

# Notes on Designing for Crowds workshop; 17/5/10

## I.

In our workshop we examined a series of settings featuring crowded spaces: football fans in pub before a match, people watching skiing and ice hockey events in bars, large interactive multi-touch displays in public venues, design concepts for creating social interactions in busy crowded environments such as train stations, and a collaborative augmented reality exhibit in a gallery. Our focus spanned a variety of degrees of 'crowd styles', ranging from significant amounts of verbal and physical collective action by sports fans with no other obvious social association (i.e., strangers), through to leisure or tourism settings where strangers coordinated shared interaction with technology, handing over systems fluidly, yet engaged largely in extended interactions with members of a local (known) group, through to very busy transient settings where visitors to them observed a studiously maintained orientation to anonymity (e.g., train stations).

Each of our settings were linked in several ways. Here I'll try to describe the ways in which this happened, and the kinds of topics that became pertinent as the workshop progressed.

## II.

1) Initially we examined the physical and verbal interactions of groups of football fans in a pub, before a match event. They were engaging in singing, gesturing, playing with shared objects and interacting intimately with the opposition. We explored practical, mundane physical and verbal ways that the sense of the 'crowd' is constituted, particularly exploring appropriateness and the expectations that are tied up in crowd interactions.



In particular, we focussed on intimate physical and verbal interactions between opposing groups, where strangers within the crowd created social situations with one another in which they could interact, such as an instance where supporters approached a small opposing group of supporters in a physical and verbal exchange (pats on the head, arms around shoulders, etc.). This kind of interaction in particular was an expected and appropriate form of interaction for the groups of fans we were examining (Scottish national team fans, who maintain and indeed self-police a purposefully 'friendly' collective persona). These expectancies were also tied up to the physical location in which social interactions took place, the known-in-common history of the fan group, etc. We also noted that there is uncertainty in the embedded and outnumbered group of opposition supporters in the pub – it is not necessarily clear how appropriate their presence is and how other groups will react / behave to them.

2) Next we looked at two other instances of sports spectators, however this time they were in the act of spectating an actual event (rather than hanging around in the run up to an event as with the first segment of the workshop). In this instance, there was less a rowdy crowd and more a (mixed) group of

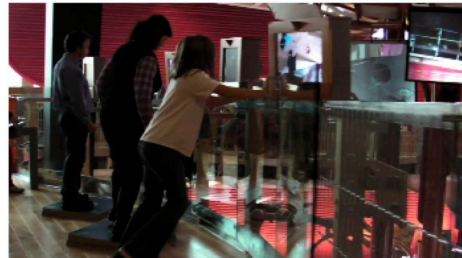


spectators watching an Olympic Skiing event at a bar. In this sequence we looked again at the nature of the supporters' verbal and physical interaction around the screen, particularly the way in which appropriateness (again) formed an important feature of interactions between those watching together. One of the instances we focussed upon was a slalom skier falling on the course resulting in success for the team the spectators were supporting. Some spectators were very visibly celebrating with gesture, cheering etc. What interested us at this point was what was seen as appropriateness of the extent of this celebration by some spectators. We saw how they calibrated their own visible demonstrations of celebration interactionally, locally with others. So for example, over-the-top celebrations were retracted and transformed into slightly less obvious demonstrations (since celebrating the failure of an opposition skier could be seen as shameful – indeed we do not see similar reactions in the crowd on TV although the absence of something is problematic to detect). This led us to discuss the possibility of similar 'shameful' demonstrations happening on the 'other side of the screen', i.e., at the actual event, however of course given the context of the situation, it would perhaps be 'unsporting' for a spectator local to the event to do visible and obvious celebration. Relating this data to other video data the organisers had explored previously (recordings of fans watching football at home), we noted the similarity of problematic utterances (e.g., shouting 'come on' at the screen) which have been difficult to analyse the sense of; i.e., we too were beginning to question 'where the interaction was' when shouting at the screen, i.e., it is not just about local sharing of emotion / tension. Moving from this previous experience and the video recordings we were examining in the workshop, we began to discuss the general nature of interaction around a digital (but not explicitly interactive) display, questioned where the interaction was in terms of local interactions and the role of the technology – the TV screen – in those interactions, particularly in what celebration, shouting, etc. 'does' in this setting. Of course, the asymmetry of input means that spectators in the pub cannot interact with those in the skiing location, and the differences are exhibited / revealed in the possibility of airing these 'shameful' yet hidden celebrations.

3) We looked at an interactive screen for group exploration of media, in this case a collection of photographs that were made available via a 3D interface controlled via a large screen multi-touch system (Common Touch). A previous iteration of the system had been situated in a busy place (looked like an exhibition?), with streams of passers-by stepping up to the interface. With this system we noted the 'handovers' of the system between strangers, i.e., the fluid movement of crowds of potential users as they transitioned between spectators and users of the system. We also noted how the content design of the system conflicted with the setting in which it was deployed; the content tended to be targeted towards a single user or only a handful of purposefully collaborating users, whereas in this setting, strangers interacting with the display concurrently often interfered with one another's interactions

(typically through expanding an image to fill the entire display including the spaces in which others were interacting physically besides the user expanding the image). This was an interesting contrast with the earlier very crowded situations in which strangers in some instances engaged in close interactions. Here, strangers were interacting with the large display, engaging in interactions that impinged upon others' and yet this was not de-anonymising the setting.

