Understanding the Social Life of Uncle Roy: Field Report [*]

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Abstract. Initial inspection of ethnographic material provides several well-established coat hangers with which to analysis the social life of Uncle Roy All Around You.[*] In the first instance it is grossly observable that Uncle Roy is populated by a distributed staff situated at a variety of sites, which include 'front of house'; 'control'; 'on the streets' including street performers, street players, and members of the public at large; 'online' in the virtual environment; in the 'office'; and in the 'limousine'. What we have here then is *working division of labour*. Each segment of that division – each site – is manifest in terms of a *discrete ensemble of collaborative activities* that make up the work of the site. In turn, this work *articulates distinct processes of work*, which combine to produce a product: Uncle Roy. This report explicates the processes implicated in Uncle Roy's production, and the collaborative work which articulates them, to show in detail just how Uncle Roy comes to life and just what his social existence consists of as a collaborative production.

Introduction

Mixed reality mobile games, like online games before them, are often conceived of in terms of entertainment and, more recently, in terms of art. While there is good reason for this, such categorizations set aside, overlook, and even ignore the *work-like* character of games. To suggest that games are sites of work seems inappropriate, misplaced, misleading even, yet is plainly observable to all who will look that Uncle Roy is undoubtedly work-like. The game's production clearly relies on a division of labour consisting of discrete ensembles of activities carried out by particular staff at particular sites, which articulate distinct processes of work that combine to produce a product, namely Uncle Roy: "the game that pitches online players around the world alongside players on the streets of a real city."

On the other hand, it may seem strange to workplace analysts to consider a game as a work site. Nevertheless, the game exhibits distinct *social organizational properties* that are characteristic of work. What has to be recognized is that each workplace is unique and there is, then, no contradiction in saying that Uncle Roy is at one and the same time an artwork,[1] a game,[2] a technological exploration,[3] and a site of work. The aim of this report is to explicate or 'make visible' in detail the ways in which the game is a site of work and how that work is socially organized by the parties to it. By mapping the processes implicated in the game's production, and describing the collaborative activities that articulate those processes (Gerson & Star 1986, Schmidt & Bannon 1992), the ultimate goal of this exercise is to identify the concerted work-practices the game's staff have devised for 'making the technology work' - thereby and reflexively producing the game - in an effort to inform design (Button & Harper 1996).

The explication begins with an abstract map of the overall sequence of gameplay. This map charts in unfolding sequential order the distinct processes that make up 'playing the game'. Each of those processes is then explored in detail to identify the collaborative activities that articulate them *and* the contingencies to which those processes are subject. What we arrive at is an understanding of the

[*] Uncle Roy All Around You

[1] Sunday Times Review

[2] BBC Manchester Review

[3] Implicating the City in a Location-based Performance

particular arrangements of collaboration implicated in playing the game and the collaborative work-practices devised by parties to the game to handle contingencies and make the technology work *in situ*.

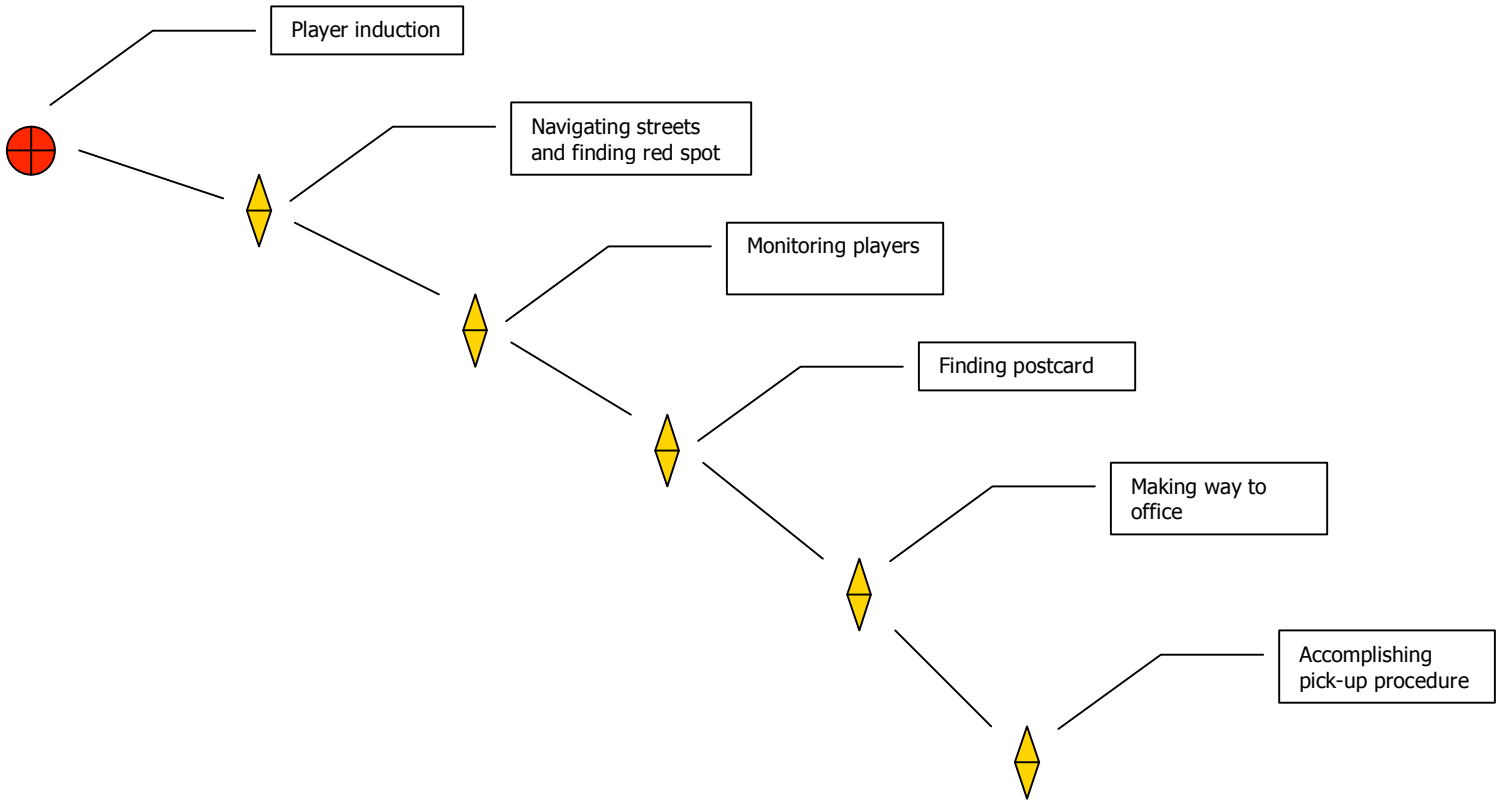

Figure 1. Sequential order of gameplay processes

Player Induction

Inducting a new player into the game consists of a discrete ensemble of collaborative activities including bringing to new players into the game, registering new players, introducing players to the game, introducing players to the technology, showing players how to get help, orienting players to actual gameplay, and releasing players onto the streets. Each of these activities is considered in turn below.

Bringing New Players into the Game

Before bringing new players into the game, front of house staff make sure that the PDAs players interact through are connected to the network and working. Two members of staff populate 'front of house'. One of them is responsible for handling new players and the other is responsible for handling the technology. Bringing new players into the game requires that front of house staff collaborate with staff responsible for booking players into the game and with staff at the office. Bringing new players into the game consists of a distributed arrangement of collaboration between booking, front of house, and the office then.

This arrangement of collaboration is mediated by walkie-talkie communication and is concerned as a matter of work-practice to *distribute awareness* of gameplay status across relevant sections of the division of labour in order to coordinate action. Coordination is here concerned with moving players onto the next stage of the game (from booking to induction) and of notifying the office that information relevant to tracking players will soon be forthcoming (see Tracking Players in the Making Way to Office process description for further detail).

Registering New Players

Players are brought from the booking area to front of house and seated at a desk from where staff conduct the registration process. This activity consists of two components: a security component and the recording of descriptions of players. On being seated at the desk, the member of staff responsible for handling the players provides the member of staff responsible for handling the technology a clipboard listing player details. The players are introduced to this latter member of staff and the details listed on the clipboard are used to assign players a specific device identity and to construct an accompanying online description of the players.

Figure 2. Assembling online ID and description

While player descriptions are being assembled, the other member of staff issues a command for the players to hand over their possessions including, wallets, watches and mobile phones. One by one the players possessions are stored in numbered boxes and box numbers recorded on the clipboard. The players are then commanded to 'take a seat' so that their photograph may be taken. There is a formal character to registration, the 'formality' of the matter having to do with the civility of the talk but a lack of interpersonal discussion. Indeed the talk has a family resemblance to that which occurs when the police take suspects into custody and one player described registration as a distinctly "unnerving" event. Essentially, interaction between staff and players is organized in terms of a conversational structure of action that may be characterised as 'giving orders'; a

structure who's 'formality' is marked by a general lack of small talk, gossip or asides. The formality of registration is intentional, designed with the artistic aim of disassociating players from the ordinary expectations and experiences of everyday life.

Introducing Players to the Game

Following registration, players are introduced to the game through the *issue of a broad set of instructions*. As with registration, these instructions are also delivered in a 'formal' manner, which does not invite 'chat' between players and staff. Nevertheless, and in addition to the creation of an artistically construed ambience, there is a pragmatic and economical character to this formally constructed and delivered course of instruction. The instructions are simple, clear and concise. They inform players that the game requires them to walk through the city streets using a PDA (or "device" in staffs' language); that there other people playing the game on the streets and online; that they have 45 minutes to find Uncle Roy; and that Uncle Roy will contact them on the device, as will other online players who they will have to collaborate with if they are to reach Uncle Roy. The players are then introduced to the technology.

Introducing Players to the Technology

Players are introduced to the technology in the same manner as they were introduced to the game and registered – i.e., formally. This method of 'speaking formally' is also complemented when introducing the technology by two vernacular and interrelated methods of instruction that may be characterised as '*telling and showing'* and '*showing and doing'* (Crabtree 1999). Accordingly, and over an unfolding sequential order of instruction, staff tells players how the "device works" and accompanies the telling by showing players just what to do with the PDA. Thus, players are told-shown 1) that "You have a stylus, which you tap on the screen. For example, to tell Uncle Roy where you are tap 'I am here' (taps on command). The more you tell Uncle Roy where you are, the more help he can give you." Each of the players in turn is passed the device and asked to replicate the action, which they do. 2) The players are told-shown that "The map shows the game area. Do not leave the game area. This arrow (points to screen) indicates North. You are represented by the 'Me' icon (points to icon). While walking round the town you can update your position by tapping on the icon and moving it like this (taps on icon and moves it). Again the device is passed to the players and each is asked to repeat the action. 3) The players are told-shown that "To receive a message from Uncle Roy, tap on the 'Me' icon, drag it to your current location, and tap 'I am here'. Please note that you must be in the actual location in the real world when you tap 'I am here'." 4) The players are told-shown that "To send messages to online players, tap 'Send audio' (taps on command) and speak into this microphone here (points to microphone). They will reply to you by text messages. During the course of the game they will need you to do something for them, so you do need to keep in touch." 5) Players are told-shown that "Here's some extra features. You can rotate you map (shows the players how). Zoom in (ditto). Zoom out (ditto). And use this button (points to button) to get extra help. Do not touch these external buttons (points to buttons) as you will not need them." With that the introduction of the players to the technology is complete.

Showing Players How to Get Help

Players are next instructed to be safe, told to be aware of traffic, and shown a telephone number on the back of the device that they should call if they find themselves in need of assistance. Just what sort of assistance is not mentioned.

Orienting Players to Actual Gameplay

Following being instructed as to how to get help, staff issues a further instruction: "Head towards a red target that is shown on your map (points to PDA). Once you've arrived, tell Uncle Roy you've arrived by clicking 'I am here'." This instruction signals the start of the game,

orienting players to the game concretely and specifically as a first event to be engaged with.

Releasing Players onto the Streets
Before releasing players onto the streets they are asked if they have any questions and when these have been addressed, should any arise, players are led out onto the streets. Here staff reports the players location on the device to receive the first clue that will direct the player to the red spot. This enables staff to see that the device is working. The device is then handed over to the player and he or she is asked to read the clue out loud. Staff points the player in the direction he or she needs to go, orienting them to streets and the way they need go in order to follow the clue and find the red spot. Staff wishes the player good luck, bringing the induction process to hearable close and the player departs.

Note: This 'release procedure' was put in place at West Bromwich. At Manchester it was different. Players were not escorted out onto the streets and 'pointed' in the right direction. As a result it was not an uncommon occurrence for players to set off in the wrong direction and even walk right out of the gameplay area.

Summary
Inducting new players into the game consists in the accomplishment of a discrete ensemble of collaborative activities which articulate the process. Those activities include,

1. Bringing new players into the game
2. Registering players
3. Introducing players to the game
4. Introducing players to the technology
5. Showing players how to get help
6. Orienting players to actual gameplay
7. Releasing players onto the street

Each of these activities involves distinct arrangements of collaboration and work-practices or 'methods' providing for their coordination and accomplishment. Respectively these include,

1. Distributing awareness of new players coming into the game across booking staff, front of house, and the office via walkie-talkie to coordinate the movement of players to the next stage of the game (induction) and to make the office aware that information of relevance to tracking players will shortly be available.
2. Ensuring that players return expensive devices (by securing their possessions in numbered boxes), constructing an online identity and player descriptions (through the use of information gathered on paper, through digital photography, and physical proximity); and dissociating players from everyday expectations through the use of a 'formal' conversational structure of action.
3. Exploiting the formal conversational structure to issue an economical set of instructions to players elaborating what the game is all about.
4. Marrying the formal conversational structure with vernacular methods of instruction by 'telling and showing' and 'showing and doing' to convey how the technology works.
5. Exploiting the vernacular method of 'showing and doing' to instruct players how to get help.
6. Exploiting the formal conversational structure to orient players to actual gameplay by issuing an explicit instruction detailing specific events to be attended to and engaged with on the streets.
7. Releasing players by first checking that the technology is working on the streets and then physically orienting players to the 'right direction' through bodily gesture.

