Maxwell Zaleski Professor Ryan Landscape Architecture 587 9 October 2018

Meet Me at that Green Space by the Campus Pond

On paper, the stepped, and landscaped urban green space in the 'center' of the University of Massachusetts, Amherst's (UMass Amherst) campus appears to be an idealistic green space (See Map 1). For our purposes, the green space will be referred to as a parcel, as the area studied is far more complex than just a lawn. The parcel has two parts, a primary green space that has an area of 1.38 acres and supporting outdoor spaces which provide an additional 0.75 acres, meaning that the parcel has a high carrying capacity (See Map 2). It has a mix of softscapes and hardscapes; wide open and private areas; varied types of seating; well-kept plantings; and even a statue (this landmark could be used for wayfinding purposes). Despite these notable characteristics the parcel is not meeting its full potential with its lack of charm, as indicated by its relatively low occupancy rate, and somewhat prohibitive and undemocratic nature. This particular study focused on uncovering the current successes and problems with the parcel, to help find solutions to increase its usability and democratization (my interpretation of 'improvement'). Research techniques deployed included behavior mapping, counting, and tracking.<sup>1</sup> Criteria that were assessed include the types of people using the spaces and their actions and the movement patterns through the spaces. The results of the study validated our course readings and in-class discussions; challenged my preconceived notions of the area; and highlighted 'Three Pillars for Improvement'. These pillars are (1) magnetism, (2) comfort, and (3) community, which work together simultaneously to form the perceptions of users.

The study took place on October 4<sup>th</sup> 2018 and was broken into three, twenty-five minute intervals (the first went from 1:00 PM to 1:25 PM, the second went from 3:40 PM to 4:05 PM, and the third went from 7:10 PM to 7:35 PM). While the majority of the paper is focused on the results of the study, additional commentary on human behaviors (based-off unregulated observations prior to the study) is included for the sake of context. The parcel is a junction of activity, especially during the warmer months (from late April to Mid-September). To its North is the concrete Lincoln Campus Center (Campus Center), to its East is the Student Union building, to its West lies the Integrative Learning Center (ILC), and to its South are 'major pedestrian paths' and the Campus Pond (**See Map 1**).<sup>i</sup>

#### I. User Findings

Before delving into the analysis of the users of the parcel, it would be beneficial to have an understanding of the forces that drive people 'to do what they do'. People are driven by what makes them feel comfortable. People want to be protected, have some interaction with nature (to benefit their psyche), and want to be deemed rational or 'normal'.<sup>2</sup> Without these desires, the study would have yielded dull results.

The age and actions of users led to the greatest differences. During the day, only 29% of the students (between the ages of 18-34) occupied the parcel, while 75% of the adult users (between the ages of 35-50) occupied the parcel (**See Table 4**).<sup>ii</sup> The interconnected factors of age and awareness may have contributed to this trend. A quick walk to the Peet's Coffee shop on the ground floor of the ILC, followed by Blue Wall Dining Area proved that these calculations and presumptions correct—as both appeared to be heavily trafficked by individual students. There were seventy-three students occupying the Peet's Coffee space and approximately two-hundred students in the Blue

<sup>&</sup>lt;sup>1</sup> Wiley-Schwartz, Andy, and Kathleen Madden. How to Turn a Place Around: A Handbook for Creating Successful Public Spaces. (New York, NY: Project for Public Spaces, n.d.), 102-107.

<sup>&</sup>lt;sup>2</sup> Rachel Kaplan, Stephen Kaplan, and Robert Ryan. With People in Mind: Design and Management of Everyday Nature. (Washington, D.C.: Island Press, 1998.), 67-68.

