Interaction Design and the Critics: What to Make of the "weegie"

Mark Blythe
Department of Computer
Science
University of York
York, UK
mblythe@cs.york.ac.uk

John Robinson
Department of Electronics
University of York
York, UK
jar11@ohm.york.ac.uk

David Frohlich
Digital World Research Centre
University of Surrey
Guildford UK
d.frohlich@surrey.ac.uk

ABSTRACT

This paper describes the development and evaluation of "weegie" an audio-photography desk featuring sounds and images inspired by the Govan area of Glasgow. It was intended to be an interactive artwork that would challenge negative preconceptions about the area. The paper describes two techniques used to consider the extent to which the piece achieved these aims. The first technique is the "personal meaning map" and taken from museum studies. The second is cultural critique drawn from the arts. Building on Gaver's [24] strategy of using cultural commentators for 'polyphonic' assessment it considers the extent to which perspectives drawn from the humanities and the arts can be useful in evaluating design. It argues that a more rigorous understanding of critical theory is necessary to the development of interaction design criticism.

Categories and Subject Descriptors

H5. Information interfaces and presentation H 5.2 User Interfaces. Theory and Methods

Keywords

Multi-media art, User Experience, Evaluation, Interpretation, Methods, Personal Meaning Maps, Reviews

1 INTRODUCTION

As computing technology moves from our homes to our pockets and everywhere else, the study of Human Computer Interaction [HCI] has had to widen its focus considerably. There have been turns to fun and enjoyment [e.g. 25, 8] emotional design [35] experience design [e.g. 14, 30], culturally situated design [10] critical and reflective design [e.g. 1, 17, 38] technology for social action [15] and aesthetics [e.g. 26, 11]. Increasingly then HCI has become concerned with social and cultural theory. For the most part the influence of the arts and humanities has been at the level of theory but increasingly there are calls for the appropriation of

methods [27, 39, 24].

A special interest group for CHI 2007 noted that while usability can be evaluated through various metrics such as measuring time on task, these measures miss the point of technologies designed for "having experiences, expressing identity, for flirting and arguing and living" [29]. It has been argued that methods designed to evaluate usability and task efficiency were "never intended to inform or underpin the design and evaluation of media rich social technologies" [3] and that there is a need for "lightweight, iterative UX evaluation" [41].

This paper describes the development of an interactive installation and reports on the strategies which were explored to evaluate it. The installation was created using audio-photography. The audio-photo desk was designed by David Frohlich and developed by John Robinson, Enrico Costanza and Tom Clancy [22]. It recognizes printed photographs that are placed on it and plays associated sound files. By mixing *audioprints* as different elements of a set, users can create different versions of an interactive narrative. Audio photographs have been seen as a new medium: their effects are quite different to those of visual photography and movies, looking at still images while hearing soundscapes can be extremely evocative and powerful [21].

The focus of this project was in using audio-photography as an artistic medium to capture and evoking the experience of a particular place and people. A context for this was offered by the Govan Initiative in Glasgow. The Govan Initiative commission re-generation projects and are interested in promoting the area's rich cultural heritage. Mil Stricevic and Esme McLeod of Pavillion Design Glasgow were briefed to deploy audio-photography in the creation of a public work of art based on materials collected in the Govan area of Glasgow.

2 AIMS

This project was a part of LeonardoNet, a UK led network which was set up to define a programme of research in "culture, creativity and interaction design" in order to consider HCI "as it pertains to the theory, design and application of interaction technologies" (31). Network members were invited to bid for limited funding to design and build interactive artworks. A bid was submitted to use audio-photography to create an engaging interactive artwork based on Govan.. The project aims were to create an engaging interactive artwork and to challenge preconceptions about Govan which, in the past, have been quite negative. These aims were particularly difficult to assess using traditional HCI evaluation techniques. Although usability was an issue measures such as time on task or accuracy were not appropriate to gauge the success of something claiming to be art.

How to evaluate the work, or – what to make of the weegie, became the main focus of research with regard to the installation. This paper reports two strategies for evaluating the work. The first "personal meaning maps" attempted to address the extent to which the piece succeeded in changing preconceptions about Govan. The second, reviews by critics, attempted to address the extent to which the installation succeeded as an interactive artwork. The term "installation" is controversial in the history of art and it is used here solely for want of a better one. Since Marcel Duchamp placed a signed urinal in a glass cage art has been defined as that which gets put into art exhibitions [28]. "Weegie" was accepted and exhibited at the LUV gallery in Glasgow but its status as art object is, of course, debatable. It was this uncertainty which motivated the recruitment of critics for the second part of the evaluation.

3 THE DESIGN PROCESS

The start up meeting between researchers, designers and members of the Govan initiative was held at Rennie Macintosh's House for an Art Lover. The lead designer, Mil Stricevic, made a presentation about his work with Pavillion design. He had created a number of public installations and noted that sometimes people called what he did art. There was a degree of uncertainty then about how the final designs might be categorized. This uncertainty seemed in keeping with the research network's interest in the blurred boundaries between art and science in interaction design. Nevertheless the stated aim of the project was to produce something that could be considered an artwork.

We showed the designers disparate examples of audio photography and discussed the potential for it to be used as a medium for artistic expression. A project manager for the Govan Initiative described the Govan initiative and its aims in relation to regenerating the area. Govan is an area which had historically served shipyards (see figure 1), now all but one of these had closed down and the area had become associated with urban deprivation, however, new investment from IT companies and property developers was changing the landscape.

