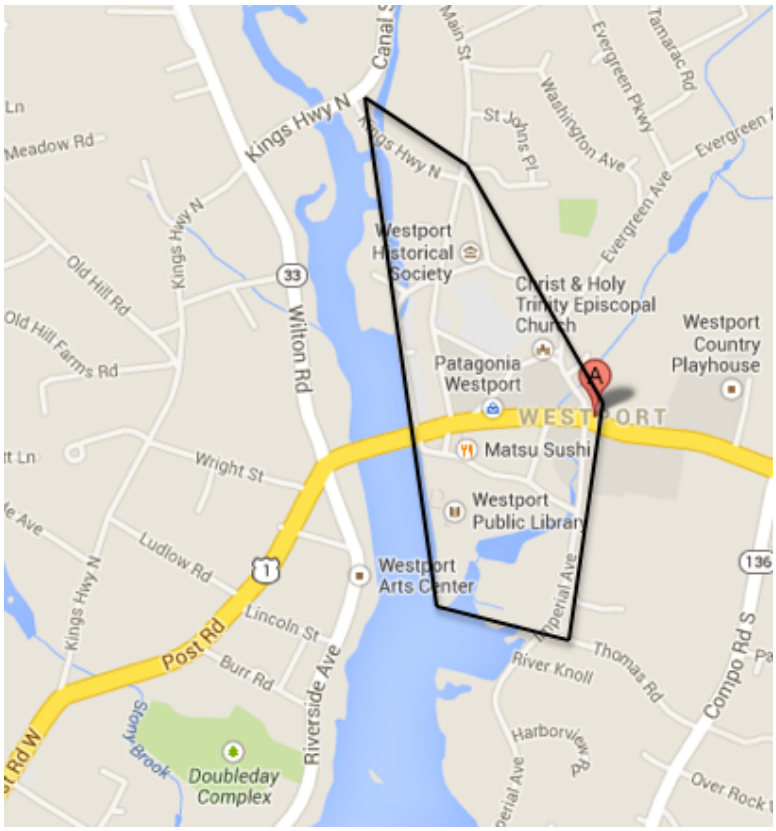

Figure 3.1. 1997 Downtown Westport Parameters. Adapted from Google Maps (2014).

Old POCDs provide a record for the changes to the town's priorities and goals. The documents take many different perspectives into account and encompass a breadth of influences. The 1997 POCD, for example, outlines the process for developing the plan: The Westport Planning and Zoning Commission created a preliminary document after reviewing the most recent POCD, consulting with municipal departments, and meeting with a professional planning firm. After creating an initial proposal, the Planning and Zoning Commission brought the plan to community roundtable discussions, utilizing groups of 10-15 residents to review each section and make recommendations. These comments were then integrated into the final document. The stated goal of the POCD is

to "guide future development decisions in the Town when its goals and policies are implemented" (Westport Planning, 1997, p. 101). It outlines short-term, mid-term, and long-term goals as well as the corresponding group that will be responsible for implementing each task. Overall, the town's regularly published POCDs lay out particular objectives for development while serving as artifacts of values against which the town can evaluate emergent proposals in the years to come.

1997 POCD

Westport's 1997 POCD reveals the town's acceptance of existing planning priorities. Analysis of the built environment excludes considerations of people's interests and looks primarily at sustainability and social concerns via disparate planning methods. The plan states that priority should be given to preserving the small-town, country character of surrounding residential neighborhoods. Preserving character, in this case, refers to maintaining low density. Planning and Zoning conceptualized the "small town feel" as beneficial to the community, but fails to consider that decreased density necessitates more car transit. Design ideals highlight buildings with no more than two stories, attempting to create a small town atmosphere while ignoring the behavioral implications of the built environment. Stringent zoning divisions also typify the image of the small town. Separated uses means that living spaces cannot occupy the area above stores, ensuring that the quintessentially suburban single-family houses remain the salient residential model.

As early as the 1920s, dense cities became symbols for chaos, noise, and disarray while towns represented the ultimate solutions to these problems. Even Henry Ford

proposed to "get the people into the country, get them into communities where a man knows his neighbor…where life is not artificial, and you have solved the City Problem" (Owen, 2009, p. 105). However, in contrast to this pervasive view that small towns necessitate low density, Jeff Speck (2012) provides evidence that increased residential concentrations can in fact increase feelings of community. Accessory Dwelling Units (ADUs) permit the inclusion of apartment space on the same property as a single-family house. Speck asserts that increased neighborhood density allows for more sidewalk traffic, thus creating more social interactions within the public sphere.

Current research shows that density in small-town suburbs is especially beneficial for increasing activity within commercial and mixed-use areas (see Chapter 2). Despite more recent movements in favor of density, the 1997 POCD is very specific in its aims to preserve the boundaries of commercial development. The plan forbids extensions to commercial and mixed-use designations and does not allow for increased density within existing commercial space. The POCD explicitly states that commercial land use cannot extend into residential zones, drawing a clear delineation between the two uses. The plan gives the Zoning Board of Appeals distinct instructions to only grant variances in circumstances of extreme hardship or exception. A major goal is to maintain "a Westport Center which is a vibrant focal area of government, cultural and business activities and in which buildings are maintained in their historic character and scale" (Westport Planning, 1997, p. 67). In addition to this emphasis on maintaining existing boundaries of commercial zones, the 1997 POCD strives to preserve low-density residential districts. Apart from a portion of apartments and condos that help the town achieve the state-mandated percentage of affordable housing units, the town's stated goal is to protect the

single family, one dwelling unit, considering only the town's physical character instead of the detrimental consequences for social interactions and fuel consumption that come with suburban sprawl.

It is through the POCD's categorical separation of residential and commercial concerns that we are able to see the discursive construction of a dichotomy: mixed-use is not an analytical category and is thus not a topic for consideration or discussion. It is only within specifically delineated categories that the town is able to conceptualize new proposals and land use options. The outlined plan reveals an aversion to density in its statement, "Proposals… to permit more intensive site utilization will be considered contrary to the Plan of Conservation and Development" (Westport Planning, 1997, p. 66).

A second dichotomy also exists in the separation of environmental and social concerns. My theoretical work in Chapter 2 shows that these domains are interrelated, suggesting a relationship that is not reflected in the 1997 POCD. The document only privileges sustainability in a final section about natural resources. By segregating discussions of environmental conservation to an isolated portion of the document, social aspects become estranged from environmental concerns within public spaces. There is no room to see the interconnections when each realm is treated as a separate and unrelated concern.

2007 POCD

As of 2007, the area considered part of the town center had expanded both eastward and westward since 1997. Where the Saugatuck River had previously acted as a boundary for downtown activity, the revival of commercial and retail space on the western side of

the water pushed this boundary farther from the Town Center. In the opposite direction, several stores and restaurants expanded the eastern borders of the Downtown area (see Figure 3.2).

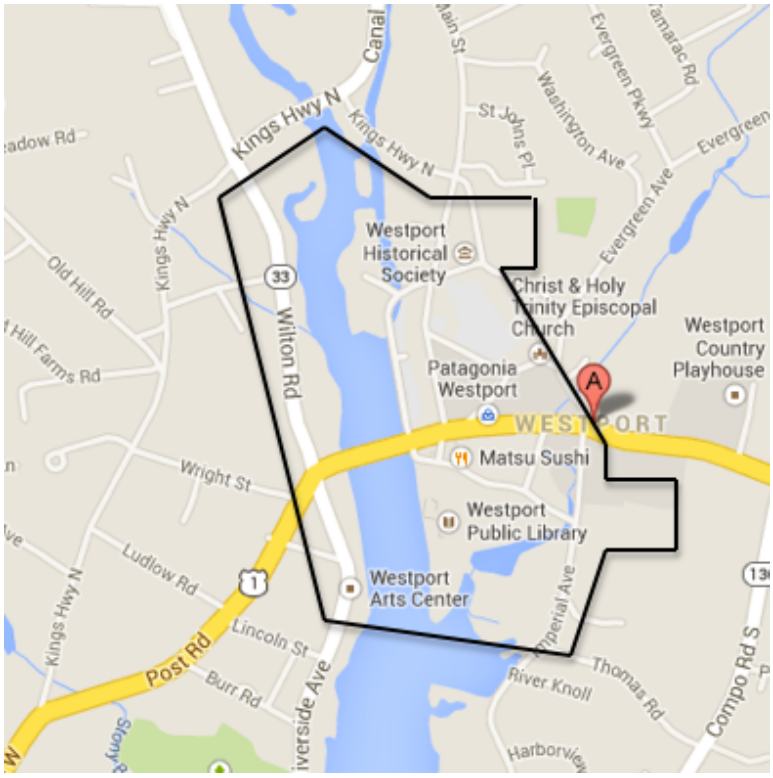

Figure 3.2: 2007 Downtown Westport Parameters.
Adapted from Google Maps (2014).

This extended space for the downtown area formed the focal region for Westport's 2007 POCD. This most recent plan developed from input from town officials but also stemmed from an extensive community survey. The Center for Research and Public Policy conducted 400 phone interviews with randomly sampled Westport residents (Town, 2007). The resulting proposal therefore makes far more use of public interest than does the plan from 1997 and is a more recent and telling indication of residents' goals. Among the most frequent suggestions for improving quality of life were items such as "better planning, reduce traffic congestion, and better zoning" (p. 6). 62% of people

surveyed agreed that the town needs more housing in Westport's center, and 60% agreed that there should be more housing along Post Road (p. 12). These statistics indicated a desire for greater mixed-use and residential space integrated into commercial districts. Other major findings suggested that residents desired more activities downtown for varied age groups, that there should be more parking and wider sidewalks on and around Main Street, and that there should be more open spaces and parks. Overall, Westport residents want higher levels of accessibility in the downtown area, reflecting a desired structural change that could result in more pedestrian transit. Residents also asked for more reasons to utilize the space, indicating a desire for more opportunities for social interactions (Town, 2007). These trends show the importance of both structural and interpersonal considerations when making improvements.

Although residents started to articulate the multi-faceted planning issues encountered in public spaces, the 2007 POCD continued to address these concerns with disparate and unconnected strategies. This new proposal discusses nature and environmental sustainability in the beginning of the report and once again at the end. This is more consideration than appeared in the 1997 POCD, but the document still contains a discursive separation between nature/conservation efforts and social/residential concerns. Sustainable implementations are still considered to have fundamentally different outcomes than those that target community vibrancy and well-being.

The basic themes of this more recent POCD include several categories: the plan distills its planning principles into preservation of environmental areas and open space, protection of residential neighborhoods, creation of an assortment of housing options, maintenance of centers with a strong sense of place, provision of transportation choices,

and promotion of sustainability (Westport Planning, 2007). The statement of these goals, while important for laying out the organizational structure of the plan, compartmentalizes issues as either relating to environment and sustainability, transportation, or housing. This stunts interdisciplinary dialogues between the domains and obscures the shared underpinnings of the planning concerns.

