Observational research and digital social media: Route 66 and Amboy California

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ABSTRACT: Place-based research is an important component of understanding physical contexts. The range of information needed to understand places, from site measurements and data, to social data and cultural needs, requires a range of sources. Observational research methods are well established. Local information is essential - site notations, photographs, oral information gathered through conversation and interviews, and information gathered from local media can give a broad range of information and provide a clear and accurate picture of a place.

With an increasing amount of data and base information available on the World Wide Web, information from official and reputable sources as well as from unvetted sources is useful for place-based research. Information for the research presented here comes from a range of sources - from government map and data websites to social media sources such as blogs and photo storage sites. The increased use of social media web sites, archiving web sites, and a range of sources reflects a trend for information gathering that encourages many voices rather than one official source, a trend that works well in design research. Discussed here is an attempt to understand the strengths and limitations of the range of digital information sources for observational research that supports design inquiry.

Through the work carried out over the past two years that includes using social media for observational research, we have come to realize that design professions can take a lead in understanding the use of social media as an information source. The use of social media is becoming inevitable. Understanding how to engage it is essential.

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INTRODUCTION

Web-based research is currently commonplace – digital information on the internet is easy to access and often a first source for inquiry. And it is increasingly possible to access information on the web that is accurate and substantial for research. In a search for place-based information, the use of web resources can be invaluable. Information about physical context ranges from maps and data to photos and descriptions. But although digital information is easy to access and widely used, reliability of sources is still often questioned. The range of reliable information available for place-based research is from official sources, such as government atlases or census data, through websites of cultural and historical organizations. At the other end of the spectrum of sources used for place-based research are websites that contain information that is unvetted and therefore according to academic and professional standards potentially unreliable. Among these sources are websites of enthusiastic amateurs in a variety of fields and social media sources. Information from unvetted sources might include inaccuracies, but can also be invaluable. When consideration of these sources is conceptualized in the spirit of Web 2.0 – where research is carried out through collaboration and sharing of information, its power resides in the fact that it is information from many voices and many sources that encourages a broad base rather than top down strategy for information gathering. The power of many voices is important, but the question of accuracy and reliability still remains.

The design research work described here uses a range of internet sources for design inquiry and place-based research. Digital information is gathered from official and reliable sources, and also unvetted sources, in particular social media sources including blogs, photo storage sites and video sharing sites. Over a two year period, in addition to gathering information about the physical and cultural nature of places, we have tracked the use of web sources with the goal of understanding the best-use of the range of information.

In order to measure and understand the use of social media sources for place-based research we followed methodologies of observational research.

Observational research methods are well established and universally used for design inquiry, however with the introduction of internet digital resources it is fair to say that relooking at observational research methodologies would be helpful. In particular we looked to the work of William H. Whyte – his observational and analytical studies of people using urban spaces in New York and other cities. Whyte's methods required what he called concern with the practical in the design and management of urban spaces, but also, as he put it the "less-practical" or fundamental research.[1] Fundamental research went beyond accepting the status quo, and questioned inherent issues of design of urban spaces that had been assumed but never tested. For example, overcrowding in cities was assumed to be a source of social ills. But the nature and place of crowds were assumed to be universally applied rather than particular to any context. Fundamental research here was looking carefully at the details of a situation. The assumption is that there are some universal attributes and behaviors but that local conditions are unique and can only be extracted through observation to understand both the context and the cultural norms. The interest in local information is important here. For the project described here we were examining sites where firsthand experience was not an option. But as an understanding of places was necessary we were interested in using internet research to understand local conditions. Moreover, internet sources presented an opportunity that is important to observational research. It allowed us to take disparate kinds of information – information on geology, popular culture and climate for example – and put them together. The multiple layers of information in juxtaposition to one another gives access to unexpected coincidences and allows unforeseen discoveries. This not only is a method that approaches what Whyte called fundamental research, it is a method that encourages design exploration and design thinking.