Fig 1. Govan Shipyards photo by Ben Cooper licensed under the Creative Commons.

We then presented "pastiche scenarios" based on the Alan Bleasdale drama *Boys from the Blackstuff* [6] which indicated how the audio photo desk might be used to tell dramatic stories about a particular place. The following section describes these initial scenarios to indicate the ways in which the final design changed and developed from early ideas.

3.1 Pastiche Scenarios

Pastiche is a form of writing that borrows quotations, style, character, dialogue and plot from well known sources to place it in a new context; pastiche scenarios draw on literary and popular culture to create rich scenarios for discussion at early stages of design [9]. *The Boys From the Blackstuff* was a BBC drama set in Liverpool during the 1980s and one of the stories featured security guards at a shipyard. The dialogue and stories from this episode were adopted for the scenario below:

"*An old man watches people move photographs and objects around the desk. When the space is free he walks over and picks out a black and white photograph of the dock.*

He hears the sounds of a busy port: engines chugging, heavy machinery, ship horns, sea gulls, waves. He picks out a piece of dirty, frayed cardboard and places it on the desk. He hears the sounds of ship rats chattering and scuttling. [...]He notices a circular security guards badge and places that in the middle of the desk. Dixie's monologue begins.

> *Dixie: I hadn't worked there that long, it just seemed like a lifetime. It was the kind of job where the only friends you had were the kind that wanted favors. Aye. and they were no kind of favors at all. The port wasn't quite dead yet, despite the efforts of all concerned. We'd lost the security contract with the shippin' line. The fourth in eighteen months and the last one on the docks. My boss didn't care, he had his police pension, but I –*

The old man pulls forward a photograph of men sitting round braziers, he hears voices talking, he brings forward pictures of various famous vessels, some trigger commentary, others ambient sounds."

[Pastiche Scenario based on 6]

The Boys from the Blackstuff is a bleak but humorous social commentary on the decline of industry in Liverpool. It was adapted to the Govan location in these scenarios which went on to describe material that dealt, like the Bleasdale drama, with corrupt dockers and security guards in a warehouse. The scenario featured objects as well as photos triggering audio files; the old man listening to the stories turns out to have been a dockside security guard who takes offence at the representation. There is a facility for him to record an alternative soundtrack to the image.

The scenarios were intended to indicate the way that images, sounds and stories might be brought together to make a dramatic and atmospheric soundscape which would convey some of the experiences of shipyard life. General information and ambient sound sat alongside particular stories like a robbery. Individual personal histories were mingled with fiction to make a provocative and hopefully emotionally powerful narrative.

It was decided early on that re-configuring the software so that an audio photo desk could recognize objects and creating a facility for record as well as playback was beyond the scope of the project; but the scenarios along with examples of abstract audio photos indicated some of the potential of audio photography for creating atmospheric and dramatic narratives.

3.2 Sketches

After these initial discussions Mil and Esme] recorded ambient sounds and interviews around Govan. Working with different community groups and individuals, they collated a 'first draft' set of 'Govan Tales'.

The Govan Initiative project manager suggested drawing on a reminiscence group where older residents of Govan would meet and discuss the past. Mil attended one such meeting but found that someone else was already making a film about the group. They came to the conclusion that the story of the decline of Govan's shipyards had already been told in many forms – television and radio documentaries, oral history archives, novels and dramas. In an interview conducted with Mil after the launch he noted that he did not want to create "a nostalgia-fest" but rather to focus on contemporary life in Govan.

Stories that centered around declining shipyards as in the Bleasdale pastiche were then rejected because they had been told too often. Neither did such stories challenge existing preconceptions of Govan. So a very different approach was taken to the one envisaged in the initial scenario, although the intention to create an atmospheric and dramatic representation of place remained.

During early meetings the audio-photo desk was discussed a Ouija board where voices of Glaswegians, in local slang '"weegies' are heard. The ouja / weegie pun was emphasized in early discussions of where the installation should be housed. One of the empty warehouses on the dockside was discussed as a suitably atmospheric venue, figure 2 shows one of Mil's first sketches for the piece set in such a building:

Fig 2: "Weegie" Initial sketch by Mil Stricevic

When it became clear that it would be very difficult to get permission to use one of these buildings, a gallery in Govan was chosen as an alternative venue and the designs were modified accordingly (see figure 3). A circular table draped in black cloth was designed to be enclosed by scaffolding and canvas so that visitors would have to enter a closed space to interact with it.
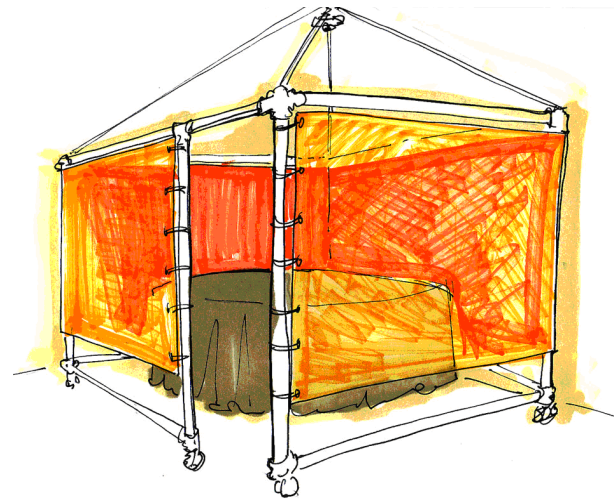
Fig 3: Initial sketch of the "weegie" installation by Mil Stricevic

The audio-photo desk software was reconfigured for the "weegie" installation. Unlike the original audiophoto desk, this was circular to facilitate group interactions. Further changes were made so that when images were pushed to the centre of the table volume would reduce and increase when pulled towards the user.