Wall Dining area. Many of whom were seen using electronic devices, most commonly laptops and cell phones. It is probable that the students felt more self-conscious and less reassured than the adults, so sticking in the center of the space felt uncomfortable for them—forcing them to seek sanctuary in the interior spaces. This unsureness was compounded further because of their use of technology, which weakened their sense of hearing and sight—by diverting their attention to the feedback they were receiving from their electronic devices. Solar glare on laptop and phone screens might have been another factor that caused students using electronic devices far less. This meant that they were not as vulnerable and were willing to sit in the outdoor spaces. The difference in sound levels might also explain why the aforementioned interior spaces were predominately populated by students. As the results suggest, adults are more likely to be in groups and to talk amongst each other, which means that they need to be able to hear. The interior noise and chaos hinder them from doing so—leading them to journey to the outdoor areas. The users' age and use of electronics is not the only factor that distinguishes how they function in the parcel.

Based on observations of actions there were two main types of users, occupying the space the rational and the irrational. The first type is made up of "performers", "socialites", and "the carefree" (See Tables 1, 2, and 3). As the label implies, "performers" they are usually doing an activity that is entertainment and recreational related, for instance, skateboarding or tossing a Frisbee. These activities make sense for the park-like parcel and do not appear to be out of place, so these users continue to use the space. The "socialites" are people who are in groups talking with one another and do not seem out of place, solely because they are joined by others. "The carefree" users are rare and are defined by the fact that they did not show any signs that cared if they were seen by people. This obliviousness could have resulted in the users getting labeled as "whacky," but their subtle movements and choices (i.e. sitting so as to maximize shade) appear to be rational. The irrational category is comprised of "wanders" and "the obnoxious". These users could be classified as outcasts or hermits. The "wanders" were all homeless adults and appeared at nightfall. They apparently had no place to go but resorted to moving around in circles, as if they were lost. This clearly was an irrational form of movement. "The obnoxious" users yelled at passersby and collided with students (despite not using electronic devices). The Movement Finding section explores other user movements.

#### II. Movement Findings

The results indicate that the most popular form of locomotion was walking. There were some movement findings that were less obvious than the movements explained above. These movements could be described as (1) avoidant, (2) protective, and (3) transitionary (See Tables 1, 2, and 3, and their corresponding maps).

A likeness can be found between the movement of people throughout the Design Building's first-floor atrium and the parcel in question, where the users avoid the center area. Even though the atrium is an interior space, both spaces have a similar layout, as they are both located at the bottom of a 'bowl-shaped' area—with countless sightlines aimed at their centers. This design leaves the dwellers in their centers open and unprotected—susceptible to attack.<sup>3</sup> In less primitive terms, this means that those occupying the center of the parcel are on public display and are probably scrutinized by those on the periphery. This may result in users who are always stressed and in a constant state of unease—prompting them to move to the edges. Users of the Design Building atrium can move to the edges and have their back to the walls (for increased protection), but the

<sup>&</sup>lt;sup>3</sup> Christopher Alexander, Sara Ishikawa, Murray Silverstein, Max Jacobson, Ingrid Fiksdahl-King, and Angel Shlomo. *A Pattern Language: Towns, Buildings, Construction.* (New York, N.Y.: Oxford University Press, 1977.), 558-559.

users of the parcel do not have this luxury, as the nearby buildings loom overhead.<sup>4</sup> To combat this 'paranoia', a majority of the students who do not want to be seen in public drift into the surrounding buildings which offer them views of the parcel (and nature benefitting their psyche) while also offering them protection. Another way to combat this fear is to form groups of people.

The old idiom 'safety in numbers' provides an explanation for the second movement type, where people feel protected in a "tribe".<sup>5</sup> As more people congregated on the concrete stairs of the Campus Center others followed suit and joined them (**See Map 3**). In other words, people became attracted to an area when it appears 'popular' and it reassures them that the space is harmless. This might be in part because a group offers security.<sup>6</sup> These groups were stationary and were positioned in a circular manner (**See Maps 6 and 7**). As quickly as the groups formed they faded. These moments of coalescing and disbandment show that without the defense of a group, people tend to go back to being unprotected and are forced to retreat inside. The third type of movement was "transitionary". This movement was observed during the night study, and involved students rapidly moving through the parcel, so they could get to interior spaces as soon as possible (not pausing at all) (**See Maps 5 and 8**). The fact that the parcel is a transition space (and nothing else) at night indicates that there are major problems that plague the parcel and prohibit people from maximizing usage of the parcel.

