The Social and Cultural Implications of 'Co-Presence at a Distance' in an Augmented Location Aware Collective Environment (the Mogi Case)

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Abstract

We propose to describe the uses of a geo-location game in Japan, Mogi in which the location of players is made publicly available to their community, through the mediation of gameplay mapping interfaces and specific location cues. In such location aware environments the sense of 'presence' is augmented by such affordances. We show empirically how players are aware that their locations are public and accountable at any time; and how forms of 'co-presence at a distance' are occasioned by mutual mediated 'sightings'. We discuss some issues related to such 'co-presence at a distance' such as: i) the way it enacts the instantiated relevance of an actual co-present encounter ; ii) the way it is used as a resource for playful engagements in which co-presence at a distance becomes an end in itself : cara-gattai' or playing to get their icons to 'touch' in the screen maps without actually being physically close ; iii) the way 'co-presence at a distance' may be treated as a potentially dangerous situation (particularly when one of the players is at home), whose negative implications may collectively be managed by players, because of the public character of their locations.

The social and cultural implications of 'co-presence at a distance' are key issues for the understanding of social behaviour in mediated communities that are augmented with location awareness resources.

Keywords--- **Mobility, Presence, Ubiquity, Location-Aware Systems, Mobile Multiplayer Game, Encounters, Interaction, Instant Messaging, Urban Computing. H5.3 [Group and Organization Interfaces] : Computer Supported Cooperative Work, Asynchronous Interaction, Synchronous Interaction**

Many hopes for the future of advanced mobile services are pinned on sensitive services. The questions raised by the sudden appearance of these technologies are of direct interest to the social sciences. Through their location-based affordances they augment our public spaces and transform our experiences of encounter within it, as well as the ways in which the entities constituting our environment can act and appear to us, here and now [16]. We can therefore expect particular forms and experiences of presence to emerge in such environments.

In recent years the development of user-position sensitive mobile technologies has been oriented in two complementary directions. First, the technology contributes towards an engineering of traffic encounters. The terminal projects a digital 'aura' over a short distance, so that when terminals projecting a compatible profile pass close by, information can be exchanged, for instance between passing cars or motorbikers [3, 5]. Resources can be provided to users via wearable computer equipment and perceptive prostheses to access virtual objects in an enhanced environment, as in the Arquake game derived from Quake [12]. Second, location awareness may be embedded in the use of handheld devices and mobile phones, through graphic interfaces that provides maps of mobile geo-located entities, in university environments with Active Campus [1, 7] or integrated within a city-based gameplay in 'Can You see Me Now?' [2]. The digital game space may also feature information resources and virtual objects 'placed' there by the designers[8]. In the 'Active Campus' experiment visitors to a place can leave 'e-graffitis' to which equipped users have access, via their terminals, when they visit the place. These systems have three characteristic properties:

-    The digital activity space is articulated to the 'real' space via geo-localization

-    The behaviour it supports is embedded in 'real' lived-in places which provide sense-making resources (for example to make sense of 'mediated' location aware social gatherings), and often have an institutional character. One could say that such location-aware devices are thus embedded into 'institutions': ActiveCampus in the university institution [1] and Can You See Me Now?, like the game Mogi that we are about to examine, in the city (or the country) as a public place.

-    Location aware systems provide for a shared space, a medium for collective activity where participants and their informational environment are

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[8] To act on them in the screen space, the equipped user has to be physically close to their 'location'.

made reflexively visible by means of mobile graphic interfaces and specific affordances

- Location aware systems may provide different types of information regarding other members of the location aware community through various affordances: location of others (in a geometrical sense), distance between self and others, direction of other to self, names for the location of others [17]. The way such information are implemented in the graphic interface provide 'social affordances' which constitute important resources for the kind of collective behaviour that emerges from the use of the game.

The Mogi game that we are about to examine here corresponds to this design perspective, although it is not an experiment. The game was developed by a French start-up and commercialized by a Japanese mobile telecom operator[9]. The players, most of whom have never met before, register by subscribing on a portal. The device provides them with access to geo-located resources, and graphic interfaces indicating location, direction to, and distance from other players under various formats and circumstances. Such interfaces and 'maps' ensure that location of connected players constitutes public data, potentially available to the noticing of proximate enough mobile players and to all connected computer-based players. As we will show, one of the implications of this is that Mogi supports the occurrence of a variety of noticeable co-proximity events. We will consider the Mogi players as a particular instantiation of a fully location aware community, and investigate the methods they have developed to manage routinely types of encounters variously intelligible as forms of 'co-presence-at-a-distance'. Such methods are co-constitutive of them as a location-aware social group, and of the augmented public space they inhabit.

