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ABSTRACT

The aim of this paper is to present a pilot mobile technology walking tour created in Venice, Italy within the context of creative tourism. The paper will focus primarily on the workings and user studies of the History Unwired (HU, see http://web.mit.edu/frontiers) project in Venice, Italy and pull in some authenticity research and other projects related to mobile technology in the tourism sector. From the outset, we recognize the potential incompatibility between the natural, palpable beauty of Venice and cutting edge mobile technology. We examine mobile media as a means of creating interactions between tourists and locals and as a means of activiting travelers as co-producers of travel experiences. This paper is being written at a time in which mobile technology content development is in its infancy, and bound to evolve in many directions, especially in the tourism industry. Thus we could say that merging rather than opposing cultural tourism studies into mobile technology development, might create an important impact on this nascent field.

Keywords

Mobile media, mobile technology, cultural tourism, creative tourism, walking tour, mixed-reality, augmented reality, gaze, experience economy, back stage.

INTRODUCTION: MOBILE MEDIA FOR TOURISM INDUSTRY AND

Mobile technology media for tourism is bound to grow as an industry and field of study in the next decade. Mobile technology media for tourism is bound to grow as an industry and field of study in the next decade. In 2005, Apple sold 40 million iPods (Pegoraro, 2006) and guide book publishers such as *Rough Guides*, *Fodor's*, and *Lonely Planet* began producing free Pod Casts (posting audio files to the Internet for download to portable devices such as iPods) of walking tours and city guides. Commercial audio guide producers such as Soundwalk and Talking Street are rapidly expanding their lines of audio walks delivered over cell phones, CD players, and MP3 players (such as iPODs) which cost anywhere from $6-30 USD. These audio walks direct users around specific neighborhoods for anywhere from one to two hours and point out historical as well as popular places of interest. Soundwalk's producer describes their approach as a combination of "*cinéma vérité* and a guided tour*.*" (Karp, 2006) While not all tours have such a strong narrative approach, the most popular tours cited in a recent *Wall Street Journal* article all emphasize less-traveled, more local areas of tourist destinations. This confluence between mobile technology and a search for off-the-beaten-path areas corresponds to general trends in cultural tourism. This paper examines a body of research from a three-year study in Venice, Italy in which a locally-focused, documentary mobile media project was developed and then tested on over 200 cultural tourists. The paper describes what is driving tourists out of the front stage, what they are looking for, and ways that the backstage areas can be authentically represented.

Tourism in Venice—Moving Off-the-Beaten-Path

Going off-the-beaten-path is not a new phenomenon, but one that does seem to be accelerating, especially in cities such as Venice where space is confined and tourist visits have shown a sharp increase in the last 40 years.

In 1960 less than a million tourists visited Venice and the city only got really crowded during high season (summer and Christmas). Over the next 40 years various factors such as low cost airlines, cruise ship development, and promotional packages have brought larger and more constant streams of tourists to Venice. By 2004, 13 million tourists visited Venice (Comune di Venezia, Ufficio Statistica e Ricerca, 2005). Estimates show that tourists use 34% of the public space in the historic center of Venice, while 49,3% is used by residents, 12,6% by outliers and the 4,1% by students. But if we consider

only the more touristy areas, percentage of tourists' use reaches 56,9%, a percentage that augments to 66,9% during the more crowded months between July and October (Indovina, 1998).

This concentration of tourists in certain zones leads to various negative experiences such as - crowds, staging, price-gouging, local resentment, etc. Thus, tourists, especially cultural tourists who tend to value atmosphere and local culture (Richards, 1996), are searching out more local, participatory experiences outside of these main tourist zones. Richards and Wilson (2005) point out, as more and more tourist zones employ "the same formulaic mechanisms, their ability to create 'uniqueness' arguably diminishes, often assumed to lead towards the 'serial reproduction' of culture, 'placelessness', non-places, or McDonaldisation." (Richards and Wilson, 2005: 2.) Debrais (1995) echoes this sentiment when he notes that the tourist areas of Venice are a permanent theater where fake figures perform, like in Disneyland. Mobile media walks leading visitors to peripheral zones and insider perspectives can then be linked to this quest for uniqueness among cultural tourists. Yet beyond the relief of escaping crowded zones, the next challenge is give tourists means of fully enjoying marginal areas of cities. To explore such activities we turn to the tenets of creative tourism.