#### III. Successes and Failures

From a landscaping point of view, the parcel is largely a success and democratic. It provides users with a variety of landscaped options from hardscapes to softscapes. Users can sit on the grass, on the metal benches, on the wood benches, on the concrete Campus Center steps, or even stand in the center or on the bowl edges. All of the abutting buildings have lower floor walkouts that direct those exiting the buildings to the parcel and allow for wheelchair accessibility. A ramp that branches off of the 'major pedestrian paths' allows those in wheelchairs to travel down to the parcel. The sporadic plantings, reeds, trees, and industrial concrete areas create miniature biomes that appeal to different user groups. But this democratic nature quickly falls by the wayside. Despite not having any physical signs outlining what is and is not permitted everything still feels 'restricted'. The area has a scarcity of wildlife, making it seem inhospitable and the immovable benches do not allow for many choices. But probably the biggest contributor to the uneasiness is the brutalist Campus Center, which conjures-up old fascist and communist buildings, literally furthering the undemocratic nature of the parcel. The eleven-story, hardened concrete exterior makes the Campus Center the most imposing building on the campus—exuding the feeling of a 'bunker'. Those who sit in the parcel or on the Campus Center steps are subject to its shadow (or wrath) and the views from the windows. Having no cover and privacy makes it difficult to concentrate and amounts to a fearful atmosphere, that probably forces students to recoil a hide in the interior space. This is unfortunate because the parcel appears to be very promising.

While it is easy to criticize the UMass Amherst Campus Planning group (UACP) for the faults and inconsistencies of the parcel and supporting areas, one can speculate that there were constraints that stifled the creativity of group and led them to design spaces that tend to inhibit users. The most obvious flaw is the feeling of incompleteness, as everything feels like an experiment and is underdeveloped. Paths intersect the lawn and end randomly and the diverse biomes are tiny. There is a two-part explanation for these design decisions. The UACP probably had a monetary

<sup>&</sup>lt;sup>4</sup> Alexander, Ishikawa, Silverstein, Jacobson, Fiksdahl-King, and Shlomo., 558-559.

<sup>&</sup>lt;sup>5</sup> Kaplan, Kaplan, and Ryan, 37.; Ryan, Robert. "Cognition and Environment." Lecture, University of Massachusetts, Amherst, Room 221 - John W. Olver Design Building, MA, September 6, 2018.

<sup>&</sup>lt;sup>6</sup> Jorgensen, Lisa, Gary Ellis, and Edward Ruddell. "Fear Perceptions in Public Parks: Interactions of Environmental Concealment, the Presence of People Recreating, and Gender." Sage Journals. Last modified May 20, 2012. Accessed October 7, 2018. http://journals.sagepub.com/doi/pdf/10.1177/0013916512446334. 806-807.