Whyte's interests were the behavior of people in urban settings as well as the settings themselves. The methods included: direct observation, analysis and notation, interviews and eavesdropping, and second-hand observation using still and movie photography. All of these, except direct observation, are methods that can be applied when using digital social media. We can visit publicly accessible photo storage sites, video sharing sites, oral history sites, and blogs. We can participate in conversations that can be structured as interviews, and notate and analyze information. It is important to note that this is not a study of the sociological implications of social media. Following on Whyte's techniques, social media is a source of what the web author might consider background information for the story being told, the settings for the primary subject of the story. The premise here is that social media can get at an understanding of the local conditions of a place. The hope is that this provides a balance to official information in understanding settlements. Using both kinds of information, we are assuming that the use of digital media provides an understanding of local attributes (both contextual and cultural) leading to comprehensive knowledge of a place and its particular design needs.

The work discussed here has led us to understand that, generally speaking with regard to place-based research, official sources of information can be used for data and for base information about a physical context. And in conjunction with this, social media can be used to gain an understanding of its local conditions including a sense of place, its culture, and spirit.

Below are examples of design research that use web-based digital information as primary resources. The examples outline the use of reliable graphic and written material such as web sites to access maps and data, online newsletters and organizations. Social media sources are also used. Information includes photos accessed on photo storage sites such as Flickr, videos available on YouTube, and conversations about places from blogs. The work is sequenced starting with projects that use official websites to projects that rely more on social media.

1. CONTEXTS LARGE AND SMALL

The research presented here focuses on the context of Route 66, considering its role as a *roadscape*. As a complete entity Route 66 was 2448 miles in length on its journey from Chicago west to Santa Monica. It still exists in fragments of usable roads, decommissioned roads, and roads that have been overtaken by the interstate highway system and although disjunctive, Route 66 is iconic and still thought of as a whole entity. The objective of the work is to find a way to envision Route 66 as a whole with significant settlements and landscapes playing a role in its character. Examples here incorporate the whole of the route as well as a focus on one town, Amboy, California. Amboy is a town in an isolated part of the Mojave Desert that was an important stop along Route 66. A ghost town at present, it was once an important travelers' destination with at least 300 residents, motels and cabins, gas stations, eating establishments, a post office and a school. The current owner is in the process of reviving travel services in the town and the context is complete enough to get a sense of its past. Amboy has had some colorful moments in its history, for example, it was until recently a place for Hollywood movie stars to fly in and out of for a hamburger and it was offered for sale on e-Bay. This kind of information, we discovered, was important to the culture of the place, but only available on unvetted internet sources. Amboy, therefore, is a great context in which to test the use and limits of social media for observational research.

The whole of Route 66 and the particulars of Amboy were examined by upper level professional program students in architectural design and research was done without prior engagement with or knowledge of the site. To goal was to gain an understanding of the cultural as well as physical aspects of this complex place in order to create a context for design. Although there is a vast

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[1] Whyte, William H., *City: Rediscovering the Center,* Doubleday, New York: 1988, p. 2.
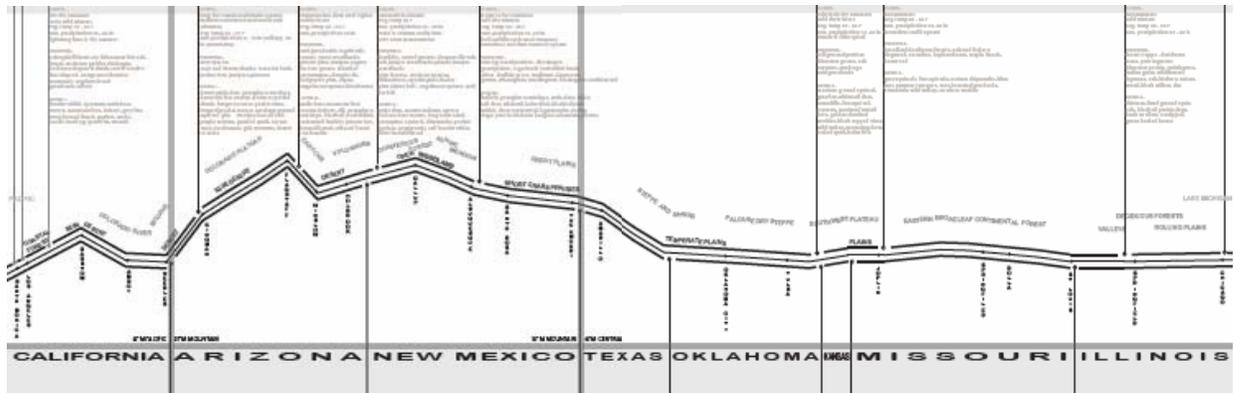
Figure 1: Route 66, 2448 mile graphic analysis of topography and ecosystems. (Andrea DeVico 2007).

array of sources about Route 66 in both print and web media, there is very little that can put together a picture of its cultural and physical landscape. The studio worked with both web and print information. The examples below present a range of strategies for understanding the physical contexts. Brief discussion about sources is included, and discussion of what we learned in the process is presented at the end of the examples.

