Interactive Placemaking

THREE CRITICAL ENQUIRIES INTO URBAN INTERACTIONS IN PLACE

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ABSTRACT

Project for Public Spaces (Project for Public Spaces) defines placemaking as a process that fosters the creation of vital public destinations: the kind of places where people feel a strong stake in their communities and a commitment to making things better. This paper uses 3 design implementations to argue that architects and designers must reconstruct these ideas of placemaking in the evolving social, cultural, economic and technological context of our time. The projects are used as critical enquiries to explore how designers can integrate current social-economic and cultural thinking from design, business, and computing and show how evolving interactive connected technologies can lead to new ways of constructing located and connected place.

1 Introduction

"Placemaking" is a term that architects and planners use to describe the process of creating urban spaces that attract people because they are pleasurable or interesting. Project for Public Spaces (Project for Public Spaces) defines placemaking as a process that fosters the creation of vital public destinations: the kind of places where people feel a strong stake in their communities and a commitment to making things better. While the idea that designed urban spaces can have significant effect on lived experiences is not new by any means, seminal work such as Lynch's The Image of the City (Lynch 1960) and Alexander's The Pattern Language (Alexander, Ishikawa, and Silverstein 1977) helped designers become more methodical in the process of placemaking. Later works by Yi-Fu Tuan (Tuan 2001) defining the co-dependence of space and place and highlighting the differences between the two added to this discourse. A methodical approach to utilizing the differences between "space" and "place" can be considered as integral to the academic research of the computing community, as several oft-cited authors (Harrison and Dourish 1996; Mitchell 1996) have provided the basis for newer models of place and placemaking (Kalay and Marx 2003; Dourish 2004; Mathew 2007). In recent times we have seen significant changes in people's sensibilities and expectations, especially with the coming of mobile, locative and ubiquitous technologies that dominate every aspect of our lived experiences. Take for example recent studies (Shirky 2009; Gee 2009; Mathew 2010) which show that new tools of social media create unprecedented opportunities to share, to cooperate with one another, and to take collective action. Digital tools are also changing the balance of participation and spectatorship, suggesting that placemaking can no longer be the creation of mute spatial arrangements but technology mediated enablers of social connectivity. In this paper, we will evaluate placemaking by first understanding the concept of place as a driver for shared interaction; by looking at three critical enquiries in the Loop district of Chicago that were built to integrate design with business and computing; and finally by translating insights derived from these enquiries into models that architects and designers can use.

For this discussion, let us focus on a recent reading (Ciolfi and Bannon 2005) of the seminal works by Tuan (Tuan 1974, 2001). In their paper, Ciolfi et al. suggest that "place" is more than just a location by describing how place is inextricably linked to people and meaningful activities that location. In this regard, place is a composite of many layers of human experience: sensory perception, memories, feelings, social connections and the presence of others, cultural rules and conventions. A visual rendering offered by Ciolfi et al. helps us to see that "place" can be unpacked into social, political, personal, and physical attributes that a user brings to that location **(Figure 1)**.

It is also interesting to note that these dimensions do not exist a priori, as a series of abstract categories, but emerge through people's actions and activities, practice and experience in locational space. For example, Harrison and Dourish (Harrison and Dourish 1996) suggest that "spaceless place" cannot exist, as sense of place can only emerge through physical immersion within a space. Thus, if we take place as this composite arrangement of cultural, social, personal and physical relationships that a participant in space constructs over time, then it can also be argued that in any given space there exists as many place narratives as the people occupying that space. This is not new – as long as people have occupied space, place narratives have been layered on top of it. What is new is that we must consider a new social order in which people are no longer restricted to the role of the spectator. And as participants they can (and often do) participate in the construction, mutation, and sharing of place narratives. The ability to produce information and the tools to produce and access sourced information are so readily available that information is never fixed—it is always aggregated and constructed upon. This leads to the idea of infinite place **(Figure 2)** where participants in space can take a single (their own or someone else's) place narrative and watch it change over time as they or others add to the narrative. Eventually public installations will have to deal with infinite place - place narratives constructed from collective co-creation and the transformation of these narratives when shared in real time. In short, these spaces will need to move from pure consumption of information from a single source to the production and re-construction of information from multiple sources, shared beyond the co-located context that space affords.