constraint, and strategically opted to include a couple of elements in a smattering of locations. They also chose elements that would be cheap to maintain out of the fear that anything fancy or manicured would get ruined by destructive students or adults—resulting in additional repair costs. The second flaw is the parcel's lack of charm. Its repelling character could be caused by the abuse of 'unspoken university societal norms'. Like most colleges in the Northeast, walking in the grassy lawns is generally frowned upon and discouraged, so the choice to designate a large chunk of the parcel to a lawn area seems like purposeful choice to stop students from using the parcel-this might have been a ploy to avoid having to maintain the parcel, further saving money. Another explanation is that the college never intended for the parcel to be used for more than ten minutes. In other words, the intent for the parcel was more of a transition space, as indicated in the Movement Findings. This can be backed up by the fact that many students were using the space as a passage toand-from the campus center, hurriedly trying to get to interior spaces for 'refuge'. Another indication of this mindset is the fact that the primary green space is sunken into the ground. Yes, this allows it to be integrated with the site (namely the entrance to campus center), but at a cost. Events like the Communication Department barbeque (open to the public) go unnoticed and suffer from poor attendance, as passersby on the major pedestrian way completely miss the event (as the event is not directly in their line of sight) and do not want to expend energy to venture down to the barbeque. In addition, the parcel does not get the same cooling breezes that the other outdoor spaces that border the campus pond receive—because it recessed in the ground. The final flaw is that no attempts have been made to improve the parcel. A quick investigation of parcel might indicate to planners that the parcel needs a bike rack, as the metal benches intended for people are obstructed by bikes locked to them (in effect, allowing cyclists to claim the benches as their territory). A logical explanation for this occurrence is that the UMass Amherst administration knows that there are countless green spaces, so if this parcel is unsatisfactory for the needs of people (other than transitional passage), then they can go elsewhere. This assumption that people can just go elsewhere, is a cop-out and limits the number of users.

The unsuccessful nature of the parcel speaks to the state contemporary society today and the stigma surrounding public parks and green spaces.<sup>7</sup> For instance, people are increasingly quick to assume that green spaces are full of crime and "litter".<sup>8</sup> The former view may be especially true for women, who are told from a young age that they are the 'prey of men'. These perceptions may have been shaped by the media, parental views, and a whole slew of different forms of influence, and might be true. One could conjecture that these negative perceptions drive college students indoors. The interior spaces may give the students a false sense of security with their regulated temperatures, sterile walls and floors, and '24/7 safety', but the students have little to no control over the conditions. This may indicate that, students who choose the outdoor spaces are liberating themselves of this 'lack of control' and confinement; which calls into question "do humans actively seek out experiences that free them from having to make decisions, in order to avoid having to make tough choices that separate them from everyone else?". The truth of the matter is that sometimes people do avoid having to make decisions, possibly out of the fear that not adhering to societal norms would deem them as 'loners'. Rewiring this perception is a massive challenge to tackle, requiring designers to get students to move outdoors so they realize their misconceptions. But once this perception is fixed, it would foster the improvement of the parcel and bring more people to it. Using the pillars of improvement

<sup>&</sup>lt;sup>7</sup> Bray, Liz, and Green Spaces Strategy Team. "GREEN SPACES...SAFER SPACES: ANTI-SOCIAL BEHAVIOUR IN GREEN SPACES." Newcastle City Council. Last modified June 2004. Accessed October 7, 2018. https://www.newcastle.gov.uk/sites/default/files/wwwfileroot/legacy/ns/leisure/greenspaces/Antisocialbehaviouringreenspaces.pdf., 2.

<sup>&</sup>lt;sup>8</sup> Bray, Liz, and Green Spaces Strategy Team. "GREEN SPACES...SAFER SPACES: ANTI-SOCIAL BEHAVIOUR IN GREEN SPACES.", 2-3.; Jorgensen, Lisa, Gary Ellis, and Edward Ruddell. "Fear Perceptions in Public Parks., 805.

(magnetism, comfort, and community) in conjunction with one another, one might create a cycle that hooks people, supports their needs, and keeps them coming back for more.

#### IV. Recommendations

The old saying "out of sight, out of mind" is a great introduction to the pillar of magnetism or gravitas. The goal here is to make the parcel and its supporting spaces a 'must-see destination,' increasing the social clout of users. The first priority should be to create an identity.<sup>9</sup> The title of this paper alludes to the fact that without a name, the parcel is hard to identify, as users are left asking "*which green space by the campus pond?*". Calling the parcel Lincoln Park would make it easier to remember and refer to (this identifier will be used in the rest of the paper). The second priority should be to position Lincoln Park so it is in the 'field of view' for passersby, alerting them to the existence of the park. This could be as simple as a series of earthen mounds with a couple of benches and trees on them (with gradual slopes making them wheelchair accessible). This topographical change would change a previously banal lawn into a space with a bit more dynamism—drawing people in. The third priority is should be to offer the target users (in this case students and adults) a paramount and novel experience.