Tenets of Creative Tourism

ATLAS defines cultural tourism as the movement of persons to cultural attractions away from their normal place of residence, with the intention to gather new information and experiences to satisfy their cultural needs (Richards, 1996). Within this general category of cultural tourism, Richards and Wilson set apart creative tourism as "not just spectating, nor just 'being there", but reflexive interaction on the part of tourists. This is an important difference between creative tourism and classic models of cultural tourism, which at their most refined, often involve groups of tourists traveling with an expert guide who interprets the culture the tourist is seeing." (Richards and Wilson, 2005: 10) Creative tourists are, thus, less interested in travel experiences that are built as a "staged experiences" by tourists operators that, as gatekeepers, decide what tourists have to experience, and how they have to interpret what they are experiencing (O'Dell and Billing, 2005). As Richards et al. underline, there is an increasing employment of creativity in tourism products to meet these specific consumer needs.

Creative tourism is growing as an emerging tourism alternative to mass and cultural tourism. Leaving creative spaces for the consumer means leaving to the tourist the possibility to determine his own perspective and actively create his own travel narrative. Creative tourists are thus active participants in the cultural experiences, working closely with locals to understand new concepts and gain new skills (Richards 2000, Richards and Raymond 2000, Richards and Leslie 2005). This can take the form of learning Tango in Buenos Aires, perfume making in Provence, or even following a Pod Cast through a South Bronx neighborhood guided by the voices of the Tats Cru graffiti artists.

Within mobile media productions the levels of user participation can vary. In the following discussion, we will examine the participatory potential of mobile media as exemplified in the HU project in Venice. We will pay particular attention to the intersection between the production techniques used to make mobile media and the bases of successful creative tourism.

THE HISTORY UNWIRED WALKING TOUR AND RESEARCH METHODOLOGY

The HU walking tour is a multi-year investigation of the narrative uses of mobile technology in historic cities. In 2004-2005 a team of researchers from MIT in Cambridge, MA, and the University IUAV of Venice, Italy, worked with local artists, citizens, and academics to develop a walking tour through Castello, one of Venice's more hidden neighborhoods, delivered over location-aware, multimedia phones and PDAs. Devices were offered free of charge from a distribution point in front of the Biennial Contemporary Art Exhibition, a bi-annual exhibit of contemporary art that attracts 256.000 visitors from June to November. These visitors come from all over the world, yet almost all of them (90% from HU surveys) cite culture as a top reason for choosing a travel destination. The cultural tourists taking the tour were both visitors and local: 76% were tourists, 22,5% were local people living in Castello or in other neighborhoods of the city, and 1.5% did not indicate their place of origin.

Two main versions of the HU tour were released: the demo version on March 2005, and the experimental version on September 2005. A preliminary survey was conducted with a group of 15 users after the demo version of the tour. This survey revealed basic impressions about the voices used in the tour, the pacing, and the effectiveness of the audio and video mixture. The experimental version was then tested on 200 users during a two-month trial period; over half of these users filled out extensive surveys (102). The primary objective of the survey was to investigate the users' satisfaction with the mobile guide, both from a technology and a content perspective. An additional goal of the surveys was to identify users' behavior and motivation in traveling and cultural consumption. The survey was comprised of 57 structured and open questions, in Italian or English, and was given at the end of tour. Four main areas composed the survey: judgment of the tour's content and technology; familiarity with new technologies; cultural tourism behavior; and demographic information.

In addition, the HU team conducted 25 individual interviews with tour participants. These interviews were aimed at gaining a more in depth understanding of users' satisfaction with the tour content, probing the specific moments, interactions, and stories that made the experience powerful. Results of the surveys and quotations from these interviews are inserted into this paper, when appropriate.