These activities, arrangements and practices are intricately woven together and in the production of one and transition to another articulate the process of inducting new players into the game. They exploit walkie-talkie communication, face-to-face conversational structures, vernacular methods of instruction, and gestural conduct in addition to paper-based information to orchestrate and coordinate interaction between players and staff.

Navigating Streets and Finding Red Spot

Finding the 'red target' or red spot, as per the first gameplay instruction issued to the players by front of house, is the first achievement in an unfolding sequence of gameplay. The achievement consists of three distinct yet sequentially related activities:

- Taking a bearing
- Following the clue
- Keeping on track

Each of these activities and the contingencies they are subject to are described below.

Taking a Bearing

While front of house staff orient players to the street, 'pointing' them in the right direction as part of the release procedure, it is one thing to know which way to go *now* and another to understand which way to go *next*. In order to determine which way to go next the player must take a bearing to establish relevant coordinates. Taking a bearing requires the player to embed the technology in the street scene he or she is confronted with so that it might furnish directions from *here*. The following extracts indicate what is involved in this achievement.

> Patrick has received his first clue which instructs him to find a bench in the park.
> Patrick: Right, bench in the park in Whitworth Street. That's Oxford Street (looks down street in front of him then looks to his right). That's Whitworth Street. Is it West Whitworth Street? (Looking at PDA). Yeah, it must be. OK, excellent.
> Patrick crosses the road and walks along Whitworth Street.

> Becky has been told to turn right on Trinity Way and take the first right at the Conference Suite.
> Becky: So I'm - turn right down Trinity Way. So I turn – trying to … rotate it – never used one of these before. So, I've just come out – turn right down Trinity Way (looking at PDA, rotating it in her hand, aligning the map with her orientation to the streets). Right, that's fine. Becky sets of down Trinity Way.

The extracts show that embedding the technology in the street and taking bearing consists of finding references points on the map (e.g. Oxford Street or Trinity Way) and aligning the map with those reference points in the real world. The alignment may be physical or digital – i.e., players align the two by rotating the map manually, literally turning the PDA into line with the physical world, or by manipulating the PDA interface, or both.

Whatever way players embed the technology in the streets, the aim is to make the digital map *correspond* with the real city streets in order that relevant directions may be determined. It is notable that more than one reference point is required to do this effectively. Thus, and for example, Patrick identifies Oxford Street and Whitworth Street West. Becky's alignment of the real and the virtual is more implicit – she is stood on the junction of High Street facing down Trinity Way as instructed by front of house staff and she orients the map to reflect her coordinates. The players can then consult the map to see what more they need to do than 'turn right' (or left, or go straight on) to reach the red target and project a directed course of action accordingly.

It is notable that a failure to employ two reference points can lead players astray and even with two reference points it was not uncommon for players to set off in the wrong direction, particularly in Manchester as a different release procedure was employed. Faced by junctions where roads cross (e.g. Oxford Street and West Whitworth Street), and in the absence of a 'pointer' from staff, it was not uncommon for players to find themselves 180^{o} out, going the wrong way. That West Whitworth Street and Whitworth Street, for example, are actually different streets is not the point. That the two converge at

Oxford Street and progress either way in a straight line rendered them, for many players, as one continuous street. Hence Patrick, for example, identifies Whitworth Street as West Whitworth Street and so sets off in the right direction! If he had embedded the technology by looking 'down' rather than 'up' Oxford Street, however, he would have set off in the wrong direction. How one orients to the street in the first instance is consequential to successfully embedding the technology and taking a bearing.

Following the Clue

The use of ordinary map reading competences and methods continues as players make their way along the streets in a direction that projectedly 'follows the clue'.

> Becky: (Inaudible) take the first right when I see the Conference Suite
> Becky carries on walking down Trinity way.
> Becky: Ah ah! Conference Suite (sees building on her right). So, take the (inaudible) – take the first right when you see the Conference Suite. So, I assume it might be down there.
> Becky carries on down Trinity Way.
> Becky (tapping on PDA): I'm just moving myself along to show the online players where I actually am.
> Becky: 'Please record a message for me.' OK. I have to record a message for Uncle Roy. 'I'm feeling very nervous and I feel very stupid because I've absolutely no idea what I'm doing.'
> Still walking down Trinity Way.
> Becky (turns to her right): Is that it?
> Looks into an industrial yard to her right, but it's a dead end, so carries on walking down Trinity Way.
> Becky: I might've taken the wrong turning.
> Still walking down Trinity Way, comes to a right turning.
> Becky: Oh this is Bolton Road. So I think - I actually think I've taken a wrong turning.
> Becky turns around and walks back up Trinity Way.
> Becky: I think it's up where those barriers are actually – at the
> Becky turns left at the barriers towards the Conference Suite.
> Becky: I'm going to move my location (updates position on PDA).

This extract shows that the vernacular map reading competences and methods ordinarily employed by players to follow the clue – i.e., the competence and method of aligning the map with real world and reading the clue as a set of instructions furnishing directions – are not infallible. While it may well be the case that some people are worse than others at reading maps there is an essential feature of instructed map use that has a direct impact on players ability to 'make sense' of the clue and derive directions.

The clue is key. Simply put, players presume that the clues provided by Uncle Roy provide instructions as to how to get to the destination. Players read the clue 'praxiologically' (Garfinkel 1996), treating it as an instruction that furnishes directions. Instructions of all kinds are 'essentially incomplete' however (Garfinkel 1967, Suchman 1987), and so establishing just what, for example, 'take the first right when you see the Conference Suite' means is not at all clear. Is that right *at* the Conference Suite or first right *after* the Conference Suite? The instruction does not say and there is no way for a player to clarify the ambiguity other than through *trawling the streets* to establish a sense of the physical topography (of the streets and their relation to one another). Thus, and in this case, when the player reaches Bolton Road and having checked the other possibilities out along the way, it becomes evident that the clue furnished an instruction to turn right *at* the Conference Suite.

Keeping on Track

Establishing a sense of physical topography – of the streets around a player and their relation to one another – is essential to keeping on track and locating the red spot. The following extract indicates just what is involved in that achievement.

> Becky is following her first clue, walking along Thomas Street where the Conference Suite is situated looking for her red spot.

Becky: And it's the corner of George Street. Which is up there, which I know that, so.
Becky walking towards George Street. Still on Thomas Street, looking at map.
Becky: So I assume – there's parking, (inaudible), George Street which is there, High Street up there, and my mark is here – so I assume it would be here.
Becky stops and drags her 'Me' icon to her red spot and reports her position.
Becky: I just let him know I am here.
Becky: 'Well done. I am glad you are going to walk with me. First of all (go) to WB Springs. 35 minutes remaining.'

The extract shows that keeping on track is matter of aligning the map with the physical topography that surrounds the player. 'Alignment' here means that the player consults the map to identify the location of the red spot and consults the surrounding topography to establish a *correlation* between the real and virtual worlds. Consulting the surrounding topography is not a straightforward matter either. In this case it appears to be very straightforward as the player knows where various streets relevant to establishing a correlation are. The player has and exploits local knowledge of the gameplay area. Many players do not have that knowledge and so they must, again, *trawl the streets* to develop it.

Establishing a correlation is subject to further contingencies, as the following extract indicates.

Patrick: Just had something from Roy saying he still wants to hear a message and that I've got 24 minutes left.
Patrick (looking at his surroundings): Is this the park here? Yes, it must be (looks at PDA) Princess Street (and at his surroundings) yeah.
Patrick crosses the road.
Patrick: Oh right, here it is, yeah.
Patrick walks into a small paved area next to a car park that is surrounded by trees with benches underneath them. He stops and reports his position on the PDA.
Patrick (reading message on PDA): Right 'You're doing well. I've sat in this park time and time over. Then at dark, over the canal.' Yeah, so I'll go and have a little look over the canal. I can't do the audio so I'm just going to have to do it just with Uncle Roy and follow his clues and see, see what he says.
Patrick sets off towards the canal.

What is interesting about this extract is that while going through the same work as Becky – i.e., attempting to align the real and the virtual by consulting the map and the surrounding topography in order to establish a correlation between the two - Patrick has not actually found the park.

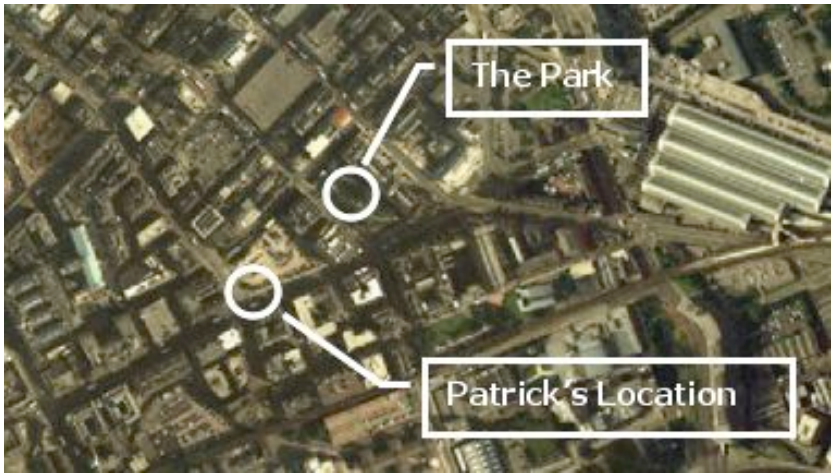

Figure 3. Incongruity between perceived and real position

Misreporting one's position was a common feature of gameplay; one that often went unnoticed by players as they received another clue from Uncle Roy in response, which for all practical purposes confirmed to players that they had got it right. It is interesting too that 'misreporting' was an achievement that brings to light players use of clues to read the streets. In breaching the instruction it becomes

apparent that players use clues to *interpret their surroundings and identify the locations* they have been instructed to find.

Summary
The process of navigating the streets and finding the red spot is articulated by several distinct collaborative activities including,

1. Taking a bearing
2. Following the clue
3. Keeping on track

These activities are collaborative in the sense that they are responses to actions initiated by other parties (Uncle Roy's agents). Their achievement consists in the exercise of social skills that are essentially related to map reading and following instructions. Respectively these include the following.

1. In order to find their way to the red spot players must locate references points on the map and align the map with those reference points in the real world to make it *correspond* with the real city streets. This allows players to project a direction to the red spot. Just how a player is oriented to the streets in the first instance is critical to embedding the technology successfully – i.e., to establishing relevant coordinates.

2. Navigating the streets requires that players read clues praxiologically as instructions that furnish directions. Players must contend with the essential incompleteness of instructions, however, which makes the meaning of instructions ambiguous on occasion. In situations where ambiguities exist, players trawl the streets to resolve them. Trawling consists of walking the streets to develop knowledge of those streets (of their names and relations to one another in the real world and on the map) and enables players to identify and eliminate possibilities.

3. Locating the red spot requires players to align the real with the virtual by consulting the map and the surrounding topography in order to establish a correlation between the two. Establishing this correlation enables players to track down and locate the red spot. The achievement exploits local knowledge of the gameplay environment, which is often developed *in situ* by trawling the streets. The clue itself is also a primary resource in this accomplishment, being used to interpret topographical features and identify sought after locations.

These skills are drawn upon throughout the game as player's progress from one clue to another. As one location is found and another clue provided, players orient themselves to the street again by embedding the technology. They follow the clue by reading it praxiologically and address ambiguities time and again by trawling. They track sought after locations down through establishing a correlation between the real and the virtual, developing local knowledge to do so, and exploiting the clue itself to interpret their surroundings and identify candidate locations.

Monitoring Players

Even in the opening stages of the game it is evident that things can go wrong for players – they may 'take a bearing' incorrectly, for example, and as a consequence head out of the gameplay area. Handling such contingencies is an integral part of Uncle Roy's production and the management of player activities on the street is provided for through a distributed process of monitoring players that consists of the following collaborative activities.

- Recognizing players on the street
- Recognizing 'confused' players
- Intervening
- Maintaining awareness

Recognizing Players on the Street

Handling contingencies on the streets is provided for by the distribution of a number of 'street performers' around the game play area, often at particular vantage points, and trades on the ability to recognize players in the first instance. This might seem a relatively straightforward task of 'seeing a person carrying a PDA' but recognizing a player is more complicated than that. In the first instance the game takes place on busy city streets (Figure 4) and in the second instance it is not at all uncommon for people to be walking the streets with mobile devices in hand, such as phones, MP3 players, PDAs, etc. (Figure 5). Recognizing players is not a straightforward matter then, though there are several ways in which recognition may be accomplished.

In the first instance, recognition is accomplished through *instructed looking*. In the course of induction front of house broadcast that new players are entering the game via their walkie-talkies. The walkie-talkie channel is shared by all staff and while front of house's talk is

Figure 4. Where's the player?

Figure 5. Is this a player?

usually directed to staff in the office or control room, it also serves to instruct street performers that new players will soon be coming out onto the streets. By listening to these messages from front of house, performers know that they should start scanning the streets for new players.

It may be the case, of course, that in scanning the streets, performers *recognize player's at-a-glance*. 'Recognizing players at-a-glance' consists of seeing people doing such actions as carrying a PDA and a stylus, interacting with the PDA via stylus, talking into the PDA, and/or consulting the PDA and their surroundings, visibly navigating the streets around them (Figure 6).

Figure 6. Recognizing players at-a-glance

It is notable that to the attuned eye players become recognizable hundreds of feet away on busy streets, not only when they are 'in your face'. However, as Figures 4 & 5 instruct us, it is not always possible to recognize player's at-a-glance, whether at a distance or up close as the following extract indicates.

John is watching the woman shown in Figure 5 as she walks down Whitworth Street. She turns right down Princess Street, which will take her out of the gameplay area if she is playing the game.

Figure 7. Is she one of ours?