The 2017 Culture Track report identifies the public's shifting perception of what constitutes as cultural activities and provides reasons for why people choose to partake in some cultural activities, while also choosing to avoid others.<sup>10</sup> This report is particularly helpful in finding what Millennials and Generation Xers (the two main user groups-the humans aged 18-34, and the humans aged 35-50) want from cultural activities and would help direct the re-designation of spatial usage in Lincoln Park. Not surprisingly, both Millennials and Generation Xers want fun, new, and social experiences, that are relevant to their interests.<sup>11</sup> With these directions in mind, some ideas to implement include: (1) constructing a pavilion café with a picnic area, a tensile canopy, and an accompanying shallow pond; (2) providing charging stations and free Wi-Fi, and (3) installing hip, eye-catching photo opportunities (for social media postings).<sup>12</sup> The behavioral mapping indicated that some people grab food at Blue Wall and eat it in Lincoln Park. Placing a food vendor in front of Blue Wall would capture the attention of users who do not want to walk another twenty feet to the Blue Wall entrance and could support the overflow Blue Wall traffic. The tensile canopy would help obstruct the view of the Campus Center, hopefully diverting the attention of users away from threatening building-and reducing their anxiety. The tensile canopy could also work to block-out solar glare, and facilitate the usage of electronics outside. The shallow pond would make Lincoln Park useful year round. In the warmer months the water would create a cooling draft and in the cooler months the water could freeze and form a safe ice skating rink. Charging stations and free Wi-Fi would allow students to use technology outside in the warmer months, by eliminating the fear of losing connection or battery life.<sup>13</sup> Public Wi-Fi would promote electronic communication, which according to Mark Oppenheimer, could serve to strengthen the community.<sup>14</sup> Eye-catching photo opportunities could be anything from a cluster of seesaws, to a series of brightly colored basketball quarts. These are gimmicky attractions that people would visit and take photos at. If any of the aforementioned ideas cause people to check out the park, the designers will be well on their way to

<sup>&</sup>lt;sup>9</sup> Re:Streets. "Image and Identity." re:Streets. Accessed October 7, 2018. https://www.restreets.org/image-and-identity.

<sup>&</sup>lt;sup>10</sup> LaPlaca Cohen, and Kelton Research. *Culture Track '17*. New York, NY: LaPlaca Cohen, 2017. Accessed October 7, 2018.

https://culturetrack.com/wp-content/uploads/2017/02/CT2017-Top-Line-Report.pdf.

<sup>&</sup>lt;sup>11</sup> LaPlaca Cohen, and Kelton Research. Culture Track '17.

<sup>&</sup>lt;sup>12</sup> Kaplan, Kaplan, and Ryan, 33.

<sup>&</sup>lt;sup>13</sup> Re:Streets. "Social gathering." re:Streets. Accessed October 7, 2018. https://www.restreets.org/social-gathering

<sup>&</sup>lt;sup>14</sup> Mark Oppenheimer. "Technology Is Not Driving Us Apart After All." The New York Times Magazine. Last modified January 17, 2014. Accessed October 7, 2018. https://www.nytimes.com/2014/01/19/magazine/technology-is-not-driving-us-apart-after-all.html.; Re:Streets. "Social gathering." re:Streets.

improving the usability and charm of the park. Once the park becomes a hopping place, students and adults who would have cowered on the sidelines will be driven by curiosity and social gains to check out the park; as described by Derek Sivers in his TED talk "How to Start a Movement". In his talk, he discusses how the initial 'adopter' is seen as an oddity, but there comes a tipping point when the adopter gains a following and a group forms, and his or her actions become valid.<sup>15</sup> In other words, humans can rationalize behavior if a group is doing it and if the action benefits them (i.e. improves their social standing or protection)<sup>16</sup>. If at least a couple early adopters use Lincoln Park and inspire others, people (not just from UMass Amherst) will visit Lincoln Park.