This one-or-the-other, non-overlapping trend continues in the town's consideration of land use categories. When enumerating proportional land uses, the POCD sorts land as either residential, commercial/industrial, open space/agricultural, community facility, institutional, transportation/utility, water, or vacant (Westport Planning, 2007). There is no specification for land that falls into two or more categories. This poses a problem because surveyors cannot categorize land into a designation that does not exist. This necessitates squeezing potentially mixed uses into one category and obscures information about how much land use actually overlaps between multiple types. When lacking a baseline measurement, improvement beyond the status quo becomes difficult in terms of achieving quantifiable goals. This distinction between residential and commercial space continues in the plan's discussion of boundaries. Under the sub-heading of "Protect Residential Neighborhoods," the 2007 POCD dictates a need for clear separation between residential and non-residential zoning areas. One of the goals states: "Boundaries between residential neighborhoods and non-residential zoning districts shall remain clear," and a second says: "Regulations protecting residential districts and zoning standards must be maintained, strengthened, improved where needed, and enforced" (p. 5-2). The rhetoric of the small town aesthetic from the 1997 POCD still persists and perpetuates the same segregation of structural and social needs.

The 2007 POCD not only sorts the reported material into highly delineated categories, but it also calls on data that were obtained through a process that focused on stringent classes of information. For example, the public was invited to attend workshop meetings to identify issues within the town and strategies to address these issues. The POCD explicitly states that the meetings were organized around conservation issues (including natural resources, open space, historic resources, and community character), development issues (including overall structure, residential development, housing needs, and business development), and infrastructure issues (including community facilities, vehicular transportation, pedestrian/bicycle/transit concerns, and utility infrastructure) (Westport Planning, 2007). Particularly for residents with no background in planning and development, the method of presenting data will influence how future conversations are structured. These compartmentalized discussion topics ignore interconnectedness and view each set of issues in isolation from one another.

Westport's plan for the future outlines several specific goals. In the section on environmental preservation, the POCD says that the town aims to "preserve and enhance the quality of the environment in order to provide long term use of the resources to ensure potable water, flood storage, recreation, and scenic beauty" (Westport Planning, 2007, p. 3-1). Two illustrations, one of an unpopulated misty field and a second of a river framed by fall foliage but otherwise devoid of life, accompany this statement, equating the environment with a landscape without people. This section of the plan talks about natural land formations and the need to protect resources. Construction and development considerations are not included in these discussions and are instead saved for a later chapter on sustainability. This separation of nature and human activity continues to place

environmental and social concerns in discursively separated categories. Breaking town issues into sharply delineated considerations gives the impression that these issues are isolated, when this is not the case.

Throughout discussions of the downtown area, the 2007 POCD reveals Westport's appreciation of open space. The town places focuses on pedestrian accessibility to and physical connections between spatially separated public places. The plan aims to connect existing open spaces with sidewalks and trails. This will allow pedestrians to walk along existing streets and will provide accessibility without necessitating cars. It is important that pedestrians are able to get from one green space to another on foot, since using a vehicle to move between parks uses fossil fuels and limits the environmental benefits afforded by green spaces (Speck, 2012). Establishing paths that are clearly visible and easy to follow helps to create a more pedestrian mindset: When people perceive that walking is a socially accepted and practical transportation option, they are more likely to take pedestrian pathways. Additionally, people use cues from the physical environment to decide on behaviors. The more cues there are about how to interact with the setting, the more easily the space's users develop a script surrounding appropriate behaviors (Gallagher, 1993). Spaces that clearly convey links between the origin and destination are more intelligible and are therefore more likely to attract users. The more clearly a pedestrian pathway facilitates way-finding for the user, the more inviting it becomes (Penn, 2001). Since people are drawn to spaces with other people, the presence of pedestrians will in turn encourage even more usage (Jacobs, 1961; Whyte, 1980). In this sense, the 2007 POCD aims to implement a productive strategy for increasing pedestrian usability in order to accomplish environmental sustainability goals. Use of pedestrian

paths appears as a way to limit car use and calm traffic patterns, not as a way to encourage organic social interactions or increase personal health through increased exercise.

The Westport planning commission proposes walkability within a purely environmentally minded context, and it conversely discusses multi-functional spaces as solely social tools. While both factors contribute to multiple aspects of a space's success, the 2007 POCD discusses each one as though it only has one consequence. As of 2007, the stated goal was to "improve the appearance and functioning of all commercial areas and minimize negative influences on neighboring residential quality of life "(Westport Planning, 2007, p. 7-1). This goal continues to separate residential from commercial areas, limiting the multi-functional possibilities for the space. The POCD proposes new commercial establishments in which residents and visitors can spend time and events can take place. These suggested changes are a move in the right direction for multiple-use space and varied patterns of activity that Jane Jacobs says will bring energy and feelings of safety (Jacobs, 1961). However, all of the users will have to travel in from residential neighborhoods. This necessitates car traffic. Maintaining the same number of housing units within the area simply means that more people will be driving to Westport Center during more hours of the day. This will serve to *increase* fuel consumption and carbon emissions. Considering multi-functionality is a step in the right direction, but limiting the scope of functions is detrimental to the town's potential for success. This narrow view of what is possible ensures that the focus stays on multi-functionality as an underlying cause of only social health, when in reality it can contribute to many more aspects of a productive space.

In general, the 2007 POCD sets admirable goals for a community friendly downtown area. The plan calls for an increase in restaurants, retail stores, and apartments, as well as infrastructure that will encourage pedestrian use, such as parks, benches, and paths that both visually and physically invite walking. To this end, the POCD recommends that the pedestrian becomes the main focus of downtown planning. This includes efforts for wider sidewalks and improved connections between landmarks as well as walkable routes that do not intersect with major roadways. The plan also recommends an expansion of uses for the downtown area to bring in more activity and to encourage vibrancy. It suggests changes to zoning laws to allow for upward construction along Main Street for third floor apartments and additional retail space. There is a stated need for a parking and traffic study to determine the most efficient and effective lot usage and traffic flows. The natural elements of the downtown area are also targets for improvement. These include integration of the riverfront and parkland into a walkable extension of the primarily commercial space. Most significantly, the plan lays out the need for a comprehensive downtown initiative that will design an implementable, cohesive, and community oriented space (Westport Planning, 2007). Although these plans are vital for a downtown area that is both environmentally sustainable and that fosters social and individual well-being, they still lack discussion of the many underlying interconnections between social health, individual well-being, and the environment.

Westport's Changing Land Use Priorities

A land use map showing existing lot allocations as of 2007 further reveals a trend towards sharp distinctions between commercial and residential zones (Figure 3.3). The

key suggests single use plots throughout the town. The downtown area contains large blocks of commercial (red), institutional (light blue), and municipal spaces (dark blue) but does not have a clear coding option for multi-use buildings. The large amount of pale yellow reflects the town's emphasis on single family housing; there are a few small blocks of dark yellow and orange indicating 2-3 family developments and multi-family developments respectively, but these are located at the periphery of the downtown area.

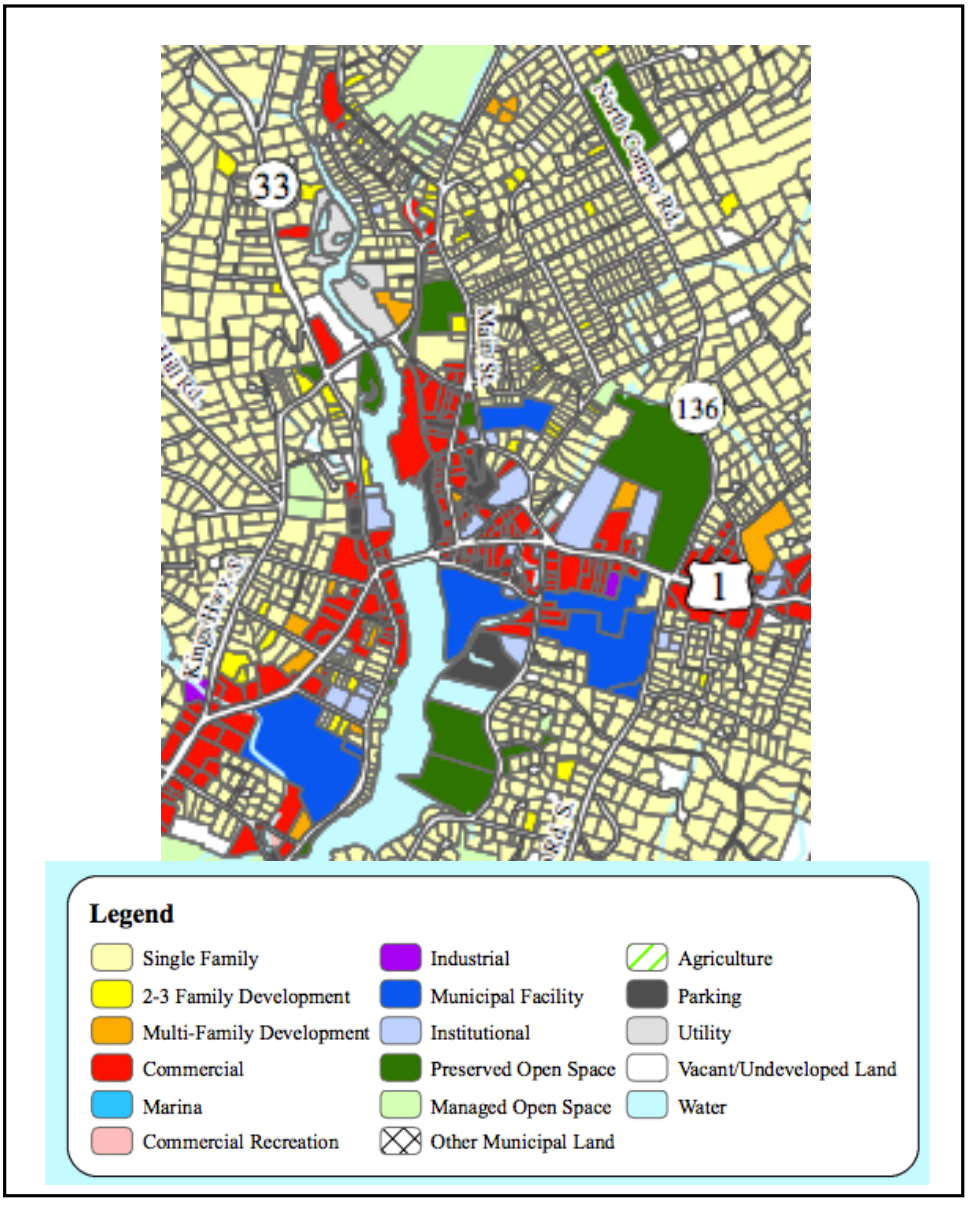

Figure 3.3: Current land uses in Downtown Westport as of 2007.
Adapted from Planimetrics (2007).