The empirical work draws on the analysis of an anonymous corpus of mobile messages exchanged between the players. This corpus has been treated with an orientation towards the methods of Conversation Analysis (CA) [15]. We discussed some of the phenomena we uncovered and our interpretations of them in face to face interviews and online discussions with some active players.

1. Mogi, a location aware game

The game Mogi was developed by a team led by Mathieu Castelli at a French start-up (Newtgames), and was commercialized in 2003 in Japan by the operator KDDI. The gameplay consists in collecting virtual objects with a mobile phone. These are 'localized' (in the sense that users can act on them only when they are close to their virtual position) and are continuously created and renewed by the game designers. The

player has an interface, the 'radar', that features a map with a radius of 500 meters. This map represents the player's environment, with his or her pictogram in the centre of the mobile screen, surrounded by those of the other players and virtual objects situated within the 500m radius. These data are updated with each server request[10]. When players are less than about 300 meters[11] from an object they can capture it with their terminal. Each object belongs to a collection (all kinds of items have been introduced by the designers, some with distinctive spatio-temporal properties). Completing a collection earns points, and players are classified according to the points accumulated. The basic idea is to create a community of high-tech hunter-gatherers whose activity is set in an economy based on the bartering of virtual objects and a sociability based on text messaging.

The main functionalities of the game are accessible from the main menu. The five most important are:

1. The 'radar' interface, the map of the player's immediate environment. By clicking on a sufficiently close object on the map the player can pick it up by launching a collection module. Clicking on a player's icon on the screen opens a window for text messaging.

2. The module dedicated to text messaging. The addresses and messages exchanged are accessible only within the game server. Players can create buddy lists of favourite correspondents (Mogi friends or the members of teams to which they belong[12]).

3. The exchange and transaction module (for exchanging objects missing from one's collection).

4. The user profile: those who can choose to make all or part of the inventory of objects that they possess, as well as the type of object they want, visible.

5. Public classification of players according to the number of accumulated points. This classification is frequently consulted by players and introduces competition between them.

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[9] An extensive description of the history of the design of the game (with changed names) was given in [9].

[10] The rapidity of these connections with the game server is critical as regards the acceptability of the game. At certain times the connection time ranged from 30 seconds to one minute, which was experienced as a real problem by players.
[11] Experience of the game is richer with a GPS terminal (the precision of geo-localization is then a matter of a few meters) but the game also offers the possibility of localization from cells. Experienced players have become accustomed to constantly switching from one to the other in their quest for objects since the map in cell mode is slightly different to the GPS map, due to the position of the antennae. It is therefore likely to reveal new objects in one or two clicks, without the player moving at all.
[12] This possibility of creating teams and getting together, introduced shortly before my study, has been highly successful.

Figure 1 The radar interface that represents the local map of the game around the player (whose icon always appears in the centre of the screen) in an area of one square kilometre. The other players and geo-localized virtual objects appear on the map. The 'closest Mogi-friend' is indicated at the bottom of the screen, with the distance even if it is more than 500 metres. This functionality was added by the designers to facilitate the 'onscreen encounters' discussed below

It is also possible to log onto Mogi on a PC, from a website. In this case the interfaces and functionalities are different. The Web interface includes a chat function not accessible on mobile terminals, but its key feature is that it allows PC-based players to visualize maps showing other players and bigger geo-located objects, throughout Japan. Since they are stationary they can pinpoint the position of highly coveted objects or unusual movements of known players. This is well known among players and has the very important consequence of turning the Mogi players into a location-aware community, in which one's location (as presented in the interfaces) and by way of consequence, one's displacements, become public data, always potentially accessible to other known and unknown players.

Regarding encounters most players avoid meeting face to face, and elude such proposals. Similarly they also rarely exchange their mobile email addresses, so that most of their text messages are sent and received on the game dedicated text messaging system. Therefore, the social interactions that are elicited in the course of playing Mogi are mostly kept within the game technical infrastructure. This apparent shyness may be a feature of inhabiting a location-aware world with unknown others (outside the scope of the game).

2. Using location awareness to elicit mediated encounters based on text message interchange

That location and displacements are public is something of which players are aware. It may even become a matter of open discussion between players. In the excerpt below, one player

(T.) discusses a long and unusual trip she plans to make, and indicates how she expects others to notice, when they see the location of her icon in the maps of the game.