With an initial user base established and the park's popularity on the rise, the designers would want to design around to the joint pillars of comfort and community to increase the longevity of the park. Humans are fickle, so the park should be designed to consider this, with adaptable spaces. In William Whyte's study, he found that moveable seating was desired because it could be adjusted to better meet the finicky needs of users.<sup>17</sup> Lincoln Park could take inspiration from the Whitney Museum of American Art, and add a bunch of brightly colored chairs to the Lincoln Park lawn space. Not only would this provide users with more choice, but it would also double as a sculpture. A second idea is to provide users with collapsible barriers that allow them to have privacy when needed—while also allowing them to consolidate the barriers and free-up space. A third idea is related to the pillar of magnetism and revolves around giving users a gateway and a guided path that safely leads people through the space and provides users with a sensory experience (i.e. smelling flowers or hearing chirping birds). Of course, comfort has a Goldilocks zone—a perfect balance of activities (not too much and not too little), which is where the community aspect comes in.<sup>18</sup> With a larger sample size of users and more activities, designers and researchers can study which activities are popular with users and which are not and intelligently edit the activities available-making sure to avoid excluding user groups. Another community-oriented option is to provide the UMass Amherst community with a collaborative project like a second permaculture garden, which would require students and faculty to join forces to take care of the garden (so it does not get overgrown) and could provide Blue Wall will local food. Implementing all "Three Pillars of Improvement" should have positive impacts on the users and the parcel itself.

<sup>&</sup>lt;sup>15</sup> Derek Sivers. "How to Start a Movement." Lecture, February 2010. Video file, 03:03. TED. February 2010. Accessed October 7, 2018. https://www.ted.com/talks/derek\_sivers\_how\_to\_start\_a\_movement?language=en#t-170412.

<sup>&</sup>lt;sup>16</sup> Sivers, Derek. "How to Start a Movement."

<sup>&</sup>lt;sup>17</sup> Social Life of Small Urban Spaces. Directed, narrated, and written by William Whyte. Direct Cinema Limited, 1980.

<sup>&</sup>lt;sup>18</sup> Kaplan, Kaplan, and Ryan, 13.

Appendix

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# **General Context:**



Map 1. Locations Surrounding the Parcel



Map 2. Area Boundaries

Primary Green Space Area: 1.38 acres or 60,000 ft<sup>2</sup> Supporting Outdoor Spaces: 0.75 acres or 32,725 ft<sup>2</sup> Combined Area: 2.13 acres or 92,725 ft<sup>2</sup>

# Behavior Mapping (Three Tables and Three Maps)



\*I included two walking groups because they contained a lot of people

# Table 1



Map 3. The circular positioning of people indicates sedentariness—people are not just moving

## Zaleski 10

#### BEHAVIOR MAPPING II - DATA COLLECTION FORM

LOCATION: Integrative Learning Center, UMass Amherst										TIME: 3:40PM-4:05PM TEMPERATURE: 73°F														
OBSERVER: Maxwell Zaleski											DATE: 10/04/18 WIND: 9 MPH													
Group #	Gender		Age							Usage	on Bench	rson Join Them	otop	oarding		ng Still	5		g Frisbee	ng to Music				es
	м	F	0-6	7-18	18-34	35-50	51-65	65+	Talkinç	Phone	Sitting	Had Pe	On Lap	Skateb	Biking	Standi	Walkin	Yelling	Tossin	Listeni				Activit
1	1	1			×				×		×													
2	13	2			×				×	×						×								
3	1	1			×				×		×													
4	1					×					×													
5	1				×					×	×		×											
6	1				×					×	×													
7		2			×										×									
8		1+1			×						×	×												
9	1				×									×										
10		1			×					×						×								
11	2	1			×						×													
12	1	1				×									×									
13	1	2			×				×								×							
14		1			×								×							×				
15	1	1			×				×								×							
16	1				×										×					×				
17	3	4			×				×	×							×							
18	4	4			×													×	×					
19	3	2							×								×							
20	5	3							×	×							×							
21	1	2							×								×							
22																								
23																								
24																								
25																								
								-																•

