[UN]SOCIAL SPACES AND URBAN HAPPINESS

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[un]social spaces and urban happiness

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abstract

According to Wirth (1938), the paradox of the city is that while a multitude of people are physically present in the urban realm, intimate relations and social engagement are considerably lacking. However, research suggests that interpersonal, social connections are especially important to one's overall wellbeing, as social capital has been strongly correlated with long-term happiness and satisfaction in life (Putnam, 2001; Bartolini, 2009). Due to a concern of stressful city living, happiness among urban dwellers is becoming a major consideration and topic of discussion in environmental design as urban areas continue to grow, and now hold over half of the world's population (Mazda, 2011). In order to combat the stressful urban environment and improve the happiness and wellbeing of urban inhabitants, designers and landscape architects look more and more to provide spaces of social connectivity in cities. From past works and studies by a number of reputable urban researchers and observers like William H. Whyte, Jan Gehl, and Jane Jacobs, site planning methods and recommendations for creating lively social spaces are widely known and accepted in the design of urban plazas, parks, mini-parks, and the like. However, these niche spaces make up an average of just fifteen percent of the urban realm (The Trust for Public Land, 2015, p. 8), while the ordinary, routine urban spaces where people most spend their time, such as sidewalks, street corners, and transit hubs, remain negligent of social stimulus. The goal of this study is to better understand how small-scale design interventions might be introduced in everyday urban spaces to heighten levels of positive feeling and behavior for a more social and happy city.

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introduction

The city is rapidly popularizing as a place for living and working, offering a lifestyle rich in culture, diversity, and dynamic, leisurely activity (Mazda, 2011). The United Nations claims that by 2030 close to five billion people will be living in urban environments (Montgomery, 2014, p. 5). While the urban population grows at such an incredible rate, the potential social ramifications of these highly densified areas are of interest. This rapid influx of people is of concern as high population urban areas are well associated with stressful living (Mazda, 2011). The notable mid-twentieth century sociologist, Louis Wirth (1938), noticed that as city populations increase, so does the lack of familiarity between inhabitants. Rather than familiarity, relations become segmented, personalities are muted, and a "schizoid" character siezes the typical urban inhabitant (p. 12).

Fortunately, architects, engineers, sociologists, neuroscientists, politicians, economists and activists alike have all been taking interest in recent scientific studies of social wellbeing and its application to urban life (Montgomery, 2014, p. 9, 30). One of the main indicators of personal wellbeing has been identified as social capital, or simply put, the meaningful interaction between people (S. Bartolini, 2009; R. Putman, 2001). Increasingly, city spaces are being consciously designed in an effort to improve sociability and curate organic interaction among urbanites (Montgomery, 2014, p. 136-7). The urban design and planning professions are taking cues from a handful of scientific studies to inform the practice of designing urban spaces reflective of human needs and desires. In 2013, Ellard and Montgomery took their experimentation to the street, striving to understand the relation between people and their reaction to surrounding architectural design. They asked volunteers to track their personal mood, emotional arousal, and physiological response to their urban environment while taking a walking tour of a few different cities. They found that subjects were more responsive to green spaces, permeable building facades, and quieter locations (p. 19). In a similar study, Quercia (2014) used an online crowdsourcing technique to harvest information on subjective perception of the

qualitative characteristics of happiness, quiet, and beauty in public spaces. The main testing procedure included a series of images that were displayed on subjects' computer screens for rating in terms of the three criteria. The results of the study indicate that the color green is positively associated with all three categories, and "natural" scenes with smooth lines, shapes, and textures are also highly ranked for all three criteria (p. 4-9). These two studies generally look at the perception of surrounding space and a user's cognitive or emotional response, but are negligent of the overwhelming presence of people in urban areas and the dimension that this social stimulus adds to the urban context.

From past studies by reputable sources like William H. Whyte, Jan Gehl, and Jane Jacobs, landscape architects and designers understand how to create sociable and engaging spaces on newly planned urban sites. Though hospitable, these intentional sociable spaces comprise only fifteen percent of the urban fabric (The Trust for Public Land, 2015, p. 8) while the rest of the city remains dull, drab, and lacking engagement. The spaces that people interact most with throughout the day, sidewalks, street corners, transit stations, all maintain environments that are socially disruptive, or at best, passive. This study will explore the ability of small, simple design interventions to effectively stimulate social interaction and positive emotion in everyday urban spaces.

figure 1. people evasively pass by each other in perhaps the most common urban space; the street.
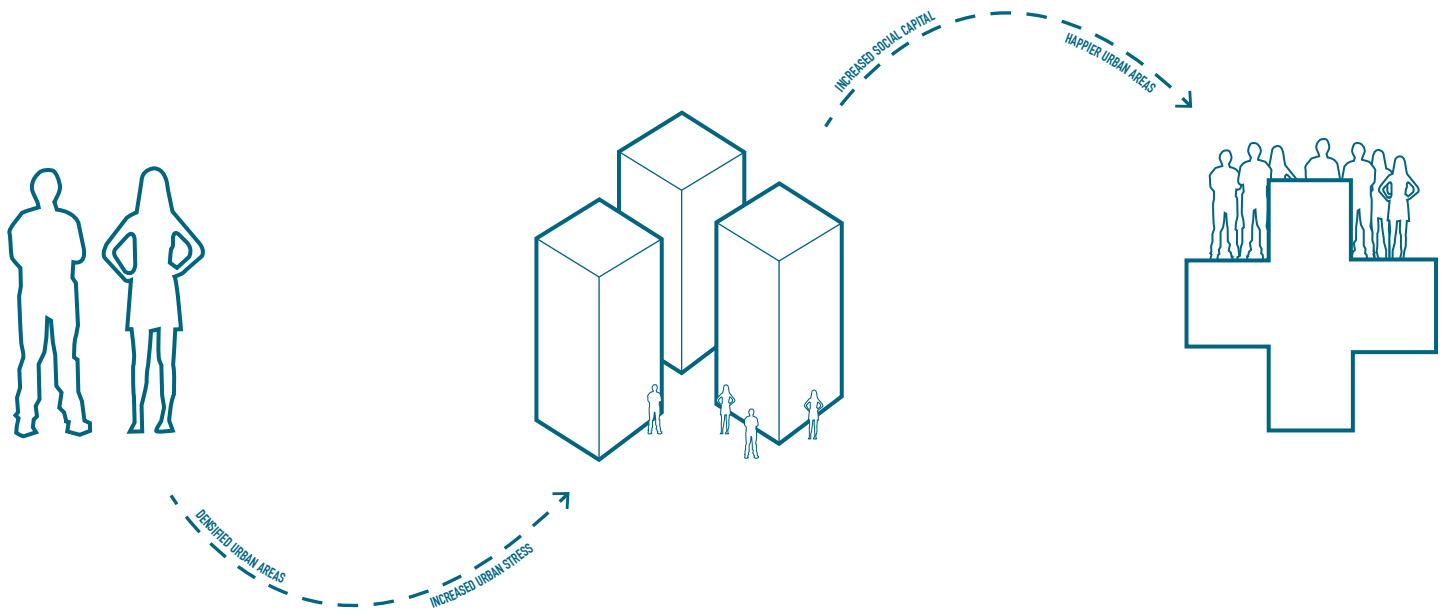
literature review & problem statement

Happiness has long been a focus of academia, professional endeavor, and everyday conversation. Montgomery (2014) notes that as far back as Ancient Greece and the Roman Empire, through the Middle Ages and up to present day, happiness has been a philosophical topic of interest. He makes the point that happiness has often been explored in architectural practice, stating, "We all translate our own ideas of happiness into form… It is impossible to separate the life and design of a city from the attempt to understand happiness, to experience it, and to build it for society" (p. 18). While urban populations continue to grow at a rampant rate, the question of happiness in the city presents itself as the crowded city has been largely associated with a stress inducing lifestyle.