1.1. Maps and data
One approach taken to envision Route 66 was to understand that the 2448 mile expanse of the Route 66 is not spatially unified and that the journey across the various landscapes was an important factor in envisioning Route 66 as a physical place. The graphic analysis in Figure 1 uses an exaggerated vertical scale, but emphasizes divisions – ecosystems, state lines, and time zones. The attempt is to take data in maps and present them in graphic form for a visual understanding of the linear roadscape. The data for this project came from government sources beginning with United States Geological Survey maps and atlas data.

aerial photos, but also relied on data from USGS, BLM, and other related government information sources, but for these projects the focus was on the local character of places rather than the overall land features across a 2448 mile expanse.

The projects in Figures 2, 3 and 4 look at water, geology, and plant systems in order to place the human scale elements - architecture and people - in an environment. This analysis found Amboy to be specifically settled at its present site in the vast dry Mojave Desert because of its underground water and its location in an alluvial plain and watershed area.

In addition to the USGS website, the work relied on website information from the Desert Gazette and the Mojave National Preserve to explain the local and regional landscape and geological and water systems that formed the area and allowed the placement of the settlement. The online newsletters were a significant information source including its links to other sites with obscure but important information about the nature of the aquifers, the nature of underground and surface rocks, the wind tendencies that influenced the landscape features.
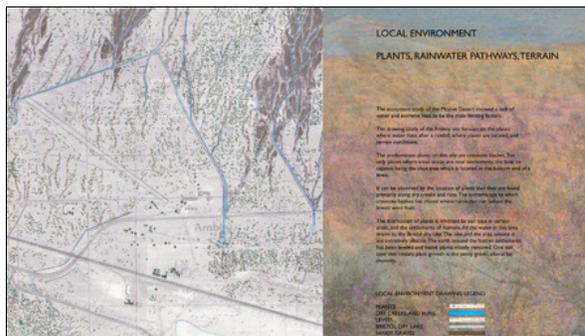
Figure 2: Surface Water (Tom Budinetz 2007)

Comprehending a settlement along the roadscape required that we find a way to understand its morphology. This meant envisioning the settlement and building patterns but also the macro structures of its landscape, geology, and systems. Similarly to the example in Figure 1, projects of this sort began with

Figure 3: Topgraphy, surface and subsurface water (Bridget Gramlich 2007)

1.2. Comparative studies and information searches
The objective of the research shown in Figure 5 was to understand the scale and size of the town of Amboy,

California. The town's location in the Mojave Desert made the scale of the settlement difficult to understand. The landscape is vast and as a partially occupied town the scale of the settlement was unrecognizable making any understanding of the place inconclusive. A comparison using aerial photos of the sites was used and a familiar scale established an understanding of the town's scale. Two sites al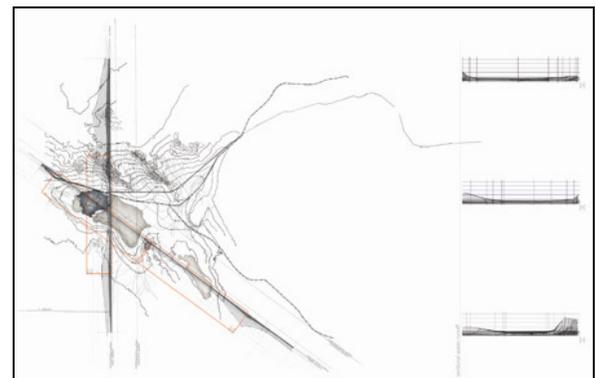ong Route 66 were compared – the town of Amboy was overlaid to scale with the East Los Angeles Interchange (Interstate Highways 5 and 10) and its surrounding context including Dodgers Stadium. The interstate highway interchange of Los Angeles overlays directly onto the center of the town of Amboy. Route 66 aligns with Route 10 and Dodger's Stadium aligns with the Amboy Crater (an inactive volcano). In the written comparison quantities help to make the comparison, for example, where Los Angeles is filled with buildings, Amboy is empty of them. Distances and scales give direct comparisons. Understanding the scale of Amboy was essential for any understanding of the sense of place and this graphic analysis became the basis for other research about the place.