\* Group 2 containing 15 people was most likely a college club, touring the Campus Center area

Table 2



Map 4. The circular positioning is starting to disappear—people are increasingly focused on moving

## Zaleski 11

#### BEHAVIOR MAPPING III - DATA COLLECTION FORM

LOCATION: Integrative Learning Center, UMass Amherst												TIME: 7:10PM-7:35PM TEMPERATURE: 70°F																
OBSERVER: Ma	xwe	l Zal	eski										DATE: 10/04/18							WIND: 8 MPH								
Group #	Gender		Age							Usage	rson Join Them	oarding	ng Still at Entrance	0	ed and Relaxed	ring			on Bench	J on Phone	ng to Music					es		
	м	F	0-6	7-18	18-34	35-50	51-65	65+	Talkinç	Phone	Had Pe	Skateb	Standi	Walkin	Recline	Wande	Yelling	Eating	Sitting	Talkinç	Listeni					Activiti		
1	2				×				×					×														
2		3			×				×					×												1		
3		1			×									×							×					1		
4	1	1			×				×					×												]		
5	2	3			×									×												]		
6	1					×										×	×											
7	1					×										×												
8	1				×									×				×										
9		2			×				×	×				×														
10	1				×					×		×																
11		4			×				×					×														
12	1					×								×												_		
13	2	2			×				×					×														
14	1					×							×							×						_		
15		3			×									×												_		
16	1	1			×				×		<u> </u>			×	L											4		
17	2				×				×		<u> </u>		×		L											4		
18	1	1			×				×		<u> </u>			×	L											4		
19	1				×	<u> </u>													×	×						4		
20		2			×				×					×												-		
21	4				×				×	<u> </u>	<u> </u>			×	L											4		
22	5	6			×	-			×	×	<u> </u>			×												4		
23	3				×	-			×		<u> </u>		×													4		
24	1					×					<u> </u>				×				×							4		
25	4	4			×				×		<u> </u>			×	L											4		
26	3	2			×						<u> </u>			×	L				×							4		
27	2	2	1	1	×	1		1	×	1	1	1	1	×	1	1	1	1	1	1		1		1		1		

## Table 3



**Map 5.** The linear positioning and movement of people speaks to the fact that a majority of people are focused on moving—they want go to-and-from Blue Wall and are choosing not to sit.