Content development

For six months the History Unwired team walked and talked with local people in the Castello neighborhood in an effort to find strong characters and interesting, unexplored spaces for the production. In the end the team ended up with a 3 km loop, guided by five local craftsmen/artists. Each character speaks for about 15 minutes along one segment of the course. The characters are as follows:

1. Dario Pinton, art critic and director of the guided tours inside of the Biennale Art Exposition;

2. Marco Forieri, called "Furio", ex-flour mill representative and saxophonist of the Venetian popular music group Pitura Freska;

3. Fabio Fornasier, second-generation glass blower and youngest master of the Murano School of Glass;

4. Alberto Garbizza. a fisherman who practices small, traditional fishing and is also a folklorist. He is a gifted tenor and loves to sing around his neighborhood.

5.Gianfranco Vianello, called "Il Crea", gondola' builder, winner of twelve Historic *Regattas*, and potential rebuilder of the "Bucintoro", the majestic boat of the Doge of Venice.
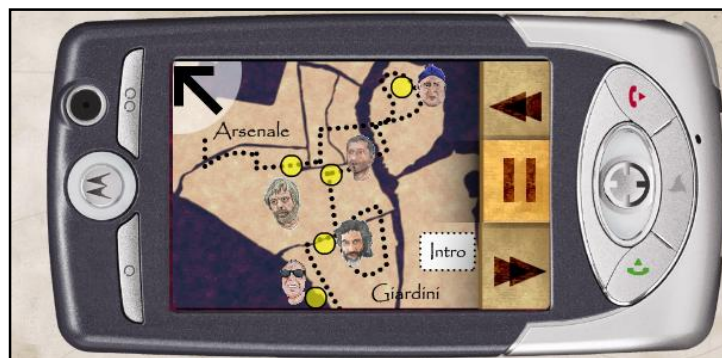

**Figure 1. A screen of the interface: at any moment, visitor can
look at the map and choose to listen one of the five characters**

The voice of a guide, Michael, the creative director of HU, helps with directions for the orientation along all the duration of the walk. Sometimes he also integrates his discourse into the characters' speeches. Collateral characters who live along the tour also appear. As a rule of thumb, HU only includes local people and businesses that the characters pointed out and had specific narrative reference to: the owner of a bakery, a old glass blower, a clerk, a retiree. But most of the content came from the five main characters, talking about the architectural and urban landscape, and presenting their personal perspective of the challenges of creative work in a city so entrenched in tradition, but changing so quickly (population decline, environmental change, and growth of mass tourism). The veracity of such content was researched for historic accuracy, but the main aspect is the authenticity of their "lived experience" and in their open offerings to tourists.

HU surveys found that this perspective was quite successful. 87% of those who took the tour responded "yes" to the question of whether the "media was successful in making you feeling intimate and connected to the characters". 90% of users similary responded positively to the question of "does this media form make you feel immersed in the environment?"

Technology and Software

The software and hardware used to create mobile media walking tours can vary depending on the target audience and commercial or experimental nature of the tour. Possibly the simplest devices to work with are iPods. These devices come in a variety of models, all with an intuitive interface and some with ability to play both audio and video files. iPods are not yet location aware and also lack interactive touch screens. Cell phones, on the other hand, have a much broader range of

functionality and are owned by far more people (812M cell phones sold in 2005 v. 40M iPods (Pegoro, 2006).) The majority in production today have the ability to play audio and video files (Motorola has integrated the iTunes player into some of its phones) and play Flash files (interactive multimedia files.) More advanced cell phones are on a par with and even act as low-end PDAs (personal data assistants,) which are like handheld computers in that they can word process, connect to the internet, and have large storage capacity. The most sophisticated handheld devices are specifically designed for game play or multimedia tours, such as Antenna Audio's proprietary GPS-enabled multimedia players. HU was tested on Motorola a1000 smartphones and Dell Axim X50 Pocket PC's. Whereas both devices are essentially small computers, the processor speed and multimedia integration were much stronger on the Dell Pocket PC, so most of user tests were conducted on these devices.