Extract n°1 (anonymized):
1. T (07:59:32): Only you and A. know that I'm going as far as Shikoku. The others will be surprised when they look at the radar. (*^m^*)

2. H (08:03:18) : Yes. Everywhere people will panic. Or maybe nobody will even notice. Which would be a bit sad. (Laugh)

3. T (08:07:20) : But at least A., T. and R. will notice. (≥▼≤)

Her correspondent responds by joking about it, even suggestions that in case nobody notices, it would even be a pity. This shows how players orient towards their being accountable for their positions on a routine basis, and openly acknowledge and discuss the fact that their mobility is made visible (particularly to PC-based players, which are able to see the whole gameplay).

Because location is made public, the actual position of a player at a given time is something that is noticeable and warrants noticing, as shown in extract n°2. One player, M., probably connected through his PC (for he gives no indication there and after that he is anywhere around Haneda Airport), remarks on the location of another player H.

Extract 2 :
1. M. (15:23:35) : Ah? ✈ *(plane) Are you near Haneda Airport ?* ❓

2. H. (15:24:09) : Yes, that's it. 😊 *(happy smiley)*

3. M. (15:25:34) : Are you leaving for work ? ❓ *(question mark)* 💪 *(flexed arm) Good luck* 🌷 *(heart)*

The sequential organization of the "noticing" turn is interesting. It starts with an exclamation that works as a 'change of state token' [8]. It constitutes what has been going on as a cause for wonder and as an occasion to invite further elaboration. Considering the question (which will be treated by the other player as a request for confirmation) about location that comes after, the turn constitutes M. retrospectively as a PC-based player remarking an unknown position for H. The question is emphasized with a 'question mark' emoticon, therefore strongly inviting H. to respond: unusual location and displacements are treated as "mentionables", which may be used as a legitimate pretext for initiating interaction. Some

sense of the familiarity between both players also emerges as a practical accomplishment within the exchange: the 'ah' token suggests astonishment with respect to the airport location of H, and some previous knowledge about where H. usually is.

The absence of greetings may be related to an 'open channel of communication' [6]. It is supported by the familiarity between players (such as between team members), by forms of 'heightened accessibility' related to multiple modalities of 'presence' of players within the environment (visibility of self's avatar and its location on electronic game maps) [14], and by a general, proximity-based and membership-based entitlement to notice and comment on constantly changing circumstances and occurrences to concerned players (interesting items nearby, proximities between players, etc.).

The Mogi case shows some of the consequences of the publicity of members' location. The current location of a given player is treated as a mentionable topic that is available (in principle) and warrants offers to initiate a particular form of encounter, based on text message interchange. The categorisation of players as localized and mobile entities is always relevant within the collective game activity, and pointing towards another player's location is a routine practice that displays one as a member. Location is there to be seen, but noticing it may sometimes infringe on one's "informational preserve" and require some specific forms of remedial interchange. Mentioning the location of another player is a way to produce affiliation markers and "doing being familiar", Moreover, such a noticing sequence has all the features that characterize a greeting sequence in the anthropological sense [4] We believe that these features characterize more generally the emergence of a public order based on visibility of one's location to other members and the development of specific ways to manage "relations in public" in location-aware communities [6].

3. Co-Proximity events: The implications of mediated co-presence at a distance

3.1 Co-proximity events and the enactment of the relevance of face to face encounters

A particular form of encounter is occasioned by co-proximity events. While a lot of attention has been paid to co-present interaction in the work of Goffman and its successors, much less attention has been given to co-proximity events. A co-proximity event is a situation in which two persons are made aware that though they are not co-present, they are close to one another, close enough that getting into a face to face interaction may become an issue, usually to be resolved through communication at a distance. Such situations constitute occasions in which parties mutually 'discover' some form of proximity, and provided they decide to act upon such noticing, that may be turned in fully blown social gatherings, displaying some form of 'co-presence at a distance'.