# Counting (Three Tables)

Counting #1   1:	00 PM - 1:25 PM							
Date: 10/04/18				Duration of Cour				
Location: Integra	tive Learning Cen	ter, UMass Amhe	erst	Observer: Maxw				
Time:	EAST	WEST	NORTH	SOUTH	Unmoving	Total (Row):		
1:00 PM	32 people	11 people	16 people	9 people	45 people	113 people		
1:05 PM	28 people	17 people	23 people	6 people	45 people	119 people		
1:10 PM	13 people	6 people	13 people	8 people	49 people	89 people		
1:15 PM	15 people	4 people	7 people	5 people	51 people	82 people		
1:20 PM	11 people	5 people	9 people	13 people	51 people	89 people		
1:25 PM	8 people	2 people	6 people	18 people	51 people	85 people		
Total (Column):	107 people	45 people	74 people	59 people	51 people			
Counting #2   3:	40 PM - 4:05 PM							
Data: 10/04/19				Duration of Cour	ti 25 Minutoo			
Date: 10/04/18	ti ya La amainan Qara			Duration of Cour				
Location: Integra	tive Learning Cen	ter, UMass Amne		Observer: Maxw				
Time:	EAST	WEST	NORTH	SOUTH	Unmoving	Total (Row):		
3:40 PM					36 people	36 people		
3:45 PM			2 people		37 people	39 people		
3:50 PM	1 person			3 people	37 people	40 people		
3:55 PM	2 people		8 people	2 people	39 people	51 people		
4:00 PM	5 people	7 people	8 people		39 people	54 people		
4:05 PM	3 people				39 people	42 people		
Total (Column):	11 people	6 people	18 people	5 people	39 people			
Counting #3   7:	10 PM - 7:35 PM							
Date: 10/04/18				Duration of Cour	nt: 25 Minutes			
Location: Integra	tive Learning Cen	ter IIMass Ambe	aret	Observer: Maxw				
Time:	EAST	WEST	NORTH	SOUTH	Unmoving	Total (Row):		
7:10 PM	3 people		8 people		2 people	13 people		
7:15 PM			5 people			5 people		
7:20 PM		1 person	9 people			10 people		
7:25 PM	6 people		2 people	2 people		4 people		
7:30 PM	2 people	2 people	11 people	5 people		20 people		
7:35 PM	5 people		4 people	8 people	5 people	22 people		
Total (Column):	16 people	3 people	39 people	15 people	5 people			

Table 4

# Tracking (Three Maps)



 Dashed Lines Indicate North Directional Movement
 Larger Line Thickness = More People Using Path

 Map 6. Movement from 1:00 PM to 1:25 PM (A lot of movement on all four sides)



 Dashed Lines Indicate North Directional Movement
 Larger Line Thickness = More People Using Path

 Map 7. Movement from 3:40 PM to 4:05 PM (Some movement on all four sides)



 Dashed Lines Indicate North Directional Movement
 Larger Line Thickness = More People Using Path

 Map 8. Movement from 7:10 PM to 7:35 PM (A lot of movement on one side)

#### Error Summary and Future Studies:

The study proved to be useful in providing objective and quantitative techniques for studying the behaviors and movements of people—helping eliminate subjectivity and unreliability. That being said, I would definitely do the study differently if provided with another opportunity. For one, the age range in the main user groups was too broad. I should have split the age into ages 18 to 24 and 25 to 34. This would have added clarity to results. In addition, I was aware that I had a limited 'viewing window' and actively tried to combat this by getting multiple perspectives on the parcel. As previously mentioned, I ventured to Peet's Coffee and Blue Wall Dining to count the number of people occupying the interior spaces, at the very end of each study. I also walked to an adjacent viewing perch, in the Student Union building to cross-reference observations and improve my recording accuracy. Doing all of these tasks alone was doable. However, the process was stressful and left room for errors. Next time, I would want to work with a group, to delegate tasks to others, to make sure I did not miss anything happening—further decreasing the margin of error.

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### Endnotes

<sup>i</sup> The ILC has a café area with study areas and houses three departments. The Student Union building has the craft center and ballroom. The Lincoln Campus Center has Blue Wall dining, auditoriums and lecture rooms in the basement, and Hotel Umass (from floors two to eleven).

<sup>ii</sup> Calculation for Indoor and Outdoor Usage from 1:00 PM to 1:25PM:

Students (ages 18-34) 113 students were outside ~273 students were inside 113 students outside/386 total students

## = 29% use the parcel (students)

Adults (ages 35-50) –consisting of faculty, visitors, and 'the homeless' 6 adults were outside 2 adults were inside 6 adults outside / 8 total adults

## = 75% use the parcel (adults)

\*The adult sample size was extremely small, which may have thrown-off the parcel usage calculations. If there had been more adults, their usage might have been more in line with student usage.