The content is a series of forty 1 or 2 minutes Flash files running inside a Flash-based user interface. HU used Flash because it is adapts easily to different screen sizes and types of devices. Also, Flash files are designed well for downloading, in case that the content is eventually streamed to users via the Internet or broadband phone lines. Finally such a modular construction allows for the development of branching narratives that determine the next file to load based on user input. The forty flash files link to each other, six short videos, and a virtual house tour. They also were programmed to interact with Bluetooth beacons that activate two art pieces along the course.

In the future, most phones should be able to run such content with little problem, similar to how early Internet computers were slow or could not display some web pages, and now most can.

Use of Physical and Social Surroundings

The narrative structure was designed to make use of the rich visual environment in Venice and the local landmarks (both architectural and human) in the neighborhood. To make this possible, HU fluidly integrated handheld content with one's surroundings. This was done in two ways:

First of all, most of the tour is audio-based with directions provided by a narrator, rather than an on-screen or printed map. Of the approximately 70 minutes of content developed, 50 minutes were audio-only, 12 minutes were video, and 8 minutes were interactive features. Thus, the visitor's attention is mostly directed at towards the visual environment, rather than the device.
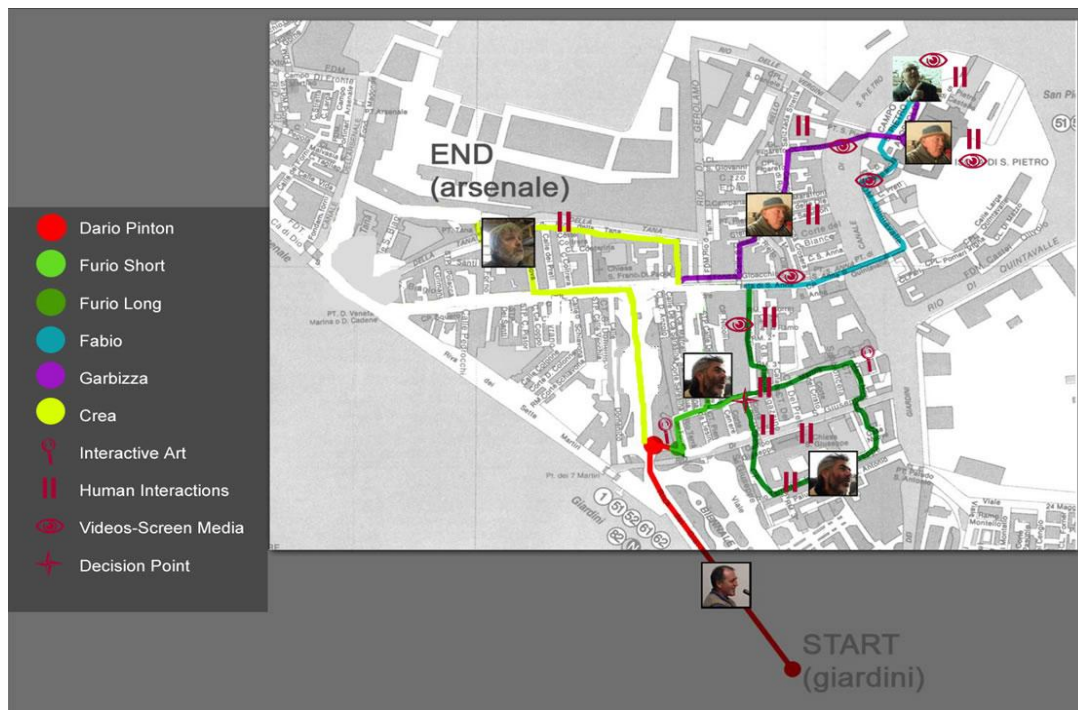

Figure 2. The narrative structure of the tour is mostly linear. Facultative digressions constitute on interactive art installation, suggested interactions with local people, videos and, one point, a longer version of the tour.

Secondly, HU's interface easily "goes away" to not interfere with the physical experience. First of all, users have a neck strap, so the device could dangle while they walk or be put in their pockets. Secondly, every function was no more than three clicks (finger presses) away and the buttons were designed to be operable with an adult finger rather than a cumbersome stylus.