A second map, created in 2011 at the onset of renewed town planning interests, features a representation of ideal future land use (see Figure 3.4). In this conceptualization, all housing in the downtown area will be at an increased density, creating a greater overall density around the central commercial district. The map of ideal land uses also outlines areas of environmental concern, such as floodplains. In contrast to the map depicting current land use, this ideal representation shows the coastal floodzone, an area of increasingly salient importance after hurricanes Sandy and Irene.

Figure 3.4: Ideal land uses as of 2011. Adapted from Westport Planimetrics (2011).

Differences between the 2007 current use map and 2011 ideal use map illustrate changing priorities. Land use allocations have changed, but more important are the changes to the conceptual categories used to depict these re-allocations. Instead of showing housing lots in terms of how many families occupy the space, the 2011 map depicts housing in terms of density. This places the focus on the spatial arrangement more than the number of people, drawing attention to the physical relationships between dense housing blocks and other land uses. Additionally, the 2011 map allows for consideration of natural forces that interact with human constructions. The presence of a 100-year coastal flood zone necessitates considerations of how the built environment will interact with storm surges, tides, and other factors intrinsically tied to construction along a riverbank. In the four years between the last POCD and the map of ideal land uses, discourses have begun to positively shift towards a more multi-faceted and complex view of land use issues and their consequences for both the people using the space as well as the environment.

2011 Implementation Plan

Shortly after the production of the map shown in Figure 3.4 and after decades of creating POCDs with few tangible outcomes, a group of residents formed the Downtown Plan Subcommittee of the Town Plan Implementation Committee. The group was comprised of local planners, lawyers, and business owners who set out a list of general recommendations for how the town should change. This set of recommendations acknowledges the need for active changes to town zoning policies in order to achieve

goals of vibrancy and community. The new suggestions therefore have an eye to practical implementation as well as priorities for action. The most important goals are as follows:

1) "Creating a Town Center with a sense of community
2) Embracing the river
3) Addressing parking needs so we can accommodate the pedestrian
4) Promoting social, commercial, and cultural vitality (including a nightlife!)" (Downtown, 2011, p. 2)

These priorities map onto several nodes of my working concept map. Point 1) relates to the importance of relationship building in fostering social health, and point 2) focuses on the river, an entity that can provide access to nature for the benefit of people. Point 3) references walkability, pushing for the larger role of the pedestrian. Finally, Point 4) addresses the overall social health of the downtown area. The Downtown Plan Subcommittee effectively highlights several areas of focus, but does not consider how to implement these goals or how they are connected to one another. This job is under the jurisdiction of the particular planning agency in charge of making concrete changes.

Accordingly, the concluding statement of purpose calls for the establishment of a task force that can actively consider developers through a Request for Proposal (RFP). This concrete plan of action was carried forth throughout 2012, and in the summer of 2013 the RFP yielded a selection of proposals from several planning firms interested in drafting a plan for downtown improvements. The task force ultimately chose RBA, a firm with years of planning experience and based in a neighboring town.

RBA's Plans for Downtown Westport

One of the major benefits of using RBA as a planning firm is the company's body of past work that reflects measures to improve environmental sustainability, social health, *and* individual well-being. For example, RBA worked on a proposal for the New York City Economic Development Corporation that aimed to increase use patterns in a currently underutilized public space. Water Street, the area of concern, is a street-length expanse of sidewalk. The sidewalk is currently too narrow given the available width of the road. The proposed plan suggests increased greenery, artwork, and lighting to encourage pedestrian activity. Stated project goals are to increase sustainable design elements and attract people to create a more vibrant and social atmosphere. The firm also states plans to improve intersection safety and lighting, aspects of a space that increase physical safety as well as perceived safety among strangers. RBA has worked to remedy a similar issue of underutilized public space in the Bronx, NY. Bryan Park is currently a small traffic island with some landscaping and a flagpole but limited opportunity for pedestrian activity. Much like Downtown Westport, this area of the Bronx is a busy commercial area for the city but lacks places for leisure and social interactions. These redesign plans discuss physical implementations that will provide users with perceived control over their environment through movable tables and chairs, safety due to improved lighting, and conceptualization of the space as a landmark through landscaping and elements of visual interest. These are all factors that interact to cause more effective spaces, as depicted in Chapter 2.

In addition to implementing smarter designs for public spaces, RBA has experience working with poorly allocated riverfronts. One such riverfront property along the Bronx

River in New York is run down and extremely close to car traffic. The recommended changes will create parks along the river and traffic calming devices such as a bicycle/pedestrian pathway. These modifications simultaneously improve safety, increase social contact, and place people closer to nature. In a second riverfront project, RBA proposed to take the presently disjointed and disconnected plans for the Schuylkill River in Philadelphia, PA and maximize access to the river, create continuous trailways, and implement recreational facilities within the existing open spaces. The plan also emphasizes the importance of managing vegetation along the edges of the river in order to prevent erosion and flooding. (RBA, 2013). These past plans illustrate the multi-dimensional planning approaches that RBA prefers. Many of the firm's proposals include discourses surrounding the environment as well as human well-being. The interconnected, causal relationships that create sustainability, social health, and individual well-being do not all appear in every plan, but RBA's approach shows a tendency towards holistic solutions. In the following analysis, I take RBA's plans for Downtown Westport and place them within my proposed model for ideal public spaces.

Figure 3.5 illustrates RBA's stated plans within the context of my proposed model from Chapter 2. This figure takes Figure 2.4, a non-specific model that could apply to any public space, and maps RBA's proposal for Downtown Westport onto the generalized schematic. As is indicated in the figure's key, the colored boxes and lines represent the level to which that particular aspect of the model appears within RBA's discourse about Westport. A light blue node within the model indicates that this concept is discussed in relation to all other proposed points of connection. A light purple box indicates that this concept appears within RBA's discourse but is not connected to as many concepts as

possible. A white box denotes a lack of discussion of this concept. It may be possible to see ways in which this concept connects to others, but these connections do not appear within the planning rhetoric. Blue arrows with blue text connecting two nodes indicate that there is a discussed relationship between the two concepts. Figure 3.5 gives a brief explanation of the connection, which is further elaborated within the chapter's text. A green line reflects a connection that did not appear in the integrated concept models from Chapter 2 but that appear within planning discourses from the case study. These additional connections are discussed within the chapter's text, and analysis of the locations of these connections within the models will take place in Chapter 5's overall discussion of theory versus practice. Lastly, black arrows indicate that no connection between two concepts occurs within the planning discourse.

RBA's plan for Westport outlines several key goals. These include unifying the downtown and outlying areas, ensuring safe transportation corridors for multiple types of users, connecting the river with green spaces for drainage and recreational use, and increasing linkages between pedestrian areas and businesses. RBA seeks to unify the central downtown district's currently disconnected yet nearby public spaces. Presently, there are parks that are separated from pedestrian corridors by main roads, and there are key cultural centers that lie across the river from Main Street. These locations are difficult to get to on foot due to visually unappealing and physically unprotected pedestrian walkways. RBA seeks to remedy these issues by instituting "Walkability" as shown in Figure 3.5. In the context of RBA's plans, walkability will contribute to "Environmental Sustainability" by providing greater pedestrian access to a wider range of destinations.

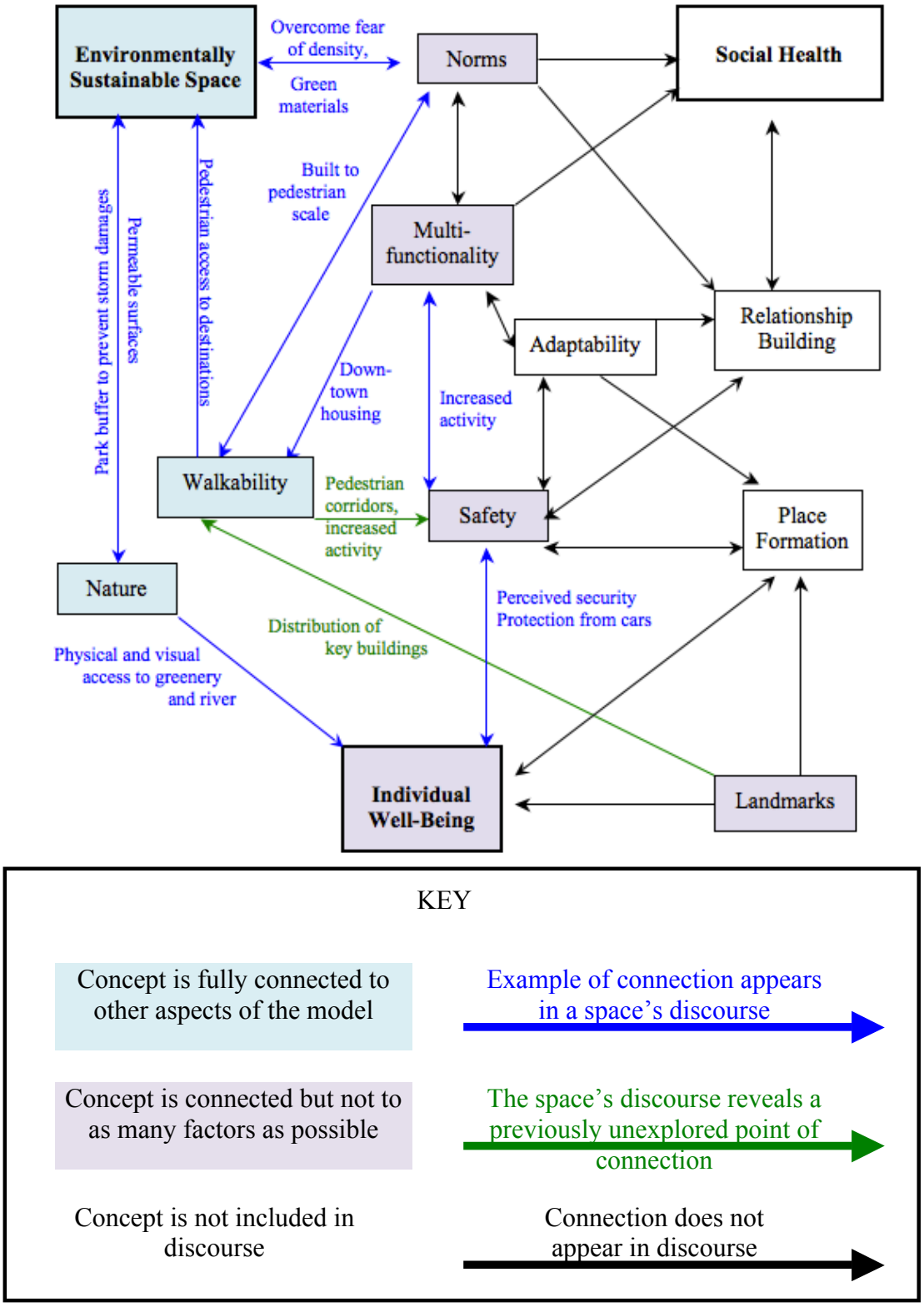

Figure 3.5: RBA's stated goals, placed within the working framework from Chapter 2

The firm seeks to create pedestrian and bicycle passages as well as additional sidewalks that will allow people to walk to a greater number of destinations, necessitating far fewer car trips. Walkability will also contribute to greater levels of safety through designated corridors that protect pedestrians from automobiles. RBA also aims to use "Landmark" features to enhance walkability. Five proposed renovation projects are spread throughout the downtown area. RBA says, "Once developed, these projects will create an extended order in Westport by connecting the active street frontage across the bridge to the west side of the river and southward towards the library" (RBA, 2013). Interesting street fronts will provide enticing paths in multiple directions and will radiate perceptions of the downtown area's parameters beyond Main Street and Route One.