As a proxy of happiness, social capital is important to personal wellbeing. However, the urban sphere does little to create social opportunities in the spaces that people routinely occupy.

urban stress

While the city grows in popularity for its provision of resources and access to amenities, related works and literature equate a stressful city lifestyle to one of unhappiness. Stress, brought on by environmental forces or events, is a cause of discomfort and unease (Krupat, 1985, p. 97). Often, people respond to these environmental "stressors" with feelings of fear, anxiety, and anger (Baum et al., 1982, p. 15). Past studies and literature suggest the city to be stress producing as an inherently demanding and exhausting environment (Wirth, 1938; Sommer, 1969; Baum et al., 1982; Epstein, 1982). Daily occurrences subject the urbanite to frequent hassles, minor annoyances that are multiple, chronic, and repetitive in nature (Krupat, 1985, p. 98). Conducting a meta-analysis on the difference in stress response between city inhabitants and rural dwellers, Peen, Schoevers, Beekman, and Dekker (2010) sampled cases from 1985 to the present day hoping to explore potential links between urbanization and psychopathology. Upon completion of the study, it was reported that city dwellers have a substantially increased risk of anxiety disorders (21%) and mood disorders (39%) in comparison to their rural counterparts (p. 91). In a separate but related study, Meyer-Lindenberg et al. (2011) designed and conducted a study that placed subjects in socially stressful situations while being monitored with functional magnetic resonance imaging (fMRI). The study investigated the difference in neural responses to stress between current urban inhabitants and those raised in urban conditions. Results show that overall urban living is associated with high stress, but ultimately, that urban upbringing is correlated with activity in the perigenual anterior cingulate cortex (pACC), the main figure of the limbic stress regulation system that responds to chronic social stressors. This effect on the pACC suggests a developmental vulnerability during early life in the city (p. 498-501). The prevalence of stress in urban citizens is often attributed to the high density that comes with cities, creating problems of coordination among people and reducing their ability to control their surrounding environment (Krupat, 1985, p. 112). This becomes overwhelming to the individual, who must actively

INCREASED SOCIAL CAPITAL

HAPPIER URBAN AREAS

DENSIFIED URBAN AREAS

INCREASED URBAN STRESS

MORE THAN ONE HALF OF THE WORLD'S POPULATION
LIVES IN URBAN AREAS.

THOUGH A GREAT NUMBER OF PEOPLE LIVE IN CITIES,
THE IRONY IS THAT SOCIAL REALTIONS ARE
CONSIDERABLY POOR.

A STRONG INDICATOR OF LONG TERM WELLBEING
AND HAPPINESS, SOCIAL CAPITAL REFERS TO THE
CONNECTIONS BETWEEN PEOPLE.

figure 2. the social paradox of the city, explained.

cope with and adapt to varying stressful situations (Baum, Singer, Baum, 1982; Krupat, 1985). Through their course and history, cities have been characterized as socially isolating because of the stressful environments they are prone to engender. In his 1938 work, Urbanism as a Way of Life, Louis Wirth sees an "absence of intimate personal acquaintanceship," describing urban social connections as anonymous, superficial, and transitory (p. 1, 14). Krupat (1985) describes his reasoning for this phenomenon in the following excerpt:

Stress leads people to get caught up in highly segmented roles, and strictly functional relationships that either call for little allegiance in the first place, or split personal commitments so greatly that little investment can be given to any single one. Urbanites adopt a mode of relating to others in general that is characterized by a tone of reserve and a holding back that makes the formation of primary relations difficult and unlikely… At its extreme we have a picture of the urbanite as a person who is physically embedded in a tight web of others yet feels psychologically almost totally isolated (p. 131).

This isolating factor gives rise to a paradoxical concept of the city: although there exists a multitude of people in a given context, there is a considerable lack of meaningful social connectedness that is so indicative of stressful urban living.

social capital

Social capital, a concept in the soft sciences referring to engagement and interaction with others, has been linked with long-term wellbeing through scientific study and is seen as a combatant to stress in urban living (Bartolini, 2009, p. 2). Wanting to understand the relation between social capital and subjective wellbeing, Bartolini (2009) performed a bivariate analysis in which he directly compared the two variables. Relying on the World Values Survey (WVS), an international observation of political and socio-cultural change, Bartolini (2009) pooled data on social interaction and membership in groups and associations. The results of his samplings show a positive correlation over time between subjective wellbeing and social capital, promoting sociability as a

strong predictor of happiness (Bartolini, 2009). This relation between sociability and wellbeing is the foundation of burgeoning literature and scientific study regarding happy cities. Planners and scientists alike are beginning to realize the importance of personal interaction in the urban context. Social capital has been attributed to communities that successfully maintain quality performance in education, high welfare of children, and low crime rates (Putnam 2001, p. 12). Putnam (2001) comments on the importance of trust between community members as a "consequence and proxy of social capital" (p.7). Upon confirming the link between interpersonal trust and wellbeing, Helliwell and Wang (2011) show that those who believe they live in a trusting environment maintain higher levels of happiness (p. 56). Sampling data from the Gallup World Poll, the researchers found that those trusting enough of their neighbors to return a lost wallet have levels of wellbeing seven percent higher than those who do not. The study not only evaluates neighborly trust, but also finds that increased levels of trust in co-workers,

police, and strangers correlate with even greater levels of wellbeing. Helliwell and Wang (2011) report on the importance of building and maintaining trust as supportive towards economic and social activity in communities, "it is shared positive experiences between people that is the foundation of building and nurturing trust" (Helliwell & Wang, 2011, p. 57). The cultivation of trusting communal ties necessary to one's wellbeing has long been attributed to areas of informal gathering, termed by Oldenburg (1997), as "third spaces" (p. 6). The third space is conceptualized from the idea of the home being the "first" place in one's life, and work being the "second" (Odenburg, 1997, p. 6). The "third space" is a space of informal, neighborly contact between people that bolsters wellbeing, psychological health, and, in effect, community (Oldenburg, 1997). Places like bars, diners, and coffee shops, are casual and cathartic in this way, and they are places where people find balance between the dichotomy of their work lives and their social lives. Oldenburg (1997) comments, "joy in living depends upon peoples' capacity to enjoy the company

of those who live and work around them" (p. 6). Third spaces are great examples of impromptu, congregational areas so conducive to social interaction and the cultivation of happiness in daily life.

environmental psychology

Both the conviviality found in the third space and the stress stemming from city living, are looked at as influenced by the design and construction of their respective environments. In the study of environmental psychology, the composition of one's surroundings is measured against their sentience and behavior. More specific to the urban context, the structure and physicality of the city are seen as influential on the urbanite's psychological wellbeing, for better or for worse (Zimring, 1982, p. 154-74). But it is not just the singular power of architecture that influences perception and behavior, rather, it is an interplay of built form, landscape, and human activity that affects one's "performance" in public space as part of a "person-in-environment system" (Krupat, 1985, p. 11). Surely, the relationship between

these items was the foundation of William H. Whyte's classic and seminal work, the Social Life of Small Urban Spaces (1980). Whyte's meticulous observation of both successful and unsuccessful public urban spaces considers a range of factors, including weather patterns and microclimates, spatial dimensions, the presence of site elements, and, of course, human behavior. Urban design affects human behavior in five ways: physically, through the arrangement of buildings and structures; functionally, by enabling the ability to accomplish a desired or necessary purpose; cognitively, in offering behavioral cues via perception; affectively, through the arousal of emotion in the occupant; and socially, whether the environment is adequate in meeting the individual and interpersonal needs of occupants (Krupat, 1985, p. 159). This demonstrated capacity of the surrounding environment to shape human emotion and behavior is of great value in designing for social urban spaces. Commenting on the design of cities in the mid-twentieth century, Jane Jacobs (1961) understood the potential of well-designed public urban spaces and their role in

promoting the wellbeing of city inhabitants. According to Jacobs (1961), the city's greatest common asset, the street, is a space that, if designed properly for social activation, can inspire greater communal sentiment rather than passively allowing anonymity and asocial behavior. Rather, in well activated spaces, citizens are inclined to take a positive and proactive role in their neighborhood, becoming responsible for the wellbeing of their counterparts, and helping their city become more livable, unique, interesting, and safe (Jacobs, 1961). The consistent contact among urban dwellers is key to building recognition and familiarity, and encouraging trust and social connectivity. "The most important psychological effect of the city is the way in which it moderates our relationships with other people" (Montgomery, 2014, p. 37). In the evaluation and design of public urban spaces, environmental psychology reveals the effect of place on one's emotion and behavior.