At any given moment, the user is free to pause, fast forward and rewind the tour presentation by tapping on the appropriate control panel button. In this manner, the visitor can easily jump out of the tour experience and talk with local or enter local establishments.

The focus of HU, as stated above, is to encourage vistor participation in local culture and not just guide them from one canned experience to another. That is, HU tries to design media that not only reveals a local perspective on place, but actually led to increasingly meaningful tourist-host interaction. This is done, primarily, through the design of the media that positions the user as a co-producer of the media experience. This co-production of the media was done by users in four different formats: audio-visual landscapes, documentary video, semi-private clubs, and character encounters.

CREATIVE TOURISM AND HISTORY UNWIRED MEDIA EXPERIENCES

Truth of Spaces: Audio-Visual Landscapes

In our surveys, users were asked to try and remember their favorite content from the tour. In general, users most often recalled stories that tell of turning points in characters' lives. Users tended to remember stories telling of events that happened where they were standing, and especially stories that encouraged users to do something where they are standing.

Figures 3a and 3b: Well to the left has one blank face. Furio alerts walkers to the fact that the Austrians chiseled away the St. Mark's lion from many facades during their occupancy of the city in the 19ᵗʰ century. On top of the well, Furio points out some of the new insignias of the city, graffiti and how these were important symbols for gaining his identity as a musician and new thinker of Venetian history. Furio then invites users to grab a piece of chalk and add to the graffiti collage atop the well.

For example, at one point in the tour, the musician Furio, takes walkers into the public housing in the Castello neighborhood.. Here he describes how the housing becomes more block-like and plain. There are no great palaces here, as in the historic center of Venice, only replica apartment buildings made from the Marghera (the industrial area of the city) mud. One could say that this is authentic Venice where local people live, but without much mutual understanding. Only when Furio projects his boyhood fantasies onto the visual landscape does the experience begin to feel complicit. He recalls that as a teenager this was the cool part of Venice, because it looked like any old neighborhood on the mainland. This perception is echoed by the visual landcape. Then Furio starts pointing out all the alterations that happened in the neighborhood, from wells that used to dip into the deep aquifers and still bear the depth markings, to lions (symbol of Venice independence) that were chiseled off of well heads by the Austrians during their occupancy of Venice. He then points out that competing symbols are still raging in the form of graffiti on the wellhead (fig. 3). He then invites users to use the chalk that sits atop the wellhead to add their own declarations of communist or soccer allegiance.

Such implication of the user into the dialogue and daily drama of the neighborhood is a major component of creative tourism. "Rather than having their passive gaze pre-determined by the homogenised spaces or bubbles of the tourism industry, the creative tourist can determine their own perspective and actively create their own travel narrative." (Richards and Wilson, 2005: 11.) This call to be involved and pick up the narrative in real space, can also be triggered by certain types of video.

Video Revelations

One of the goals of the HU project and creative tourism is "reflective interaction", both between tourist and mobile media and between tourist and locals. We can start by thinking about all the limitations to such and ideal state of interactivity. In her paper, "The Mutual Gaze", Darya Maoz says, "The mutual gaze makes both sides [tourist and local] seem like puppets on a string, since it regulates their behavior. It results in mutual avoidance, remoteness, and negative attitudes and behavior." (Maoz, 2005: 224). Such a gaze is based on a mixture of fear, condescension, and mistrust. Maoz and other authors (MacCannell, 1973, Boorstin, 1961) offer little positive evidence of how to move away from the mutual gaze.

In creating a interactivity with a glass blower and his art/craft, a simple view into the backrooms would prove insufficient. Throughout Venice, hawkers offer "free tours" of the famous glass factories in Murano island, and on these tours often take visitors "special backrooms" to see the secrets of Murano glass blowing techniques. The glass blowing is often "an artisan forming a figurine by dabbing on different colored blobs of glass; rarely can one expect to see actual glass blowing." (Davis and Marvin, 2004: 173.) And even on special back room tours, the story of the craft and the glass blower's backstory are difficult to grok before the next group shuffles in. HU goes after a more personal understanding of glass production, by spending months with one of the five characters, Fabio, including filming him from the start to the end of a work day, traveling with him, going to his exhibits, and getting to know his colleagues. Yet, in the audio portion of his tour, as with other characters, Fabio would point out places and memories in those places, but without too much spontaneity and candor. This spontaneity emerged in two videos created about him.