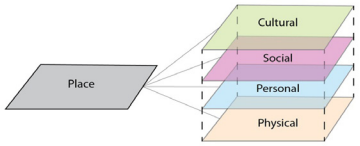

Fig. 1

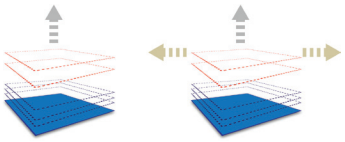

Fig. 2

Figure 1. *Ciolfi et al.'s unpacking of place as defined by Tuan*

Figure 2. *Infinite place: New models of place must accommodate infinite numbers of place narratives not only layered on fixed space (blue) but also shared across space and time*

But what does it mean for architects and designers who wish to use this concept to design place? In the following section, we will show 3 critical enquiries designed to explore this notion of placemaking using infinite place. The projects are from a specific point of view – that of the Chicago Loop.

2 Three Critical Enquiries in the Chicago Loop

According to the Encyclopedia of Chicago, the Loop is the popular name for the Chicago business district located south of the main stem of the Chicago River. The name apparently derives from the place where the strands powering cable cars turned around on a pulley in the center of the city (The Loop). The Loop has historical significance for Chicago because it is the seat of power for the government of Chicago and Cook County and it houses the theater and shopping district along the historic State Street (Chicago Loop Alliance). The Loop is an interesting "place" because it can be deconstructed into a complex array of historic artifacts, personal memories, political engagements, endeavors that succeed, and those that fail. This immensely rich environment provides a wonderful context for technological experimentation. The following projects, completed over the period of two years, was an attempt to work with several organizations in the city to integrate design and business using urban design, architecture, and technology as catalysts. The projects themselves are designed as critical enquiries – intended to examine if the juxtaposition of technology, infrastructure, and the urban user can create interesting placemaking experiences.

2.1 ENQUIRY 1: THE CITY AS A MUSEUM

What happens if you turn a museum inside out into the urban context it is situated in? Art Loop Open (ALO) is an innovative city-wide art exhibition designed with the intention of mobilizing the general public to engage with art, artists and each other (Art Loop Open). Modeled on the very successful ArtPrize in Grand Rapids, Michigan (ArtPrize), ALO had 200 unique pieces of art juried and exhibited across 13 different venues in the city of Chicago. The venues were selected from the 200+ merchants in the Loop district of Chicago and included high profile stations such as Macy's Flagship Store, the historic Palmer House Hotel, the Burnham Hotel, the Hard Rock Hotel, and Merchandise Mart, among others.

One of the primary motivations behind ALO was to integrate businesses in the Loop with art using technology as mediation. Thus, the historic Loop district became an urban art experience and brought art into the open, to communities who might not otherwise go to the art. The choice of using high profile venues in the city (such as Macy's, the Burnham Hotel, the Palmer House) was to evaluate if accidental interactions (O'Hara, Glancy, and Robertshaw 2008) with art and technology lead to interesting experiences. In short, the intention was to use the city as a museum where people who come to shop, could stop to view art; and people who came specifically to see the art, could move into the Loop's many venues to shop and eat. Since we wanted the public to participate rather than just view (participants could vote on their favorite pieces of art); we layered technology on the urban fabric to design the overall experience.

ALO was designed ground-up from the user perspective – using three design frameworks to set up our design process. The Analysis-Synthesis bridge (Dubberly, Evenson, and Robinson 2008) allowed us to move iteratively and quickly along two spectrums – Know (understanding users and context) to Make (developing prototypes); and Real (developing implementation plans) to Abstract (rapidly modeling experiences). The 5E's Experience Model allowed us to extend user journeys beyond engagement through Entice-Enter-Engage-Exit-Extend aspects of an experience (ConiferResearch 2002). Both of these frameworks allowed us to design the trajectory of the user through ALO. In addition, the Just-in-Place framework (Mathew 2010) was used as the basis for the technologies which defined ALO **(Figure 3)**.

The frameworks allowed us to break down the design of the ALO experience into two major themes combining physical and virtual interactions:

1. Located: Located technologies are interactive systems that have "place". These technologies are interconnected in such a way that their specific location adds meaning to the interaction. Located technologies at ALO focused on crowd behavior and allowed for participative trajectories at a technology rich space like Hub37. Hub37 housed technologies such as Surface Tables, a TwitterWall, and an analog

Fig. 3

Fig. 4

CommentWall. Located technologies allowed participants to learn more about the different art projects around the city as well as interact with other (co-located and non-co-located) participants in the experience **(Figure 3)**.

2. Distributed: Distributed technologies are non-located, essentially distributed either in physical space or in virtual space. These technologies are intended to polarize non co-located people around specific interests. All art work was tagged with MS Tags as well as SMS which allowed the participants to vote and comment on their favorite pieces of art. The tags allowed the participants to query for more information and interact with other participants (both co-located and non-co-located) through comments and Tweets **(Figure 4, 5)**.