Walkability's connections to safety as illustrated in Figure 3.5 also stem from the stated goal to ensure safe transportation corridors. There are many blind curves in the downtown area that make it difficult to cross streets as a pedestrian. In response to this issue, RBA proposes to evaluate street configurations and widths, creating increased space to allow for separation between walking and driving space with a strip of plantings and trees. The firm also emphasizes the importance of traffic calming measures. These entail education for drivers about maneuvering alongside pedestrians and bicyclists. Traffic calming would also entail more intuitive intersections and traffic lanes. There would be many amenities for pedestrians, including crosswalks, medians, and pedestrian countdown signs. Increased walkability through deliberate protective measures increases safety, which in turn elevates individual well- being as indicated in Figure 3.5.

The goal of safe transportation corridors also speaks to Westport's lack of connections between nearby residential neighborhoods and the commercial center. RBA

suggests establishing practical walking and bike paths that extend from residential zoning districts into the downtown area. This reflects walkability as a strategy for achieving safety and sustainability: Focusing roadways around pedestrian concerns makes them safer for walkers and bikers, and it also encourages non-car transportation by increasing the appeal of safe pathways.

RBA seeks to use nature as a tool to implement environmental improvements. One of the ways in which RBA seeks to connect the river with green spaces is to relocate parking so that the area immediately adjacent to the river is organic. There will be a grassy and tree-lined section buffering the parking area. RBA suggests that implementing park space will do several things. First, it will provide vegetation to prevent the erosion and flooding problems that have occurred over the past two consecutive years during hurricanes Irene and Sandy. Second, park space lining the riverfront will recapture the space's utility. There are currently a few benches that look over the water but they are within several feet of the traffic and are unappealing for leisurely resting and appreciation of the riverfront. There is also a small boardwalk that juts into the Saugatuck River, but this walking path is a dead end that extends only a hundred meters or so. Figure 3.5 illustrates these spatial changes through "Nature's" connection to both "Environmental Sustainability" and "Individual Well-Being." Replacing a significant amount of pavement with plants will reduce the impact of storm surges and high tides. Creating green spaces will also make the area more appealing for individuals, given the positive relationship between access to nature and emotional well-being (Platt, 2006).

Creating more park space along the river will ideally increase activity along the shoreline. Increased activity in this area will necessitate additional passages from Main

Street. An increase in salient pathways will in turn increase movement from one location to the other, allowing pedestrians to move throughout the space via a safe and practical route (Gallagher, 1993). Currently, there is one tunnel that runs perpendicular to the Saugatuck River and connects the existing parking lot to Main Street. This tunnel is the only throughway in the middle of the block and is extremely dark, vandalized with graffiti, and generally unnerving at night. Encouraging activity flow from Main Street to the riverfront will necessitate implementation of more effective pathways from one to the other. By providing additional reasons to use the riverfront, more people will occupy the space. The presence of more people gives the impression of increased safety, which in turn encourages more people to use the area. By implementing greater usability along the shoreline, as indicated in Figure 3.5, safety and therefore individual well-being increase.

Beyond these few explicated goals, RBA's proposal reveals an underlying effort for sustainable design. The firm cites past work on a sustainable parking lot, a design that includes energy efficient lighting, permeable road surfaces, rain gardens, and light colored paving materials to reduce the heat island effect (see the "Green materials" connection between "Environmentally Sustainable" and "Nature" in figure 3.5). These types of construction elements are important in reducing energy use and maintaining a balanced water table while reducing flooding; however, it is important to recognize that the most important tools are those that will change behavioral patterns. In the long run, implementing walkable corridors will save far more energy and reduce emissions to a higher degree than will sustainable lighting fixtures. Although these types of improvements are not the most vital for large-scale changes, they are still extremely important in communicating sustainability norms to the users of the space: publicizing

the fact that the parking lot has been specifically engineered to save energy and to conserve the natural water balance will send a message to town residents that environmental issues are a priority.

In continuing to establish beneficial norms, RBA has stated that one of its main objectives is to "conquer the fear of density through good design." Particularly in suburbs, there tends to be opposition to dense downtown spaces. This type of design is often thought of as too urban and not indicative of the small town character, as noted in the 2007 POCD (Westport Planning, 2007). In order to dispel fears of dense construction, RBA plans to execute density in a way that is specific to the context and not just for the sake of implementing a particular design practice. Density needs to be relative to the space and to the space's use. This will happen through whole-block design, a principle that considers the functions and potential of an entire area instead of planning each building separately. This strategy is illustrated in Figure 3.5 as the connection between "Norms" and "Environmental Sustainability." These two factors contribute to one another: density communicates sustainable norms to the users of the space, and these users act upon subsequently internalized norms to perform sustainable behaviors. RBA's plans also include the use of norms to further implement walkability. The firm aims to "reinforce a human-scaled as opposed to a car-scaled environment." The built environment will thus demonstrate pedestrian activity as a norm, and this socially accepted norm will further encourage walking as a mode of transportation.

RBA's plan illustrates many improvements to discussions of Downtown Westport. 1997's POCD created a sharp delineation between people and the environment. Anti-density sentiments persisted, as did efforts to maintain strict boundaries between

residential and commercial zones. The 2007 POCD illustrates many improvements in planning discourse. It focused more on the pedestrian and suggested incorporating residential spaces into the central shopping area. However, this plan still treated environmental concerns as completely separate from how people interact with the space. There was recognition that humans are agents confined by the parameters of the physical surroundings, but there was no acknowledgement that environmental and people-based problems have the same roots and thus the same potential solutions. RBA used the Downtown Plan Subcommittees' goals as a jumping off point and is more successful (although not entirely) in integrating issues pertaining to the environment as well as people. In revisiting Figure 3.5, it is clear that there are many links extending from causal factors to both "Environmental Sustainability" and "Individual Well-Being." This reflects discourse that considers how one feature of a space can have multiple effects. RBA has also proposed ways in which landmarks contribute to walkability and walkability contributes to safety that I had not considered based on a prior literature review.

Despite its successful discursive connections, RBA's proposal does not sufficiently recognize the ways in which many of these same contributing elements tie in to Social Health. The black arrows connecting "Norms" and "Multi-Functionality" to "Social Health" in Figure 3.5 reflect unexplored avenues through which RBA could have more directly considered the impact of the social environment on the health of a space (see the discussion of social health and relationship building in Chapter 2). Since some of the factors that contribute to Social Health already exist within the plan, RBA would simply need to consider these issues within a slightly different framework. For example, RBA is already using safety to create a more secure environment for individuals. The

firm could extend this principle to ensure that the space also conveys safety in social situations and for the benefits of relationship formation. All of the elements are already in place; RBA would just need to change how it looked at the full impact of all of the factors that it currently perceives as separate.

Throughout this analysis of Westport as it currently exists and how it is proposed to be, I have focused on the ways in which planning bodies discuss and portray the downtown area. This scope excludes some interpretations of the space, but it is important to focus on the planners' discourse, particularly while considering the statement of the issue in order to implement changes. The ways in which issues are depicted will determine how they are solved. With this in mind, my goal for this chapter has been to look at how rhetoric has changed over time. I have sought out gaps in both town agencies' and RBA's ways of discussing planning issues. By looking at the town from only one point of view and by assuming that environmental goals are disparate and unrelated, planning groups face a narrow starting point from which to propose changes. By mapping RBA and town planning groups' goals onto my proposed diagram from Chapter 2 (see Figure 2.4), it becomes easier to see where environmental and human-oriented viewpoints have been successfully integrated and where there are still gaps in discourse.

Chapter 4: Vassar College as a Case Study

Vassar College's inception had its beginnings in 1855 when Milo P. Jewett and Matthew Vassar first met. Jewett had aspirations of opening a school for women that would be focused on academia on a par with Yale and Harvard. He strove for a more rigorous educational experience than was currently offered at women's colleges, which then were mostly seminaries or institutions for teaching socialization to the elite. Matthew Vassar, on the other hand, had amassed large sums of money from his brewing company and was on a quest to immortalize his name within Poughkeepsie. Jewett was able to convince Vassar that providing his name and funds for the first "real college for girls" would be a memorial "more lasting than the pyramids" (Horowitz, 1984, p. 30). Through funds, a vision, and years of construction, Vassar College was officially established in 1861.

The school, still in its original setting, is in the town of Poughkeepsie, right outside of the city of Poughkeepsie and three miles from the Hudson River. The plot of land selected for construction originally contained a racetrack and undeveloped farmland, but the modern-day surrounding area now contains a few streets with shops and many roads with residential houses. When the school was first constructed, it consisted of a single building in which all of the students, young women ages 16-24, ate, slept, socialized, and learned (Horowitz, 1984). Now, the campus has numerous buildings that are mostly allocated to single uses, such as classrooms, dorms, and athletic facilities. However, the original Main Building is still the hub of Vassar life and continues to hold many spaces for a variety of different purposes. Although the nature of its use has changed over the years, Main Building continues to act as a multi-functional space for the campus.

In working with Vassar College's Main Building as a second case study, I aim to again apply my conceptual model from Chapter 2 to the rhetoric of the space. I will first look at the discourse surrounding Main during its initial construction, considering the ways in which the founders' views of the school and its purpose shaped the formation of the space. I will then look at Main as it currently exists. I will consider the ways in which students think about the space and the primary goals set forth when using the building. During these two analyses, I will consider the built space within the context of my proposed model from Chapter 2. I will continue to utilize the color-coding set forth for figure 3.5. For a full explanation of the key for the forthcoming Figures 4.1 and 4.3, see Chapter 3.