3.3 The Final Design

Mil and Esme created six sets of three audio-photographs; each set featured a commentary, ambient sound and music. The sets were designed to be played together but it was recognized that different combinations of image and sound might produce serendipitous effects. Figure 4 shows one set of "The Reform Club" as an example.

Fig. 4. "The Reform Club" Pub Culture, Community Life http://www.pavillion.org.uk/pages/weegie.html

The first photograph was accompanied by the ambient sound of someone playing the gambling machine pictured [quite serendipitously the recording made on site featured someone winning the jackpot]. The image of the ringed fingers was accompanied by the landlady of the club discussing her fears about the impending smoking ban. The following is a transcript of part of this audio file:

> "And I don't go there with the smoking ban. Twenty eighth o' March I got order [,,.] through the Scottish Executive office – no smoking. I'll lose a lot of trade. You oughta seen 'em here yesterday with all the young 'uns in watchin' the footbae. All smokers. Can you imagine me going oot and saying to Jimmy – Jimmy put that cigarette oot? I get fined two thousand pounds if he dis'nae do it! I can't – I'm not dictating to some youngster that you - he'll turn round and tell me where to go won't he? Got to go outside! It's terrible though. Somebody'll take 'em to the European Court anyhow.

Ever heard of Freedom of speech? Well, I'll take it, I'll go the whole road with Jock McConnell. He's no dictating to me. I've been smoking for thirty years and I ain't stoppin' now. I'm seventy. […]I don't drink. Do you like a drink? I don't], I like to smoke. I don't drink at all. Never drunk. Am I missing anything? No. I don't like it…. I like ma tea."

The image of the cigarette in the ashtray was accompanied by the song "King of the Road" which contains the line "I ain't got no cigarettes".

Other sets featured: a model boat builders club, a country and western music venue, a family run Italian coffee bar, an amateur photographer and BAE shipyards [for further details see www.pavillion.org.uk]

5 EXHIBITION: THE LUV GALLERY

The "weegie" was exhibited at the Linthouse Urban Village [LUV] gallery in Govan.

Fig. 5. The LUV gallery in Govan

A promotional flier read:

"From individual personal histories to a tour of the shipyard, by way of fiction, local politics, new architecture and the impending smoking ban, its all here – come and have a go!"

The gallery curators planned to show the installation for two weeks and the reactions from the Govan residents who had an opportunity to try it were very positive.

The first visitor to the art gallery to interact with "weegie" worked in the Govan area. He said he was quite fond of Govan and recognized many of the locations in the photographs "*I pass by it [the pond in the photograph] I walk though the park on the way to work every day.*" Looking at a photograph of the country and western music club he noted that he had spent many a happy evening there.

Fig 6. Visitor using "weegie" at the LUV Gallery in Govan

It became difficult to hear him above the noise of the sound file so the researcher told him that if he pushed it towards the centre of the table it would get quieter (see figure 6). Trying this he seemed quite surprised and impressed when it worked.

- Oh! How on earth is that done?

- How would you think it's done?

- It's something…something magic about it…God knows.

Users of the audio-photo desk are often puzzled about how it works, assuming that there is some kind of sensor in the picture itself [21, 31]. In fact image recognition software is triggered when a white rectangle is detected by a camera above the desk. This non-obvious kind of interaction can be very engaging [Ibid].

Technical problems meant that the installation had to be disassembled before it completed the envisaged two week exhibition in the LUV gallery. "Weegie" seemed to be somewhat temperamental: it would work perfectly for long periods of time and then suddenly crash. It was assumed that there must be bugs in the programme and despite best efforts from the project team they could not be solved in time to keep to the LUV gallery schedule. Assuming that the problem was in the code many hours were spent labouring on the computer below the "weegie" table. However, we eventually discovered that the problem was at once more and less complex than a bug.

One of the photographs depicted a collection of framed photographs hanging on the wall. These had been taken by an amateur photographer and depicted Govan changing through the ages. It was not until later that it became apparent that this photograph of photographs had been causing the problems. There were a large number of small white rectangles in the photograph of the photographs and one of them had a best match with a "shut down" command in the file. The software was working perfectly well, finding best matches as it was designed to do. The problem was one of both technology and content.

The problem was solved by removing the set of photographs and "Weegie" was then moved to the Responsive Home at the University of York for modification and further evaluation. The Responsive Home features a number of demonstration technologies for the home and is used for training, education and research. One room was given over to "weegie" and the gallery set up was recreated as faithfully as possible.

6 FIRST EVALUATION: PERSONAL MEANING MAPS

It is well recognized in studies of exhibits that visitors are inclined to be polite when researchers ask them what they think [19]. This is a problem in the evaluation of exhibits when there are educational goals that might or might not have been reached, but here researchers can ask concrete questions to establish levels of understanding. It is even more of a problem where there are no educational goals. "Weegie" was conceived as an interactive installation: its purpose was not to educate although it was part of the Govan initiative which sought to change perceptions of what Govan was like. Joe Cutting, a Leonardo-Net member and design consultant for museums suggested using "personal meaning maps" [20]. Here participants are asked to list as many words as they can which they associate with a key word or phrase. It has been used for pre and post museum visit interviews and has been useful for getting people to articulate their perceptions of particular subjects [Ibid].