Different interaction models were used in the design of the ALO experience to accommodate a range of potential population. Since early on in the project we identified that our participant demography would be varied, we wanted all audience members to interact with the art as well as have the ability to share their experiences. And so it was important that there were places and technologies which allow them to do that - ranging from the completely low tech (for example the analog commentWall where a magnet of each piece of art could be pasted and commented upon using whiteboard markers), to the medium tech (the technology enabled but still intuitive surface Tables that could "read" the magnets and provide information), to the high tech (MS Tags which allowed smartphone users to query information and vote using their phones, and the TwitterWall which aggregated tweets about ALO into a collective art visualization). The power of this breadth was evident as in the end 200,000 pedestrians were involved in the exhibition, 12,000 votes were cast, 100+ tweets constructed a new twitter art generated every day, the commentWall had to be erased every few days to accommodate new comments, and almost everyone used the technologies to connect with the art, artists, and other participants.

Figure 3. *Located technologies at ALO included an arrayWall with all 200 pieces of art in the form of magnets which could be placed on Surface Tables that recognized the art, or posted onto a commentWall where people could leave comments, a pivotTable where you could search through the art, and a twitterWall which converts people's tweets into community art visualization*

Figure 4. *Distributed technologies at ALO allowed participants to use MS Tag technology to identify the artwork, read descriptions, comment on the art, as well as vote for their favorite pieces of art*

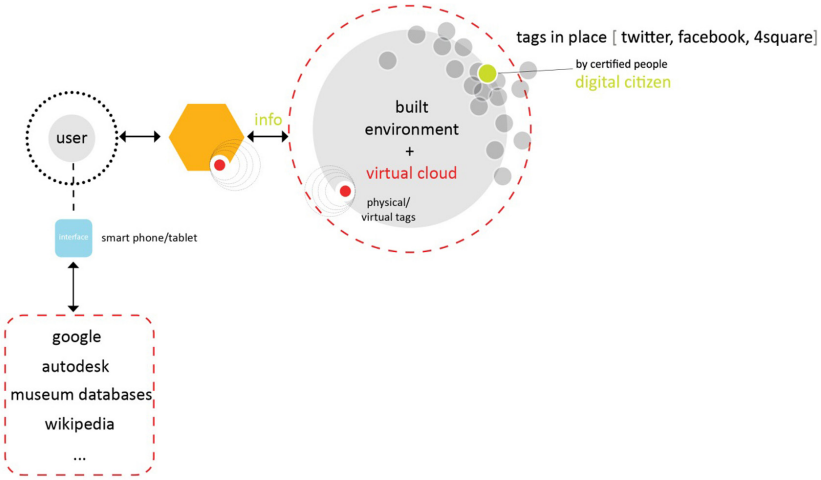

Fig. 5

2.2 ENQUIRY 2: TRACKING URBAN DEMOGRAPHY THROUGH SOCIAL CONNECTIONS

What happens when you embed technology into urban space and allow passersby to engage with other citizens in the same space? Urban Forest 37 sought to answer this question by embedding the concept of a social family tree into two windows of a large urban shopping mall called Block37 **(Figure 6)**. It is important to note that the location Block37 has a storied history as well. It is perhaps the most prominent vacant lot in the country (Sharoff 2007), having remained vacant for over 20 years. When the sleek steel and glass urban mall designed by Gensler was finally constructed in 2007, it saw itself caught in the growing woes of the recession and the overall decline of large urban shopping centers - several of its high profile clientele left and a superstation for an express route to the Chicago O'Hare airport disappeared because of lack of funding. The social family tree concept highlights this complex relationship that we have with the city. It suggests that everyone is inter-connected through relationships forged by an engagement with the city, sometimes in far greater ways than what is visible. Urban Forest 37 is an interactive installation that attempts to highlight these relationships by making them visible – at the street level.

The installation asks passersby to answer one of two questions – Thin Crust or Deep Dish? Sox or Cubs? O'Hare or Midway? The questions were designed to change out every 72 hours. The interaction model is simple – as you walk down the street you tap on the question you associate with. The tap is visualized as a leaf on a digital tree that grows with every answer. As more people answer the tree grows larger and larger – and the visualization allows passersby to see which question is getting more responses from people on the street. So if you are passionate about Deep Dish pizza and you see that Thin Crust is winning, you can choose to add to the Deep Dish side. The one step interaction model used (touch the question you want to answer) comes from embedded user research which suggested that passersby like to note their preferences without hassles of log in or connecting using other mediated interfaces. This meant that passersby were free to interact with the installation anywhere along the thresholds of activity framework (Brignull and Rogers 2003) – through peripheral awareness as they walked across the installation; through focal awareness as they watch others interact with the installation; or through direct interaction as they add their response to the "forest".