Main Building: The Original Design

In the 1800s, women were seen as delicate and corruptible, needing protection from the negative influences of cities. The location and general setup of the school reflected these early objectives and concerns. Matthew Vassar very carefully selected a plot of land that was far enough from the city of Poughkeepsie to be safe from supposed sources of corruption. Direct access to the river and train would allegedly cause too many distractions for the women (Lossing, 1867). Even worse, situating a women's institution within a city was seen as placing students at risk for contact with "commerce, hectic pace, and loose women" (Horowitz, 1984, p. 33). Jewett, in counseling Vassar on the best place to locate the college, recommended the country, which he saw as a place for "pure women and virtuous families" (p. 33). "Safety," as cited in Figure 4.1, arises in part from

the school's location: Distance from urban Poughkeepsie offers protection and therefore an increased sense of security for students in an era when shielding females from harm

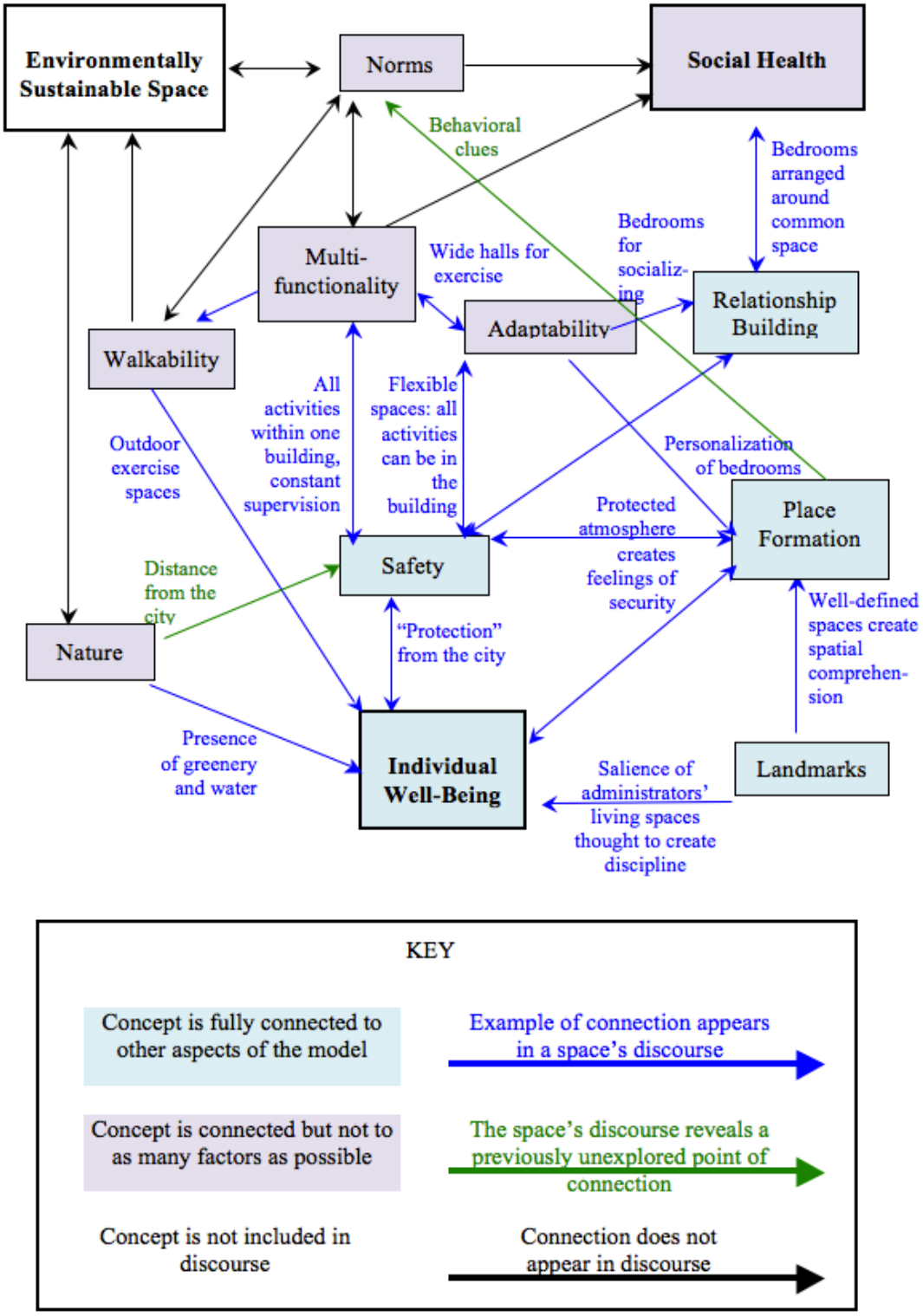

Figure 4.1: Main Building's original design as illustrated by the working model

was considered to be of utmost importance. The college was also surrounded by nature and sources of water, thought by Matthew Vassar to promote health and general well-being (Lossing, 1867). This is congruent with current theories about the positive impacts of nature on mental and emotional health (Platt, 2006). The desire to place the school among greenery further ensured distance from the city, given the dichotomy between nature and urban centers of the time. This guaranteed that students would be removed from the corruptive forces of the city. An additional consideration when choosing a location was Vassar's desire for the school to dominate the landscape. After all, the building was his tool towards immortalization in the local memory. For this reason, the college was constructed on a hill with relatively low surrounding land features (McKenna, 1940). Location selection contributes to "Landmarks" in Figure 4.1. Visual prominence of an establishment makes it a known presence within the area, endowing it with a sense of place among the people using it as well as viewers able to see the distinctive building from a distance.

The original school's single building had a vast and undifferentiated outer appearance, but the interior of the school was specifically designed to fulfill Jewett's vision for the multiple functionalities of a women's college. The use of space reflected his progressive ideals and philosophies about what higher education should look like. Each space was purposeful and form was consciously allocated for particular functions. This further enforced safety. By having all activities within the same building, students were under constant supervision and therefore protection from external evils. Because Milo Jewett and Matthew Vassar wanted to create an environment to foster instruction, safety, quiet, privacy, and family, the interior included rooms for learning, apartments for

professors and their families, and all necessary dining and living facilities to ensure that the women could be constantly protected. Despite Milo Jewett's progressive ideas about the intellectual content of women's education and insistence that college should be a place of higher learning regardless of gender, propriety was still important to the girls and their families. Accordingly, construction focused on providing spaces where women could learn socialization and the art of conversation (Taylor & Height, 1915). I will focus on this idea in more detail in the forthcoming discussion of the layout of student's rooms and social spaces.

Main Building was constructed with one main hallway that comprises the length of the building. There are three wings, one on either end of the long hallway and one extending away from the main entrance in the middle of the hall. Figure 4.2 illustrates the general layout of each floor. The image specifically shows the room divisions for the second story, but the footprint is the same for the basement and first floor. The third, fourth, and fifth floors also have the same footprint except for the wing extending away from the entrance (outlined in red in figure 4.2).

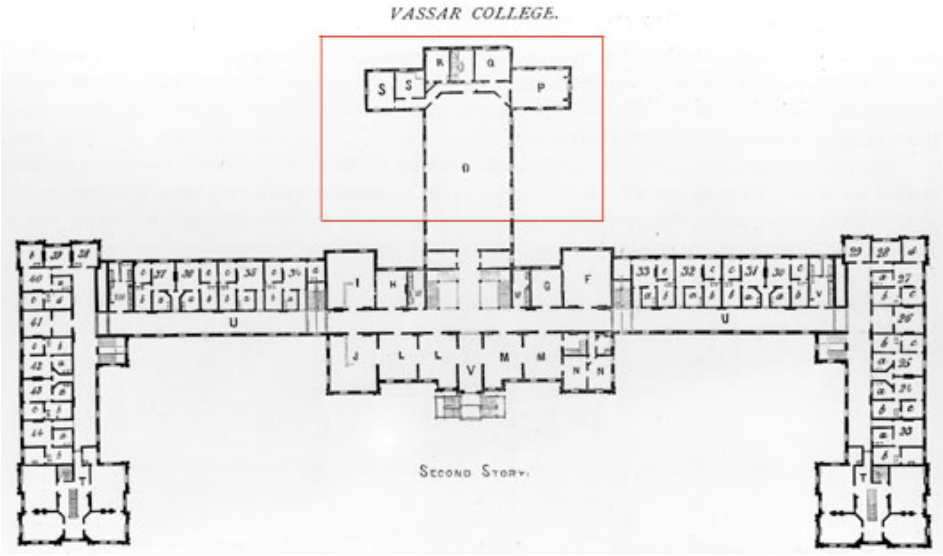

Figure 4.2: Original plan for the second story of Main Building at Vassar College. Image reprinted from A. Marvar (2011).

The main floor was deemed most importance because it was the most visible to visitors and was at ground level. This is where the school housed offices for the administration, the registrar and the trustees. These offices were just inside the main door and looked out over the college's entryway. The other rooms immediately inside the entryway were classroom space. The chemistry department, composed of a lab, a lecture hall, and a recitation room, took up a significant amount of space in the main hallway. The philosophy department was also prominently placed directly across the hallway from the administrative offices. The philosophy classroom was adjacent to a room filled with philosophical instruments of academic significance, such as pendulums to help establish patterns of the earth's movement. The remainder of the long hallway was composed of student's living spaces. This placement was indicative of the building's multi-functionality and subsequent consistency of supervision of the women (see the connection between "Multi-functional" and "Safety" in Figure 4.1). Each woman had her own sleeping room but shared an adjoining parlor with two other students. The arrangements of the bedrooms around a common space helped to achieve the goal of learning communication and socialization skills (Lossing, 1867). This layout facilitated "Relationship Building," a key factor in acquiring "Social Health" (see Figure 4.1). The social health acquired through sharing spaces with peers subsequently served to encourage future relationship building with other students. The remaining sections of the first floor were designated for faculty and staff use. The right and left hand wings were apartment areas for professors and their families. This was intended to foster a familial atmosphere and instill a sense of safety among the women. The rear wing contained the servants' bedrooms and dining halls, the kitchen, and the laundry (Lossing, 1867).

This spatial pattern of the living spaces, as previously mentioned, was particularly designed for the perceived safety and security of the students. The placement of the bedroom suites allowed for supervision of social life. Corridor Teachers lived in the building with students and were charged with overseeing the girls when they were out of class. The Corridor Teachers' rooms were strategically positioned so that all of the girls' rooms were under constant surveillance (Taylor & Haight, 1915). In this sense, the multiple functions and hence diverse role of users created a supervised atmosphere and thus safety. This sense of security in turn created a protected atmosphere within the building, leading to a strong sense of place and of Vassar College as "home" (Lossing, 1867).