4) Another system we examined was an augmented reality collaborative game, Flypad, situated in a public gallery. This exhibit consists of a number of 'terminals', which have large screens situated in front of footpads. Each terminal has a corresponding motorised camera that moves as players interact with the game.



Players step onto the footpads and interact with an avatar (overlaid on the video view), which they 'fly' around the space by stepping on the corners of the footpad, and, bumping into other players' avatars, enter 'holds' and exchange limbs with these avatars. Large numbers of visitors to the gallery passed this exhibit, often with overlapping exchanges of family groups engaging with the game in turn. Once again we examined the ways in which the system was handed-over to other visitors (both between strangers and members of the same group) and what interactionally constituted these handovers. We noted that although the system afforded smooth transitions between waiting for a footpad to be free, and stepping onto a footpad, interactions between apparent strangers appeared to be minimal at best (although were carefully-timed physical negotiations). In this sense we found that in spite of the setting being a relaxed, leisurely one, and with visitors engaging in the kind of fluid handovers of technology we saw in the previous example of the large screen multi-touch display (3), the system did not seem to develop interaction between strangers of the kinds of conversational rapport or more visibly 'sociable' interactions that we discussed as a being a commonly-desired form of design intervention for public, crowd spaces.

5) Developing this topic further, we also looked at design interventions in crowded public places. The system we explored (Team Battle Quiz) was concerned with creating social connections between strangers in public places, focussing particularly on train stations. Here, some work had been done interviewing travellers at train stations regarding the efficacy etc. of the large screen displays that are now prominent in many station platforms, what they thought the displays could potentially be used for and particularly questioning commuters and travellers regarding their interests in creating a more 'sociable' situation in the train station (i.e., creating 'conversational opportunities between strangers').



The displays as they currently stand within the station are not interactive and typically display adverts and travel information. The design aim was to create social connections between strangers via collaborative games, such as a quiz

that involves interacting with the screens via mobile phones. The system had been tested in a lab-based setting between strangers with two main conditions: the first condition involved participants in two separate rooms, representing two separate teams playing the game against one another; the second condition involved players competing individually with no teams. It was found that using team-based play encouraged the participants to engage in increased physical and verbal interactions with one another, thus suggesting that a similar deployment into a station might produce similar results. This developed our earlier thread of discussion regarding interactions between strangers and appropriateness of social action in a given setting (see (1) and (2)). In particular we discussed the viability (and indeed, intent) of design interventions in order to create these new social situations in public, busy 'transitional' places. We discussed the achieved anonymity of the train station, referring to Goffman's *Behaviour in Public Places* as instructive on the understanding the methods with which people conduct themselves in these spaces (specifically the concept of civil inattention (Goffman, 1963), also explored by Sudnow in his descriptions of the temporal parameters of shared gaze between passers-by in the street and other settings (Sudnow, 1972)).

### III.

Summarising, our workshop concerned primarily contrasting instances of anonymity and familiarity in crowded settings, interactions between 'strangers', and the design intentions of technology constructed either explicitly or implicitly to intervene in situations of both anonymity (5, 4, 3) and familiarity (1, 2). Our concerns also spanned crowds of greatly- to minimally-observable physical and verbal demonstrations of social 'coherence'. Settings we examined ranged from more leisurely situations to busy, transient spaces where people are continually coming-and-going with high frequency.

Even well-designed technology handovers didn't appear to necessarily create connections in crowded spaces, although this is of course something that we would like to collect more examples of. Clearly the absence of such connections does not mean they are non-existent, however what the workshop brought out for us was a critique of the noble drive to create design interventions that help inspire, generate, etc., increasingly rich social interactions between people. For example, the lack of interaction between remote and local spectators in (2) afforded environments in which different forms of expression were appropriate; in connecting them we as designers must be aware of rubbing up against this substantive difference in interactions.

Conceptually side-stepping this, we started to consider 'fictional' interactions, i.e., those forms of interaction which are in some sense asymmetric. Fictitious interactions create the fiction that social connections are being made, that spaces are becoming more 'social', when in reality it is an optional engagement that permits people to interact in anonymity. In this sense we are no longer attempting to design in order to 'change the world' or make certain so-called 'non-places' more visibly sociable (whatever 'sociable' means – there is considerable physical bodily interaction between large numbers of strangers in train stations; this is social organisation). For instance, the quiz

presented in (4) provides asymmetry in that players engage 'with' one another within the anonymity of the train station, however this engagement is not easily mapped to any displayed effects of manipulations of each user's interface (i.e., their phone). Although as we saw in the video recordings collected from a trial version of (4) situated in an office room, users alternately looking at their personal phone screen and the large shared display, we imagined (as the system had not been deployed into the train station environment yet) that this physical conduct would most probably be hard to link causally as an 'engagement' by spectators of this interaction. Although according to a taxonomy of spectator experience with interfaces (Reeves, 2005) this notionally fits into the 'intriguing' category of hidden manipulations and revealed effects of those interface manipulations, it might call for a more subtle understanding – i.e., how 'intriguing' brushes up against the sense of anonymity, civil inattention, etc. that is accomplished in that setting.

## References

Goffman, E. (1963) *Behavior in Public Places: Notes on the Social Organization of Gatherings*, The Free Press.

Reeves, S., Benford, S., O'Malley, C., and Fraser, M. (2005) Designing the spectator experience. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI)*, pages 741-750.

Sudnow, D., N. (1972) Temporal parameters of interpersonal observation. In D. N. Sudnow, editor, *Studies in Social Interaction*, pages 259-279. Free Press, New York, NY.