experimental prototyping

The role of exploratory design also plays a key role in creating sociable, happy city spaces. The city has been seen as "an immense laboratory of trial and error, of failure and success" (Jacobs, 1961, p. 6). The prototype is a tool for exploration and experimentation in research about, for and through design. In experimental research, "the prototype itself is the object about which design knowledge is sought through the experimental setup" (p. 264). In the field of landscape architecture, experimental prototyping is often used. For example, in 2015 Balmori Associates took interest in the issue of constriction and enclosure in the urban setting. In researching methods of ameliorating impeding horizon lines on peripheral vision, the design team constructed a street side prototype for passersby to step into and view an artificial, panoramic horizon line circling around them. Participants remained in the space for five minutes and then answered a series of questions about their experience afterwards (Cooper, 2015). Another example of experimental prototyping in the field of landscape architecture is the project ACTIVATE! by Meghan Funk and Kevin Pazik, which created a low cost play and

exercise experience by transforming a vacant urban lot through the simple use of paint. The project was a response to a design competition in Chicago focused around the repurposing of urban space to be more accessible, inclusive, age-friendly, and community based (Latent Design, 2013). Projects like these stay close to their respective themes in developing experimental prototypes that tease out the details of design that work to enhance people's daily living.

interaction. A psychological perspective recognizes the power of built structures and surrounding spaces to be influential on emotion and behavior. This project will investigate the ability of design interventions to reverse perception and feeling of these everyday, socially disengaging spaces.

summary of review

It can be inferred that in high-density populations, inhabitants are subject to greater social isolation from overbearing stress, and the need for social capital to combat an unhappy urban lifestyle is of great importance. While designers maintain the tools and means necessary to create socially successful spaces, these practices are applied to a small portion of public urban spaces in the form of pocket parks and plazas. Still, the urban spaces that people occupy regularly not only lack social interaction, but at times discourage

purpose statement & research question

From the research presented, it is well understood that social connectivity is of importance to building and maintaining happiness. However, the prevalence of stress in daily urban life often keeps urbanites from engaging in meaningful social interaction. While designers strive to create social oases woven into the urban fabric, these areas comprise only a fraction of the urban footprint. The intention of this sequential two-phase, mixed methods study will be to understand how design interventions might transform ordinary urban spaces to create moments of interaction and social connection, raising positive feeling and behavior between people. Through site inventory and analysis, the first phase assessed the function, use, programming elements, and social normative of two specified sites along Market Street in San Francisco's Financial District. The two sites selected for comparison are Mechanics Plaza, a well-designed and highly active social space, and the Montgomery BART entrance, a site oriented and designed more for function than social stimulus. The inventory of these two sites was necessary to establish the parameters of each site, showing their difference in function, design, and user affect and behavior. Given the information presented in the review of literature, it was expected that the space designed for greater social activity, Mechanics Plaza, would host more positive measures of perception, feeling and behavior. After the information had been collected, analyzed, and distilled, it was used to guide the design, fabrication, and installation of a small, socially interactive design installation that was then tested for its effect in creating greater positive feeling and behavior and augmenting social capital at both sites.

The aim of this research was to review some of the potential factors of urban space that influence one's inclination to socially involve themself or not. It is understood from environmental psychology that people respond emotionally and behaviorally to their surroundings. The purpose of this research study was to alter pedestrian emotion and behavior in typical, routine, monotonous urban sites, through sociable design. Urban designers should realize the importance

of social interaction in ordinary public space. For this reason main ideas and themes were reviewed and processed to formulate research questions that would provide direction for the study. The main question behind this study aimed to understand how simple design interventions might work to dissipate social hindrances in public space and instead, work to raise social capital between urbanites. The main guiding research question is:

In ordinary urban spaces, can socially engaging design interventions raise positive emotional affect and behavior between pedestrians?

Through research and data collection based on the above question, it is anticipated that this study will contribute knowledgeable findings towards studying the creation of ordinary city spaces that nurture social capital, hinder stress, and cultivate happiness in daily urban life.

research design, methods & data collection

This research project addresses the difference between socially active and inactive urban spaces, and how they foster or obstruct positive emotion and actions among pedestrians. In order to inform the focused research question, this study recorded information on two different urban settings for their use, design, social presence, and as a result, social capital. After distilling and analyzing the gathered information, a prototyping methodology was adopted to inspire a small-scale, socially oriented design intervention in response to thorough site investigation, participant feedback, and the researcher's own observations. The intervention aspired to incite positive emotional affect and behavior among pedestrians in public urban spaces, hoping to augment social capital.

In the first phase of this qualitative study, two site-specific locations were assessed on their function, design, social dimension, and user emotion and behavior. The two sites chosen are similarly sized triangular spaces in the Financial District of San Francisco, along the highly active and pedestrianized Market Street. Market Street is incredibly busy with a myriad of people that walk, bicycle, bus, and drive the primary arterial throughout the day. By comparing two sites along the same street, that are within a few blocks of each other, the sampling population was assumed to be similar. The two sites were chosen as both maintain a high amount of people throughout the day, although there is a great social difference between each space. Mechanics Plaza is a recently renovated plaza at the corner triangle of Market Street and Bush Street, it carries a lively public atmosphere with a few cafes, a large seating area, sun exposure, and trees for comfort. The second triangle is a few blocks southwest of Mechanics Plaza, and serves as an access point to the Montgomery BART Station. Although just as many people occupy the space in comparison to Mechanics Plaza, this site is much less socially enticing; people work to evade others as they quickly make their way through the space. With a thorough site reconnaissance using maps, sketches, photos and field notes, the factors of each site as well as users and activities will be recorded at the height of

pedestrian activity, from 11am to 2pm, in order to understand the normative characteristics of each site. This method of observation is called place-centered behavioral mapping, focusing on site-specific inventory and analysis (B. Martin & B. Hanington, 2012). Once the initial site reconnaissance was completed, a three-question intercept survey was employed at each site in order to quantify users' inclination to engage with others, as well as their perception of social capital, measured through questions regarding safety and trust. The survey questions was as follows, 1.) Excuse me, would you mind answering two quick questions? 2.) On a scale from 0-10, 10 being the safest, how safe do you feel along this street? 3.) On a scale from 0-10, 10 being a sure thing, what is the likelihood of someone picking up your wallet and returning it to you if you were to accidentally drop it? The reasoning for this group of questions was to first, gauge the likelihood of site users to socially interact, second, to gauge user perception of safety on the site, and third, to gauge user perception of trust on the site. For the purpose of this study, safety and

trust have been decided as measures of social capital as they are each necessary components to strong social ties and community development, noted by reputable sources such as Jacobs (1961) and Putnam (2001). Additionally, safety and trust are critical to psychological comfort before engaging socially with others (Helliwell & Wang, 2011; Montgomery, 2014).

For the qualitative methods used in this study, there are a few definitions that should be clearly stated for the reader's understanding. In this research project, "social interaction," "social engagement," "social activity," "social interactivity," "social connection," and similar descriptions of pro-social action and behavior is defined as "two or more people interacting in a manner that can be described as affable, convivial, or cordial." Not only were social cues noted, but pedestrian behavior at both locations were recorded as well, giving insight on subjects' emotional affect and sense of surrounding space. Behavior was observed objectively as "the manner in which one conducts oneself." Feeling, or affect, is seen in this study as the emotional state one

experiences at a particular point in time. To understand how site occupants feel and respond to their surrouding space, a word association was utilized as well. Participants will be asked to offer three words that come to mind when reflecting for a few moments on the space surrounding them. Next, observations of pedestrian behavior were recorded, looking mostly at people's body language and countenance. This observation was able to reveal insight into emotional affect of users in each space.