The second floor of Main followed the same floor plan as the first floor: the long main hallway had one wing extending away from the front of the building as well as one wing each on the right and left sides. Again, the rooms containing the features deemed most important were placed in the central tower right above the doorway. The president's house and parlor as well as the college parlors took up this space and again emphasized the importance of socialization in the student's lives. There were medical lecture rooms and recitation rooms that contained both male and female skeletons as well as various anatomical models. The rear wing on this floor held the dining room, which could seat 400 students at one time. Behind the dining room were silver and china rooms, a carving room, and a pantry. The rest of the floor was student rooms and parlor space (Lossing, 1867). The fact that each room had a particular purpose would have made the building easier to make sense of. Harvey (2010) explains the importance of spaces with distinctive purposes in reducing cognitive load. She says, "Spaces that…are differentiated reduce the

need for cognitive processing. Occupants feel safer and can engage in other cognitive acts" (p. 198). While the building's designers were most likely not thinking about the cognitive implications of specified room functions, one goal was to implement propriety and discipline. By creating distinctive environments for specific purposes, each room gained meaning and thus allowed it users to easily determine appropriate behaviors and demeanors within the space. Although achieved through nineteenth century goals of propriety, this spatial communication serves the same role that cognitive scientists now see as important in creating comprehensible spaces. This relationship reflects the Figure 4.1's connection from "Place Formation" to "Norms" as accomplished by the "Behavioral clues" offered by the space.

Main Building's third floor contained the president's office as well as the female principal's office. The space above the dining room was the chapel. This floor held more bedrooms and parlors as well as the library. This creation of distinctive places within each floor was, again, a way to create landmarks and thus foster place formation and therefore behavioral norms. The fourth floor held music rooms, recitation rooms, an art gallery, and medical facilities such as a physician's office, an infirmary, and a convalescent's room. These medical rooms were purposefully overlooking the rural scenery in an effort to lift ailing student's moods and improve the speed of healing. This use of spatial arrangement reflects Figure 4.1's portrayal of "Nature's" role in improving "Individual Well-Being." The fourth floor also contained more bedrooms and parlors for social interactions. The fifth and highest floor contained rooms for vocal music and drawing. The student rooms on this floor differed from the others: instead of three rooms arranged around a parlor, there were only two rooms to each parlor. The final use for this

floor was to house additional servants (Lossing, 1867).

Part of Matthew Vassar's aim was to provide enough space for outdoor recreation. However, given the inclement weather that is inherent in northeastern winters, he was aware of the frequent hindrances to outside activity. As a result, the long hallway on all five residential floors had bedrooms on only one side. The other half of the width was dedicated to a twelve-foot wide hallway. This space allowed for indoor recreational activities, promoting health (Daniels, 1987). A result of these wide hallways is the lightening of a potentially dark expanse. The allowance of light that flows in through large, nearly wall-length windows substantially enhance the aesthetic quality of all of the floors. This layout also added an extra layer of security for the women. The empty space facing the front of the building meant that all bedrooms were against the rear walls and the women had full privacy from anyone entering the building and perhaps looking up through the windows (Horowitz, 1984). The hallways' adaptability based on outside weather ensured that the students were protected from extreme temperatures as well as storms while still getting exercise, another way of creating safety for the students.

As mentioned above, several aspects of the buildings reflected the importance of supervision: the placement of Corridor Teachers' rooms to be able to observe all student dormitories, as well as the presence of the President and Principle's apartments within the main hallways ensured that the female students were constantly under surveillance. However, the arrangement of bedrooms in a suite configuration allowed for some level of privacy within the individual sleeping rooms, much to the chagrin of the Corridor Teachers. This gap in visibility allowed students to hold social gatherings in their rooms outside of the watch of their superiors. Bedrooms could therefore become places of free

self-expression both through decorations and social gatherings. Each girl's access to a personal, unsupervised space allowed each student to adapt her room to her own personal and social needs. In Figure 4.1, "Adaptable" bedrooms allowed individualization to create a sense of place and create a home. Adaptability also led to more appealing social spaces that facilitated "Relationship Building" and therefore "Social Health."

The college as a single building inherently provided multi-functionality: confining all uses to one location necessitated multiple purposes within the total space. However, the allocation of specific purposes to particular rooms helped to guide place formation *within* a larger multi-use space. Additionally, the few adaptable spaces provided a balance for students to learn discipline as well as socialization and self-expression. Main Building was constructed with a keen eye towards protecting the students, and accordingly the space successfully fostered individual well-being, as depicted in Figure 4.1. To a certain extent, students also acquired social health as a result of the building's physical components, but this form of well-being was developed in a less complete fashion than could have been possible given the working model for successful spaces. Environmental sustainability did not enter into the rhetoric of the time because it was not a major concern of the era. Many of the factors that were used for individual and social health could have been extended towards an environmental goal, but this was not the focus of the time so does not appear in Main Building's original planning discourse. Instead, these priorities for the space were born out of a perceived need to keep women confined and sheltered. While the end result was likely beneficial to the physical and emotional health of the young women, the underlying motives were based in an antiquated view of women as the weaker sex. Main's original design therefore reflected

the prevailing views and priorities of the time period.

Changes to Vassar College

Vassar's legacy as an all women's institution is a contributing factor for many aspects of the college that exist today. The change from a single-gender school to a co-educational college was in fact driven by the obstacles faced by females at Vassar as values and social roles changed. By the 1950s, women faced expectations from society and their families to obtain an advanced degree as well as to marry an equally educated man. Vassar students were no different and sought out male companions (Daniels & Griffen, 2000). Yale men were considered to be the ideally dateable demographic based on the school's rigor, the likelihood that the male students came from well-off backgrounds, and the relative proximity of Poughkeepsie to New Haven, CT. Consequently, as more and more women embraced serious relationships while in college, most partners tended to be Yale students. The 1958 graduating class exemplified this trend: 30 seniors were already married and 1/3 of the class was engaged. These relationships were with more men from Yale than from any other college or university (Plum & Dowell, 1961).

Relationships that resulted in marriage necessitated social interactions with males, a feat that was difficult because of Vassar's all female population and relative isolation from other institutions of higher learning. The other all-women's colleges of the day were located in cities and near all men's or co-educational schools: Radcliffe was in Cambridge and near Harvard, Wellesley was outside of Boston and the numerous colleges in the area, and Barnard was in New York City and right near Columbia. Vassar

did not have this advantage of proximity. While there were some local colleges nearby, Yale men still held the attention of most Vassar women with marriage aspirations. In an effort to increase social interactions between the two schools, busses would bring men from Yale to Vassar for the weekends. However, with the rise of co-educational colleges came the desire of many women to have male presence during the week and in the classrooms (Daniels & Griffen, 2000).

By the 1960s, it was clear that Vassar needed to make large-scale changes in order to maintain enrollment levels. More and more, qualified female applicants were drawn to co-ed peer institutions or to schools in closer proximity to male universities. Vassar's administration conceived of several potential solutions to these problems. Vassar could merge with Yale in New Haven, form a consortium with other nearby schools, create Matthew College in Poughkeepsie for men, or admit males to Vassar. Several years of debate and research ensued. Faculty members and administrators formed both a Vassar-Yale study and a Committee on Alternatives, the first seeking to evaluate the feasibility of moving to New Haven, and the second to explore other options for Vassar's future (Daniels & Griffen, 2000).

After several months of study, Vassar's administration determined that it would be impractical to relocate the campus to New Haven. Relocating all physical resources, moving professors, and transferring endowment funds would necessitate a five to ten year closure. Exploratory efforts shifted to the Committee on Alternatives to determine the best course of action. By 1968, it became clear that the College would have to make a quick decision in order to keep enrollment figures up. Going coeducational was the most practical solution. Establishing a men's college in Poughkeepsie would have required

additional building and would not have been a fast enough solution, nor would the change have been big enough to improve Vassar's enrollment numbers. Accordingly, the Committee announced its decision and began admitting men to Vassar in 1969 (Daniels & Griffen, 2000).

The admittance of men certainly made dating life easier on campus. A female student from the class of 1973 highlighted the convenience of no longer having to go all the way to New Haven to go on dates. She said, "Some sophomore and junior women had a bridge-playing group and often went to Yale on weekends. Yet, a senior woman might be going out with a male freshman so that she wouldn't need to go out of town on the weekend" (Daniels & Griffen, 2000, p. 111). The shift from an all woman's to a co-educational college also highlighted many of the obsolete practices that had carried over from Vassar's original days as a protective and sheltering institution. Outdated curfew policies were finally abolished, as were the limitations on the amount of nights that freshmen were allowed to be off campus (Plum & Dowell, 1961). The co-ed visiting hours, previously limiting the amount of time visiting men could stay in a Vassar student's room, now seemed unnecessary given that men and women were living in the same buildings and across the hall from one another (Daniels & Griffen, 2000). Changes to the student population in this time period served to increase women's social skills with the opposite sex while simultaneously encouraging more socialization to take place on campus.

Main Building: Current Uses

Vassar College has also undergone many physical changes since its inception in

1861. The school, instead of consisting of just one building, is now made up of dozens of academic, athletic, residential, and cultural facilities. (Daniels & Griffen, 2000). Additionally, the city of Poughkeepsie has changed from a major port location in the 1800s to the central location for IBM's headquarters, but the presence of IBM subsequently depleted population numbers and average income level due to suburbanization among corporate workers. In recent decades, Poughkeepsie has transitioned once more into a city undergoing renovations and revitalization efforts (Flad & Griffin, 2009).

Regardless of the changes that occurred in the nearby city over the past century, Vassar students remained socially isolated from Poughkeepsie. Despite women's increased rights and broadened perceptions of what females are capable of and have the intellectual capacity for, the women still tended to stay sheltered within the walls of Vassar's gate. The strict curfews and limits on how many nights could be spent off campus per semester encouraged a culture of separation between the campus and the city (Daniels & Griffen, 2009). Proximity to the Town of Poughkeepsie increased over time as suburban sprawl increased in the area. The Town moved closer to Vassar, rather than the College increasing its reach into its surroundings.

Based on this legacy of separation from Poughkeepsie as well as its physical distance from the central city (as intended by Matthew Vassar in the 1860s), Vassar College's culture is still focused on campus life far more than interactions with surrounding populations and resources. A public bus route serves the campus, connecting students to the grocery store and train station, but many students do not use this mode of transportation because of its lengthy route and fairly infrequent schedule. The minimal

use of public transportation as well as campus-centric norms mean that the majority of students on campus rely on the school's facilities to meet daily needs and to access key services.