John (not on walkie-talkie): I don't think she's one of ours – it didn't look like a PDA she had there. Might have to just check.
John: John to control.
Control: Go ahead.
John: Can you just confirm whether one of the girls was Asian, over?
Front of house: Front of house to control, none of the women was Asian.
John: It's OK. Don't worry, over.

This extract shows that recognizing a player, or someone who might be a player but turns out not be, exploits an arrangement of collaboration between the *street performer, control, and front of house*. That arrangement is mediated by walkie-talkie communication and exploits online player descriptions assembled during induction, which are available to both front of house and control (either could have responded to the performer's query and so too could the office).

It is also the case that players are not recognized on the streets. They do not pass unnoticed, however, even though they have not been seen.

> John is scanning Whitworth Street, looking for a player whose release was announced some time ago. He broadcasts the news on his walkie-talkie that he has not seen David come past him yet and then walks down the street searching for him.
> Caitlin: John, did you find him?
> John: No, but he's not on Whitworth Street. I'm just wondering whether he's gone out the wrong way on Whitworth Street or Oxford Street, over.
> Caitlin: Yep, I'm going to go that way. I'm on Portland Street now. Do you want to stay in the game and I'll walk down those two streets.

The extract indicates that street performers have a sense of how long it should take a player to come into their zone and failure to comply with this expectation - failure to recognize a player having been instructed to look – triggers an unfolding sequence of work exploiting various arrangements of collaboration that transforms the player into a lost object to be found.

In the first instance, failure to recognize a player leads the performer to notify other staff of the situation. Performers then move beyond scanning the street from a particular vantage point to *tracing the player's path* through the game space. This entails walking the streets the player is expected to be on and scanning them to establish whether the player is where he or she should be, and perhaps experiencing difficulties, or not there at all. If it is established through this method that the player is not where he or she should be then potential pathways the player might have taken are taken into account and the performers concert their actions via walkie-talkie to execute the search. Those nearest to potential paths usually carry out the search, not that this necessarily results in the player being found.

> Caitlin to another street performer: I want you to check around G8, around that area, for a guy called David. He's the only male player with a PDA in the game. Can you just go up there, he may be up there, I might have missed him.
> Street performer: Head down to Portland Street, that area?
> Caitlin: Don't come down onto the southside. Stay on the north, 'cause we're down south.

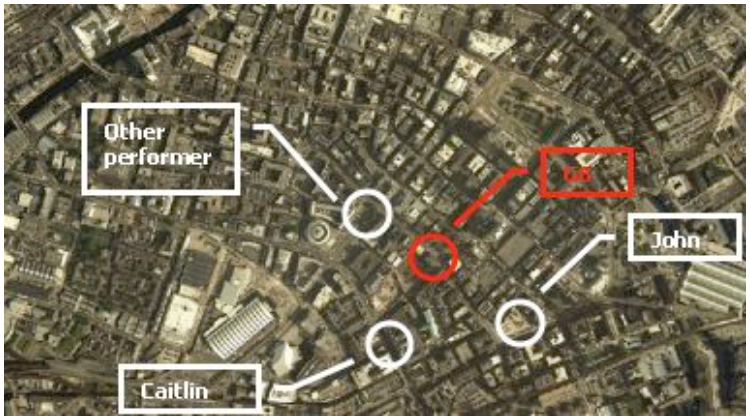

Figure 8. Tracking a player down

Having traced the potential pathway(s) without success, more performers are recruited to the search. The performers coordinate the search through the use of *grid references* that demarcate discrete locations in the gameplay area - G8 being the crossroads at Portland and Princess streets. G8 is in the middle of the gameplay area and a location that provides 'good views' across large sectors of that area.

As such, performers often go there to look for lost players. Nevertheless, if tracing a path or potential path fails to locate a player, performers must resort to trawling the streets to find someone who might be and indeed is a recognizable 'player'. Then, of course, as a last resort there is always sheer serendipity.

John is walking along Whitworth Street, returning to his vantage point but still searching for David.
Caitlin: John, I probably need you closer to the Cornerhouse exit just for now while players file out. And I'll go – or I can stay here and you go up to the park and have a look for David.
John: Yeah OK, I'm near the park now so I'll go and have a look down that way.
Caitlin: Tony, where are you?
Tony: At G8
Caitlin: OK, so we're still looking for David. (inaudible) just have a look round China Town.
Tony: Yeah will do.
John (not on walkie-talkie): I'm a 100% sure no David has come past me, but we'll go and head down that way just to be sure.

A couple of minutes later -
Caitlin: John go back to Whitworth and Princess, Tony seems to have found David.
John: OK, no problems.

The concerted search for lost players does not always run so smoothly, as the following extract indicates when a player is not recognized as expected.

John: John to control.
Control: Go ahead John.
John: How many players were released on the last wave, over.
Control: 3, though 1 was released about 3 minutes after the other 2.
John: I've had visuals of the 2 females but not of the other player, over.
Control: Yeah it's a female called Yasmeen, she's going for the Whitworth Street red spot.
John: Is she still connected, over?
Control: Yep, she's currently in I4.
John gets a paper map of the gameplay area out of his bag and consults it to see where I4 puts Yasmeen in the real world.

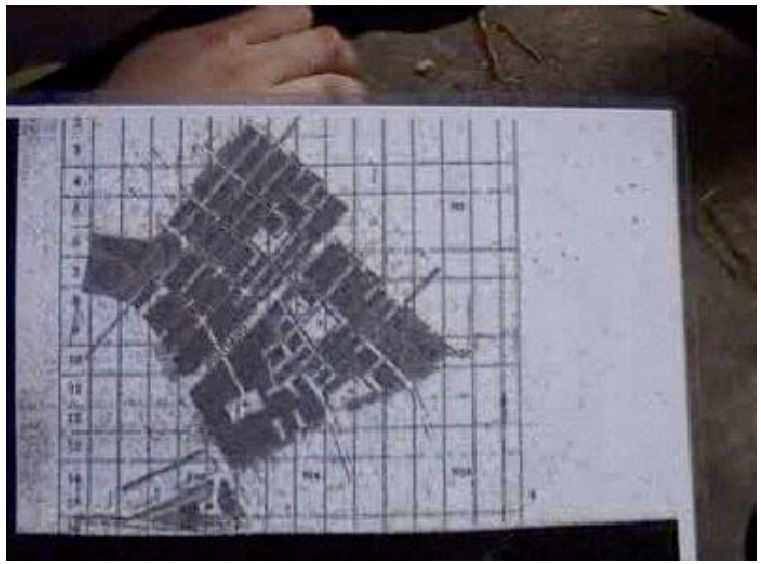

Figure 9. Consulting grid references to ID real world locations

As Yasmeen has been released but not been recognized yet John traces her route to the location provided by control. He is walking back up Whitworth Street having failed to find the player.
John: Can you just reconfirm her description, over.
Control: Yasmeen is female, middle-aged, long black hair, brown blazer, blue jeans.
John walks back to his vantage point looking out for Yasmeen on the way.
John: John to Caitlin. Are you sure she's not going down Whitworth Street West and still playing the game as if she's was in the area, over.

Caitlin: Caitlin to Martin, can you give me an update on Yasmeen please?
Control: She's in K11. I don't think we need to find her.
John (not on walkie-talkie): She's not!
Caitlin: I don't think so either John, I think she's fine.
John: She's not in K11, I'm standing there now. She's nowhere near that area. It's the car park area K11 and there's no one of that description, over.
Caitlin: She's still connected and she's still playing – I think she's fine.
Control: She's getting clues
John (not on walkie-talkie): She will get clues though.

Dicky asks for a status report on all players in the game.
Caitlin: There's just 3 players. One's going the wrong way down Whitworth Street.
John (not on walkie-talkie): Oh right, so that happens!
Caitlin: There's 2 women coming your way, then there's one guy going the wrong way. I'm going to help him I think.
John: Hello Caitlin: Can you just – while you're there can you just keep an eye out in case you do see Yasmin that way because I am adamant that she hasn't come this way, over.

Just what happened to Yasmeen is not clear - she never passed John to his knowledge but that is not what is of interest her. Instead the extract shows more of the collaborative ways in which 'losing a player' is handled. As John has not recognized all the players he expected too he checks with control to establish player status. Control updates John, confirming 3 players have been released and that the last one out is heading his way – she should be coming into view. Control exploits online information that is associated with individual players to update John and connectivity information to establish the player's current location (Figure 10). Again, grid references are used to talk about locations (though this is not always the case, as staff often use local knowledge and refer to locations by name) and John translates this information by using his paper map to ID the grid reference in the real world.

John then sets off to find the player, as she has been released, and heads to the location furnished by control. He doesn't recognize anyone as a player en route and so contacts control to obtain a description of the player. Control exploits the online description furnished by front of house to provide this and John scans the streets looking for someone who fits this description as he returns to his vantage point on the junction of Whitworth and Princess.

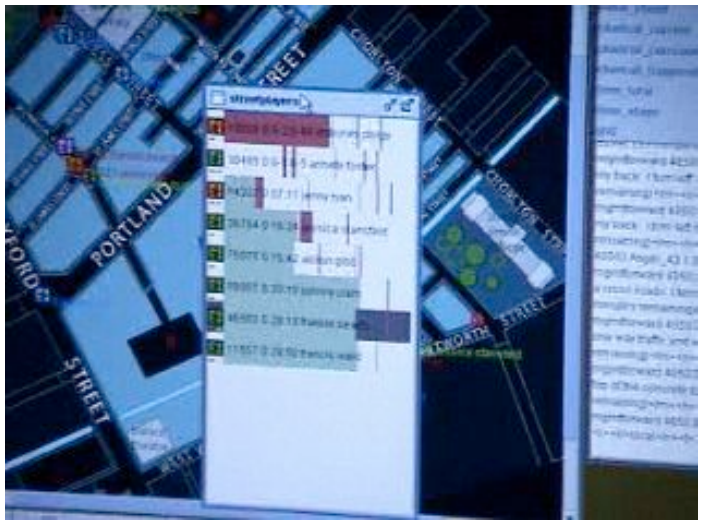

Figure 10. Individual player information, connectivity and location

On arriving at his vantage point, and still not having recognized the player, John contacts another street performer who is working the next sector down to suggest a potential pathway that might explored to find the player. The other performer contacts control to get an update on the player, which says in not so many words that other performer does not think that this is the case (the view from this zone allows performers to see which direction players set off in on release, assuming that a player has been recognized as they come out onto the street).

Control consults online information again to identify the player's location and reports it to the performers, suggesting that there is no problem with the player – K11 puts her on Whitworth Street, very close to John's vantage point and the other performer concurs with control's judgement. Being physically present at the location, however, and not being able to see the player, John does not. Control reinforces the veracity of his judgement by providing further online information to support it: not only is the player connected but she is getting clues, which means she's reporting her position.

Whether control is right or wrong is not the point. The issue here is that in situations where players have not been recognized on the streets, then they may be *recognized virtually* through digital traces. These traces may be dubitable, of course, for as the last extract in the sequence of talk indicates (along with prior consideration of the work involved in following the clue), player's can always misreport. However, in the vast majority of cases, and through the use of the various recognition practices that staff employ, players are recognized and otherwise found.

Recognizing 'Confused' Players

Recognition practices are central to monitoring players and managing gameplay. Recognition is not simply a matter of seeing at-a-glance that players are playing the game unproblematically – that they are doing such actions as carrying a PDA and a stylus, interacting with the PDA via stylus, talking into the PDA, and/or consulting the PDA and their surroundings, visibly navigating the streets around them – or that they are lost, but also, of *recognizing that they are 'confused'* – i.e., while doing visibly recognizable gameplay actions the player is also, and at the same time, doing actions that suggest to street performers they are encountering some kind of trouble. Figure 11 provides an example. Here it is visible that while consulting the PDA and her surroundings, the player's accompanying actions, particularly her changing orientation to the streets, suggests that she is encountering some kind of practical trouble, as the following sequence of talk from the observing street performer further elaborates.

Figure 11. Is this player confused?

John (not on walkie-talkie): There's one now, heading towards us in green. It's amazing how you can just spot them instantly now.
John (not on walkie-talkie): As she fast approaches I'll start to turn down my walkie-talkie.
John (not on walkie-talkie): Looks like she's a bit confused.
Player is standing in street now, looking at PDA and at her surroundings. John is about 50 metres away, monitoring her actions. The player turns and starts walking towards John. She stops again, turning around and looking at her PDA and her surroundings.
John (not on walkie-talkie): Right, I'm going to – oh no, she's off.
The player sets off back in the direction she has come.

The sequence of talk instructs us that recognizing confusion is not as straightforward as it might first appear. That the player looks confused because of her changing orientation to the streets – particularly *changing bodily orientation* (from left to right, back to front, etc.) and *constant consulting of the PDA* that accompanies these orientations - does not mean that she is. Or rather, such *outward signs of confusion* do not mean that the player is encountering an obdurate trouble that is likely to effect the playing of the game. In this case, the transient character of the trouble to-hand becomes apparent in the player's decisive about turn. What we have been witnessing is not an obdurate problem but a player trawling the streets to establish a sense of the local topography and work out which direction she is being instructed to proceed in.

The *transient* or *obdurate* state of confusion only becomes apparent to street performers after watching an unfolding series of actions on the street and it is with this knowledge in mind that street performers exploit a method of *shadowing* players to establish the state of confusion being encountered. The following sequence makes visible the work of shadowing.

> John is watching a street player who is approaching
> John (not on walkie-talkie): I've just turned down my walkie-talkie. The player walks towards John and stops, looking at her PDA and her surroundings, particularly the names of the streets around her. She then moves off to her right and crosses the road. She stops at the other side of the road and consults her PDA and her surroundings again.
> John: John to control.
> Control: Go ahead.
> John: I've got a female player, long beige jacket, middle aged, black trousers, just walking down the wrong way down Princess Street. I'm going to clock her and if she carries on further down I'm going to intervene, over.
> Control: Can you give me her description again? *(continued overleaf)*

Figure 12. Shadowing a confused player

John: Yeah, middle aged woman, shoulder length blonde hair, long beige trench jacket, and black trousers, over.
Front of house: (That sounds like) Nicole.
The player has disappeared from view, going the wrong way down Princess Street
John (not on walkie-talkie): Here we go.
John crosses the road and watches the player from the street corner. The player turns around and walks back to where John is standing, goes past him and makes her way down Whitworth Street.
John: John to control, Nicole is now heading down Whitworth Street towards the park area. She has realised her mistake and (about going out of the game area).