Figure 4: Landscape systems (Nina Gernesova 2008)

Comparison of the two contexts used graphics and statistics that highlight quantitative measurement. For the graphic comparison the primary sources were Google Earth and Google Maps.

An emerging advantage in web-based research is the availability of inventories and archival information. Web archives follow the logic of Web 2.0 use - that presenting and sharing information for others to use leads to innovation. The project depicted in Figure 6 uses a reliable archive source, the Center for Land Use Interpretation's tagged map of sites, for industrial uses in the dry desert environments of California.

The project builds on information about the various uses found in the dry and harsh environment of the Mojave Desert proposing future planning and growth of industries and occupation of the sites between Barstow and Needles to build an environmentally sustainable settlement. Industry includes agriculture, transportation networks, and energy production and the design research leads to speculation that these industries can be the basis for future settlement.

Figure 5: Comparison of Amboy and Los Angeles (Chris Willich 2007)

Figure 6: Proposal for Industry Network, Mojave Desert (Mike Villegas, Keith Stauffer, Hiroyuki Watanabe 2008)

1.3. Photographs: what other people see

Another approach to discovering the nature of Route 66 involved looking at signs. The premise for the project depicted in Figure 7 was that roadside signage is a cultural manifestation, portraying information about the site. Route 66 signs were compared with road signs from the parallel interstate highways. The comparison shows the nature of two roadways, reflecting aspects of road travel. Route 66 includes variety in its signage as shown in the top tier of Figure 7. Signs are individual projections of the places they represent. The attempt of settlements and individual establishments is to attract visitors. Along the interstate, signage is uniform as shown in the bottom tier of Figure 7. Place names and mileage are all indicated on green or blue highway

signs, reflective of the interstate system where the objective of travel is to get as quickly and efficiently as possible from one place to another.

Photos of signs were obtained using Flickr and other photo storage web sites. Photos were called up according to categorical classifications, Route 66, Interstate 40 or individual place names along each route. The signs were then located graphically using an aerial photographs of Route 66 as the background for organization.

Another use of photo storage sites is indicated in the project depicted in Figure 8. Similarly to the project shown in Figure 1, the objective was to understand the varied landscapes representing ecological shifts along the roadscape, but this one went about the research differently. Where the project in Figure 1 used maps and data from government websites, the project in Figure 8 was interested in the visual nature of landscapes and used photos to classify the differences along the route. The project began with a broad understanding of ecozones along the roadscape and called up photos according to place names.
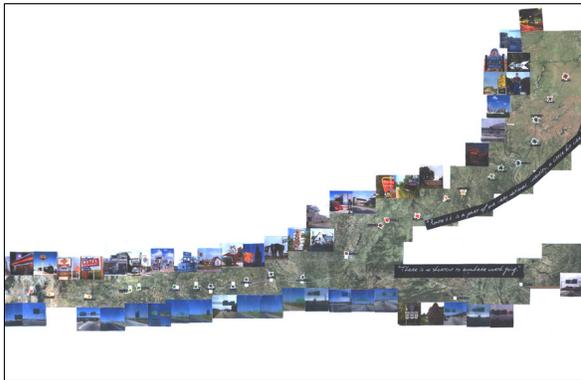
Figure 7: A portion of Route 66 / Interstate 40 sign comparison study (Kristy Simcic 2007)
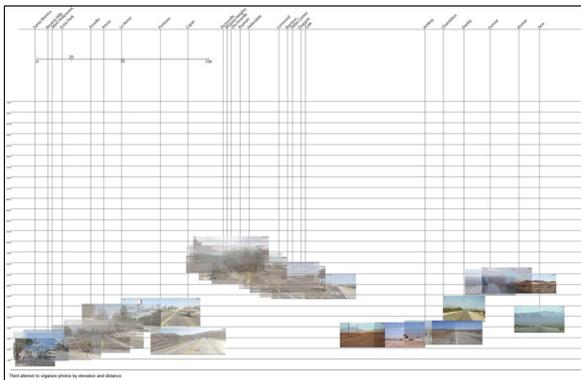
Figure 8: Landscape photos from photo sharing websites (Renee Trimarco 2008)