A specific feature of Mogi is to provide many occasions for 'onscreen proximity events' [10]. This occurs when one mobile player logs in and 'discovers' that another connected player's icon appears on his mobile map, which means that : a) they are within a few hundred meters from each other b) the other player can make similar observations. The following text message corresponds to such a situation. It typically starts by a direct reference by player A to the location of B, relative to his own location, and an assessment of their situation as one of potential co-proximity:

Extract 3

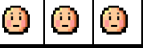*1.A.(20:19:38) : this evening, (surprised smiley) we are very close aren't we?*

2. B. (20:22:55) : Waouh (sweat) we are close (tired smiley)

The lack of initial greetings and the surprised smiley construct the turn as a response to a previous action, that is, the perception of their co-presence on the mobile phone. The noticing is done in a way that combines cognitive (recognizing onscreen co-presence) and social issues (on screen co-presence as an event which it is proper to mention and to constitute as a relevant feature of the ongoing interactional setting). The second player responds by acknowledging the onscreen co-presence (she thus legitimizes the other player's noticing of the event) and aligns with the co-proximity assessment. In this way both players have turned their mutual sighting onscreen into a shared and mutually-acknowledged noticeable co-proximity event, relevant to an ongoing interaction.

Such openings are commonplace in the corpus and appear as a conventional way to take notice of mutual onscreen co-presence. They can also be considered as greetings [4]. Their specificity with respect to traditional greetings in co-present encounters rests on their reference to the particularities of a mediated onscreen 'encounter'. After this conventional opening, participants have not only greeted one another, they have also established their situation as a meaningful form of co-proximity. With respect to the interactional device we have identified, they have constructed a mutually shared and ratified co-proximity event, which is also a salient feature of their interaction. The difference lies in the fact that what was a purely conversational accomplishment in mobile phone conversations, is now a heterogeneous and multimodal socio-technical assemblage, in which location-awareness, mobile screens and the size of the map of the radar interface are all active in the constitution of co-proximity as a relevant interactional feature. Does it still entail the projection of the face-to-face encounter as an horizon to the ongoing text message interaction?

Extract 3 (followed)

3.A.(20:24:53) :you ran away 😟 😟 😟 *(3 disappointed smileys)*

4. B (20:27:14) : no 💧 *(sweat) it is because I got on the Marunouchi line* 😊 *(happy smiley)*

After about two minutes, player A sends a new message stating that she has run away (turn 3). Since they are not in visual contact, this message necessarily refers to the fact that she has disappeared from his screen. He accompanies his noticing of the end of their co-proximity with repeated markers of disappointment, thus making it retrospectively remarkable that such a course of action does not meet his expectation that the co-proximity should have lasted, and therefore should have developed into a kind of activity for which co-proximity is relevant. She responds (turn 4) by accounting for her disappearing from his screen on the basis of her current mobility (she took another subway line). By doing so she legitimizes his expectation that their initial co-proximity, made interactionally relevant, was projecting some expectable potential course of action. She then reverts to this issue several turns later (turn 8) where, after a repair sequence, she provides a more general account of her behaviour.

Extract 3 (followed)

5.A.(20:28:35) : 🚂 *(train) It's not the Yamanote line* ❓

6. B (20:35:26) : no 💧 *(water droplet, tear, sweat) for it is not my direction.*

7.A.(20:36:43) : So be it … sorry 🐱 *(apologizing cat)*

8. B: (20:40:34) : everybody can make a mistake (happy smiley) maybe one wishes to run when one gets so close 💧 *(sweat) today I got near several players* 😮 *(smiley that shows surprise)*

Turn 8 is proffered as a general maxim that one wishes to run away when one gets very close, and therefore evades the potential consequences of co-proximity. Such a desire to escape is said to be stronger when players are closer. All this is consistent with the notion that the inter-subjective constitution and acknowledgement of co-proximity enacts the possibility of a face-to-face encounter and that the force of that performative multimodal achievement increases with the degree of co-

proximity. She adds a more circumstantial justification, based on the fact that she has experienced many such onscreen 'encounters' that day: frequency is hinted at as mitigating the force of the co-proximity event. It provides another reason to ignore such events or to avoid acting upon them. The situated use of such a gloss on the pragmatic consequences of co-proximity (the various actions that may constitute proper responses) mutually constitutes the participants as members of the community of players, with repeated experience of the Mogi lifeworld.

The entire interaction makes sense with respect to a characteristic interactional device: collaborative construction and acknowledgement of mutual co-proximity, followed by excuses showing retrospectively how such an accomplishment projected a future encounter as a proper consequence.

3.2 The potential dangers of 'co-presence at a distance': 'Stalking'

Home is a place whose threshold is regulated by various material devices and social rituals. Some of these specifically deal with a display of proximity by one participant. Proximity then resonates with a more general social concern, the problem of hospitality and the way it may be granted. In the bourgeois culture of the nineteenth century it was customary to leave a card to show that one had just been at the home of a person one wished to visit, and to fold that card to indicate that one definitely intended visting and being received at a later time [13].