In the first instance, the sequence instructs us that shadowing a player is a *covert* activity. Street performers do not want players to recognize them, either in general course of monitoring them or in the particular case of shadowing them. To maintain anonymity, performers turn their walkie-talkies down as players approach them, turning them up again as players move out of earshot. In this case, the player is recognized at-a-glance and it is not until she 1) starts changing her orientation to the streets and 2) heads off in a direction that will take her out of the gameplay area that a confused state is recognized. Recognizing a confused state not only relies on recognizing 'outward signs of confusion' then, but also on the *performer's knowledge of the gameplay area:* that the player is moving out of the gameplay area clearly suggests a confused state. Just what kind of confused state is not yet evident, however, and so the street performer shadows the player to establish the state of confusion to-hand.

Shadowing a player often involves, as it does in this sequence, collaborating with control. The primary purpose of this collaboration is to find out if the player is *experiencing any obvious technical difficulties*, such as a disconnection from the game. Collaboration relies on establishing the identity of the player, which is done through providing a description of the player's recognizable features (gender, clothing, hair colour), and by matching that description with the online description produced by front of house. The absence of any response from control suggests that the player is not experiencing any technical troubles and that the state of confusion is *interpretive* in character: the player has taken an incorrect bearing, aligned the map wrongly, misinterpreted the clue, is trawling the streets to develop enough knowledge to make sense of the clue's instructions, or is quite simply and utterly lost. Collaboration with others in the division of labour allows performers to rule in or out technical sources of confusion, then, and to *elaborate candidate sources* of confusion.

In this case, it is not clear just what the source of confusion is, but the player soon recognizes her mistake and makes her way back the game play area. That she is no longer confused is recognizable to the street performer by the *direction* she takes – towards the park area – which is on target for the red spot. Recognizing that the player is no longer confused again trades on the performers knowledge of the game, this time on his or her knowledge of *well-trodden paths* that players take through the game. While players may, in principle take many different paths through the gameplay area, in practice they tend to stick to the main streets and thoroughfares. Consequently, over the unfolding course of gameplay, performers come to recognize well-trodden paths and exploit these to recognize both confused states and their repair. Essentially, it is a matter of players not only looking like they are not confused but also of being in the right place at the right time and any deviation from such expectancies warrants investigation. Shadowing players allows street performers to investigate player's actions and recognize states of confusion.

Intervening

Recognizing confused players is essential to gameplay – in the absence of such recognition, play would *breakdown*. Recognizing confusion not only warrants investigation, however, but also *intervention*, which prevents terminal breakdown. The following

sequence elaborates something of the rich tapestry of work implicated in effecting an intervention and preventing terminal breakdowns.

John is keeping a look out for street players.
John (not on walkie-talkie): (Is that one?) Looks like it – about to cross over – and turning back round.
John: John to control.
Control. Go ahead John.
John: Yeah, female player, black top, yellow T-shirt, long brown hair, can you just confirm is that supposed to be a new player going towards Whitworth Street red spot, over.
Control: Yeah, that's it exactly.
John: OK, that's great. It's just that she came up here and turned round again, over.

Figure 13. Recognizing a player going of the well-trodden path

Shortly afterwards the player comes back into John's view. She crosses the road and makes her way over to where John is sat watching and walks around the area, changing orientation and consulting the PDA. She then sets off up Whitworth Street.
John (not on walkie-talkie): She's looking mighty confused. Think I might follow her actually. John watches her make her way up the street towards the park area. She appears to be less confused now and so he lets her go on her way.

Figure 14. Looking mighty confused

As there are no more players heading towards John at the present point in time (which is established by contacting control), he goes to check up on the player, notifying control of his intentions and the player he is looking for. He runs across the car park behind him, taking a short cut to the park area she was heading towards.
Car park attendant (not on walkie-talkie): Are you looking for one of your girls?
John (not on walkie-talkie): Yeah.
Car park attendant (not on walkie-talkie): (Inaudible).
John (not on walkie-talkie): Sorry?
Car park attendant (not on walkie-talkie): Is she a small girl, pair of jeans?
John (not on walkie-talkie): Yeah, yeah, yeah.
Car park attendant (not on walkie-talkie): She went up there about 5 minutes ago (points to Brazil Street in front of John).
John heads towards the street pointed out to him by the car park attendant.

John: John to control.
Control: Go ahead John.
John: Can you just confirm her last location for please, over?
Control: She's in L8 at the moment, she's connected and she's has found her red spot.
John (not on walkie-talkie): Found her, there she is (K10).
The player is making her way along Canal Street towards John. John retreats round the corner out of sight and then watches the player as she makes her way along the street.

Figure 15. Shadowing player

The player stops, looks around her, looking at her PDA, looking confused again. She carries on her way, stops, turns around, looking at her PDA and at her surroundings. She makes her way back down Canal Street, stops again, looking at her PDA and her surroundings. John is monitoring her from around the corner. The player turns around and heads towards John, who walks away. The player proceeds down the street then crosses the road. John turns around and carries on monitoring her progress. The player stops outside the park and John starts making his way back up the street until is adjacent to her.

Figure 16. Recognizing confusion again

The player is standing outside the park looking at her PDA and at her surroundings, again looking very confused. John walks across the road to the player and intervenes:

Figure 17. Intervening

John (not on walkie-talkie): I'll give you some helpful directions, OK.
He turns to his left and orients the player to the street by raising his arm to point out a direction.
John: Head towards Portland Tower.
Player: Yeah.
John turns and walks away.
Player: Thankyou.
The player walks off in the direction pointed out by John.

This sequence shows something of the unfolding character of collaborative work and interaction that leads up to and results in an intervention being made. It consists of the following component activities:

- *Recognizing that a player is going off the well-trodden path.* On recognizing the player, the street performer also sees that, in turning left at the lights and heading back down Whitworth Street, the player has gone off the well-trodden path. This does not mean that anything is necessarily wrong, as a red spot is located halfway down Whitworth Street (it's just an unusual way to get to it if the player is going there), but does warrant investigation. The street performer checks with control to see if the player is going for that red spot, furnishing a player description and intended destination, which is confirmed by control.
- *Recognizing confusion.* When the player comes back into view and approaches the spot where the street performer is located, she starts to display outward signs of confusion, frequently changing orientation to the streets and consulting the PDA. Just what the source of the confusion is, is not clear so the street performer monitors her conduct as she proceeds up the street. As the player proceeds up the street, signs of confusion abate and the street performer decides not to shadow her.
- *Locating the player.* As there are no players heading towards the street performer, he goes to check on the player's progress. This exploits the performer's local knowledge of the gameplay area – knowing shortcuts to pathways through the game space that player's are expected to be on – and a contingent arrangement of collaboration between the performer and a member of the wider public, namely, a car park attendant. Over the course of gameplay, the game is in various ways *called to account* by members of the public. In this particular case, seeing someone hanging around on a street corner, talking into a walkie-talkie, and occasionally following people around is not only a noticeable feature of the street scene but a 'remarkable' one – i.e., one that warrants questioning – especially for someone who's job it is to monitor people's actions in and around a car park. The questioning results in the performer explaining what he is doing and establishing a contingent arrangement of collaboration in which the car park attendant becomes complicit in the game, providing an extra pair of eyes on the streets and furnishing directions towards sought after players.

Locating the player also draws on a more stable arrangement of collaboration between the performer and control. This establishes the player's current gameplay status and provides the performer with the player's last known location, which becomes a resource with which to determine a direction to take from 'here'. In other words, providing the performer with a location (in terms of grid reference) does not 'tell' the performer where the player is, but what direction to head in from his or her current location. Between contingent and stable arrangements of collaboration, an *unfolding course of directions are formulated* and followed (e.g., down Brazil Street and then towards Canal Street) and the player is recognized by scanning the streets along the way and around the suggested destination point.

- *Shadowing the player*. Once the player has been located, the performer shadows her to see how she is getting on. The player soon starts to display outward signs of confusion again, frequently changing orientation to the streets and consulting the PDA as she moves up and down Canal Street. The performer maintains a discrete distance as he shadows the player's movements. As the player moves off in a new direction, the performer waits and watches, but the player soon displays confusion again as she comes to a stop besides the park area.
- *Intervening*. The player's repeated display of confusion warrants intervention. The performer already knows the player's status, that she is connected and has found her red spot, so technical troubles are not the source of confusion. Her problems are interpretive. The performer approaches the player and asks her if she needs any help. He then gives the player directions to the next point she needs to get to in the game, thereby making sense of the clue for the player and *pointing out* the direction she needs to travel in and the location she needs to make her way to next.

This sequence articulates one of *three main categories of intervention*, namely, 'getting players back on track'. The other two categories consist of 'handling technical troubles', and 'managing the contravention of gameplay rules' (where, for example, two players play together and efforts are made to stop them). While any of these interventions may be made at any point in the game, two of them are *critical:* getting players back on track, which is essentially a matter of recognition work and consists of the recognition practices described above; and handling technological troubles, which is essentially a matter of collaboration between street performers and control.

The handling of technical troubles is no more pronounced than when a player calls for help. The following sequence articulates something of the work involved in handling technical troubles.

Phone goes in control room and control answers it.
Control (on phone): Hello, how can I help you?
Control looking at gameplay map.
Control (on phone): What's your name please?
Control selects player Craig on connectivity interface (icon orange).

Figure 18. Checking player status and seeing trouble

Control (on phone): (Inaudible). Has it been like that for a long time?
Control (on phone): OK, can I get your location please?
Control (on phone): OK, if you'd just like to stay where you are I'll get somebody to come and fix it for you.
Control (on phone): Bye.
Control (on walkie-talkie): So Craig just called. He's in the phonebox on Portland Street opposite the Nat West. His PDA won't let him record audio, he wants someone to reset it.

Control: Can somebody who knows it tell me where – on the grid – where Nat West is on Portland Street?
Street performer: Sorry, it's on the junction of – sort of near the end of Sackville Street and Portland Street
One of the performers is in the control room having a short break. He goes over to the controller and points out the location on the gameplay map.

Figure 19. Where is the player located on the grid?

Control: OK, got that. Are you quite near there, over?
Adam: Not really, no.
Control: OK.
Caitlin: Can you give me your grid location Adam?
Control: OK, so I need someone to quickly go to this phonebox on Portland Street and Sackville.

Street performer: Is that Francis?
Caitlin: Yes that's Francis.
Control: Is anybody going to deal with Craig?
Caitlin: Caitlin to control, sorry. Find out where Adam is 'cause I'm probably 3 minutes away.
Control: OK, that'll do. Will you go there Caitlin?
Caitlin: Yes, will do, just a moment.

Caitlin: Caitlin to control, can you tell me a bit more about this guy on Sackville Street?
Control: Yes, his PDA just needs resetting. He's connected but it doesn't think it is, so he can't send audio.
Control has pulled up the online description of Craig.

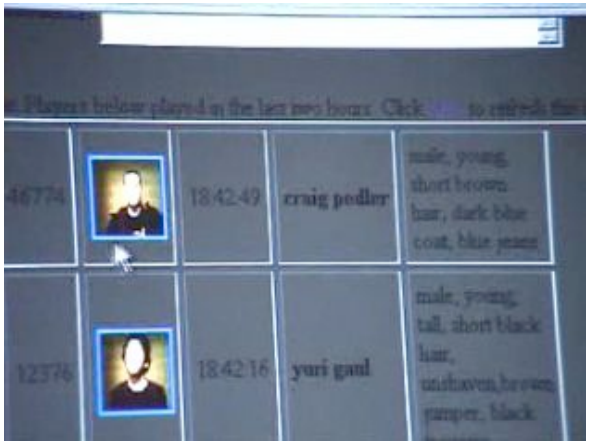

Figure 20. Describing the sought after player

Control: He's a young male, he's got short brown hair, dark blue coat, and blue jeans.
Caitlin: So what's his (inaudible).
Control: Say again.
Caitlin: Is he at the phonebox that's there?
Control: Yep. I told him to wait at the phonebox. He just needs the PDA resetting.
Caitlin: OK (inaudible).

Caitlin: Caitlin to control, can you confirm that Craig is now connected and in the game?
Control looks at connectivity interface. Craig's player icon is highlighted orange and disconnection is visible (see bars adjacent to orange icon).

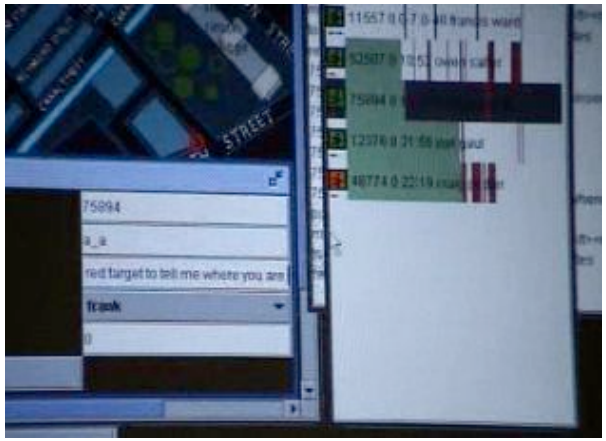

Figure 21. Seeing that the player is disconnected

Control: He's not connected at the moment. (Inaudible) make sure he's connected.

Caitlin: Caitlin to control.
Control: Go ahead.
Caitlin: I've just put Craig back in the game. He's on the blue trail heading for the (inaudible).
Control looks at Craig's connectivity and can see that he is connected (icon green).