Upon completing the site reconnaissance, intercept survey, and behavioral observation at each of the two chosen sites, the collected information was then organized and consolidated to inform the design of a socially interactive installation for later implementation at the two research sites. The intervention responded to the information recorded and the researcher's observations from the site inventory. In testing this intervention for its ability to alter emotional affect and behavior and raising social capital, similar methods were taken as in the initial site investigation phase. After

engaging with the intervention, participants were asked to answer the same set questions from the intercept survey to compare people's inclination to engage with others, and their perception of social capital. Participants were also asked to quickly offer three descpritive words in another word association exercise for comparison to the original findings. Finally, body language and facial expression was observed as users interacted with the intervention, again, to measure against the initial analyses at either site.
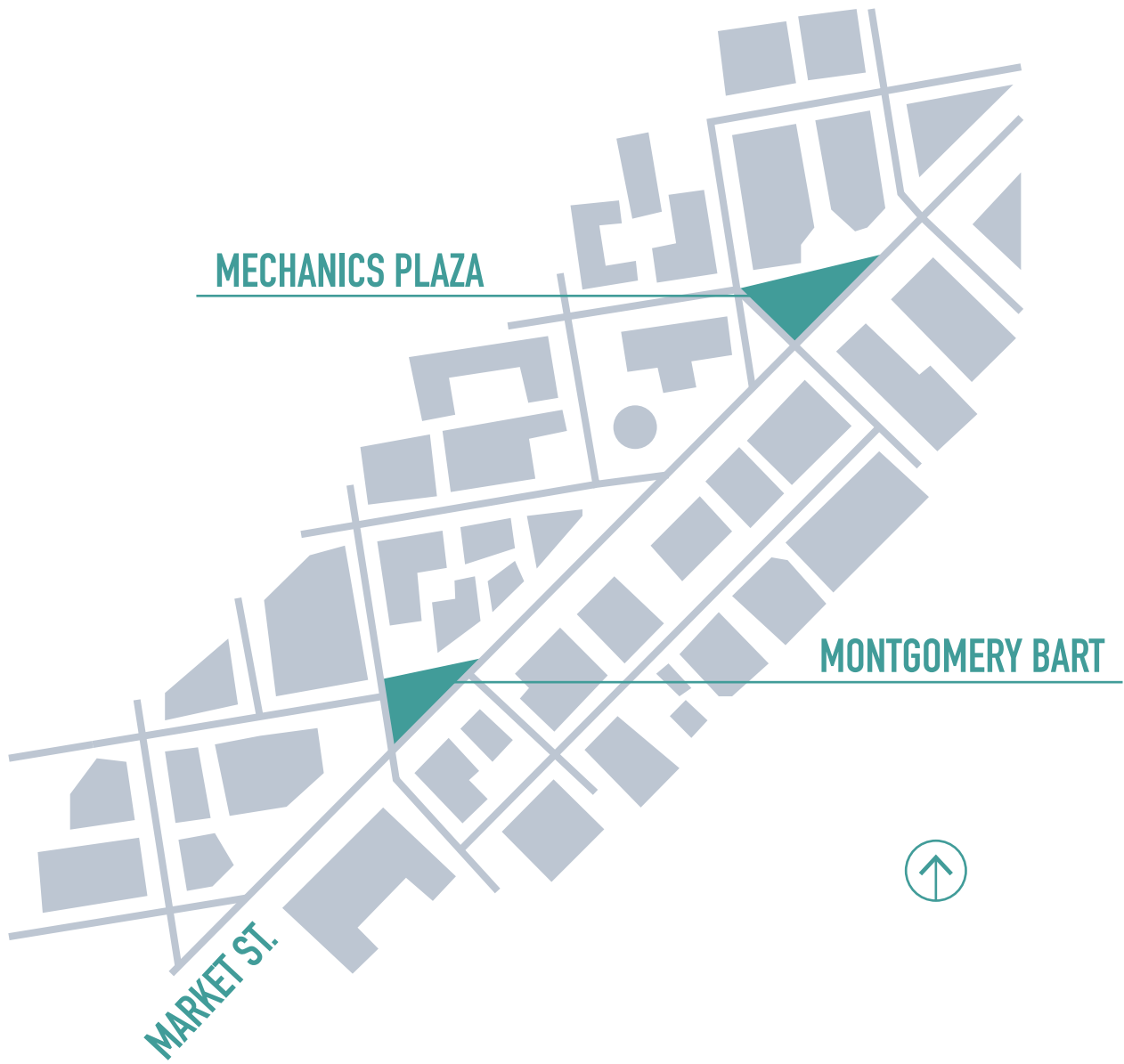
MECHANICS PLAZA

MONTGOMERY BART

MARKET ST.

figure 3. specified site locations along Market Street in San Francisco.

design investigation & analysis

As mentioned before, the purpose of this research project was to understand how the introduction of sociable design tactics in unsocial urban spaces can supplement social capital through the instigation of positive emotional affect and behavior between people. Following the methods outlined in the previous section, the first step of the study analyzed two distinct urban spaces, Mechanics Plaza, and Montgomery BART. Perhaps the only similarity between these two spaces is the high count of people that use them throughout the day. The difference in function, use and design are what make the two spaces dissimilar from each other. Mechanics Plaza, the socially active space, is designed for interaction between people, and serves the purpose of offering respite from the surrounding cacophony. This public urban space maintains a clean, lively environment full of people with access to food, comfortable seating, warming sunlight, and trees for cover. On the other hand, the Montgomery BART entrance is a rather bustling space, as people shuffle in and out of the triangle, making sure to steer clear of others. Looking at these two sites and considering the literature from past research, it was expected that people using Mechanics Plaza would maintain much higher emotional affect and positive behavior in comparison to those near the Montgomery BART entrance. The methodology in taking these measures employed a few instruments, both qualitative and quantitative. The spaces were analyzed between the hours of 11am to 2pm, on two separate business days, splitting the six total hours equally between the two sites. Favorable Spring weather persisted both days, between 65° F and 75° F, with sunlight and minimal cloud coverage. The initial step in analyzing the sites was a simple inventory of each space, looking at the design layout, elements, materials, and aesthetic. A simple circulation chart helped to take note of how people moved through each space, and where people tended to gather.

After considering the design and function of each site, an intercept survey was utilized to bring quantitative value to the study. The survey was based on two indications of social capital, hoping to gauge feelings of