An open day for the Responsive Home [37] was taken as an opportunity to show groups of visitors the "weegie". The installation was set up with its orange canvas surround pinned to the walls of the room but it was not possible to use a round table so some of the initial design was lost. However, the orange room felt separate from the rest of the house in a similar way that "weegie" felt like a separate area within the gallery. Seven groups of two or three people and one group of ten were shown the piece by a researcher. Before and after viewing "weegie" they were asked to list words they associated with Scotland, Glasgow and Govan. This proved an effective way of eliciting responses to the piece, the participants not only offered word associations but also stories and recollections. One group of representatives of a forum for older people, for instance, was particularly interested in the set where a Govan café owner talks about his Italian heritage. The older people in this group noted that Italian prisoners of war sometimes settled in the countries where they were taken prisoner and went on to discuss their own war time experiences.

To the researcher's surprise the participants were all enthusiastic about "weegie" despite having little to no knowledge of Govan. There was a good cross section of ages from seventeen to eighty and one group were based in Edinburgh. The group of ten were part of a programme where A level students come to see the kind of work done in the computer science department of the University, the rest were visitors to the Responsive Home and perhaps therefore particularly interested in developing technologies, which may have biased them in favor of new experiences of technology.

The personal meaning maps [PMM] are represented by the word clouds in figures 7, 8 and 9. These were made by assigning font sizes that increased with the frequency that the word was mentioned by the groups. The smallest font indicates that the word was mentioned in only one of the groups, the largest indicates that it was mentioned in six of the groups.

Fig 7: PMM for "Scotland" Black – pre "weegie", blue (and underlined) post "weegie"

Before seeing "weegie" the words most frequently associated with Scotland across the group were: hills, castles, dialect, haggis, rain, bagpipes, tartan, drinking, lochs, shortbread, scenic, kilts, holidays, Billy Connolly, wildlife, rugby, friendly and cold. There were other single group mentions like Prince Charlie, Nessie and snow. In the main then, there were associations of landscape and cultural icons.
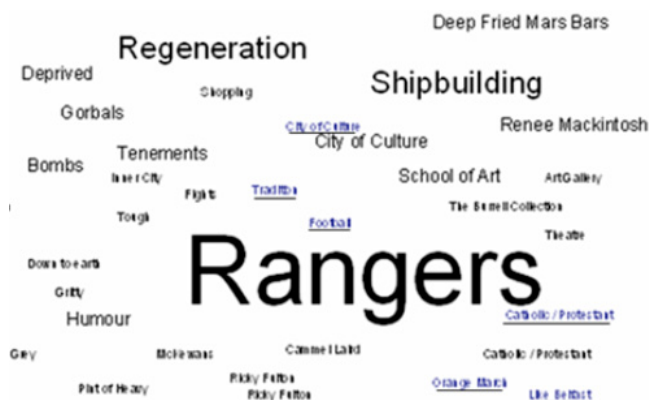

Fig 8 PMM for "Glasgow" Black – pre "weegie", blue (and underlined) post "weegie"

Glasgow was most frequently associated with: rangers, shipbuilding, regeneration, the school of art, city of culture, Renee Mackintosh, deep fried mars bars, tenements, gorbals and bombs. [two of the groups saw weegie in the days immediately after the terrorist attack on Glasgow airport]. Other words were only mentioned by single groups e.g.: the Clyde, shopping and theatre.

Fig 9. PMM for "Govan". Black – pre "weegie", blue (and underlined) post "weegie"

There were very few pre "weegie" associations with Govan as most of the participants had never heard of it. The most frequent words that came up for the two groups that knew it were: rough, ship building, deprived, tenements, working class, humor and community. There were also several words mentioned by only one group e.g.: Rab C. Nesbit, bad language and friendly. Rab C. Nesbit is a sitcom character who is a bar room philosopher and alcoholic, though a well loved comic creation the character represented some of the associations, such as social deprivation and problem drinking, that the Govan initiative was keen to displace.

There were very few new associations for Scotland and Glasgow after seeing "weegie" but those that were mentioned are interesting. Post "weegie" associations with Scotland were far less concerned with landscape and cultural icons like tartan and kilts. These included: Europe, cultural identity and confusion; new associations with Glasgow included: tradition, city of culture [emphasized after "weegie"] and protestant / catholic divides. The new associations following "weegie" were mainly focused on Govan itself.

The most frequent new associations with Govan were: country music, shipbuilding, community, clubs, international, traditional, old fashioned, smoking, pride, café culture, working class, reminiscence and pathos. Some of these reflect the subject matter of "weegie" directly. For example, a number of photographs were accompanied by country and western music which is very popular in Govan. This came as something of surprise to the York participants and it was the most frequently mentioned new association. Other associations are reflections on the tone of the piece "reminiscence" and "pathos". One elderly participant noted it was about people "living lives and looking for meaning". There was a diverse range of single group responses: greasy spoon, regret, story telling, tough, vibrant, alive, insular, peaceful, melancholy, warmth. Some of the responses seem somewhat contradictory e.g. vibrant and old fashioned. This range of responses suggests, perhaps, that "weegie" is a rich piece of work open to multiple interpretations. It also suggests that the participants engaged with the piece and the general enthusiasm with which it was greeted cannot be explained solely in terms of being polite to the researcher.