The difficulty here was in trying to find photos of landscapes in the vast spaces between towns. This is indicated in the distance between photos groups,

located according to road mileage. Storage on shared photos sites tends to focus on nameable areas. A search strategy to look at photos sequences was employed. If, for example, you follow a traveler's sequence of photos between two towns you obtain photos of the towns and of places in between. Working with photos of more than one author, multiple sequences gave a more inclusive view of the context. Even with this strategy, photos accumulate around certain areas. A conclusion here is that sites of interest tend to be photographed repeatedly corresponding with prominent sites along the route.

1.4. Travelers' and residents' blogs

Given the scale of the context we were trying to envision (2448 linear miles), travelers turned out to be a primary constituency for information. Many kinds of travelers still traverse Route 66. The analysis depicted in Figure 9 was done to try to understand the nature of travelers along Route 66. In order to do this, travel blogs of individuals and groups were accessed. The blogs included journal entries and photos from the authors' trips. Different groups were classified – solo travelers and families, for example, and vehicle types were noted - car drivers, motorcycle tour groups, recreational vehicle travelers, and bus tourists. Comparative inventory of sites visited and named in the blogs indicated the idiosyncrasies of different kinds of traverses. Groups on motorcycles (shown in the top tiers of the image), for example, tended to stop less than other groups. Their blogs indicated they were traveling Route 66 for the freedom of the ride and open space on the backroads. Travelers with children stopped at tourist sites, places where signage was unusual, and spectacular scenic areas. And where the motorcyclists photos tend to focus on the group, photos by families tended to focus of the sites and objects along the roadside. This denotes different kinds of journeys for different kinds of travelers. In all there were 13 traveling groups studied through travel blogs, each represented in Figure 9 by a horizontal band of quotations and photos taken from their websites. The cadence of each travel group is notated, the data coming from their blog diaries. The line is scaled to the road and demarcated with photos and text according to the journal entries' indication of stops. To give an understanding of cadence, the image uses the group indicated by the bottom band as a norm for time measurement. The family started their trip in Santa Monica, traveled east towards Chicago in an RV and ended up in Chicago 66 days later. Of the 13 traveling groups surveyed in detail, there was only one site along the whole of the roadscape that was visited by all – the Cadillac Ranch outside Amarillo Texas (it is close to halfway along the route and therefore located in just about the center of the image).

Where travelers' blogs gave important insight in understanding the experience of travel and the whole of the Route 66 roadscape, blogs of occupants and former occupants of settlements were found to be a useful source of information when focusing in on towns. To discover the nature of daily life in Amboy California

in its heyday[2] the project depicted in Figure 10 began a search to find information from former residents. Blogs that mention the town are abundant, as Amboy is still a prominent feature along Route 66 even as a ghost town in the vast and desolate Mojave in the triangular area between Twentynine Palms, Barstow, and Needles California. Blogs of former residents included reminiscences of events in their lives. Reminiscences were set in places such as the Amboy crater and the graveyard (landscape features), the Amboy School and the San Antonio chapel (buildings).

The project had the result of painting a picture of the culture and life of the town by placing the memories (in the form of quotes and photos) of residents and former residents in the physical context. In order to get enough content to understand the context this research it required looking at many sources for small amounts of information, short oral histories from many voices. Some of the information was lore rather than event and needed verification from other sources. Nonetheless, the information was essential to painting a picture of the place as it had been when occupied.

2. USES OF INFORMATION

The above examples are indicative of the kinds of sources that were used for design research about places. We found that there were some essential source materials. Google Earth and Live Local, for example gave us easy access to accurate base information. And the more we looked at aerial views as research progressed the more we understood and were able to conceptually 'enter' into places. The USGS, BLM, National Atlas, and other official sources of maps and data also proved to be essential as sources of base data for understanding sites.