Figures 4a and 4b. Two Shots from the videos of Fabio's artistic glass. To the left, Fabio reads to us from his journal in his studio. The image to the right shows a portion of a glass shower curtain adorned with small breasts.

Fabio begins his portion of the tour, discussing his contentious entree into the world of glass blowing. He talks of how he was always a little rebellious, skipping school and running around the very ground the audience is walking on. But in his efforts to become rebellious with glass blowing, Fabio has run into the art community and admits along the walking tour, that he is not sure where crafts stop and art begins. The audio is able to reveal some of his hesitancy, but only with video it is possible to see his face in moments of tension that are inexpressible. Like cinema, mobile technology documentaries can reveal the inner workings of people, which words can't express. A short video at this point chronicles Fabio's new, erotic glass blowing work. In the video users see the insecurity and conflicts of Fabio's persona in a recent exhibit. Fabio ends his tour recognizing his debt to Murano traditions and then leaves users with a video at the doorstep of another glass rebel: the only glass blower to move his factory to the historic center of Venice. This video is an introduction to the glass work of Orlnado Zennaro and an invitation to enter his studio which is right in front of you. This studio is normally not open or even known to normal travelers. 17% of users cite this video and the surrounding sequence as one of the most memorable moments of the tour. This type of exploration of the conflicts and characters behind the ubiquitous glass blowing industry, is provides a platform for entering traditional crafts from a more sympathetic and insider perspective. Tourists might be able to tour a glass factory and even see the glass blown, but through such on-site video and compelling characters, they report a notable insight into the lived experience and personal comprehension of how this craft is practiced today in Venice.

Human Encounters and Location-Based Media

While discussions of landscape and video may reach a personal, interactive level, a true dialogue between tourists and locals only emerges through human interaction. In user surveys, two main human interactions where reported by users during the tour:

- a basic level of interaction, as asking information about the orientation of share impressions with other testers of the tour met during the walk (referred by the 4% of the users).

- a deeper level of interaction, referred to meeting the characters along the tour or entering in some of the public or semi-public spaces suggested by the five local guides (16% of users).

Within this second instance, an analysis of how deep this interaction reached in a semi-public and in a public space is

here provided.

One of the challenges in promoting off-the-beaten-path tourism is not to turn the few remaining local spaces into tourist havens. Goffman first defined back stage areas a special areas, uncontaminated by tourism marketing and presentation (Goffman, 1959). Dean MacCannell (1973:592) nuances Goffman's appeal by noting, "It is always possible that what is taken to be entry into a back region is really entry into a front region that has been totally set up in advance for touristic visitation."

Figure 5. A view through the gate of the "Club Anziani Castello Est" shows a mural on the wall and card tables on the patio. To the right is a nursery school and to the left is the Club and bar. Users viewed a video of a typical day at the club while looking at this liminal space.

Castello and many historic cities are full of semi-private clubs where locals gather to talk, drink, play cards, etc. In incorporating these back spaces into the user experience, HU had to find a way to keep these areas natural and unrehearsed. HU worked closely with two of semi-private clubs, "Circolo Podistico Odeon" and "Club Anziani Castello Est", to create opportunities for users to understand these spaces and interact with their members. The more successful of the two was the "Club Anziani Castello Est", a rather large card/billiard club for retirees.

The club is introduced during a segment of the tour guided by the musician Furio. He points out that the club lies next to one of the few nursery schools in the area. Viewers are afforded a liminal view of both the club and the nursery school through the gate to the courtyard. They then look onscreen for a video chronicling one club member's typical day. The video takes users into many of the interior spaces, conflicts, and opinions of the club members. After the video users are invited to go into the club to have a drink and say hello to characters.