To an extent the before-after differences in the meaning maps are entirely predictable and unsurprising. Before participants used

generic cultural knowledge to respond, afterwards they responded directly to what they had seen and heard. However, many of the new associations were positive and few were concerned with deprivation and the negative associations that the Govan initiative were keen to challenge.

Yet the aims of the installation were not merely to add to or change perceptions of Govan but rather to create an engaging installation. Sengers and Gaver [39] and Gaver [21] argue that cultural commentators like documentary makers and screen writers can be useful in assessing technologies in the home. Their non-native perspective offer divergent or 'polyphonic interpretations" which can be useful when a piece is outside of traditional usability evaluation criteria [24]. With this in mind reviews of "weegie" were solicited from critics with expertise in different areas of cultural commentary. Documentary film makers work within strong traditions of detached observation and neutrality. Because the project aimed to create an engaging artwork it was felt that we should at least attempt to evaluate the extent to which this aim was met. While the PMM study focussed on user experience the next evaluation was concerned with critical appraisal. For this reason critics who deal explicitly in making value judgements about cultural products were recruited to write reviews of "weegie". .

7 SECOND EVALUATION: REVIEWS
Reviews were sought from a theatre critic, a radio and television critic and a comic book critic. All three reviewers had had their reviews published in print and online media. They were shown "weegie" and asked to imagine that their review of it was for an arts magazine. The arts magazine was imaginary and it is possible that very different reviews might have emerged depending on where they were to be published. However, the reviewers were all briefed to be as critical as possible and assured that the more damning the review was the more helpful it would be .

7.1 Theatre Reviewer
Cecily Boys and Derrol Palmer write reviews for the British Theatre Guide. Their review was on the whole very positive, describing the piece as overall "funny and engaging without ever being pretentious". The review begins:

> "Walking into a small room draped in orange plastic, placing photographs on a piece of green baize and waiting for a sound clip to be played does not sound like the ingredients for an enjoyable and creative experience. However, an hour and half later we emerged still discussing our 'Guess The Sound Game' and 'One Picture To The Sound Of Another Game', enjoying the surprising possibilities that '"weegie"' has to offer."

The review highlights the interactive nature of the exhibit contrasting it with more traditional gallery displays:

> "A traditional gallery presents isolated and untouchable images in frames offering little more than an appeal solely to visual sensibilities"

"Weegie" is seen as a "clear advance on the dead images" found in traditional photographs and paintings. It is interesting that this review explicitly highlights the difference between purely visual

aesthetics and what has been called aesthetic interaction [36]. These reviewers played with different combinations of pictures. Although the sets were placed together in groups of three they enjoyed experimenting with different configurations. The landlady talking about the impending smoking ban is taken out of the original context of her club and played against the sound of rain from another set, her disaffection is "somehow more poignant in the loneliness of the rain."

The review emphasizes shared experience and criticizes the Responsive Home installation where the table was against the wall for creating "stasis" when so much of the experience was dynamic. The review also focuses on the theatrical elements of its staging in a critique of the "set":

> Although screening off the windows creates
> a luminous orange glow the audience does
> not feel fully inside the set.

The original setting in the LUV gallery enclosed the audience more fully and it is interesting that these reviewers picked up on the compromises of the University presentation. Other notes of criticism were that the camera above the table was clearly visible, this was like a "magician revealing his trick" again in the LUV gallery the camera was much higher up, taped to scaffolding and not immediately visible.

This kind of critical engagement with the piece was of far more practical valve than the personal meaning map evaluations. Although the meaning maps indicated how the content was interpreted this did not provide the kind of critical evaluation which would be of direct use in design. Aspects of the university installation which detracted from the experience could be changed as a result of the critique. The critique then, was of practical value even though the perspective was one drawn from drama and theatre rather than HCI

7.2 Film and Radio Reviewer

Ben Sawyer is a Press Association writer and reviews radio and television programs for various publications. Again his review is positive, on the whole, describing "weegie" as "an interesting experiment in documentary storytelling". Sawyer emphasizes the playful elements of the piece and notes that controlling the sound by moving the pictures is like "giving the listener a virtual sound mixing board to play with." Other studies of audio-photography have made similar analogies such as "DJing with photos" [31]. The review goes on to explore some of the "questions" that the piece raises "a picture of a jukebox summons music, but who chose the song and why remain a mystery" untold stories "lurk in the gaps".

The orange canvas was also singled out for mention in this review. Here it is seen to give the piece an "industrial feel" that is appropriate to the shipyard depicted. The language of this review is rich and evocative, the "barricade of orange sheeting" serves to "isolate the audience from the world". This is a very far step from the objective tone of a usability evaluation but the genre of the review places specific attention on the "weegie" as an art installation:

> "The photographs often have an effectively
> rough and ready feel to them, with shadows
> and light blurs in place of artfully
> composed shots. People are almost
> completely absent from the images, with
> little attempt made to put faces to voices,

> which seems apt given that sound and
> vision are so distinct in the audio
> photography medium."

There is an explicit concern in this review to make sense of the relationship between form and content. The focus on one particular aspect of the content: the absence of faces, leading to a perhaps important insight about the nature of the medium. Though sound and image are tied together this offers the possibility not only of unity- in the presentation of ambient sound recorded alongside the image but also the possibility of surprise and incongruity with the addition of other sound elements added later on.