Reliable sources are more and more available on the web. Online newsletters such as the Mojave's Desert Gazette are important hyperlocal sources. The data and information is accurate and the links are vetted. Sources like the National Parks Route 66 Cultural Resources website includes links that are vetted. This website and others like it have brought government historical surveys and information from state historical agencies, once buried in archives, to the web for easy access. Differently than in the recent past, the internet is now a powerful tool that allows for information searches for specific place-based material. The website of the Center for Land Use Interpretation (CLUI) represents a great emerging feature of site-based web research. The inventory of sites in the form of a digital archive, compiled as part of the CLUI's work with sites gives a broad and accessible view including varied information from the vast landscape of the United States. Sites are tagged to a Google Map and information is posted along with site photos, allowing the researcher the opportunity to bring his/her own

questions to bear on what is seen and compiled. This kind of archive assumes that the work done to date by CLUI might be built upon by other researchers and scholars for future investigation. It is an interesting product of the digital world. Because of the vast ground that needs to be covered, an inventory of sites is an archive of intellectual content and virtual information about physical places rather than a more traditional archive of things. The CLUI web information is companion to information located at a physical place, but the web information is easier to access. These kinds of sites – an archive companion - did not exist in the non-digital world. Their presence has expanded research opportunities in a positive way.

Web-based photo storage sites and video sites also offer a powerful research tool for site-based research. Photos storage categories offer multiple ways to access information. A building, for example, might be listed by name, place name, type, or event. A search for photos in these categories will bring forth these and other photos that have also been classified in this manner. Photo sequences are useful in understanding a person's encounter with a site. And the number of photos of a site (by multiple authors) suggests importance or appeal. An example is Cadillac Ranch (depicted in Figure 9 above). The number of photos available on the web is reflective of the interest of travelers and therefore its importance as a landscape feature. Repetition of a photo marks important or typical views of the site. Views in other, atypical, directions at Cadillac Ranch give us an understanding of the whole site through the eyes of its visitors.

The use of blogs for place-based research gives us a way of finding out about the culture of a place through descriptions. The comparison of sites visited in Figure 9 above offers insight into the journey as seen through the eyes of the traveler. Here, the 13 traveling groups can be considered the subject of design and their interests can be charted and analyzed. Blogs with oral histories, such as those used to create the analytical map in Figure 10 include people's memories of places. The event is featured in this kind of blog entry. The place as the setting is remembered as an important aspect of the place. The written memories together with photos are located according to the town plan, giving dimension to the memories allowing the place to come alive.

CONCLUSION

We have discovered positive uses of social media in place-based research, but it is important to remember that this kind of information is only one form of measurement of a place – it is a way to gain insight into the qualities and life of a place. In conjunction with information that is more analytical in nature, a balanced view of a place is gained, one that conveys the scale and physical dimensions of a context and one that also depicts the culture and nature of a place.