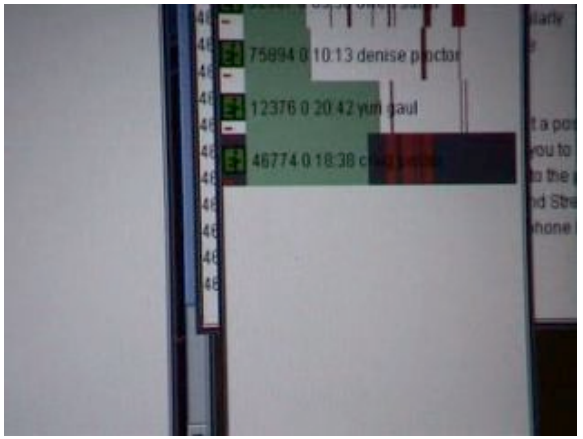

Figure 22. Seeing that the player is connected

This sequence articulates the arrangements of collaboration and interaction that the handling of technical troubles relies on. Handling technical troubles involves collaboration between players and control, and control and performers. Players and control collaborate to establish the nature of the problem, which is aided through the technology (which in this case indicates that the player is disconnected from the game), and to identify the player's location. It is notable that players do not consider location in terms of grid references and so control must translate the player's account into a grid reference that permits speedy location of the player. *Establishing the nature of the problem to hand and identifying the player's location* is the first action in an unfolding sequence of collaboration between control and street performers.

Control has then to *coordinate assistance* with street performers. This is done over the walkie-talkies and is concerned to *identify* a performer who can get to the player. The *relative relationship* between performers and players locations, along with performers current activities, underpins negotiation and decision-making as to

just which performer will assist the player. Collaboration here also involves *articulating* the nature of the technical problem to hand and a course of action that may result in its resolution, along with furnishing a description of the player so that he (or she) may be recognized. Establishing that the problem has been solved is also a matter of collaboration, where performers *notify control* that a repair has been made and ask control to *confirm the efficacy of the repair*. In this case the repair is not at first successful (though for what reason is unclear) as can be seen by control when the connectivity display is consulted (the player's icon is still orange). Just what action the performer executes to remedy the problem is not clear (does she just wait or do another reset?), however, it is clear that player is back in the game, which can be seen by control on the connectivity display, which is again consulted after notification. The lack of a response indicates that the player is connected – no further attention is required.

Interventions in the control room also extend beyond the handling of technical troubles. Following technical troubles, time may be added to a player's game, for example, and control may intervene in gameplay in other ways, as the following sequence indicates.

> One of the control room staff is logged into the online game.
> Staff (not on walkie-talkie): Alison's really getting harassed by loads of street (online) players now.
> Control (not on walkie-talkie): Alison?
> Staff (not on walkie-talkie): Alison - she looked like she was going to get quite close to the office, but now it looks like they're all trying to get her to get postcards.
> Control selects Alison's personal information to view her interactions with online players.
> Control (not on walkie-talkie): Yeah.
> Staff (not on walkie-talkie): I think she might have got it – if she found a post box.
> Control (not on walkie-talkie): I'll give her some help.

In this sequence it can be seen that interventions are based on *monitoring* the interactions between street players and online players in order to *manage* the relationship. Online players need street players to find a postcard located somewhere on the city streets if their involvement in the game is to develop and the situation frequently arise where multiple players seeking multiple cards attempt to get a player to find them. This results in street players being 'harassed' by online players, or rather, in street players being diverted from reaching Uncle Roy – all the street player needs to do is find a card for one online player, not that street players know this. Caught up in the cacophony the street player is led astray and loses time. Control monitors player interactions, by viewing the messages sent to street players, in order to *keep street players on track* and interventions here consist in the sending of message providing relevant instructions to street players who find themselves in this situation.

The monitoring and management of online interactions extends beyond a concern to keep street players on track as the following sequence elaborates.

> Dicky (not on walkie-talkie): How online players?
> Control looks at interface listing online player details.
> Control (not on walkie-talkie): We've got 7 online players. Oh, and we've got somebody called Fuck You. (Inaudible) better keep an eye on them.
> Control pulls up interface to online player text messaging to view Fuck You's talk.
> Control has been monitoring an online player's behaviour.
> Control: I've got an online player called Fuck You who's not being very nice.
> Dicky (not on walkie-talkie): Do you think we should disconnect him (inaudible).
> Control: "They are coming" says (inaudible). Fuck You say's "So is my cock".

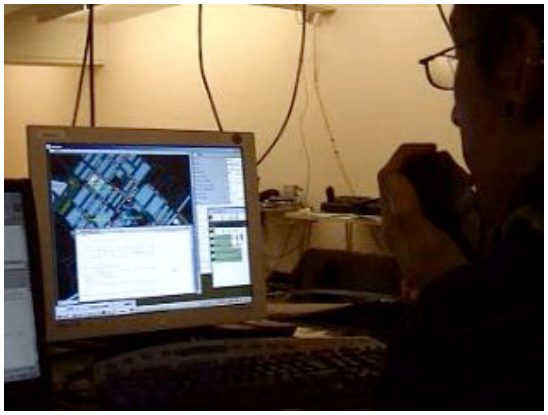

Figure 23. Monitoring online players

Dicky (not on walkie-talkie): I don't think we should have that kind of thing on (inaudible).
Control (not on walkie-talkie): No, I know. Oh, he's gone.
Dicky (not on walkie-talkie): (Inaudible) so can we just disconnect that online player.
Control: He's gone now. I've watched the chap and I do disconnect them.

As a social phenomena Uncle Roy is a moral phenomena not just to spectators but to those directly involved and the very playing of the game is subject, as such, to judgements of *sanctionable conduct* (of what it is 'right' and 'wrong' to do if you prefer). Monitoring and managing online interactions is concerned to *maintain the moral fabric of the game* and control routinely 'watches' player interactions for inappropriate conduct, which is usually managed first by warning the culprit via text messaging seen by all online players and then by disconnecting them if the offending behaviour continues.

Maintaining Awareness

These latter classes of intervention in the control room – keeping players on track and maintaining the moral fabric of the game – are instances of a broader and crucial feature of gameplay, namely, *maintaining awareness*. Maintaining awareness permeates every aspect of the behind-the-scenes monitoring and management of the game. Gameplay, in other words, *relies on maintaining awareness*. The following sequences articulate the myriad ways in which awareness is maintained and for what practical purposes. Together they combine to elaborate fundamental features of the social character of awareness that are *essential* to Uncle Roy's production.

#1. Announcing new players
Front of house: Front of house, we have 3 players in the game.
John: OK
Front of house: Katherine, Kate and Paula (player names)
Control: All 3 PDAs are connected front of house

This sequence announces that new players are joining the game. It triggers a response from control to confirm that the new players are connected and that everything is okay, exploiting the game's control technology to do so. While directed at control, the announcement and control's response is broadcast to the street performers and other behind-the-scenes staff. Everybody is made aware that new players are entering the game and coming their way.

#2. Broadcasting player descriptions
Control: Dave has got short brown hair, glasses, grey shirt and blue jeans.
John (not on walkie-talkie): That's his description so I know who I'm looking for.

This sequence from control broadcasts a description of a new player who is joining the game. It exploits the online description assembled by front of house and shared with control and the office. It does at says and makes street performers aware of who it is they are looking for, what the look like, and so supports the recognition of players on the streets.

#3. Broadcasting player in trouble
Caitlin: John, (inaudible) has gone the wrong way up Whitworth Street, she's not reading her map right.
John: OK.
Caitlin: Have you got the other 2 players in your sight?
John: Not yet (inaudible).

Caitlin: The woman in the black plastic coat has just walked off the game area. She's just – oh no she's coming back but she's heading the wrong way up Oxford Street away from the red spot

John: John to Caitlin.
Caitlin: Caitlin to John, come in.
John: Yeah, I've got visuals on (inaudible) two players, over.
Caitlin: OK. The woman in the black plastic coat is heading back to the Cornerhouse, I'm hoping she will cross over into Whitworth Street.
John: OK, I'll (stay here), over.
Caitlin: (She's) looking at a street map – a real one not our PDA.

This unfolding sequence makes the street performers aware that a new player is going the wrong way and asks that the status of the other newly released players be checked. The locations of all the newly released players is subsequently broadcast, which relies on recognition work and shadowing.

#4. How many people are playing?
Caitlin: Caitlin to Martin, have we got good online player numbers?
Control: Not huge, there's only 5 online players.
Caitlin: And we've got 6 people on the clue trail, yeah?
Control: Yeah, but not attracting a huge amount of online players.
Caitlin: Have we got Simon down there playing?
Control: I don't know, he's not up here.

This sequence broadcasts awareness of online player numbers and street player numbers. It exploits control room technology.

#5. Is there a technical trouble to hand?
Caitlin has called control.
Caitlin: Woman, red hair, blue top, red pants, near the (inaudible) Street phonebox – is she OK?

The controller selects the list of player descriptions taken by front of house. He examines the list to find someone matching the description and checks the players connectivity status.
Controller. I think it's probably Alison. Yeah, she's fine.
Caitlin: OK, great.

This sequence exploits verbal descriptions and the shared online description to identify a player. This is used in combination with displays of connectivity status to establish whether or not the identified player is experiencing technical troubles. In this case it is established, and performers are made aware, that the player isn't experiencing technical troubles, if there is a problem to hand it is not of the technology.

#6. Checking on player status
Adam: OK just to warn everyone, there's 2 guys just around the edge of China Town, one's got a pony tail and they're really legging it to try and get to the office by the look of it.
Caitlin: OK, I'm going to go undercover.
The controller selects the descriptions list, searching for player described. He looks at photos of 2 players and selects one for a closer look then closes the photo.
Controller: OK, that's Johnny and Francis. They've both got time left. They've got like 25 minutes.
Adam: Oh yeah, but they're really really sprinting.
Control: Yeah. They left at the same time as Frankie, who got there in 10 minutes.
Adam: I think there's 2 of them playing together as well.
Control: Er – oo.
Adam: Or it could have just been a friend who wasn't playing, but there's 2 of them running around together.
Control looking at gameplay map and checking player positions (clicks on connectivity bar to view personal records detailing current position).
Control: Yeah, there's 2. Frankie – no, Francis and Johnny. The 2 male players I think.
Adam: Yeah, they're running round together at the moment.

Control selects players descriptions again, looks at their photos, switches back to gameplay map, then selects player information.

This sequence makes behind-the-scenes staff aware of unexpected player location. It is not simply a notification of where players are but a query that asks if everything is okay – have they missed their red spots, for example, or is something else going on. Control's response broadcasts awareness that there are no problems to hand here from a technical point of view or in terms of the players' progress through the game (the technology tells him that they have their red spots and are following clues).

#7. Where are the street performers located?
Dicky: Who's street running now please Martin?
Control: Adam is and (inaudible).
Adam: I'm on Portland Street.
Dicky: Where's John?
John: I'm at St James' Street near the office.
Dicky: OK. I'm going to have a quick cup of tea then I'm going to come back out, OK.
Control: All right.

This sequence broadcasts awareness of how many players are on the streets and their locations. Such awareness enables performers to coordinate their actions, whether it be in monitoring players as the progress through the game space or coordinating breaks and changeovers.

#8. Keeping an eye on players
Adam: I'm hanging around Princess Street and Whitworth Street.
Control: OK Adam. Keep an eye out for the kid who's with 2 women. They're going for the red spot on the canal.
Dicky: Dicky to Adam.
Dicky: Dicky to Adam.
Controller (not on walkie-talkie): He probably won't be able to hear you.
Dicky: Dicky to Adam.
Adam: OK, go ahead Dicky.
Dicky: Adam, just keep an eye on this kid. It might worth – since there's no other players coming out apart from 1 girl – following them around so they don't get in to trouble, over.
Adam: OK.

This sequence not only coordinates the actions of a street performer but broadcasts awareness of the need to monitor a particular player across performers, as can be seen in the next sequence.

#9. Where is the player?
Caitlin: (Inaudible) in the game anywhere?
Adam: Can you confirm where our young player is?
Control clicks on the kinds connectivity icon to check the kid's personal information.
Control: The kid is in G8.

Awareness of where a player is here fostered by consulting the gameplay technology in the control room to furnish a location. This enables performers to orient to the player and establish a sense of where he or she is relative to them, which in turn enables them to determine their actions relative to the player (e.g., whether or not they should keep an eye out if the player is coming their way).

#10. Player status
Adam: (Adam to control), can you tell me how long the kid's got left?
Control selects 'the kid' on the connectivity interface.
Control: Yeah, the kid has 13 minutes. Currently in E6.
Adam: Could you repeat that?
Control: 13 minutes, currently in E6.

This sequence broadcasts awareness of a player's gameplay status and location. It exploits control room technology and its sparsity indicates that there are no problems to hand.

#11. Where are the other players?
Dicky: Martin, can you just give us an update on how many players are on the street (now) please?
Control looks at connectivity interface.
Control: Yes, there are 4 PDAs on the streets.
Control selects a player on the connectivity interface.

Control: Denise is going up and down in the lift.
Control selects another player.
Control: Owen (inaudible) is in E6 near an X location.
Control selects another player.
Control: Yuri is on Portland Street in H7.
Control selects the final player.
Control: And Craig is in the phonebox in H8.

This sequence not only makes behind-the-scenes staff aware of just where players are but in doing so makes them aware of potential next actions (e.g., that a player is approaching the office and should soon be upgrading). In other words, awareness articulates the flow of 'work' on the ground and enables behind-the-scenes staff to coordinate that workflow (e.g., looking out for a player approaching the office and intervening if needs be).

These simple sequences of collaboration articulate the fundamental and essential importance of maintaining awareness, not just between particular segments of the behind-the-scenes division of labour but across it. Awareness is *distributed awareness*, both in the literal sense that is spread across many parts but also, and reflexively, in the sense that it emerges from many parts: from front of house, control, on the streets, and in the office. The game relies, then, not any single source of awareness – such as the control room – but on an *ecology of awareness*, on people situated at various locations, exploiting various resources, social and technical (i.e., local knowledge of gameplay and recognition practices alongside the technology available to control).