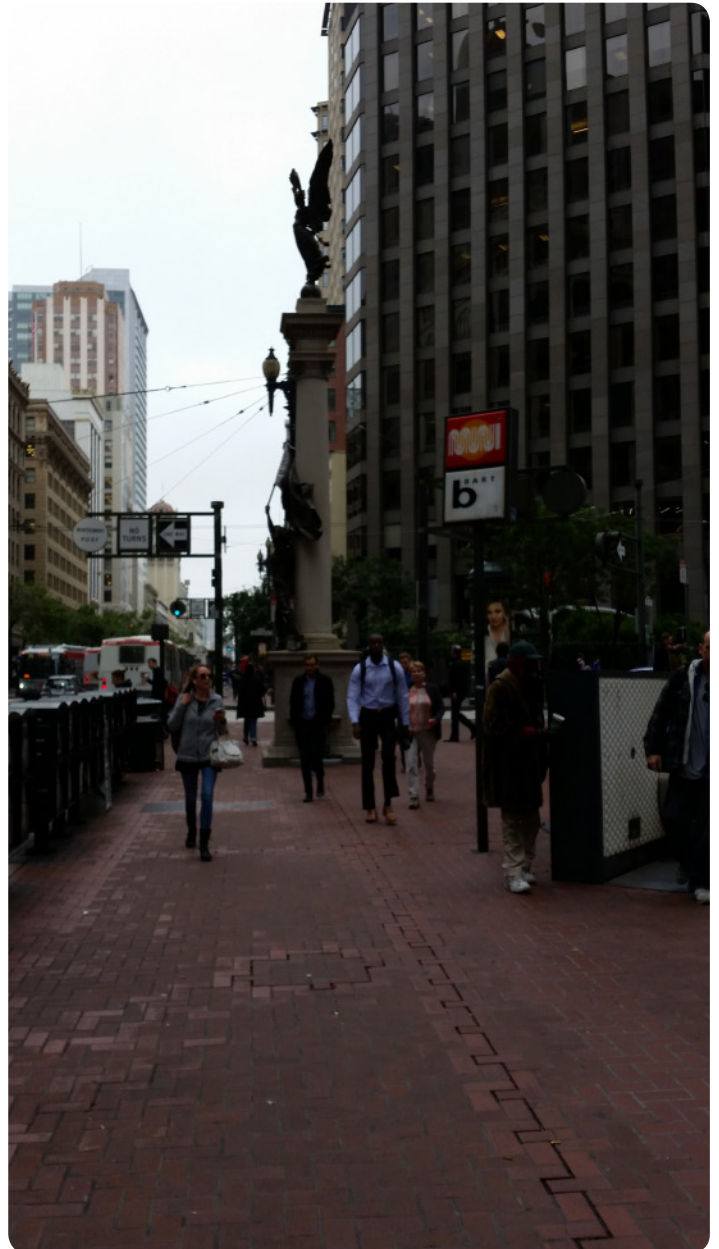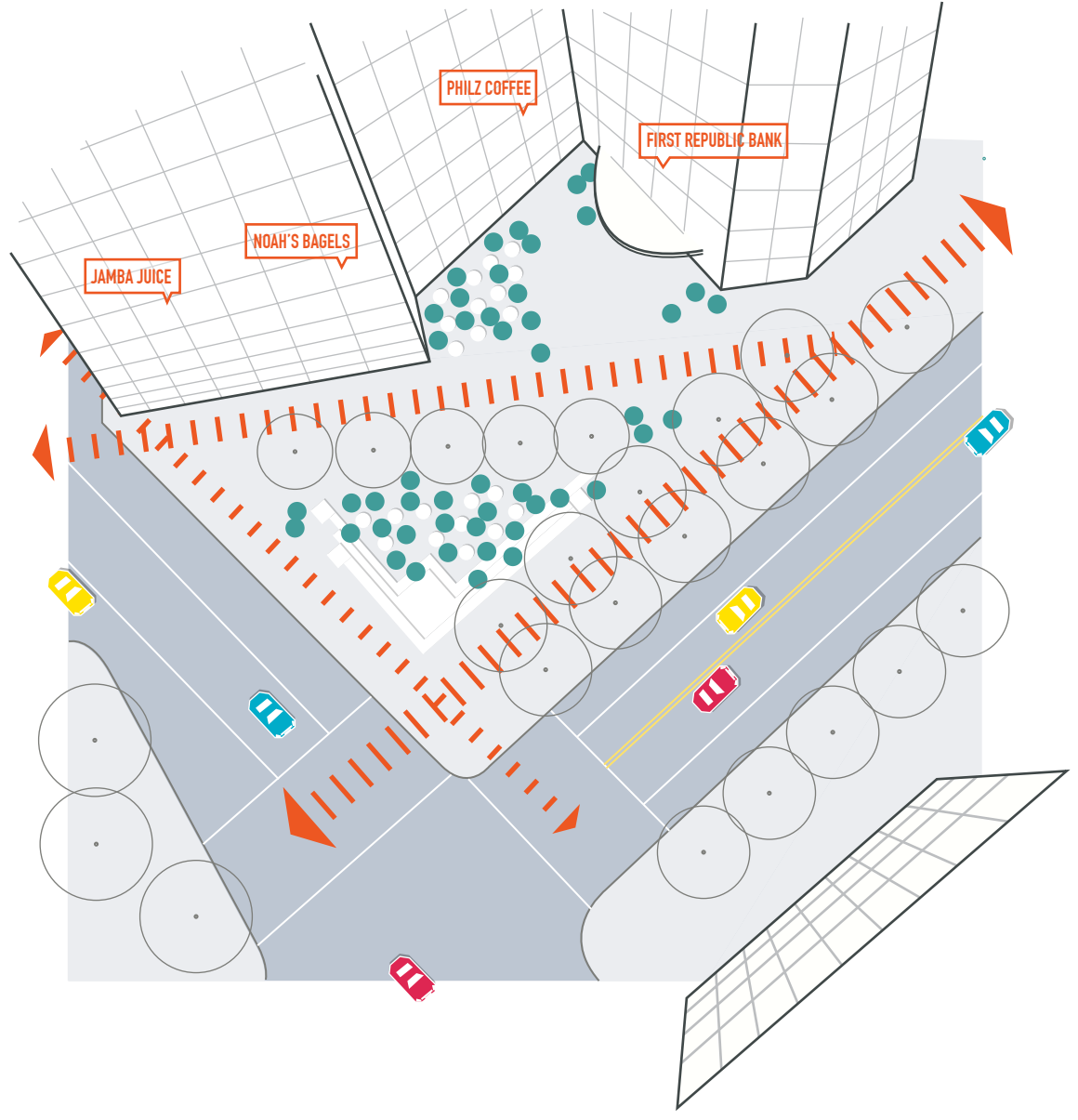figure 4. socially active space at Mechanics Plaza.

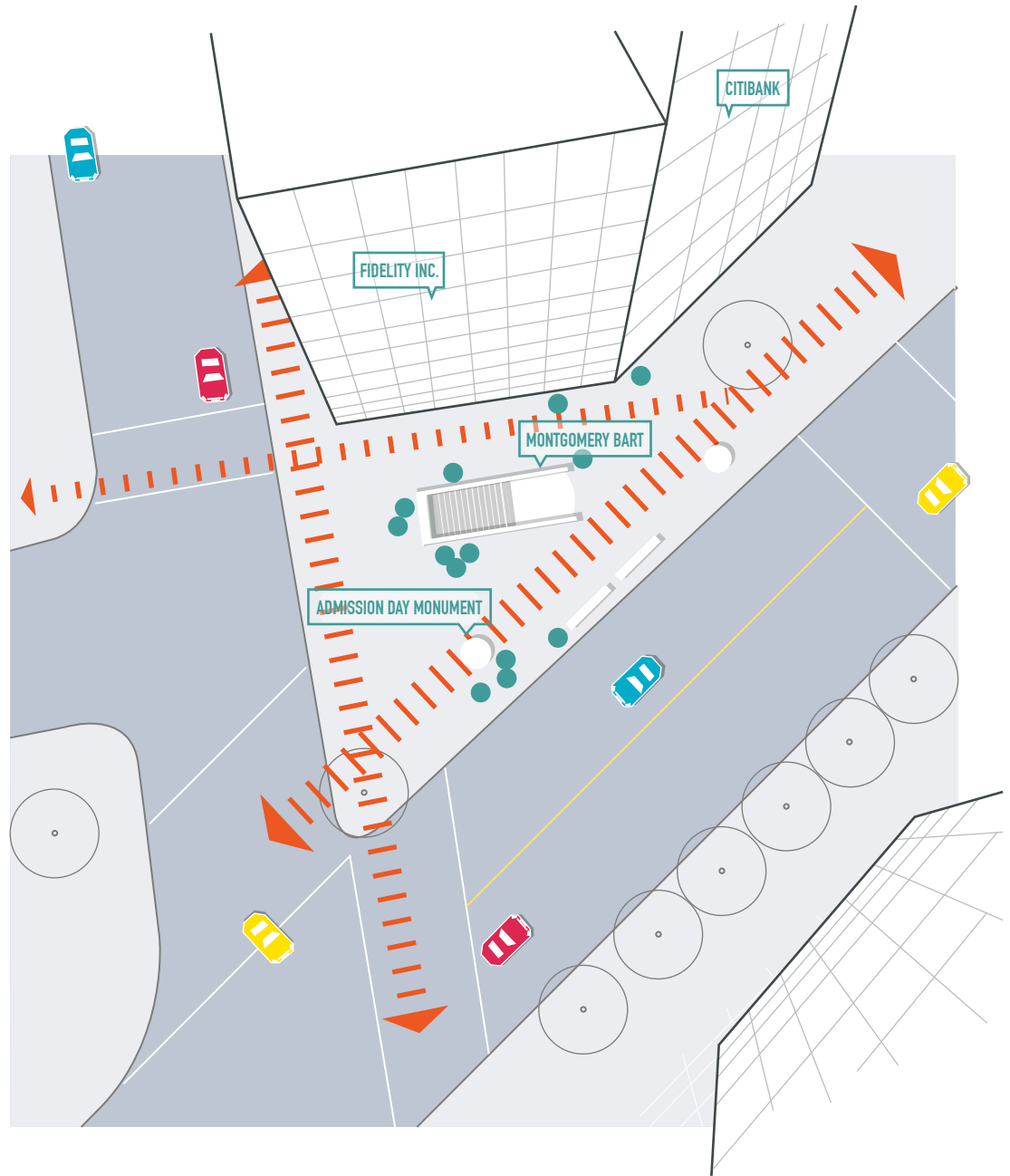figure 5. socially disengaging space at Montgomery BART entrance.