Sawyer's review also makes critical points. He notes that the use of the Elvis Costello song "Shipbuilding" with an image of the shipyards was a little too "on the nose" drawing attention to itself as something mixed in later rather than recorded on site. One piece features a "local poet" doing a recitation, this is "the only speaker mentioned by name" and this feels odd. Sawyer speculates that if the rest of the material had been more of a mix of artistic and documentary material it would have felt more appropriate. The piece then felt slightly inconsistent, however this inconsistency also demonstrated the potential of the medium of audio-photography.

Again, these criticisms address both form and content that a traditional usability analysis world miss.

7.3 Comic Book Reviewer

Chris Power is a reviewer for the industry webzine Silver Bullet Comic Books. Again his review was on the whole very favorable although he did make critical points. Comic books are often referred to in academic reviews as "sequential art" and the order in which the audio-photos were to be put onto the table was particularly interesting for this reviewer. On the back of each photograph was a description of the set e.g. "Model Boat Club" with numbers from one to three. Power's review describes placing them on the table in this order at first but then experimenting with new orders that seemed to make sense of the pictures and create "the story that he wanted to hear". Following the order suggested by the labels occasionally caused disruption. Placing one card in a loud zone on the table triggered the sound of an espresso machine which was "a painful experience" that "destroyed" the "effect of the presentation". The review ends suggesting that the soundscape should be designed so that the order of panels would not matter and that any combination should produce "pleasant effects".

Despite this painful experience the review describes being "pulled into the world". When the espresso machine picture had been moved to decrease the volume:

> the reviewer actually felt that he was sitting
> in a café listening to an Italian living in
> Scotland. […] the miniature boat club
> actually did generate a feeling of sitting
> down by the water relaxing and talking
> about a favorite hobby.

Power also noted that the interaction with panels could be somewhat cumbersome, putting a hand over a picture would stop the sound file from playing and the movement of cards was too sensitive.

Each of the reviewers drew on the domains they usually reviewed in order to make sense of "weegie". Boys and Palmer discussed

the "set" and the "audience". Sawyer focused on diegetic and non-diegetic elements of the sound track and criticized predictable choices of music. Power referred to the images as "art panels", a panel being an individual frame in a page of a comic book. Each of these perspectives offered different insights as well as criticisms but all of them could be described as "good notices".

8 DISCUSSION

A search in any quotations site on the term "critics" will indicate quite quickly that artists, writers, actors, designers, politicians and the other groups routinely subjected to criticism do not like it much. The composer, Sibelius pointed out that no-one has ever built a statue to a critic; the actor, Kenneth Tynan defined a critic as "someone who knows the way but cannot drive the car"; in 400 BC the painter Zeuxis notes that "criticism comes easier than craftsmanship" [40]. The writer and comedian Stephen Fry asks what decent person would want to be critic and imagines a dead one trying to justify his life at the Gates of Heaven.

'And what did you do?" asks Saint Peter. "Well," says the dead soul. "I criticized things." "I beg your pardon?" "You know, other people wrote things, performed things, painted things and I said stuff like, "thin and unconvincing", "turgid and uninspired", "competent and serviceable,"…you know'[23, p 412].

St Peter's response is left to our imagination. The study of HCI has in some senses always been a form of criticism, but this criticism has been based on scientific method and lab based experimentation. Although ethnography has been used to offer qualitative accounts of HCI in the field the kind of subjective opinion which forms the basis of a critical review may be considered all but useless.

A traditional usability analysis of "weegie" would not have been sufficient for its evaluation because it was not concerned with the accomplishment of a specific task. However, there were clearly important usability issues to address because, when initially set up in the LUV gallery, it did not perform reliably. Once the problem with a particular set of photos had been addressed, as discussed earlier, other usability problems remained. There was, for example, a delay of two to three seconds between the photograph being placed on the desk and the sound track starting. The comic book reviewer felt that this was an area for improvement, but for two of the theatre reviewers waiting and anticipating was an important part of the experience. Sengers and Gaver expected that the use of evaluations drawn from the humanities and the arts might well produce contradictory accounts and argued:

"While the results may conflict, the responsibility remains with the designer to weigh the results and to justify his or her eventual conclusions."

[39 p.105]

The reviewers did not agree entirely in their interpretation of the piece there was a consensus that it was a rich and engaging work. More importantly the reviews recognized the potential of audio-photography as a medium for artistic expression.

However, the journalistic style of criticism here would be considered unsophisticated by academics engaged with literary and critical theory. Journalistic criticism is concerned with recommendation - is this book worth reading, should we go and see that play? In the nineteen sixties these kind of judgements were themselves subjected to a radical critique. What were they other than expressions of the taste of a particular class? This argument found empirical support in surveys of French taste conducted by the sociologist Pierre Bourdieu who argued that taste is, for the most part, a function and expression of social class and education [12]. Marxist, feminist and post colonial critiques of the literary canon led to a range of analytical and interpretive strategies [18]. This theoretical upheaval resulted in the establishment of several competing schools which drew on other areas of study such as anthropology, sociology, linguistics and psychoanalysis. The best known of these, at least in HCI, is semiotics (e.g.16) but there are a range of other interpretive perspectives which are increasingly relevant to interaction design. Books introducing critical theory are generally arranged by perspectives such as: Formalism, Structuralism, Post – Structuralism, Marxism, Psychoanalysis, Feminism, Reception Theory. Each of these perspectives, or at least, proponents of each of them, had at one time or another expected to triumph over all of the others. In practice critical theory often borrows from more than one perspective [18]. The study of interaction design is perhaps equally eclectic drawing on many disciplines, however much work will be necessary before critical theory can be properly incorporated into design.