The production and maintenance of this ecology of awareness enables behind-the-scenes staff to build and update a shared sense of the *flow of gameplay activities* and to *coordinate* their actions accordingly. Thus, and for example, performers know when players are being released and start scanning the streets for them; know when players are going the wrong way and look out for them and check that other players are okay; know how many people are playing the game and who is experiencing technical troubles or troubles of another nature; know where players are located and where performers are on the streets; etc; and this knowledge enables behind-the-scenes staff to coordinate their actions accordingly.

Distributed awareness permits *distributed coordination* then (COMIC 2.2) and this in turn ensures that the game is, 99.9% of the time, played and not aborted. To paraphrase Hughes et al. (1992) if we look to see what provides for this reliability, it cannot be found in any single element of the socio-technical system. It is not to be found in the technology. Nor is it to be found in the planful character of the game, where players are perceived to move stepwise through a series of procedures understood as 'following clues'. Nor is it to be found in the personnel who, though highly skilled, motivated and dedicated, are as prone as people everywhere to human error. Rather, reliability is to be found in the collaborative activities of behind-the-scenes staff across the 'totality' of the socio-technical system, and particularly in the ways that awareness is produced and maintained by the parties involved in monitoring players actions. Those parties, who are variously situated, on the hand have little more than there eyes to work with and on the other, little more than digital traces and technological information. This arrangement compels behind-the-scenes staff to collaborate to establish 'what is going on now' and to determine 'what needs to be done next'. In the course of that collaboration staff produce and maintain a shared sense of gameplay through the continual checking and reporting of the elements of gameplay unfolding before them, and through the response of others to those events. So while we could easily imagine furnishing every member of staff with the resources available to control, in doing so we would have to be wary that this would interrupt the very work that guarantees the playing of the game, namely, the *continuous course of status reports and responses from multiple locations* where behind-the-scenes staff are situated.

Summary

Monitoring player activities is central to the production of Uncle Roy – the game relies on it, indeed monitoring is indispensable as it enables behind-the-scenes staff to handle contingencies effecting gameplay. Monitoring the activities of players consists of the following collaborative activities:

- Recognizing players on the street
- Recognizing 'confused' players
- Intervening
- Maintaining awareness

Recognizing players on the street

Handling contingencies on the streets is provided for by the distribution of a number of 'street performers' around the game play area, often at particular vantage points, and trades on the ability to recognize players. Recognition is accomplished through *instructed looking*, where front of house broadcast that new players are entering the game and performers start *scanning the streets* for players. Performers may *recognize player's at-a-glance* in seeing people doing such actions as carrying a PDA and a stylus, interacting with the PDA via stylus, talking into the PDA, and/or consulting the PDA and their surroundings, visibly navigating the streets around them. Recognizing a player is not always a straightforward matter, however, as the streets are heavily populated and many people carry small mobile devices. In such situations, recognizing a player also occasions collaboration between the street performer, and/or control, and/or front of house, and/or the office and exploits *online player descriptions* assembled during induction *to confirm or reject a player identity*.

There are occasions when performers fail to recognize players. This does not go unnoticed, however. Performers have a sense of how long it should take a player to come into their zone and failure to comply with this expectation triggers an unfolding sequence of work exploiting various arrangements of collaboration that transforms the player into a *lost object to be found*. Failure to recognize a player leads the performer to *notify* other staff of the situation. Performers then move beyond scanning the street from a particular vantage point to *tracing the player's path* through the game space. Failing this, *potential pathways* the player might have taken are taken into account and the performers concert their actions via walkie-talkie to execute the search. Those nearest to potential paths usually carry out the search, not that this necessarily results in the player being found. Having traced potential pathway(s) without success, more performers may be recruited to the search. The performers coordinate the search through the use of *grid references* that demarcate discrete locations in the gameplay area. If tracing a path or potential path fails to locate a player, performers must resort to trawling the streets to find someone who might be and indeed is a recognizable 'player'. Then, of course, as a last resort there is always sheer serendipity. The search for lost players exploits online descriptions and gameplay status reports – connectivity, last 'known' location (self-reporting may be erroneous), clues being followed. If a performer fails to recognize a player these 'digital traces' provide for *virtual recognition* of the player and inform judgements as to whether or not remedial action needs to be taken.

Recognizing 'confused' players

Monitoring player activities also relies on recognizing when players are 'confused' - i.e., seeing that while doing visibly recognizable gameplay actions the player is also, and at the same time, doing actions that suggest to street performers they are encountering some kind of trouble. Performers attend to *outward signs of confusion*, particularly *changing bodily orientations* (from left to right, back to front, etc.) and *constant consulting of the PDA* that accompanies these orientations. Outward signs of confusion frequently occur but they do

not mean that a player is necessarily encountering an *obdurate* trouble that is likely to effect the continued playing of the game. Outward signs of confusion also accompany *transient* troubles, particularly trawling the streets to establish a sense of the local topography and work out which direction to proceed in. Recognizing confusion is not a straightforward matter then of seeing outward signs of confusion – the status of these signs or behavioural displays stand in need of confirmation. The *transient* or *obdurate* state of confusion only becomes apparent to street performers *after* watching an unfolding series of actions on the street and it is with this knowledge in mind that street performers exploit a method of *shadowing* players to establish the state of confusion being encountered.

Shadowing a player is a *covert* activity that relies on a performer's *knowledge of the game and the gameplay area*. While players may, in principle take many different paths through the gameplay area, in practice they tend to stick to the main streets and thoroughfares. Consequently, over the unfolding course of gameplay, performers come to recognize *well-trodden paths* and exploit these to recognize both confused states and their repair. Essentially, it is a matter of players not only looking like they are not confused but also of being in the right place at the right time and any deviation from such expectancies warrants investigation. Shadowing a player often involves collaborating with control. The primary purpose of this collaboration is to find out if the player is *experiencing any obvious technical difficulties*, such as a disconnection from the game. Collaboration relies on establishing the identity of the player, which is done through providing a description of the player's recognizable features (gender, clothing, hair colour), and by *matching* that description with the online description produced by front of house. In the absence of obvious technical difficulties the state of confusion is identified as *interpretive* in character: the player has taken an incorrect bearing, aligned the map wrongly, misinterpreted the clue, is trawling the streets to develop enough knowledge to make sense of the clue's instructions, or is quite simply and utterly lost. Collaboration with others in the division of labour allows performers to rule in or out technical sources of confusion, then, and to *elaborate candidate sources* of confusion.

Intervening

Recognizing confusion not only warrants investigation but also *intervention*, which prevents terminal breakdown. There are *three main categories of intervention*: 'getting players back on track' as and when they encounter interpretive troubles, 'handling technical troubles', and 'managing the contravention of gameplay rules' (where, for example, two players play together and efforts are made to stop them, not always successfully). While any of these interventions may be made at any point in the game, two of them are *critical:* getting players back on track, which is essentially a matter of recognition work and consists of the recognition practices described above and subsequently intervening to give directions - this is *the most common form of intervention*; and handling technological troubles.

Handling technical troubles is highly collaborative activity. It may involve all behind-the-scenes staff – performers, control, front of house and the office – as well as players. Intervention is here concerned to *establish the nature of the technical trouble* (is it a disconnection, which can easily be seen by control, or some other less visible problem, such as the audio not working?) and, if the player is not already being shadowed, to *locate the player*, which entails furnishing spatial coordinates based on digital traces and scanning the streets (digital traces at best only furnish an area where the player is located and not his or her exact position). If the player is not already being shadowed, collaboration is also concerned to *coordinate assistance*. This involves *identifying* a performer who can get to the player. The *relative relationship* between performers and players locations, along with performers current activities, underpins

negotiation and decision-making as to just which performer will assist the player. Collaboration here also involves *articulating* the nature of the technical problem to performers and a course of action that may result in its resolution (typically and simply resetting the PDA). A description of the player is also required in situations where the player is not being monitored so that he or she may be recognized. Establishing that the problem has been solved is also a matter of collaboration, where performers *notify control* that a repair has been made and ask control to *confirm the efficacy of the repair*, which is established by consulting the technology in the control room.

Interventions also extend to *managing the interactions between online and street players*. Online players need street players to find a postcard located somewhere on the city streets if their involvement in the game is to develop and the situation frequently arises where multiple players seeking multiple cards attempt to get a player to find them. This results in street players being diverted by online players and control monitors player interactions, by viewing the messages sent to street players, in order to *keep street players on track* and interventions here consist in the sending of message providing relevant instructions to street players who find themselves in this situation. Control also monitors the content of online messages for inappropriate conduct. Intervention is here concerned with *maintaining the moral fabric of the game* and in situations where inappropriate language is used, online players are first given a warning and, if their behaviour continues, then disconnected from the game.

Maintaining awareness

Intervention relies on awareness of player activities online and on the streets. Awareness is produced and maintained through the continuous monitoring of players – through recognition practices and managing player interactions online – and the *continuous stream of status reports and responses from multiple locations* where behind-the-scenes staff are situated. Through this continuous stream of reports and responses awareness is *distributed moment-by-moment*. It emerges not from any single source but from people situated at various locations, and with different resources to hand, where monitoring goes on. Thus, the game's production relies on an *ecology of awareness* that enables behind-the-scenes staff to build and update a shared sense of the *flow of gameplay activities* and determine 'what is going on now' and 'what needs to be done next'. Distributed awareness in turn permits *distributed coordination* and the collaborative allocation of staff to undertake the activities that ensure the continued flow of gameplay. Future design work needs to take the production and maintenance of awareness into account to ensure that solutions do not disrupt the ecology of awareness on which gameplay relies.

Finding Postcard

The movement of players through the streets is a directed movement, not only in terms of behind-the-scenes work to keep them on track but also in terms of the fabric of the game: street players follow a 'trail' through the city streets, notably finding a red spot and then a postcard. Finding a postcard, which may be located in a variety of locations on the streets, is essential to finding Uncle Roy and allows street players to progress to the next stage of the game. Finding a postcard is a highly collaborative achievement that entails cooperation between street players and online players, behind-the-scenes staff, and members of the public. The following sequence elaborates the arrangements of collaboration implicated in 'finding a postcard' and the contingencies to which that achievement is subject. Patrick has just found his red spot and received his next clue from Uncle Roy:

> Patrick (reading clue): Right 'You're doing well. I've sat in this park time and time over. Then at dark, over the canal.' Yeah, so I'll go and have a little look over the canal (which is to his immediate right and clearly visible).
>
> Patrick sets off towards the canal.
> Member of the public: Excuse me? You couldn't spare a bit a change could you?
> Patrick: I haven't got any, I'm really sorry.
> Public: What youse doing if you don't mind me asking?
> Patrick: I'm just working.
> Public: Building?
> Patrick: No, we're surveyors.
> Public: What does that mean?
> Patrick: Just looking at the area for mapping.
> Public: Oh right, sorry I didn't mean to be nosy.
> Patrick: No, not at all.
>
> Patrick is following the clue, heading over the canal.
> Patrick: Portland Tower, that's where we've got to go to. He told me to go over the canal then sent me another one: go to Portland Tower.
> Patrick turns corner, off Princess Street onto Portland Street: I think it's down here.
>
> Patrick: Right, I'll have to ask someone on the street.
> Patrick sees a group of four people walking towards him.
> Patrick: Excuse me? Do you know where Portland Tower is?
> The group come to a standstill.
> Group member: Where's that?
> Patrick: Portland Tower.
> Group members: No.
> Patrick: All right, cheers.
> Patrick moves off. A little further down the street he sees a woman sat on a bench.
> Patrick: Excuse me? Do you know where Portland Tower is?
> Woman (who is a street performer in the game) Portland Tower?
> Patrick: (Inaudible).
> Woman looks to her right.
> Patrick's gaze follows her bodily orientation.
> Woman: I don't actually.
> Patrick orients himself to the woman.
> Patrick: No? OK.
> Patrick looks up to his left again.
> Patrick points upwards with his PDA.
> Patrick: It's not that big tower (he says smiling). Portland Tower on it – a sign, I've just seen it.
> Woman (smiling): Ah!
> Patrick: I'm not being funny, I just noticed it.
> Patrick starts walking away.
> Woman (laughs): All right then.
> Patrick: Thankyou.
> Woman: Cool.
>
> Patrick walks towards the tower.
> Patrick: Right (he reports his position).
> Patrick (reading new clue on PDA): 'Wai Yin. Translate. Men cannot enter. Make appropriate move. 23 minutes remaining.' Wai Yin, OK, yeah, all right, I'm going to head for China Town then.
> Patrick navigates the PDA map.
> Patrick: Right, China Town.
> Patrick: Oh, someone's sent me a message here, Venom.
> Message from Venom: What's up Patrick (Must be something about a phonebox here, but missing from log).

Patrick (selects record audio): 'All right **Venom, how you doing? Listen, I'm heading to China Town but if you find your phone box give us** a shout, yeah'.[4]
Patrick: OK, right, China Town.

Patrick is making his way to China Town.
Patrick (looking at PDA and laughs): Someone's telling me I've got a nice jacket on.
Message from Nicole: Hi Patrick - that jacket looks cool.
Patrick (selects 'audio record'): 'Thanks **Nicole, it's very comfortable and it's keeping me very warm tonight, so thanks for that.**'
Patrick: It's bizarre in it.

Patrick is making his way towards China Town and approaches a couple walking down the street towards him.
Patrick: Excuse me? Do you know where China Town is?
One of the couple turns to his right and points across the street saying 'That way'.
Patrick: Right, down there, wicked, cheers.
Patrick: It's where there's the big gate.

Patrick is making his way towards China Town.
Patrick: Right, Dave's just sent me a message – 'Go into the graffiti phonebox by the railings'. So I'm going send him a little message now.
Patrick (selects 'audio record'): 'Dave, **can you direct me to it. I'm outside the red phonebox outside er – oh bollocks** (looks around for street sign) **– outside Reyner Street**. So yeah, if you want to direct me there that would be wicked. Cheers mate.'
Patrick crosses the road, heading towards the red phone boxes.
Message from Dave: Have you found the postcard on top of the phone?
Message from Nicole: Hi Patrick - my postcard is at this phone box.