While only 5% of users went into the club, 19% recalled this video as a highlight of the tour. Several users refer in the open interviews that they found a nice synergy between seeing people playing cards in reality and seeing a video that talks about some of the rivalries and running jokes behind the games. This instance of mobile media is worth pondering given the history of "gaze" in tourism studies. The original concept of the tourist gaze as put forth by Urry "is the equivalent to looking at the mad behind bars'' (Urry 1992:177) Here the tourist gaze through the bars of the club and see men playing cards. The media offers a degree of distance, but more the distance of fantasy. This is puzzling, because the video places the tourist both inside and outside the space.

This unusual middle ground that mobile technology affords, between entering and not entering, between knowing and gawking has been discussed, to a degree by MacCannell (1973). In response to Goffman's idea that tourists should penetrate back regions for more authentic experiences, MacCannell's defines a range of front-back stages. Stage 1 is Goffman's front region, the kind of social space that cultural tourists attempt to overcome and get behind. Stage 2 is a front region with some décor to appear as a back region (i.e., a restaurant with old, yet mass-purchased mementos.) Stage 3 is a front region that is extremely convincing in its portrayal as a back region. Stage 4 is a back region open to outsiders, such as an open house in a school. Stage 5 is a slightly altered back region, like a kitchen hastily cleaned for a surprise visitor. Stage 6 is a true back region, hosting unadalterated local life (MacCannell, 1973.)

The Club Anziani that the tourist encounters on the tour is normally a stage 6 region. The HU team made minimal efforts to prepare club members to receive tourists. However, once a user views the video, the space is transformed into a stage 4 or 5 region. The fact that the video exists implies some forewarning of a visit from outsiders. In practice, though this forewarning did little to entice users to enter the club or for club members to go out of their way to welcome visitors. The Club, somewhat sadly, remains a stage 6 area, as few users actually entered the club to greet and chat with members. This standoff is somewhat sad because members of the club revealed a certain sense of isolation that may have been broken by thoughtful visits from outsiders. In interviews with members of the club, one retired man said, "We don't see so many tourist around here. We feel isolated. Viewing someone new makes us feel more alive." (author interview, 2005) How to improve this standoff between outside observation and insider interaction is taken up in the final section of this paper.

Character Interactions

6% of the people referred to have seen or spoken with one of the two main characters living along the walk (Garbizza and Dario), and 2% had met the art critic, Dario, who works in the Biennale. Such serendipitous encounters could be very interesting for future studies of such mobile media. For instance, certain characters could have their own mobile devices with them that will alert users on the walking tour, when characters are in the vicinity. If characters were really involved in the media experience, they could be paid to be on call at a certain point on the tour to interact with tourists. Such connived interaction might be a great boost for tourist and for locals who enjoy interacting with outsiders.

Figure 6. Some characters met tourists along the walk. This type of serendipity is also important area for future studies of mobile media in tourism.

POSSIBLE FUTURE RESEARCH

This paper discussed how mobile technology production techniques can position travelers as co-producers and creators of local interactions. A more extreme version of this co-production role can be found in media forms that are entirely created by users such as blogs and the Yellow Arrow System. Yellow Arrow advertises itself as the largest public art project in the world. They sell stickers with a unique code that when entered into an sms (cell phone text message) and sent to the Yellow Arrow home number, automatically generate replies with a message from the owner of the sticker. Messages vary from silly banter about the meaning of the place to poetic stories from the sticker's location.

The History Unwired media might similary be similarly opened up in specific spaces along the tour for "open source" input. For instance, before entering the bakery, it can be possible to see a dynamically updated list of user comments on the bread and other products. Or after the video of the Club Anziani one could read about other users' experiences inside the club. A filtering, search, and/or rating system could be devised (similar to Slashdot.com) to allow users to pull the content they want. But such a system seemed a little cumbersome to build for the project, and, more importantly, potentially could interrupt rather than complement the content of the tour. What seems most feasible for future development is a system that would allow user input and chatting online **after** the experience. There are many models for how this could be done, but new mobile technologies such as life blogging (posting pics and text to a blog from the user's phone) show a technical path to allow users to continue the experience of the tour online afterwards and possibly create a community of commentators and activists. Such a system is under development by the authors of this article for a future project in New Orleans.

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