SOCIAL INCLINATION

31%

SAFETY

8.2

TRUST

4.1

SMILE

35%

PHILZ COFFEE

FIRST REPUBLIC BANK

NOAH'S BAGELS

JAMBA JUICE

MECHANICS PLAZA

CIRCULATION ABOUT SITE   GATHERING POINTS

SOCIAL INCLINATION

24%

SAFETY

7.4

TRUST

2.2

SMILE

26%

CITIBANK

FIDELITY INC.

MONTGOMERY BART

ADMISSION DAY MONUMENT

MONTGOMERY BART ENTRANCE

figure 6. analytical site diagrams of Mechanics Plaza and the Montgomery BART entrance.

trust and safety in the two spaces. The first question of the survey, "Excuse me, would you mind answering just two quick questions?" was an indication of how likely people using the space were to socially involve themselves. The second question, "On a scale from 0 to 10, 10 being the safest, how safe do you feel in this area?" was a straight forward question simply trying to understand how safe and comfortable people perceived the space to be. The third and final question of the survey, "From 0 to 10, 10 being a sure thing, if you were to drop your wallet in this area, what is the likelihood of someone picking it up and returning it to you?" This question is not as direct, but gets at how trusting of others the participant feels in the space. Although the results of the survey are not staggering, they do still give testament to the difference between the spaces. At Mechanics Plaza, pedestrian feeling was more positive, people were 31% (19 of 63) likely to socially involve themselves. Those surveyed had an average safe feeling of 8.2, and had an average trust feeling of 4.1. At the Montgomery BART entrance, people were less likely to involve themselves as only 24% (14 of 59) responded to the survey, where the average safe feeling was 7.4, and the average feeling of trust was 2.2. While these results are not terribly significant, the researcher believes it still shows the difference between the two spaces in consideration of the function, use, design, and social dynamic at each site.

Further investigating the two sites for emotional affect, a few qualitative measures were utilized for site investigation. The first, a word association, was employed to generate a sense of user perception of each site. Participants were asked to reflect on their surrounding space for just a few seconds before offering the first three words that came to mind. Next to the social comfort survey, this method shows a stark contrast between the two sites. Mechanics Plaza elicited great positivity, responses entailed words such as "wonderful, lovely, restful," while Montgomery BART evoked words such as "nightmare, stress, crowded."

Another qualitative measure was simple place-centered observation in which the researcher scrutinized body language and facial expression exhibited at each site.

While present in each space, the researcher took note of the posture and countenance of site occupants. To no surprise, those at Mechanics Plaza were much livelier, with heads up, looking around at the scenery. Generally speaking, and from the researcher's subjective observation, people's expression at this site was generally more good-natured, and neighborly. By contrast, those passing through Montgomery BART kept their heads and shoulders down, simply trying to make their way in and out of the space as quickly as possible. People in Mechanics Plaza were also much more likely to smile compared to those at the Montgomery entrance. While on site, the researcher took note of how many people offered a smile of acknowledgement upon making eye contact. At Mechanics Plaza, 35% of those the researcher made eye contact with gave an acknowledging or courteous smile. At Montgomery BART, only 26% of people with whom the researcher made eye contact with offered a smile.

This collected information then helped spur the process of creating an interesting design for testing at each site.

"ALL WALKS OF LIFE" DECENT SPACE

FREE CELL CHARGING "EASY TO STOP"

PEOPLE "NICE LITTLE MONUMENT"

HEART OF DOWNTOWN REST WONDERFUL

"TABLES AND CHAIRS" RESPITE WOW

HANGOUT STANDBY "LUNCH OR RELAX"

GOOD FOR US SPOT TO STOP PEOPLE SITTING

"LOVELY, RESTFUL PLACE"

POWERFUL "ACTUALLY QUITE CLEAN"

SOCIABLE BUSY GREAT PARK PLEASANT

MECHANICS PLAZA

figure 7. word assocation diagrams of Mechanics Plaza and Montgomery BART entrance.

"SUSPICIOUS LOOKING CHARACTERS"
"LINES OF PEOPLE" BUSINESS MEN + WOMEN
SLOW NIGHTMARE "NEEDS POWER WASH"
FINANCIAL DISTRICT FLOW BUSY WALK
DOWNTOWN SAN FRANCISCO URINE
"COMMUTERS AND TOURISTS" DIRECT
CROWDED "COULD BE BETTER" WORRIED
NO CHOICE COMMUTE DUST FILTHY
"IN SOMEONE'S WAY" IN & OUT MARIJUANA
FOOT TRAFFIC HAPPENING FINE
"LOVE HATE RELATIONSHIP" CROWDING

MONTGOMERY BART ENTRANCE

design intervention

The second step in this research study included the design, fabrication, and implementation of a socially engaging design intervention based from the inventory and analysis of the two sites. The goal of this step was to have two people, presumably unacquainted, socially interact with each other as a result of voluntary engagement with the design intervention. From this interaction, it was hypothesized that levels of social capital would be raised.

The first understanding was that the intervention had to be simple enough to be designed, constructed, and placed on site for testing in a matter of two weeks. From site analysis, the researcher had an understanding of major circulation patterns, the flows and gathering points of both Mechanics Plaza and the Montgomery. station. Remembering at both sites, people's inclination to look toward the ground plane and their mobile phones as they moved through space, the researcher wanted to capitalize on this focus of attention. Also drawing from the analysis, the researcher noted in which spots people were apt to stand or loiter. Using these two

key peices of information, the researcher was able to conceptualize a stencil design to be spray chalked on the sidewalk for passersby to see. The stencil creates a series of footprints along a roughly fifty foot long stretch of public right of way. At about every fourth step is a casual statement or question, ordered conversationally as if the participant is speaking with the sidewalk as they pass by. Upon completion of this sociable walk, the participant is met by a separate set of footprints facing back at them. This second set of footprints are placed at one of the natural gathering points on each site in an effort to make acquaintances of unassuming passersby. The intention was that as a result of the participants' curiosity and interest in the sidewalk stencil, they would enjoy a random social interaction, encouraging positive emotional affect and behavior.

The researcher hypothesized that the intervention would be successful in increasing peoples' inclination to socially interact with others at both Mechanics Plaza and the Montgomery BART entrance, introducing curiosity, peculiarity, disruption, and joy in people's daily routine.