[4] Audio record is limited to 6 seconds only. Thus, the messages online players hear are not the same as what street players actually deliver. The text highlighted in black represents what the online players hear of the street player's messages.

Patrick: Is he trying to goose me here. He's telling me that I've got to have a look on top of the phonebox. And Nicole, who likes my jacket, is saying that her postcard's here as well. So,

Patrick opens the phonebox and looks inside.
Patrick: There's nothing in there.
Patrick sees a postcard on the floor outside the phonebox and picks it up.
Patrick: All right (it says) 'Tell me about someone from your past who never leaves you.' Right, OK.
Patrick (selects 'audio record'): Right. 'Nicole, **tell me about someone from your past who never leaves you – that's what it says on your postcard** and it's on (looks around him for street sign) Charlotte Street.'
Message from Nicole: U R cool.
Message from Dave: U need the phonebox on Portland St - by the tower.
Patrick (looking at PDA): Right, and apparently there's another one. There's a phonebox – Dave's telling me there's a phonebox over by Portland Tower.

Patrick heads towards Portland Tower.
Patrick (sees another phonebox in front of him): Oh right.
Patrick (selects 'audio record'): 'Dave, **is it the one over the road from Portland Tower?**'
Patrick stops by phone boxes in front of him, checks PDA, and moves off towards Portland Tower.
Message from Dave: OK mate – well done.
Message from Nicole: Huh … um someone from my past … is it a riddle?
Patrick: Well I've just got a 'Well done' from Dave – hang on. 'No Nicole. **Nicole, it's not a riddle, it's the clue that's on the postcard on Charlotte Street phonebox**. You've got to text me with the name of someone from the past who never leaves you.'

Patrick crosses Portland Street heading for the tower.
Message from Nicole: OK - my best friend Royce. He is so great and has always stuck by me.
Patrick: Right I've just
Message from Uncle Roy: Where are you? Press ACTIONS then choose I AM HERE to let me know. (18 minutes remaining)

Patrick: Uncle Roy is getting a bit annoyed because I'm not telling him where I am.
Patrick reports his position.
Patrick (reading clue): 'An ambulance stopped here. It looks like someone I know. I turned away towards the bank as it was then.'
Patrick looks around.
Message from Nicole: OK?
Message from Dave: Head toward subway on Portland Street.
Patrick: 'An ambulance once stopped here as it once was.' Was there an old hospital round here or something?
Patrick looks around at his surroundings trying to make sense of the clue: I think he's giving me directions towards China Town.

Patrick heads back towards China Town. He is looking at his PDA as he walks along.
Patrick: I've just realised that these are all the online players but I'm not sure it's telling me who's who. Oh yes it is. You know that Nicole, who likes my jacket, she was stood right next to us online.
Message from Nicole: I'm real sorry, I'm confused. Am I doing the right thing?
Message from Nicole: Hi Patrick?
Patrick (selects 'audio record'): 'Yeah Nicole. **I'll read the clue again. Just tell me about someone from your past who never leaves you.**'
Message from Nicole: Unkl Roy sent a msg - I'm supposed to guide you to his office.

The sequence instructs us that finding a postcard consist of more than following clues, or rather, that 'following clues' is a practical achievement that extends beyond player interaction with the PDA and the psychical gameplay environment (or the topology of the streets). In the first instance, interaction does proceed in this way and players look for the *spatial relevance* of clues as can be seen, for example, in Patrick's reading of the clue 'You're doing well. I've sat in this park time and time over. Then at dark, over the canal.', which he makes sense of by reference to his immediate environment and in saying "I'll go and have a little look over the canal", which is to his immediate right and clearly visible. In this case, the clue is read then not as furnishing a next destination but a direction from 'here'.

The player follows the direction he has been instructed to travel in and in the course of transit is interrupted by a member the public. That she is begging for money is not the interesting point (a common enough feature of urban life in the UK at least). What is of interest is the player's response to the question "What youse doing if you don't mind me asking?" Similar questions were, on occasion, asked of street performers (as noted on page 21), and in this case the player's actions are also *called into account*. What's happening is recognizably unusual, out of the ordinary, and worthy of remark. In such fleeting and transient situations, and rather than go into lengthy explanations of what they are actually doing, players and performers alike offer alternate accounts to inquiring members of the public that are intended to bring conversation quickly to a close: we're surveyors mapping the area, or undercover policemen, for example. Whatever the particular account given, being *accountable* to members of the public is occasionally an unavoidable contingency of playing (and monitoring playing) on the streets and, as such, part of the social fabric of the game.

Player interactions with members of the public are also much more intentional and deliberate. Following a clue requires that the player make sense of it and it is in this respect that members of the public become unwitting but willing collaborators in gameplay. Of particular relevance is the *local knowledge* that members of the public may posses and players frequently query the public to *get directions and identify locations* that are relevant to following the clue. Thus, and for example, Patrick asking "do you know where Portland Tower is?" or "do you know where China Town is?" 'Following a clue', then, consists not only of reading it for its spatial relevance in order to determine the direction to go from 'here', and of using the clue to interpret topological features, but also relies on exploiting the local

knowledge possessed by members of the public to *find the way* to destinations of relevance and thus to 'the next step in the game'.

The instance instructs us that street players also collaborate with online players. While absent from this sequence, collaboration is occasionally concerned with wayfinding where street players ask online players to help them find their way to a particular destination,[5] however, this usually results in the player being pulled into the search for a postcard by the online players. In the above sequence, Patrick encounters the online players in this way – i.e., he is pulled into a search for a postcard by the online players (and this happened to Becky as a result of her appeal for assistance). Collaboration here is concerned firstly to establish a *mutually intelligible point of reference* (not, of course, that this will always be successful) It is not enough to say 'go into the graffitied phone box by the railings' – directions are needed and for that a mutual intelligible point of reference is required, such as 'I'm on Reyner Street'. This reference point in principle allows Dave to formulate directions from Patrick's location to the graffitied phone box. They are not forthcoming in this case and Patrick is still moving towards China Town. He then receives messages from Dave and Nicole instructing him to look on top of the phone box. Patrick searches the phone box and locates a card on the floor outside, which he reports to Nicole.

Patrick hasn't located the phone box Dave requires and Dave prompts him to look for the one on Portland Street by the tower. There are several phone boxes near that location and Patrick tries to find out which one Dave wants. At the same time, Patrick has to explain to Nicole what the message on the postcard means and the two work together then establish the sense of the card. And finally, as Patrick goes in search of Dave's phone box, Uncle Roy intervenes to keep him on track. Unwittingly, Patrick is being led astray by Dave – the game only requires that he find a postcard for one player, who will then be instructed by Uncle Roy to lead the street player to his office. Collaboration between street players and online players may be highly confusing then, with street players wandering the streets trying to find vaguely described locations (hardly surprising given the unavailability of the real street scene to online players).[6] Where *negotiations of direction and destination* are successful, or serendipity intervenes, and postcards are located, street players may find themselves led astray by online players (or 'harassed' in control's terms) and intervention is required from control if the street player is to *keep on track* and reach the next stage of the game: finding the office. This requires that players collaborate to establish the *meaning of the instruction* on the postcard: that it is literal and not, for example, a riddle. Once the card has been recovered and its instruction complied with, the online player is furnished with information from Uncle Roy (how?) that may enable them to guide the street player to the office.

Summary

Finding a postcard relies on 'following clues'. This is a practical achievement that exploits various arrangements of collaboration between street players, online players, behind-the-scenes staff, and

[5] For example: Becky: (Reading message from an online player) 'Hi Becky, how are you?' I'll send audio. 'I think I'm lost. I'm trying to look for the helical sign where everything is intertwined. I'm at the bottom of George Street, by the sports warehouse, clothing warehouse.'

[6] Examination of message logs shows that online players work to find and give directions but in the absence of being able to see street players, many corrections are occasioned and negotiation often appears to break down. Whether this is because of the paucity of descriptions or because street players ignore online players either as a result of following new clues or of interventions by control is not at all clear. (See Appendix I following section Summary overleaf for examples).

members of the public. Work here is concerned with the following 'jobs'.

- Street players need to establish the spatial relevance of clues in order to determine the direction to go in from 'here' –i.e., from the place where they have received their next clue.
- Contingently, as occasion demands, street players need to account for gameplay actions to members of the public.
- Street players exploit the public's local knowledge of the gameplay area to get directions and identify locations and thus find their way to destinations of relevance specified by clues.
- Street players establish mutually intelligible points of reference with online players in order to formulate directions to locations where postcards are situated.
- Street players negotiate directions and destinations with online players in order to find locations where postcards are situated.
- Street players and online players collaborate to make sense of the postcard's instructions.
- Control intervenes when street players are being led astray by online players in order to keep them on track and get them to the next stage of the game.

The work of establishing mutually intelligible points of reference and of negotiating directions and destinations is subject to the contingencies of gameplay: of street players being unable to make sense of vague descriptions, or ignoring directions, or being unable to identify destinations, or of receiving new clues from Uncle Roy, and following them. Collaboration between players is, as a consequence of these contingencies, sporadic, fitful, or *hit-and-miss*.

Appendix I

Kate	debbi could you go to the grey horse inn
Kate	then i will tell you where roy s office is.
Kate	Debbie will you help me
Kate	send me audio
Kate	talk to me debbie. ive found roy
Kate	follow my directions
Kate	start walking and ill direct you
Kate	start walkig
Kate	update position
Kate	left
Kate	right
Kate	right
Kate	stop
Kate	go back as far as grey horse
Kate	goto the grey horse pub. ill tell you were roy is
	Communication stops
Yasmeen	pls go to red fone box on charlotte st in chinatow
Yasmeen	theres a postcard on top of the fone for you
Yasmeen	theres a postcard in red fonebox charlotte st
Yasmeen	it s behind you...
Yasmeen	fone box is opposite manchester mill
Yasmeen	i can help you if you help me
Yasmeen	yes. go back to charlotte st redfonebox
Yasmeen	opp manchester mill youre v close
Yasmeen	its on top of the fone
Yasmeen	we can help u
Yasmeen	walk down charlotte st
Yasmeen	go to charlotte st pls
Yasmeen	have u got my postcard
Yasmeen	the postcards on top of the phone i
Yasmeen	go back
Yasmeen	have you got my posrcard
	Communication stops

Making Way to Office

The sporadic character of collaboration between players continues as street players attempt to make their way to the office, as the following sequence indicates.

Patrick is making his way along Charlotte Street towards China Town.
Message from Nicole: Unkl Roy sent a msg - I'm supposed to guide you to his office.
Patrick (reading message): Ah right, OK. Right, because I've collected the postcard for Nicole, Uncle Roy's sent her a message saying 'Right, guide Patrick to my office'.
Message from Dave: Patrick it's Dave – head to Mosely Street.
Message from Nicole: I will tell you how to get there.
Patrick (selects audio record'): 'Nicole, you're going to have to tell me where to go. I'm at the car park near the China Town gates. So if you want to gives us a shout that'd be great. Cheers. Bye.'
Message: OK. I think go straight ahead – the direction
Message from Dave: Come on chief – through China Town towards Mosely Street.
Message from Nicole: U R facing – I dunno if you can see me or not – towards the China Town gate.
Message from Dave: Get moving mate – towards Mosely Street. Update your location – do you need help?

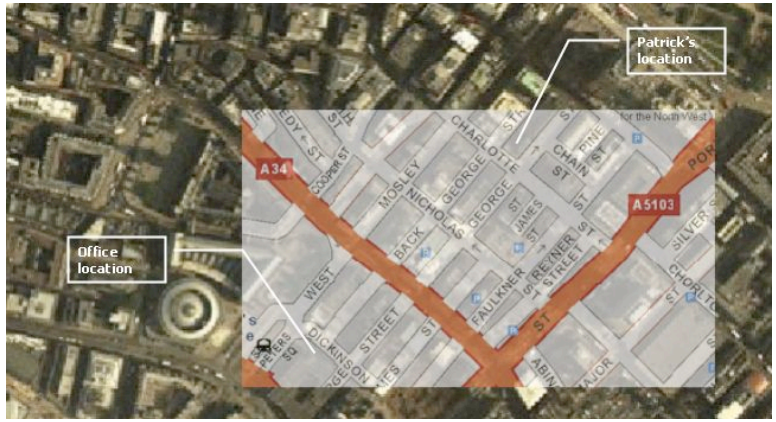

Figure 24. Patrick's location and the office's location

Message from Nicole: Hi Patrick – perhaps I have annoyed you …
Message from Dave: Talk to me – do you need some help?
Message from Nicole: Uncle Roy's office is ahead if you will follow – or maybe you are talking to and helping other players?
Message from Dave: Patrick move back nearer Oxford Rd. You are far away at the minute – go toward OX Rd.
Message from Nicole: Patrick is there anything I can do to convince U to follow me?
Message from Dave: Where are you? Talk to me.
Message from Nicole: Maybe you have lost reception …
Message from Dave: Speak to me – where are you?
Message from Nicole: Hi Patrick?

Just what happened to Patrick is not clear – he made it to the office but whether through further collaboration with online players or through the instruction of Uncle Roy is not known as the logs end with Dave and Nicole's pleas for Patrick to talk to them. The important point here, however, is to note the breakdown of communication between online players and street players and the complete *unavailability of street player status to online players:* Patrick is lost to them and they struggle to *make sense* of that loss – maybe he's lost reception, or is talking to and helping other players, for example.

Some 70+% of players made it to the office and instances such as this and those in previous sections suggest that this is through a *mix* of collaborations between players, behind-the-scenes staff, and members of the public. The following sequence elaborates the work involved in successful collaborations between players, where online players do manage to guide street players to the office.

Becky (selects 'send audio'): 'I'm at the kiosk now. I've just picked up a postcard and it says, "Go to the nearest phonebox and call the number." So I'm going to go and do that right now.'
Becky leaves the kiosk and looks around for a phone box.
Becky: There's one down there. Although, is there one closer? (Looks around again). I think we'll go down to that one.