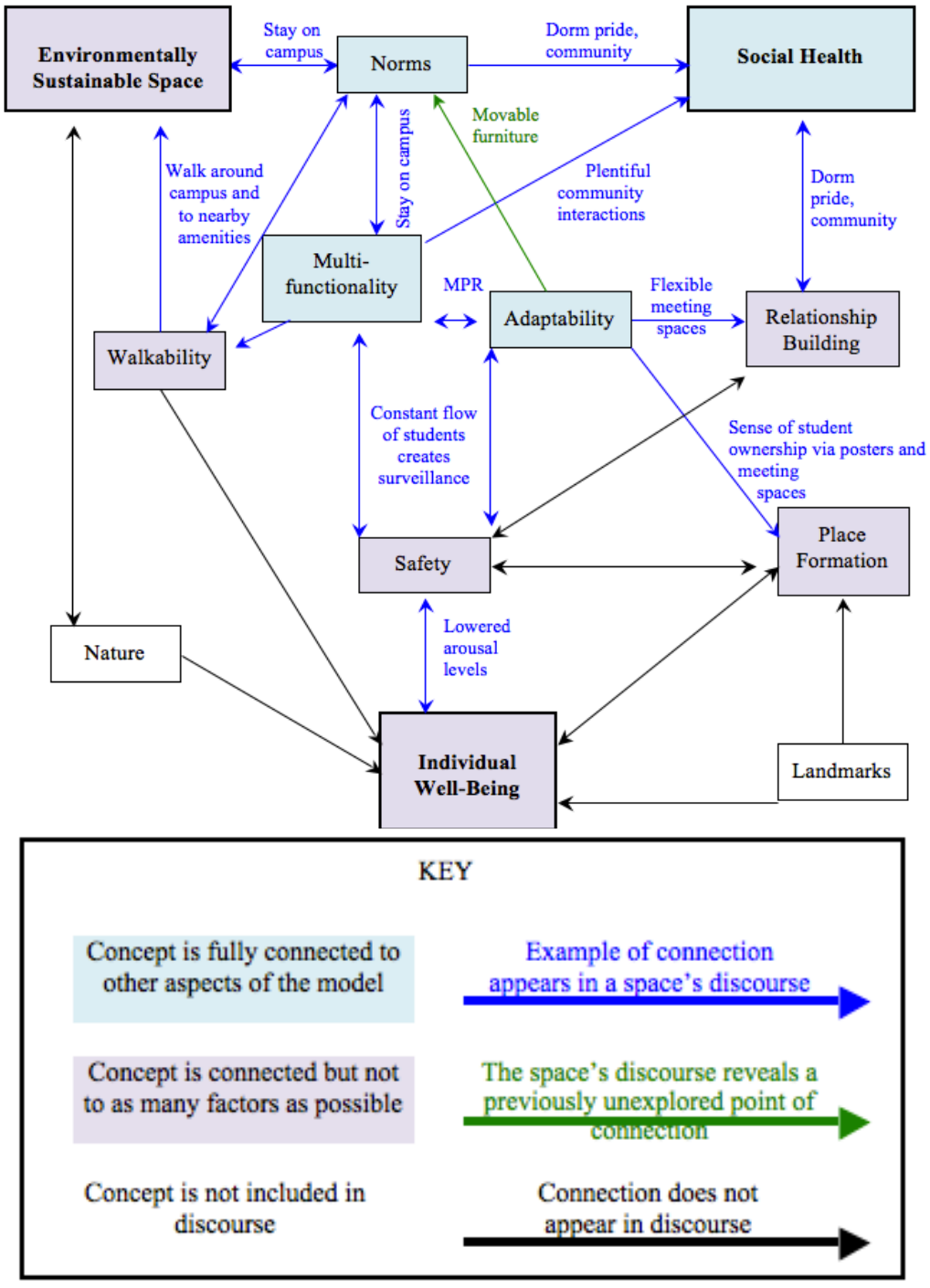

Figure 4.3: Main Building's current design as illustrated by the working model

As indicated in Figure 4.3, “Norms” have multiple impacts on life on campus. First, the socially accepted norm of staying on campus for the majority of time has encouraged the school to provide amenities within Vassar’s boundaries. This includes a takeout food facility, a post office, and a small store, all of which are located within Main Building. This relationship is bidirectional: having many amenities on campus encourages people to stay within the school’s boundaries, further perpetuating Vassar-centric norms. Staying on campus also has a large impact on car use and therefore environmental sustainability. Since most resources are available within walking distance, walking is the most common mode of transportation, making pedestrian transport a normalized decision.

Main Building is no longer the only dorm on campus. It is now one of 10 residential buildings that contain students from all class years. This division of students into dorms or “houses” has created a sense of friendly competition throughout the years. Many campus traditions foster well-intentioned rivalries in order to build community within each house. These events serve to normalize dorm pride within the student body. In this way, norms, as established through dorm versus dorm contests and activities, foster community within each building, contributing to social health and relationships among each dorm’s residents (see Figure 4.3).

Main Building, along with remaining the largest building on campus, has remained the central hub for activity as well as the single location with the most varied uses. The first floor still contains important functions for the college. The initial design included classrooms, offices, students’ bedrooms, and servants’ quarters. Present day use of the original floor plan has maintained administrative offices but all of the previous functions have been relocated. There are no longer classrooms in Main, since Main is no

longer designated as an academic building. Servants' quarters also no longer exist in Main, nor are they located anywhere else on campus. Students' bedrooms, though still located on higher floors of Main, are no longer on the first floor. New additions to the lower level of the old footprint include a career development office, numerous deans' and programs' offices, and a financial aid department where a professor apartment used to be located.

The second floor also contains offices and departments that operate for the benefit of the entire school. The old location of the dining room is now a ballroom that is used for school-wide dances, lectures, activities/majors fairs, performances, and fundraising events. This room has been specifically designated as an adaptable space, encouraging use by all campus groups and informal gatherings. The stretch in the main, long hallway that was previously composed of parlors and the president's office still fulfills these purposes. New functions, such as communications and alumni affairs, have moved into the second floor of Main Building. The many residential bedrooms that used to take up the majority of space on this floor are now only located on the two side wings. Instead of three rooms around a single parlor, the rooms on this floor are single, double, or triple occupancy or are three bedrooms surrounding a common area, much like the original residential arrangements.

The third, fourth, and fifth floors of Main, while originally home to a variety of uses, are now primarily residential spaces. The chapel, library, medical facilities, and art gallery that used to each occupy one or several rooms have subsequently moved to their own buildings around campus. The music and drawing rooms that used to be on the fifth floor have been subsumed by various other locations on the college's grounds. Instead of

these varied functions, Main Building's upper floors primarily meet residential needs. However, several of the community aspects of the original design have remained: there are still professors who live with their families among the students to encourage a familial atmosphere. There are also still parlors on the upper floors, now called Multi-Purpose Rooms, or MPRs. With Multi-functionality built into the name, these rooms are meant to be adaptable to student and community needs. The spaces are specifically designed to fit the needs of multiple audiences and for leisure time, house meetings, and special events. This multi-functionality contributes to social health and relationship building (see Figure 4.3) by providing places for any number of community members to interact with one another.

These new uses for the old space have transformed Main from its original layout to a building that fits better with Vassar's present day needs. Additionally, 1975 saw the construction of the adjoining College Center. This new wing connects to the old footprint of Main and is two stories high. The first floor contains a northern atrium with a post office, a small computer store and help desk, a café, help and information areas, and a school store in the basement. This northern side of the College Center connects to the mailroom and a corridor, which then connect to the southern side of the building. The southern side of the more recently constructed space is dedicated to a dining facility as well as several dozen tables and chairs. This section also contains an ATM as well as a small art gallery. The first floor of the College Center contains many of the functions that would otherwise require a student to leave the grounds; the College Center thus allows students to meet many needs while staying on campus, as mentioned above.

The second floor of the College Center contains several meeting rooms as well as

offices for school government and event planning committees. The top floor of the addition also contains centers for women and for LGBTQ students, harkening back to Vassar's origins as an all female institution as well as encompassing current goals for inclusion and social justice. This floor is home to a meeting space specific to LGBTQ organizations on campus and another dedicated as a Women's Center. The rooms accommodate many different types of activities, but have specific audiences. This creates adaptability that contributes to ownership of the space. Having continual access to a particular meeting space is empowering to communities that are continually marginalized and denied places to organize and find solidarity. Figure 4.3 shows the importance of these adaptable yet audience-specific meeting spaces in "Place Formation," especially for groups who usually face feelings of placeless-ness.

Another prominent feature of the second floor is the view of the lower floor from balconies that circle the perimeter of the space. On the northern side, open walkways pass over the lines for the post office and cafe and allow passers-by to observe which student organizations, local vendors, or informational groups are set up on the first floor. This creates surveillance by the people with a vested interest in the health and well-being of the College Center. This space is reminiscent of Jane Jacobs' Greenwich Village in which regular occupants, and therefore those with the most to lose from harm coming to the neighborhood, were informal yet reliable watchers for the streets. Continual surveillance of the space was always possible because of the many purposes and therefore varied patterns of use. Likewise, the College Center as a hub for meetings at all times of day and evening as well as the only place on campus to get food from 8-11 pm, students become observers and protectors of the shared, utilized, and subsequently cared for space (see the

connection between “Multi-functional” and “Safety” in figure 4.3). These walkways overlooking the first floor, besides supplying vantage points for casual surveillance, are also a place to advertise campus activities. Because the wall of the balcony is only four feet high, students are able to hang posters for upcoming events. These posters are then visible to students occupying the lower and upper floors. This provides advertising for future events that will bring people from the whole Vassar community together, and the act of labeling the space with a mark of the sponsoring student organization creates a sense of place for that particular club within the communal area.

The second floor on the southern side of the College Center is also comprised of balconies and walkways that look over the first floor. From this side of the building, the second floor looks out on the tables and chairs that fill the majority of the first floor. Students, faculty, and staff use this space to meet with one another, eat meals, and study. All of the tables are movable, a feature that the space’s users frequently take advantage of. It is common to see large groups of students pulling two or three tables together to accommodate a meeting or social gathering. In addition to the spatial flexibility, the seating arrangements also allow for varied numbers of people at each table. The circular tables come in two sizes, and the lack of corners means many more people are able to have a spot without being stuck at a corner. People are able to observe these social dynamics from the second floor while walking to and from classes, meetings, and other obligations both within the building and throughout the campus. As indicated in figure 4.3, knowledge that peers are providing surveillance of the space provides increased feelings of safety and individual well-being.