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[2] Amboy's heyday as a town and travel stop paralleled the rise of automobile travel – from the late 1920s until the late 1960s. In 1972 the opening of Interstate 40 north of Amboy impacted traffic through the town.
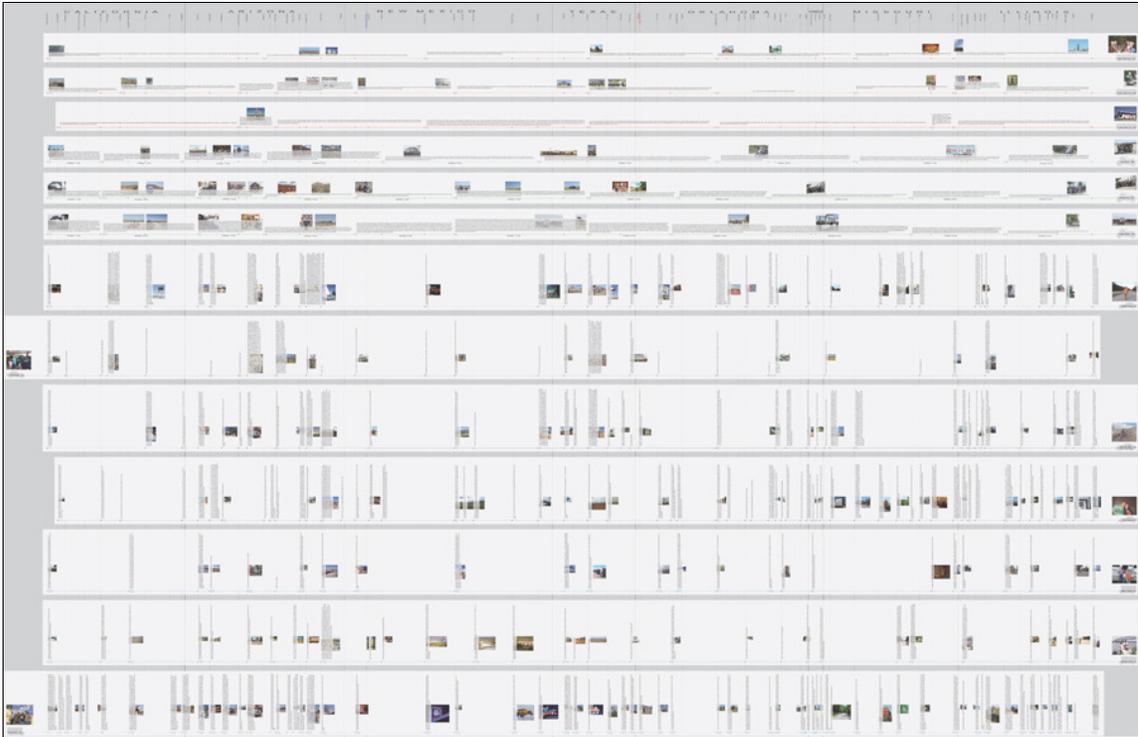
Figure 9: Charting Route 66 travelers' itineraries: motorcycle, automobile, bus, RV (Sam Wood 2008).
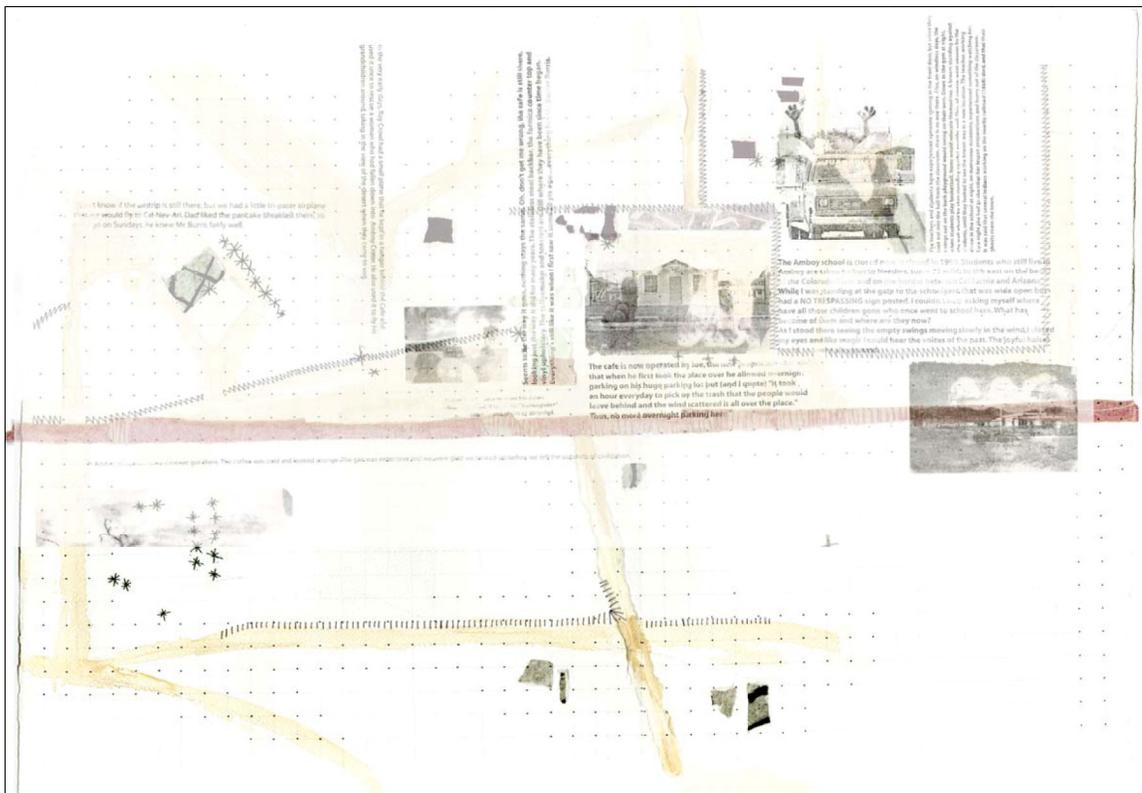