Becky (walking along, updating position): I put myself by the (points to phone box).
Message from Uncle Roy: 'Keep Safeway on the right. 23 minutes.'
Still heading for phone box
Becky: 'I'm going to send a message to Polly (online player who helped her find postcard). 'I'm by the phone box. I'm about to call the number on the back of my device now.'
Enters phone box and dials number.

Becky: Hi. This is Becky. I've just received a postcard.
Becky: It was Polly.
Becky: Yeah.
Becky: Right.
Becky: OK.
Becky: Thankyou.
Becky: Bye.
Becky: I've been told I must go to Uncle Roy's hotel room.
Becky (selects 'send audio'): 'I've been told to go to Uncle Roy's hotel room. Can anybody help me find where it is?'

Becky heads back towards Safeway's car park.
Becky: I can see on the map that Polly's actually following me and helping me out, that's good. She hasn't sent me anything as yet but she's just – keep making her way towards me.
Becky is still making her way towards the car park.
Becky (reading message from Polly): 'Can you see …' – she's just helped me to the Days Hotel (which is clearly visible a few hundred metres away).
Heading towards the hotel, updating position.
Message from Uncle Roy: 'You're very very close. Get to the Days Hotel (inaudible). 7 minutes remaining!'
Becky: Oh God, I'm going to have to run.

Becky is heading to the Days Hotel.
Becky: Just moving myself to Safeway's
Becky (selects 'send audio'): 'I'm just about to head towards the Days Hotel and I don't know whether to go in the front entrance or the back entrance.' I think there's only a front entrance.
Becky makes her way to the front entrance of the hotel.
Becky (selects 'send audio'): 'I'm running a little bit late. I've got 2 minutes left. I've just fallen over, so I'm not very happy at the moment.'

Becky goes into the hotel and updates her position.
Message from Uncle Roy: 'Near the lift is a photo with one person in it.'
Becky makes her way to the lifts and starts looking around.
Becky: Ah ah (sees photo on wall next to lift and goes over to it).
Becky (reading message from Uncle Roy): '(Inaudible) find the person in the crowd.'
There is a photograph of people in a crowd on her PDA. Becky scrutinizes the photo on the wall then circles the same person in the crowd.
Becky (reading message from Uncle Roy): (Inaudible) 817. I take it that will be, what, floor 8 room 17, or
Becky gets in the lift and goes to the eighth floor.
Becky (reading message from Uncle Roy): 'Take your time and take in the skyline and scan the town.' I better go and find it (the office) – I need to sit down!
Becky makes her way along the corridor to room 817.
Becky: 801, 816, it's along here.
Becky (reading message from Uncle Roy): 'Congratulations, we wanted you to spend some time here.'
Becky sees a keycard on a chain outside 817 and lets herself into the room.

The sequence instructs us that where collaboration is successful in guiding street players to the office it relies on street players *notifying online players of their current situation* (e.g., that card is in hand and that they need to make a phone call) and of *updating location* so that online players can follow them.[7] The players collaborate to find the hotel where the office is situated, with online players exploiting the street player's *reported location* and their *view of the virtual environment* to furnish directions. The office is located by accomplishing a predefined gameplay procedure where street players following an instruction from Uncle Roy to go to the hotel lifts and identify a person in a photograph.

Summary
Making way to the office exploits various arrangements of collaboration between street players, online players, and behind-the-scenes staff. Work here is concerned with the following 'jobs'.

- Notifying online players of the street player's current situation and updating location.
- Exploiting reported location and views on the virtual environment to furnish directions to street players.
- Accomplishing predefined gameplay procedure to locate the office within a building.

Guiding a street player to the office is subject to the contingencies of communication. When street players fail to respond to online players queries, collaboration breaks down leaving online players confused if not bewildered and struggling to make sense of what is happening on the ground. Essentially, the practical concern here is one to do with awareness: of online players being aware of street players locations (which they work to establish in order to furnish directions) and of awareness of street players connectivity status when communication breaks down. The potential exists here to augment awareness in various ways to support direction-giving and provide various representations of street player status (including connectivity along with movement and clue status).

[7] This sequence is from a revised version of the game staged at West Bromwich, where the postcard instructs the street player to contact behind-the-scenes staff who, in turn, instruct the player to go to Uncle Roy's office.

Accomplishing Pick-up Procedure

Reaching the office also relies on behind-the-scenes work by staff at the office. In the sequences that follow, staff are located in a room next door to the office. This room provides a view onto the office and its approach. Cameras in the hall approaching the office and in the office itself allow behind-the-scenes staff to see approaching players and, once in the office, to see whether or not they have accomplished the pick-up procedure that will result in them being taken by limousine back to the venue from where they started the game. Behind-the-scenes staff also have access to online descriptions of players and are in contact with control and street performers via walkie-talkie. Below we consider the ordinary flow of events and contingencies that are involved in a player reaching the office from the point of view of the work of behind-the scenes staff, and what happens next.

Tracking players

In the first instance, and before players reach the office, behind-the-scenes staff track players. Tracking players consists of various activities and arrangements of collaboration. Work here begins with staff consulting online descriptions. Staff does this frequently throughout the game. 'Consulting online descriptions' consists of refreshing the description list to find new players who have joined the game. The names of new players and the time they started the game is noted down on a paper list which is kept to hand. If players do not reach the office their names are crossed off this list. If they do reach the office then their names are added to another list and crossed off when they leave the office. The production of these records, which provide a 'head count' and enable behind-the-scenes staff to recognize lost players in the first instance and that pick-up has been accomplished in the second, is accompanied by further tracking work:

> Caitlin: Woman in black, all in black, and another woman in a denim jacket with blonde hair – that must be Maureen. Are they X located?
> Staff looking online description.
> Caitlin: Caitlin to control, has Maureen timed out?
> Control: Control to Caitlin, which was the name?
> Caitlin: Maureen.
> Control: Control to Caitlin, yes I think Maureen timed out.
> Caitlin: OK, they must be heading back to the High Street now.
> Staff crosses players off list.

This sequence shows that tracking work consists of *monitoring* the talk of street performers and control, which enables staff to identify players who will not make it to the office. Conversely, staff and street performers also collaborate with one another on occasion to establish player identity, exploiting the online description to recognize players who are approaching the office. This work serves to *notify* staff that players are approaching and should soon be in view. If a player fails to 'show up' within a reasonable time frame then their absence will trigger a collaborative search for them, with staff notifying performers and control of their absence. Staff also collaborates directly with control to establish whether or not players are approaching the office:

> Staff refreshes online descriptions.
> Staff (not on walkie-talkie): They're all new – (inaudible), Amy and Malcolm.
> Staff writes names and start times down on list.
> Staff: Office to control, have we got any players on the way to the office?
> Control: Control to office, no there aren't any players near to the office yet.

So tracking players from the office consists of exploiting online descriptions to generate lists of 'incoming' players, monitoring the talk of performers and control to identify players who will not make it to the office and recording that status by crossing them off the list, collaborating with performers via walkie-talkie and exploiting online descriptions to recognize players who are approaching the office, and similarly, collaborating with control who exploits technical views on

location to update staff as to who, if anyone, is approaching the office. These arrangements of collaboration, which exploit the ecology of awareness underpinning the game, enable staff to track the progress of players through the game space (and to recognize the loss or absence of players and initiate remedial action), and where things proceed smoothly, to orient to the approach of players to the office and the next stage of the game.

Recognizing that players have reached the office

Just as it is not always straightforward for performers to recognize players on the streets, then so too it is not always straightforward to recognize that players have reached the office *even when someone comes into view:*

> Staff is looking at the hallway monitor and sees 3 people walking down the corridor towards Uncle Roy's room. They turn the corridor out of view.
> Staff #1 (not on walkie-talkie): I don't think that's players. I was told there was no-one on their way so …

This simple sequence shows that recognizing that players have actually reached the office relies on a co-produced *awareness of the flow* of players through the game space and with that their position relative to the office. This awareness is produced through prior collaboration with other behind-the-scenes staff in tracking players as described above. Even when players reach the office matters are not always straightforward, however:

> Two members of staff are in the office and control has notified them that a player – John – is approaching.
> Staff #1: Office to control, has John upgraded yet?
> Control: Control to office, no John (inaudible) I'll send him a message.
> Staff (not on walkie-talkie): I thought John was on his way to the office. F13 he (control) just said. That's like by the tram station. What's going on? It was John that phoned you, right?
> Staff #2: Hmm.
> Several minutes later John can be seen walking down the corridor via the monitor. He walks towards the hotel room then turns the corner, away from Uncle Roy's room.

Figure 25. Seeing a player walk to and away from the office

> Staff #1 (not on walkie-talkie): I think I should go and get him. What do you think, shall I go and get him?
> John walks back into view. He walks up to Uncle Roy's room and turns away again.
> Staff #1 (not on walkie-talkie): That's it, I'll go.
> Staff #1 goes and gets John, shows him to Uncle Roy's room and returns to the office.
> Staff #1: Office to Paul, I have John in the office.
> Limo: Paul to office, standing by, over.
> Control: Control to office, John still hasn't been upgraded to the office. I don't know how he get there.
> Staff #2: Nick to control.
> Control: Nick.
> Staff #2: John's definitely in the office so can you maybe upgrade him to the office sequence?
> Control: OK, I'll upgrade him now.

Staff surmise that in this case the player has cheated – they reason that a friend has played the game before him and told him where to go. While the instructions were not good enough to get John to the office, they were sufficient to circumvent the upgrade procedure,

which amongst other things not only tells the player where to go (as in Becky's accomplishment at the lifts) but subsequently informs them to fill in the postcard in the office and to wait in the office for further instruction. Filling in the postcard is the next stage of the game when a player has reached the office and represents the accomplishment of the pick-up procedure on the player's part.

Recognizing pick up procedure has been accomplished

For staff, 'filling in the postcard' is a matter of recognition. In many cases this is a straightforward matter:

> Staff is watching 2 players – Tina and Joanne - in Uncle Roy's room via the monitor.
> Staff (not on walkie-talkie): Are they filling in the postcard or having a chat about it? I mean, she's got it here, look (points to person sat on bed).
> Staff continues watching the player, sees her writing on the card and then pass it to the other player who reads it and puts it on the table.
> Staff: Office to Paul, Tina and Joanne have finished writing their postcard.

Figure 26. Recognizing that the postcard has been filled in

Recognizing that players have filled in the postcard triggers the next stage in the game – notifying staff in the limo that the pick up procedure has been accomplished, which is followed by a call from limo staff instructing the players to make their way downstairs to be pick-up in Uncle Roy's limousine. All of this relies on office staff seeing players write on the postcard. For various reasons of collaboration – such as tracking players or monitoring activities in the hallway – this may be missed, or again, as players move around the room and place themselves in various locations, just what they are doing may not be visible. So recognizing that the pick up procedure has been accomplished is not always a straightforward matter:

> Staff is watching player (John) on monitor.
> Staff (not on walkie-talkie): I don't know whether he's written his postcard or … he's flitting between reading his PDA and doing his own thing and then … I don't know whether he's …

Figure 27. Has the postcard been filled in or not?

> Staff: Office to Paul, I believe John hasn't done his postcard but I'm not sure if he's going to do it all. You can make the phone call and ask him. I'll leave it up to you.
> Limo: OK, I'll make the call.
> John goes over to phone and answers it. He goes to the table and fills his postcard in. He then makes for the door.
> Staff: Office to Paul, John has finished writing his postcard.
> Limo: Paul to office, (inaudible).
> Staff watches John leave the room on the corridor monitor.
> Staff: Office to Paul, yeah he's just left.

This sequence shows the work involved in resolving recognition troubles. The work is collaborative and entails notifying the limo staff of the problematic situation. The trouble is resolved by the limo staff calling the player and instructing them to fill in the card and then to make their way downstairs to the limo to be picked up. The resolution of recognition troubles exploits ordinary *procedures for coordinating the pick-up of players*.

Coordinating pick-up

Running alongside the accomplishment of the pick-up procedure – filling in the postcard on the players part and recognizing filling in the postcard on office staff's part – are collaborative procedures carried by office and limo staff. When the limo is in transit, limo staff are out of walkie-talkie contact so as not to interrupt artistic elements of the game. This means that office staff must make frequent 'calls' to find out if the limo is ready to transport another player back to the venue where they started the game from. The absence of a replay to a call signals that the limo is not ready.

Staff: Office to Paul.
Staff: Office to Paul.
Limo: (Inaudible).
Staff: Yeah, it's Debs. Are you ready to drive?
Staff: Office to Paul, yeah we have John in the office at the moment.
Limo: Yeah I'm ready.
Staff: Office to Paul, Tina and Joanne have finished writing their postcard.
One of the players picks the phone up and after the call the players leave the office.

Figure 28. Seeing players leave the office

Staff: Office to Paul, Tina and Joanna have left the office.
Staff crosses the players off her list of players who have made it to the office.

Issuing calls is followed by the notifications described above. So, when the limo is *ready to drive* and the players have *recognizably filled in the card*, office staff *notifies* the limo whose staff, in turn, call the players and *instruct* them to make their way to the limo.

Summary

Accomplishing the pick-up procedure involves discrete jobs of work and arrangements of collaboration carried out by behind-the-scenes staff and street players. These include:

- *Tracking players*, where office staff monitor talk between performers and control, and otherwise collaborate directly with them, to establish who is in the game and approaching the office.
- *Recognizing that players have reached the office*, where staff exploit the ecology of awareness involved in tracking players to recognize persons as players and otherwise assist players into the office as contingencies dictate.
- *Recognizing that the pick-up procedure has been accomplished*, where office staff look to see if players have

filled in their postcards as per instruction and otherwise collaborate with limo staff to resolve recognition troubles.

- *Coordinating pick-up*, where office staff and limo staff collaborate to establish that the limo is ready to drive and limo staff collaborate with players to arrange their pick-up following notification from office staff that the pick up procedure has been accomplished.

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