On the back end, the numbers of responses for each question were tracked for two purposes – first to render past responses in the background as a "forest" constructed over time representing the collective preferences of a city; and second, to construct a demographic profile of the population which frequents the urban location of Block37 on State Street (and the Loop). The second purpose for tracking is important as both Block37 and the Chicago Loop Alliance, the sponsoring organizations, were interested in increasing foot traffic in that area. The business premise was that understanding

Figure 5. *Just-in-Place framework used as the basis for design of Art Loop Open*

Fig. 6

the demographic profile of the pedestrians on the street will allow both organizations to build experiences that can be catered to specific populations. This aspect of the project played a large role in the framing of the questions since aggregated responses to even a seemingly benign question such as "O'Hare or Midway?" (names of Chicago airports located at two ends of the city) could potentially lead to an understanding of where the respondents live in the city. Social connectivity in the project comes from the true aggregation of responses seen in the "urban forest" visualization. After the installation of the interface we noticed several occasions where people would halt in the middle of the street to talk about or ponder the implications of the questions. In other occasions, strangers would start to talk to one another about why a certain response was recorded. In both occasions social connectivity – realization that we are part of a larger ecosystem that is the city - played a major role in the construction of place around the Urban Forest 37 installation.

2.3 ENQUIRY 3: THE STREET AS A PLATFORM FOR EMBEDDED CONNECTION

What new connections can be enabled if the street becomes a platform for connecting personal stories of place? The intersection of State and Madison is the center of the addressing scheme for the city of Chicago and has been so since 1909 when this new system was implemented. The addressing scheme uses a grid system which has a 'primary' street at each half mile, and eight city blocks measure one mile and marked in increments of 100 from the origin of the grid at State (0 East) and Madison (0 North). Thus, one can easily inferthat Michigan Ave (100 East) is one block east of State St and Congress Parkway (500 South) is 5 blocks south of Madison St. Equally important is the fact that one of Louis Sullivan's most recognized designs, the Sullivan Center (or the Carson Pirie Scott building), is located at the South East corner of this intersection. With its iconic architecture and urban significance, State and Madison is a prime placemaking opportunity. The story of State and Madison is a story of re-centering. It is about re-centering around the city, its many neighborhoods, countless restaurants, bars, theatres and playgrounds all of which can be traced from the city at State and Madison. It is also a story of re-centering around the history of Chicago. State and Madison, at one time, used to be the busiest intersection in the world, and even today has significant pedestrian traffic. Our project highlights this by first giving State and Madison a personality – ZeroZero, and secondly by making visible the invisible stories of the countless people who pass along this intersection. In this manner, ZeroZero's personality becomes a composite of the infinite number of place narratives that pass through the origin intersection of Chicago.

Figure 6. *Urban Forest 37 used simple touch interaction to record social preferences of pedestrians - The responses were visualized in the form of a tree that grows with every response*

Fig. 7

The ZeroZero installation **(Figure 7)** has two embodiments: a physical one and a virtual one. ZeroZero's physical embodiment was designed into the corner windows of the Sullivan Center. The window installation consists of a sculpture, an iconic world map, and instructions on the windows. ZeroZero's virtual manifestation consists of a website and a mobile page. At the website, one can read about the history of State and Madison, and contribute to the place by adding an address anywhere in the world and describing why it is important to him/her. For example, I could add my home address and describe it as where live; or add a University address and describe it as where I went to school; and so on. The website then uses a Google Maps API to pull an image from the address entered and add it to a database. The visualization pulls all of these images to show the many different stories of people who have interacted with ZeroZero – not just location, but also the place narratives. The system also translates the number of miles into a cumulative total represented in terms of number of Chicago blocks traveled (remember 1 Chicago block = 8 miles). Since ZeroZero had to sit in one of the busiest intersections in Chicago, it was designed in four levels – at its base level the installation can be enjoyed as Art (the sculpture and the map located in the Sullivan Center). If someone was interested, they could move in to receive [passive] Information (the instructions on the window describes why State and Madison is important). If they are further intrigued, they can Interact with ZeroZero (through their smartphones or tablets on the website). And finally if ZeroZero plays a meaningful role in their experience, they can engage with place (adding their own place narratives and sharing it with others).