9 CONCLUSION

The writer and critic John Berger noted that photographs do not preserve meaning "Only that which narrates can make us understand."[5]. Audio-photography allows for the possibility not only of the preservation of the visual but also the sonic scene before a camera. Susan Sontag makes an important distinction between private and public photographs: the private photograph remains within its context, Berger explains that if you have a photograph of Peter on your wall you are not likely to forget who he is; the public photograph, however, is torn from its context, becoming a "dead object" which can be used arbitrarily [Ibid]. Roland Barthes makes a similar point about the meaning of press photographs which are never solely visual but intertwined with text such as the caption, title or the article it appears in [4]. Berger argues that public photographs are used in a "unilinear way" to repeat what is said in words or illustrate an argument. Memory, he argues, is not unilinear but made up of "an enormous number of associations all leading to the same event"[5: p 293]

Audio-photography opens photographs up to new kinds of "text" in the form of audio narrative and the preservation of the sonic scene which accompanies the visual. It offers the possibility of a range of associations and perhaps the possibility of a new kind of photographic memory. The initial scenarios envisaged something as powerful as Bleasdale's *Boys From the Blackstuff*. While 'weegie' was certainly not as dramatic as that, the range of responses in the personal meaning maps and the reviews indicate at least the potential for audio-photography to be used as an artistic medium.

The multi-perspective evaluation reported here indicated that reliability is as important in a gallery installation as in any other computer system. When "weegie" was not working it was just a table surrounded by orange canvas taking up a lot of gallery space. However, what could be described as a usability problem in terms of delayed feedback could also be interpreted as an important feature of the experience of the installation, two reviewers made a game of guessing the soundtrack that would accompany each photograph. While aspects of usability were important heuristics developed for the accomplishment of task would not have been appropriate as they would fail to allow for a diversity of responses.

Using more than one method of inquiry has been useful in evaluating interactive art in previous studies [e.g. 7, 27]. Clearly journalistic criticism cannot be the sole basis for a design program, however an engagement with critical theory may go some way towards creating a vocabulary for the new areas of design that HCI is becoming engaged with

Sengers and Gaver [39] point out that interpretation has always been central to HCI though expert evaluations based on, for example, Nielsen's heuristics [34] are far more systematic and, arguably, repeatable, than a review drawn from the arts. Nielsen [33] aroused a great deal of ire when he declared that 99% of flash on web site applications was bad. As Nielsen entered debates which were at least partly concerned with aesthetics he aroused some very palpable anger. One satirical news report noted that Nielsen had now branched into cultural usability and "declared the letter C unusable" [13]. This indicates at the very least strong disagreement and diverse responses to particular evaluations and suggests that single perspectives are not adequate to accounting for visual aesthetics, interaction aesthetics or multi-media installations.

Gaver [21] argues that commentators outside of the field of HCI can be useful in offering divergent perspectives or polyphonic perspectives in evaluations. Engagements with cultural commentators of the kind described in this paper are capable of informing design in terms of evaluation. However, the journalistic review is a relatively superficial form of criticism, the form is popular and helps inform public opinion about what film to see and what car to buy, but there are more rigorous forms of criticism available which may also be of value in HCI. Elements of cultural and critical theory have already made an appearance in the HCI literature, most notably, those drawn from semiotics. Yet many other perspectives are available and may prove equally useful. Critical and cultural criticism is a diverse field where multiple perspectives are in constant dialogue. Perhaps this is what a genuinely interdisciplinary HCI would look like.

10 ACKNOWLEDGEMENTS

REFERENCES

1. Agre P. (!997) Toward a Critical Technical Practice: Lessons Learned in Trying to Reform AI in Bowker, G., Star, S., Turner, W., and Gasser, L., eds, *Social Science, Technical Systems and Cooperative Work: Beyond the Great Divide*, Erlbaum, 1997

2. Bakhtin M. M., (1984) *Problems of Dostoevsky's Poetics*. Ed and trans. Caryl Emerson. Minneapolis, University of Michigan Press.

3. Bardzell J., Churchill E., (2007) From HCI to Media Experience: Methodological Implications. Proceedings of HCI 2007 Lancaster, UK

4. Barthes R., (1961) The Photographic Message. *A Barthes Reader*, edited by Susan Sontag. Hill and Wang New York 1982

5. Berger, J. (1978) Uses of Photography in John Berger *Selected Essays*. Edited by Geoff Dyer. Bloomsbury 2001

6. Bleasdale A. (1990) *Boys from the Blackstuff*. Studio Scripts. Edited by David Self. 1990 Stanley Thornes Ltd Cheltenham

7. Blythe M. Reid J., Wright P. and Geelhoed E. (2006) Interdisciplinary Criticism: Analysing The Experience Of Riot! A Location Sensitive Digital Narrative. *Behavior and Information Technology* Volume 25, Number 2, Number 2/March-April 2006, pp. 127-139

8. Blythe, M. A., Overbeeke, K., Monk, A. F., & Wright, P.C (2003) Eds. *Funology: From Usability to Enjoyment* Kluwer, Dordrecht