With increased social interaction between people, it was expected that positive emotional affect would be increased greatly at the Montgomery BART entrance and social capital will also be significantly heightened as a result of the design instrument. However, as Mechanics Plaza is already a lively, social space, positive affect and levels of social capital were not expected to be altered substantially, if at all.

results

After conceptualization of the intervention, titled "SmallTalk Sidewalk," the stencil was designed using Adobe Illustrator, and then laser cut onto chipboard. Two cans of temporary, white chalk spray were purchased from a local hardware store for marking the sidewalks at each site location. Implementing the intervention proved to be easy. Both of the targetted sidewalks were sprayed around 8am, before many pedestrians were using the street. There was a minor issue with one of the building security guards, although once the project was explained, and more importantly, the spray

was proven to be temporary, the guard acquiesced. Observation began promptly at 11am at the Montgomery BART entrance site as people began occupy the sidewalk, making their way about their lunch breaks. From about twenty feet back, the researcher watched how people reacted to the intervention. As expected, people received the project well, smiling or laughing to themselves, pointing the sidewalk out to others, even stepping along and matching their feet to the painted footsteps. The project garnered funny and curious looks, people stopped to take notice in the middle of the traffic flow, it was even admired as some pulled out phones to takes photos and videos. From observation, emotional affect certainly seemed to have been altered as a result of the intervention. After about thirty minutes of observation, the positive influence of the intervention seemed substantial. Next, the researcher wanted to test responses to the intervention while standing at the interactive end of the walk. Without saying anything, only looking up in an approachable manner, the researcher waited for people to volunteer information. Although not

SIDEWALK SMALL TALK
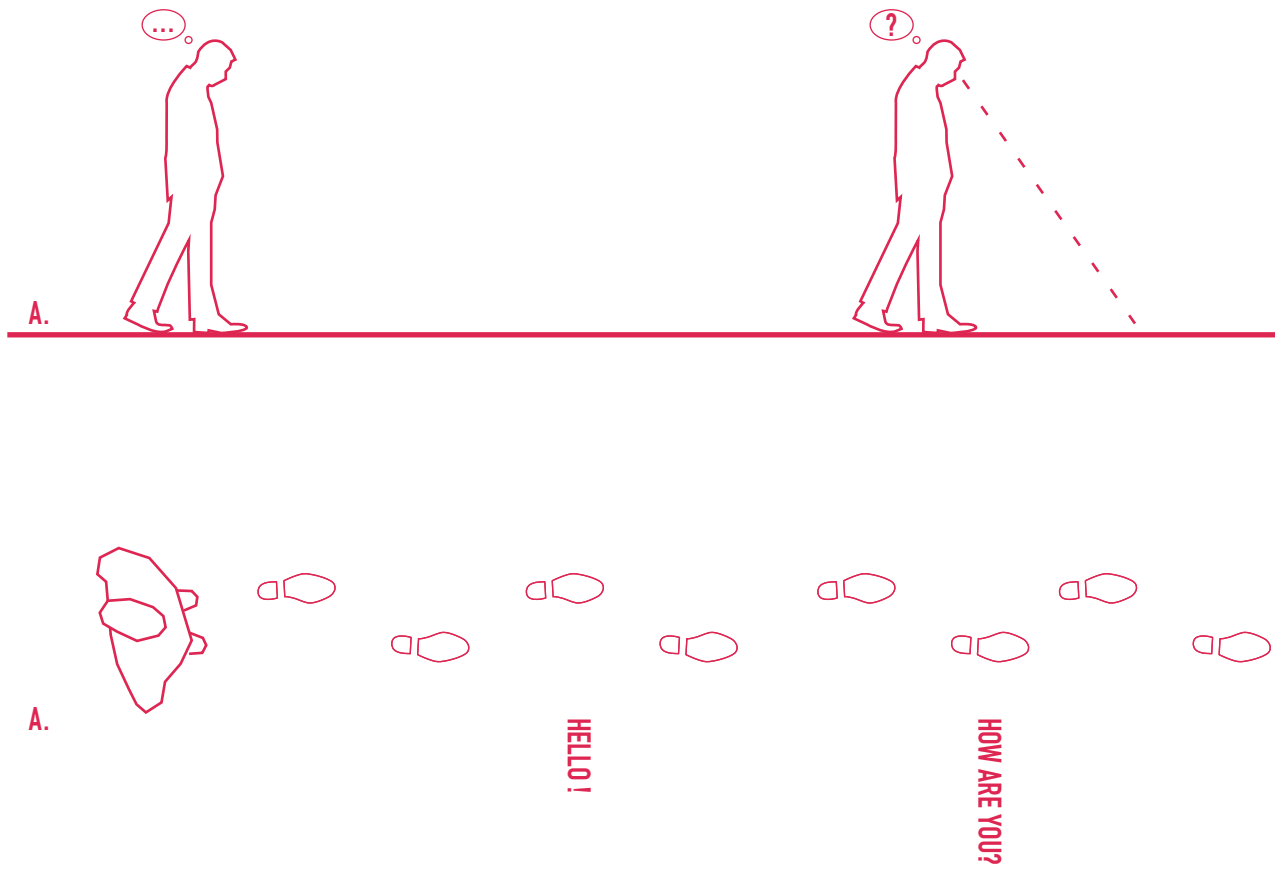
A.

....

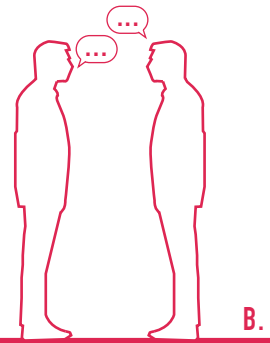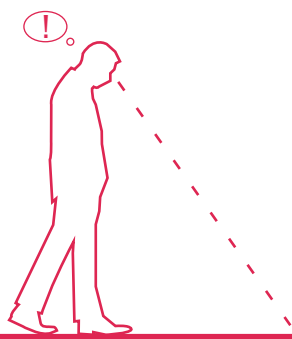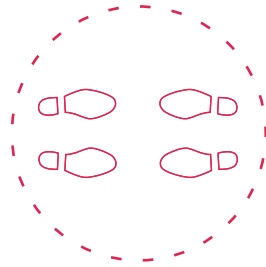?

HELLO !

HOW ARE YOU?

A.

figure 9. a section and plan of the "SmallTalk Sidewalk" design intervention.

I'M WELL, THANKS FOR ASKING.

SO... WALK HERE OFTEN?

STOP AND SHARE !

B.

B.

many people stopped to interact, many did offer smiles and a polite "hi" or "hello." In fact, at the Montgomery BART entrance, 38% of people who passed by after engaging with the intervention gave either an acknowledging smile, courteous greeting, or a combination of the two, compared to just 26% from the original analysis. Although this was a dramatic increase, there were still only a handful of people who had actually stopped voluntarily for the researcher to interact with. After about fifteen minutes, the researcher began to reach out with the initial intercept survey, asking again the three questions aimed at inclination to socially involve oneself, and perception of social capital through safety and trust. In about forty minutes, the researcher asked 64 people if they would be willing to answer two simple questions. While only 19 responded yes, this meant that 31% of site users were willing to interact with others after engaging with the intervention, compared to an original 24%. This shows a great spike in social engagement compared to the intital site survey. The other two questions, however, were not altered as expected. Asking about safety, participants felt relatively the same, as the average feeling of safety of those who had interacted with the intervention was 7.1, very similar to the original rating of 7.4. Neither was trust significantly affected, as those who interacted with the intervention reported an average number of 2.6. Again, not significantly any different from the initial score of 2.2. However, as people passed by, or stopped to talk, they expressed excitement and joy, complementing the project and the idea. Insight into this discrepancy will be noted in the following section.

At Mechanics Plaza, the researcher followed the same format in conducting analysis on the effect of design implementation. From roughly 20 feet back, subjects were observed as they interacted with the intervention. Similarly to Montgomery BART, people smiled and chuckled to themselves, playfully stepped along with the footprints, and others stopped to take photos as they walked. People's facial expressions showed intrigue and excitement, a similar effect to those at the Montgomery BART entrance. After observation, the researcher stood

again at the end of the walk, waiting to see how people responded. Like at the Montgomery station, many people were apt to smile and even wave or greet the researcher. Of those who interacted with the intervention and passed by, 44% offered at least a smile, a large jump from the original 35%. After fifteen minutes of counting smiles, the researcher moved on to the intercept survey, where 27 people of 71, or 38% decided to partake in the study, raising the site's social inclination level by 7%. Surprisingly similar to the effect at Montgomery BART, although emotional affect and social inclination levels were noticeably raised, social capital remained relatively the same. From those who responded to the survey, the reported average feeling of safety was 8.4, originally 8.2, while trust averaged a score of 4.6, originally 4.1.