This new wing of Main Building adds many important elements to the campus’

central landmark. In contrast to the original building, which had multiple uses but few opportunities for students to shape the elements within the spaces, this newer layout offers many chances to adapt the environment to social and relational needs. The northern side of the first floor contains a large, open space that is regularly used for everything from club sign ups to flea markets to space for a bouncy castle. This precedent of multi-functionality makes students aware that they can alter the space in ways that are beneficial to their groups and organizations. In this way, adaptable spaces convey the possibility of multi-functionality. Likewise, the tables and chairs on the southern side of the first floor are adaptable to the needs of differently sized groups as well as different types of social interactions. The space can be used for academic meetings just as easily as it can be used for birthday celebrations or weekly lunch dates. Although there is a large amount of flexibility within each space, the different areas are still defined enough that they communicate schemas to users to aid in comprehension. For example, the café and kiosk clearly communicate their purposes through signage and particular locations for lines (Lawson, 2001). These features contribute to the space's readability and hence to user's ability to more easily understand the space, leading to lower stress levels upon entering a location that tends to be heavily crowded with people (Penn, 2001).

In addition to contributing to safety and adaptability, the current uses of the College Center add to the space's sustainability. The number of facilities within the space means that a student, faculty or staff member, or visitor can accomplish multiple tasks within a single building. Students who live on the upper floors of Main exemplify this on the days that they never leave the building. Some will spend entire winter days without wearing a coat; there is no need to dress warmly when all daily needs can be met without going

outside. Because the College Center contains so many functions, the school has set up a space that eliminates the need for cars. When students can meet the majority of needs within a single building, it becomes far less necessary to go elsewhere for food, coffee, mail, or toiletries. This saves gas and fuel emissions, increases time efficiency, and allows members of the community to run into one another, facilitating social interactions and relationship formation.

Main Building, as the largest and most central structure on campus, is incorporated into students' ways of talking about communal places on campus. Within students' discourse, the College Center is a place for meetings, meals with friends, and club spaces. Individuals are far more likely to talk about running to the College Center to grab a sandwich for later, or passing through to check for mail. Walking through the space is also widely acknowledged as an excuse to stop and chat with acquaintances and friends who are also present. The seating patterns both reflect and inform the preference for group use of the space: The tables and chairs on the first floor of the College Center are movable and therefore adaptable to different patterns of use, a features that Whyte (1980) says gives people a sense of control over the environment. However, these particular tables are heavy and difficult to move without help. Moving the tables is, therefore, only practical when multiple people are present and are setting up for an anticipated social gathering. Individuals looking for their own place to sit are far more likely to seek out a table that is not grouped with others and avoid rearranging furniture.

The comparison between Figure 4.1 and 4.3 illustrates the changes in discourses surrounding Main Building. While the structure of Main Building is largely the same as it was in the 1860s, ways of thinking about the space have changed over time. The original

building was built with the explicit purpose of ensuring students' personal safety and providing spaces to learn proper social skills. Vassar's progressive goal of educating young women to the same standard as men still required promises of protection and an adequate social environment to the students' parents. Given that ideas about environmental sustainability were not present in discourses of the time, the aspects of the physical school that could now be interpreted as sustainable were not seen as such. Walkability, for instance, was an indication of personal health far more than a tool through which to reduce emissions. Now, however, Vassar College has many more buildings and opportunities for students to attain solitude and individual well-being. Main Building and the College Center are considered to be far more community oriented.

It is evident through comparisons of Figures 4.1 and 4.3 that the discourse surrounding the space has always focused on social health but that the ways in which Main influences the individual have fallen out of favor over time. Vassar provides a few examples of connections that did not come up during a preliminary literature review. These are indicated by green arrows and coincide with the areas receiving the most focus in general perceptions of the space. The original goals for Vassar College centered on the protection and propriety of the female students. Accordingly, places where additional points of connection occur in Figure 4.1 and in discussions of the original building focus on student safety and behavioral cues. For Matthew Vassar and Milo Jewett, Nature was a tool for creating distance between the students and the perceived dangers of the city. This use of a spatial feature that currently carries environmental implications reflects the priorities of the time. Additionally, the abundance of connections to Place Formation including the green arrow from Place Formation to Norms emphasizes the importance of

creating an environment that communicated social rules and behavioral expectations, yet another sign of the goals of the era. Current perspectives on Main Building have shifted away from gendered priorities, partially because of the school's transition to a co-educational population and partially because of changing societal viewpoints regarding gender equality in academia. Modern perspectives frame Main in terms of its multiple uses. Figure 4.3 shows this focus on its multiple functions and the extent to which the building can suit diverse needs for the school's population. As such, an additional connection between "Adaptability" and "Norms" arises from the perceived importance of movable furniture. This additional connection emphasizes the current priorities and areas of concern for the space.

As was the case with RBA's discourse surrounding Westport, CT in Chapter 3, discourse surrounding Main Building also continues to be disconnected. Rhetoric has changed over time from a focus on social health and individual well-being towards a discourse of environmental sustainability and social health. Individual well-being appears in discourses of Main's constant activity and therefore feelings of security within an active community, but many connections between present nodes and their impact on the individual are missing. Rhetoric about the space largely turns away from the individual and towards the group, a phenomenon that impacts how people experience the public space on campus. A more holistic way of viewing the Building would create more complete benefits for the space's users.

Chapter 5: Conclusion

I began this thesis with discussions of environmental sustainability, social health, individual well-being, and public space as four isolated topics. After exploring existing literature. I then went on to put environmental sustainability, social health, and individual well-being into the context of public space in order to better understand how these different elements are interconnected. Unfortunately, this is a step that is often left out of planning literature. Issues of a space's implications for resource conservation are typically considered unrelated to the aspects of a space that impact the people within it. I believe that this disconnect between perspectives is unnecessary and can be detrimental to the health of a space: Limiting the ways of defining the problem can undermine the potential for effective solutions.

I began this thesis by constructing definitions of environmental sustainability, social health, individual well-being, and public space in the context of existing literature. Environmental sustainability, when taken as an independent concept unrelated to other academic disciplines, is the minimal impact of humans on their environment to maximally reduce resource degradation. Social health consists of positive interactions with others and resulting feelings of belonging. Social health necessitates relationship formation, even if these relationships are not long lasting. Individual well-being includes all of the elements that make up personal health, such as physical, cognitive, and emotional wellness. The more an individual feels secure and in control, the more that individual experiences feelings of well-being. Lastly, public space is conceptualized as an accessible location that is available for use by the entire community. It is typically a space that conveys different meanings to different users. Although many public spaces

have become increasingly commercialized, it is communal usability and potential for contestation that defines a space as public.

After establishing clear definitions of these terms in isolation, I then considered their relationship to one another through a literature review and the creation of diagrams modeling interconnections. I started by separating environmental sustainability, social health, and individual well-being to explicate how different aspects of a space contribute to each domain on its own. This resulted in three separate models illustrating the importance of each factor that plays a role in the creation of an optimal space. At the end of Chapter 2, I brought these ideas back together into a unified diagram illustrating a holistic approach to planning. The connections and cyclical relationships that are evident within this diagram indicate the close ties between the three outcomes of a successful public space (see Figure 2.4). This is despite the fact that most academic literature examines either sustainability or people and rarely places the two into the same analysis.

In Chapter 3's case study of Westport, CT, I looked at a legacy of planning documentation in order to see how perceived connections between space, people, and sustainability have changed over time. Planning goals from the 1990s pushed for delineated zoning patterns which would prevent increased density and keep residential and commercial uses separate. These early documents also framed the environment as an issue completely separated from people and social dynamics. Documents from 2007 exhibit improvements in examining relationships between people and sustainability, but they still discuss the environment as an unrelated domain from residents and their interactions within the space. By mapping RBA's stated plans onto Figure 2.4, discursive patterns emerged. RBA places its emphasis on creating a walkable, environmentally

sustainable downtown area. The firm proposes many changes that will positively influence both environmental sustainability and individual well-being, and these considerations of dual outcomes indicate a positive change in planning discourse. Visual patterns in Figure 3.5 reveal that RBA's emphasis on creating a walkable space has highlighted additional ways in which this change will create benefits. Walkability's high level of connectedness and abundance of green arrows suggest that RBA is entirely competent in creating changes with multiple effects. The firm sees how one factor can influence multiple others; interconnections are present within the plan.

However, even though RBA illustrates interconnectedness within one planning domain, this pattern does not extend to discussions of other planning strategies. The firm lays out plans that, according to Figure 2.4, could improve social health. RBA only puts these factors in the context of improvements for individuals and sustainability. Discussions of social health are left out this connection, despite indications that RBA embraces discussions of multiple causalities. While it is impossible to know what could have happened in another set of circumstances, Figure 3.5 raises questions about how RBA could have more effectively integrated social health. The many arrows leading both towards and away from walkability coupled with RBA's past experiences with creating purposefully socially healthy public spaces indicates that the firm may have needed a broader focus for the plan. It is possible that the firm geared its description of the proposed design towards the town's perceived focus instead of looking at a more holistic approach. It is also possible that without explicitly setting social health as a goal for their proposal, RBA placed its focus elsewhere and concentrated on fully elaborating other spatial factors. Whatever the reason, it is crucial that social health enters into the planning

discourse. If this entire domain does not enter into discussion, RBA risks incomplete consideration of all of the ways in which social health can occur within the space.

When looking at Main Building at Vassar College as a case study in Chapter 4, I examined both the original discourse of the space and current conceptualizations of Main and the College Center. This analysis revealed a clear bias towards existing social perspectives. The original plan placed the school within a framework that focused primarily on what it meant to have an all female school. The school's founders emphasized the importance of safety and well-being, an outlook that in turn shaped the physical aspects of the school's design. 19th century discourses did not include environmental concerns. As such, sustainability did not arise as a considered outcome for many of the desired implementations. Although it is possible to draw connections between the planning objectives and environmental sustainability, it is important to recognize that these were not the founders' intended implications. Connections made in hindsight are not relevant to the ways in which the planning goals were originally stated.

Main Building as it existed in 1861 used many design strategies to ensure individual well-beings for inhabitants, an outcome that is tied to the original goals of the school. Likewise, current uses of the space reflect the school's modern focus on community rather than the individual. Changes in priorities over time are natural, and an evolution in spatial needs and strategies over time is to be expected. However, the shifts that have occurred over the schools 150-year history have obscured some of the connections that were once prominent. For example, access to nature receives far less attention now than it did originally. There are also fewer connections to Place Formation. These are both facets of individual well-being, and if considered more closely they could

increase the ways in which the space creates Individual Well-Being. Just as the gaps in RBA's discourse are most likely due to narrowly defined goals, the un-perceived relationships between aspects of Main Building are also likely due to a limiting perspective on how the space can most effective.

Overall, my proposed model and its application to existing spaces emphasize the importance of considering all possible interactions before implementing changes. When framing an issue, the discourse used in establishing the areas in need of improvement becomes the jumping off point for creating solutions. When complex interactions are simplified or ignored altogether, they do not appear in the rhetoric for proposed changes. Current planning strategies frequently exclude entire domains. Likewise, discussions about a particular space often center on very specific modes of thought. These narrow perspectives, while useful for creating designs that are highly effective for one type of planning strategy, miss the larger picture and limit the possibilities for what can be achieved.

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