ZeroZero's front end experience showed that people were willing to add their place narratives – in the end 2,344,979 blocks were traveled. But its integrative power comes from its back end tracking. By tracking place information, we are able to track where people on State Street were coming from – not just through quantitative

Figure 7. *ZeroZero had two embodiments – a physical embodiment using a sculpture, a stylized world map with Chicago as its center, and instructions on the window of Sullivan Center; and a virtual embodiment where people could add their own place narratives into a compilation of narratives*

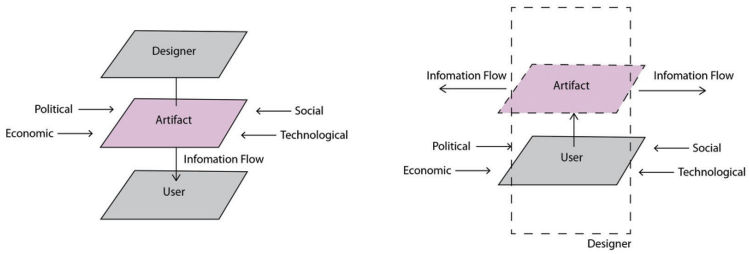

Fig. 8

metrics (which we were able to derive from Google Maps) but also through qualitative metrics (through the descriptions that they add to the story they share). Moreover, no identifying information was asked for, no login was required, no names or identification data had to be provided during the interaction. Any information provided was purely voluntary and with the knowledge that it would be shared among others visiting the interface. This meant that we could take the data and use it both at a macro aggregate level (were the users primarily tourists or residents?) or at a micro specific level (what makes certain places valuable for people?).

3 Translating Insights from the Enquiries

Dan Hill in his essay, The Street as a Platform (Hill 2008) suggests once we recognize that information systems are starting to play a major role in the construction of our daily experiences, invisible parts of the street (patterns of data in the streets, systems that enable and carry them, quality of these connections, their various levels of openness or privacy) will all affect the way the street feels, as much or more than, street furniture or road signs. With new mobile technologies, ubiquitous computing, sensor and actuation systems becoming accessible and readily available, designers now have the ability to take what was once invisible to the naked eye and make it a visible part of the architecture of the street. As communities become more socially connected through technologies such as Facebook, Twitter, Foursquare etc., these connections become the key element by which placemaking can happen. Placemaking in this context moves beyond the architecture of the space into the experience of place. In the following section we will evaluate insights from the above enquiries and use it to develop a model for thinking about placemaking in the context of social connectivity.

The traditional design model is largely a top down approach where the designer is the key driver of the design process and information flow. S/he uses this top down model to appropriate information from political, economic, social, and technological realms to create an artifact – a space, a building, a neighborhood, a city – which then becomes the object through which information is passed to the users. The designer in this context is a composer – someone who constructs every aspect of the experience through the form and function of the artifact **(Figure 8)**. The artifact becomes the focus of attention - an object which the user inhabits to construct, receive, or share the information. If we look at these three embedded enquiries, a new model emerges – where the user becomes the focus of attention rather than the artifact. In the particular contexts of highly connected individuals, a bottom up model means that users draw from their personal political, economic, social, and technological stories to construct the experience with other users who share the same place. Take for example the CommentWall and TwitterWall in ALO and the aggregated place narratives in ZeroZero; in both cases, the experience of place comes from a willingness to share one's own narrative while re-living it through someone else's narrative. The artifact or technology in this case is only a medium for information flow and not the focus of attention. The designer still constructs the overall experience but the role shifts slightly – s/he understands the broad level flow of information and is able to set up filters or levers for aggregating individual narratives. Thus, the artifact removes itself as the focus of attention and becomes simply a lever for experiences and the role of the designer shifts from a composer to mediator of such experiences.

Figure 8. *Traditional model = designer as a composer, artifact as an object, information flows from designer to artifact to user - New model = designer as a mediator, artifact as a lever*

4 Conclusion

In this paper, I argue that placemaking is a changing concept in the context of evolving social, cultural, economic, and technological trends. New places must respond to this by becoming interactive levers that mediate connected social experiences than mute participants of spatial activities. The paper describes three critical enquiries in the Loop district of Chicago to enumerate three different ways in which we approached this problem. The insights from these projects are then translated into a direction for architects, planners, and designers.

While the arguments proposed are still preliminary in nature, the basic position is that placemaking must evolve to respond to the social, cultural, and technological changes we see around us. Architects and designers must re-consider their role in the construction of place as a composite of space (the geographical and physical construct); place (the aesthetic and memory construct); and technology (the social and connective construct). It is our hope that the arguments, the projects, and the model proposed in this paper will become the starting point for future discussion about space and place, and the evolving nature of placemaking.

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