It was surprising to see how the emotional affect and social inclination of those present on each site were signifcantly altered, while feelings of trust and safety were not. It was expected that by raising positive affect and social engagement, that these measures, reflective of social capital, would be similarly augmented.

figure 10. implementation of the "SmallTalk Sidewalk" intervention at either site.
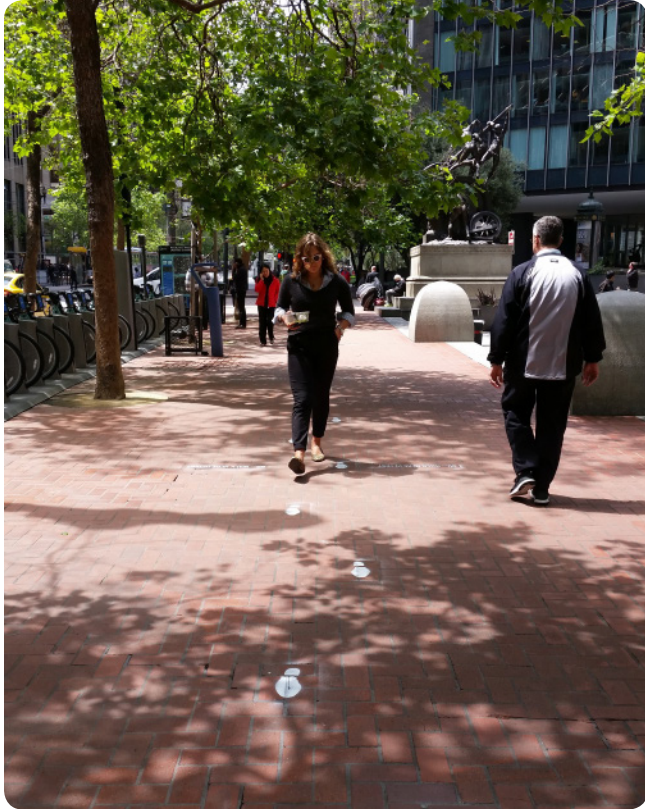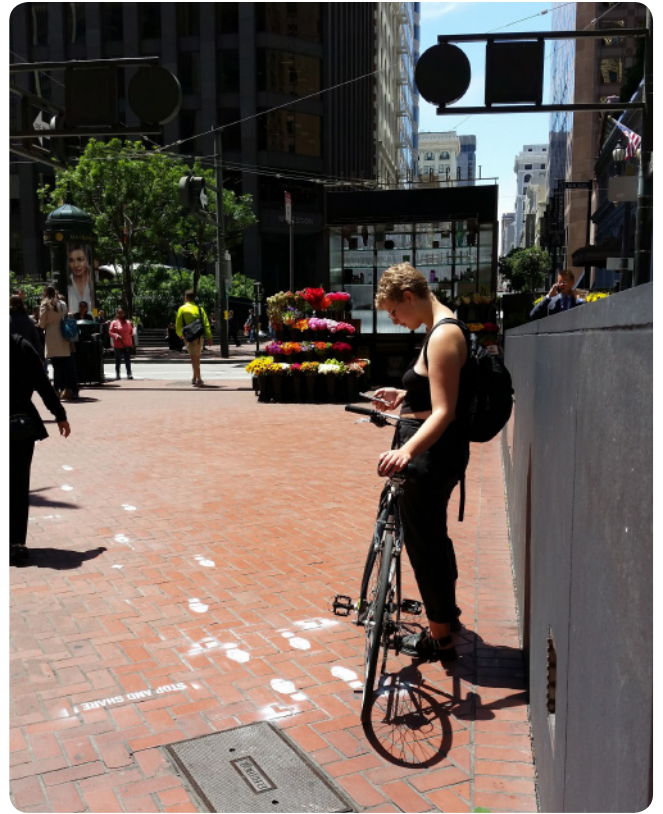
figure 11. people engage with the intervention at either site.

The outcome of this research study is intriguing. In implementing a socially engaging design intervention at both Mechanics Plaza and the Montgomery BART entrance, it was expected that the emotional affect, social inclination, and feelings of trust and safety in everyday pedestrians would all be greatly enhanced as a result of social interaction. In reality, however, while both emotional affect and social inclination were positively encouraged by the intervention, people's feelings of safety and trust remained surprisingly similar to the initial findings at either site. The original thought was that these three factors would be contingent upon each other, that if one is increased, than the other two would follow suit. However, the results show that emotion and feelings are much more complex than this. After reconsidering the interplay between emotional affect, social involvement, and feelings of safety and trust, it seems that emotion and an inclination to socially engage with others are different from feelings of trust and safety as they are much more ephemeral. Emotional affect and one's urge to socially engage are momentary, almost impulsive, easily influenced by present conditions. In this study, these transient feelings are measured against safety and trust, which are more stable, and built over time. In this study, safety and trust work as measures of social capital, the network of connections between a community based on shared values and insights. Perhaps the reason that although at both testing sites, the intervention was successful in engendering positivity between people, but failed to increase senses of safety and trust, was due to the fact that these are feelings that are constituted and reinforced over time through multiple interactions between people. If the hope of this study was to raise social capital, measured through peoples' sense of safety and trust, it would benefit greatly from longer term testing periods to verify if these measures would increase over time through habitual social interaction.

The trajectory of this research study should be acknowledged as well. At first, it was difficult finding a direction for the study, not only are emotions and feelings incredibly subjective and difficult to measure,

but, there are also multiple elements and variables that take effect on emotion and feeling. The study at first was wanting to incorporate environmental psychology, spatial design, and evaluate happiness. However, given the small time frame, and the lack of knowledge, information and resources, this would simply be too ambitious. Therefore, the focus needed to change, becoming simple and narrow enough to be carried out. It was then that social interaction was taken on instead of happiness, known from the review of literature to be a link to happiness as well as a much more observable element.

If this study were to be improved upon, it would benefit greatly from standards of measurement for social interaction and engagement as well as other variants of observable behavior. It would also be prudent to look at multiple spaces deemed unsociable; this study was too advanced in analysis of the two chosen sites before being able to switch to or add new ones.

The project may also inspire a study of the factors that make unsocial spaces, and why. Reflecting on the work of William H. Whyte, a major influence in this study, the many factors that make up the complexities of a space are of interest as a social science. The researcher would request the antithesis of Whyte's work, scrutinizing "the unsocial life of urban spaces."

In retrospect, and more broadly, this project has helped the researcher understand just how much planning and logistic foresight is needed for research. This is an undertaking much different from strictly design work. Although, like design, it is both successional and reflective. The researcher must be mindful of what they are doing, what they have done, and what they are going to do, and they must be cognizant of their focus, direction, and goal. The value of research should not be underestimated, both failures and successes are valuable findings and contributions to the advance of knowledge.

appendix

Prior to design implementation

Question 1. Excuse me, would you mind answering two quick questions?

	Mechanics Plaza	Montgomery BART
Total Responses	63	59
Yes	19	14
No	44	45

Question 2. From 0 to 10, how safe would you say you feel in this space?

	Mechanics Plaza	Montgomery BART
Total Responses	19	14
Average Score	8.2	7.4

Question 3. From 0 to 10, if you were to drop your wallet, what is the likelihood of someone picking it up and returning it to you?

	Mechanics Plaza	Montgomery BART
Total Responses	19	14
Average Score	4.1	2.2

After design implementation

Question 1. Excuse me, would you mind answering two quick questions?

	Mechanics Plaza	Montgomery BART
Total Responses	71	64
Yes	27	19
No	44	45

Question 2. From 0 to 10, how safe would you say you feel in this space?

	Mechanics Plaza	Montgomery BART
Total Responses	27	19
Average Score	7.1	8.4

Question 3. From 0 to 10, if you were to drop your wallet, what is the likelihood of someone picking it up and returning it to you?

	Mechanics Plaza	Montgomery BART
Total Responses	19	14
Average Score	2.6	4.6

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