Figure 10: Memories represented in photos and text of events located on a plan of Amboy California (Emma Jesko)

The difficulties of social media as a basis for research arise in the lack of accountability for the information. Written forms of social media include lore, opinions, reminiscences, or information that is not checked for accuracy. But information from these sources can be used when checked against official sources. If the objective of using social media is to understand the setting and the culture of a place (the sense of the place), then fact checking would include the accuracy of the physical context. And written forms of social media can then be contextualized through photos and drawings of the place. The problems of personal memory, lore, and inaccuracies we found using social media are similar to problems encountered in site-based observational research. The use of blogs for finding data, for example, is not unlike the use of eavesdropping or reliance on personal interviews. In both cases, the setting and cultural understanding will be important background information but the facts or specifics about location, etc., drawn from memory might be best understood in relation to more factual information.

Another problem of inaccuracies of information can come from amateurs' websites. But some of what is found on these sites is invaluable – historical photos or personal reminiscences, for example, offer a hyperlocal view of information not found in other sources. Local community newsletters from amateur historians are another method of finding hyperlocal information. We were surprised to discover that many age groups were represented in social media. Because we were working with Amboy, a ghost town, and Route 66, the subject of many memorable encounters, there were oral histories recorded from elders as well as impressions of travelers from many age groups. The presence of family travel blogs suggest also that although we are currently working within a certain demographic range, we can anticipate an expanded demographic sampling from social media in the future.

Our initial conclusions about the use of social media for place-based research are that the method of working and checking information needs to be well established in order for the research to be of value. We have continued the Route 66 research but have expanded it by beginning to look at other towns in addition to Amboy. The specifics of methodology might change from site to site, but certain kinds of conclusions can be drawn. Official map, data, and historical information sites are primary sources for base information. Blogs, photo storage, and video sites are useful but depend on the author's knowledge and accuracy and information will need verification for it to be of any use. But all in all, social media gives us a way into observational research not unlike the methods used on site that are well established.

The use of digital information from the World Wide Web can be compared with other methods of observational research. And there is one more parallel that is important to note. Observational research as it was developed in the latter part of the 20th century assumed that local application of design principles might include universal premises and beliefs, but would only be successful if the local condition was recognized. We face the same challenge in using digital media for place-based research. But social media and hyperlocal sources focus on specifics and as such offer more than they detract in place-based research. The advantage using the web for information gathering is in the opportunity for many authors and many voices. The more voices that exists the easier it is to get at accurate information. In the current semester, internet sources are being used to study a socially vibrant area of Cape Town South Africa. In this context the role of many voices and the power of the internet to hear them is even more poignant; with so many residents of the city displaced during the apartheid era, memory of places they were forced to abandon is often the only record of settlements. In order to understand the social and cultural context, we depend on sources that have collected the stories of residents and their daily lives. Without this, we would know the place only through the physical context – the colonial architecture and the topography.[3] To a great extent using the web for research about Cape Town's settlements and Amboy's former settlement are similar. In both cases the web is used to support the virtual context held in memory and exhibited through stories as a means of really understanding the tangible and physical context. It is interesting to note the parallels of virtual worlds – the virtual world of the web to gain access to the virtual world of memory - to understand the qualities of a settlement.

Using digital information sources in the spirit of collaboration and sharing follows the non-hierarchical nature of web use amongst the emerging generation of scholars. This way of working is not uncommon in design inquiry and research. If this mode of research is considered in balance with the need for authoritative and official voices, we approach a form of scholarship and practice that is both accurate and inclusive. This presents an optimistic and interesting future for place-based research. Given the accessibility of sources and ease of information gathering on the web we have, as a premise, considered the use of a range of sources to be a reality for future scholarship.

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Amboy California: http://www.rt66roys.com/ (note: links to related blogs and reminiscences about Amboy)

Center for Popular Memory: http://www.popularmemory.org.za/index.php?option=com_frontpage&Itemid=1

Department of the Interior, Bureau of Land Management, California: http://www.blm.gov/ca/st/en.html

Flickr: http://www.flickr.com/

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[3] See, for example, the Center for Popular Memory's website: http://www.popularmemory.org.za/index.php?option=com_frontpage&Itemid=1

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National Parks Route 66 Corridor Preservation Program: http://www.nps.gov/history/rt66

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