9. Blythe M. (2004) Pastiche Scenarios in More Funology Interactions XI.5 - September / October, 2004

10. Bell, G., Blythe, M., Gaver, W., Sengers P., Wright P.(2003): Designing Culturally Situated Products for the Home: CHI 2003 *New Horizons*. Extended Abstracts pp1062-1063

11. Bertelsen O., and Pold S., (2004) Criticism as an Approach to Interface Aesthetics. Nordichi 04 October 23-27 pp 23-32

12. Bourdieu, P., (1986) *Distinction: a social critique of the judgement of taste.* (Routledge and Kegan Paul, London).

13. Daniels U. S. (2008) Jakob Nielsen Declares the Letter "C" unusable. As Always, He's Right. http://uspressnews.com/articles/1101 Accessed 26.8.2008

14. Davis M. (2003) Theoretical Foundations for Experiential Systems Design. ETP 03 2003 Berkeley, USA ACM pp45-52

15. Dearden A., & Walker S. (2005) (Eds) Special Issue of Interacting with Computers: Designing For Civil Society - volume 17 (1),

16. De Souza C.S (2005). *The Semiotic Engineering of Human-Computer Interaction.* MIT Press

17. Dourish P., Finlay J., Sengers P., and Wright P. (2004) "Reflective HCI: Towards a Critical Technical Practice." Extended Abstract. Vienna, Austria CHI-2004, April 2004

18. Eagleton T., (1990) *The Significance of Theory*. Basil Blackwell Ltd. Oxford

19. Falk, J., & Dierking L., (1992) *The Museum Experience* Whalesback Books, Washington DC

20. Falk J., Moussori. T., and Coulson D., (1998) The effect of visitors' agendas on museum learning. Curator. 40/3: 211-218

21. Frohlich D. (2004) Audiophotography: Bringing Photos to Life with Sounds. : *Computer Supported Cooperative Work* , Vol. 3

22. Frohlich D.M., Clancy T., Robinson J. & Costanzo E. (2004) The audiophoto desk. *Proceedings of 2AD*: Second International Conference on Appliance Design (p139).

23. Fry S. (1992) *Paperweight* (2004) Heinemann, London

24. Gaver W. (2007) Cultural Commentators: Non-native interpretations as resources for polyphonic assessment. *International Journal of Human Computer Studies*. 65, 4. p.292-305

25. Gaver, W. (2001).Designing for Ludic Aspects of Everyday Life. *ERCIM News No. 47*, October. http://www.ercim.org/publication/Ercim_News/enw47/gaver.html. Accessed 26.8.200

26. Hassenzahl, M. and Tractinsky, N.(2006): User experience -- a research agenda. In *Behaviour and Information Technology*, 25 (2) pp. 91-97

27. Hook K., Sengers P., Andersson G., (2003) Sense and Sensibility: Evaluation and Interactive Art. Proceedings of the SIGCHI conference on Human factors in computing systems Ft. Lauderdale, Florida, USA pp 241 - 248

28. Hughes R., (1991) *The Shock of the New: Art and the Century of Change.* Thames & Hudson Ltd; Rev Ed edition

29. Kaye J., Boehner K., Laaksolahti J., Stahl A., (2007) Evaluating Experience Focussed HCI CHI 2007 SIG April 28-May 2. San Jose CA

30. McCarthy J. and Wright P. (2004) *Technology as Experience*. MIT Press

31. Leonardonet.   http://www.leonardonet.org/leonardonet.php Accessed 26.8.2008

32. Monk A.F. & Lindley S., (2004) DJing with Photos. HCI 2004, Leeds, British HCI Group, 179-180.

33. Nielsen J., Flash 99% bad. Alertbox October 29 2000 http://www.useit.com/alertbox/20001029.html   Accessed 26.8.2008

34. Nielsen, J., and Molich, R. (1990). Heuristic evaluation of user interfaces, *Proc. ACM CHI'90 Conf.* (Seattle, WA, 1-5 April), 249-256.

35. Norman, D. (2002). Emotion and design: Attractive things work better. *Interactions*, ix, 4, 36-42.

36. Petersen M.G., Iversen O.S. Gall Krogh P., Ludvigsen M., (2004) Aesthetic Interaction – A Pragmatist's Aesthetics of Interactive Systems Proceedings of the DIS 2004 Cambridge, MA, USA Pages: 269 - 276

37. Responsive Home. Centre for Usable Home Technology. University   of   York. http://www.cuhtec.org.uk/resphome.php   Accessed 26.8.3008

38. Sengers P., Boehner K., David S and Kaye J. (2005) Reflective Design in proceedings of Critical Computing Aarhus Denmark

39. Sengers P., & Gaver B., (2006) Staying open to interpretation: engaging multiple meanings in design and evaluation. DIS 2006 PA, USA Pages: 99 - 108

40. Thinkexist.com.   Search   on   "critics" http://thinkexist.com/search/searchquotation.asp?search=critics&q= Accessed 26.8.2008

41. Väänänen-Vainio-Mattila K., Roto V., senzahl M., (2008) Now Let's Do It in Practice: User Experience Evaluation Methods in Product Development. CHI 2008 Florence, Italy

42. Wright P. and Finlay J. (2003) British HCI group international workshop "H*CI, the Arts and the Humanities*" - York 21st July King's Manor, York, England.

43. Wright, P.C. and McCarthy, J. (2005) The value of the novel in designing for experience. In Pirhonen, A., Isomäki, H., Roast, C. and Saariluoma, P. (Eds.) *Future Interaction Design*. Springer. pp. 9-30.