Leaving a card displays and makes noticeable a potential co-proximity (which cannot be ratified on the spot). The potential visitor who leaves his or her card intends this action being read by the recipient as a sign of her/his proposing a visit and displaying her/his commitment towards the realization of such an encounter. Folding the card transforms the performativity of the action of leaving a card and reinforces the projection of a visit as a relevant project and future course of action. .

The Mogi case is very different, for players are not intimate with one another and do not consider themselves as entitled to infringe on other players' homes. Location awareness may therefore lead to forms of 'territorial offence' [6]. In the following exchange, a player comments on a particularly disquieting co-proximity event that happened to her, in a way that shows the potential tension between rights to privacy and the performative force with which the discovery of mutual co-proximity projects an encounter.

Extract 4

1. A (15 :03 :51)

Are you in the same area as player [C] ?

2. B (15 :07 :50)
Yes, it seems he lives in a neighbouring town.
(happy smiley)

3. A (15 :09 :24)
Ah well. Are you in Shikoku island ❔

4. B (15 :16 :58)
Yes, it is. (happy smiley) I do not like him.
💧 *(tear or sweat) There are only twelve kilometers*
between him and me, and it scares me. ☠ *(skull)*

5. A (15 :18 :05)
You must compete a lot to get items. It must be
tough. 🔸 *(dash)*

6. B (15 :22 :54)
Yes, it is. (sad smiley) Moreover he has a car
while I walk. 💧 *(tear or sweat) He sometimes*
comes close to my home in the evening. A few days
ago he even turned up outside my place ! He sent me
a message. ✉ *(letter) « I am coming» and he was 8*
meters from me. ✚ *(anger) I eventually sent a*
message to the company that runs the game.
(smiley that sticks out its tongue)

7. A (15 :31 :36)
How selfish he is !

8. B (15 :35 :42)
I was really scared (pale smiley) when he
came looking for my flat. When I saw on the screen
that the radar indicated zero distance I was in my
room and incapable of moving. (sad smiley)
Anyway beware of him I am sorry to complain.
(smiley withtearful eyes)

9. A (15 :38 :48)

It is dangerous. It looks like a stalker. ☠ *(skull)*
She recounts how another player who lived close to her home once showed up unexpectedly on her doorstep. Her narrative plays on the juxtaposition of the visual experience of co-proximity on the mobile phone (« the radar showed a zero distance ») with her embodied experience of being in a private and familiar space (« I was in my bedroom »). This juxtaposition marks a tension that accounts for her being led to paralysis and having to resort to an extreme action, outside of the gameplay (calling in the building's security).

The co-proximity event is narratively displayed as presenting deviant features. This is accomplished in a vivid way by quoting the message the 'intruding' player sent her, after she saw him on the screen (« he was eight meters from home ») :« I am coming ». The recipient is therefore invited to experience vicariously the impropriety of a direct announcement of an encounter and the emotions it may elicit. Such a move was doubly transgressive and threatening. First because an invitation would have been the relevant next action that his behaviour (getting close and getting that proximity noticed) projects, and not an annouecment that seems to force the meeting upon her. Second because as a player he has no right to call her at home uninvited. The territorial offence is compounded by the fact that because of the location awareness, unlike a random caller-to-be, he knows she is at home (and she know he knows).

One cannot dwell in the same way in the vicinity of another person's home as an 'ordinary' potential visitor and as a Mogi player. Some players have developed specific tactics to prevent the entanglement of these two zones of personal relationships, that of the game in which a collective of players interact in a setting in which locations and mutual positions are a public feature of the ongoing interactions, and that of the home, where issues of hospitality and rights to visit require entitlement, and special arrangements supported by distinctive socio-technical agencies (from visiting cards to phone interactions infrastructures). A woman truck driver uses the possibility (again unintended by the designers and discovered by the players) to 'freeze' one's icon in a given place to avoid that her icon might become visible when she is at home and make other players aware of where her home is. As soon as she leaves the area she connects to the game and makes her location public. When she gets back, she 'freezes' her icon at a respectable distance from her home so as to prevent other players from identifying its exact location. She reinforces the personal, private character of her home place by making it invisible within the gameplay.

3.3. Playing with Co-Presence at a Distance: Aiming at "Onscreen Proximity" While Ostensibly Eluding 'Physical' Co-Presence

Without intending it, the designers of Mogi have left open the possibility for players to "freeze" their positions in a given place, by getting there, connecting to the game, and not refreshing their radar screen after they have left the place. Players have been quick to discover and exploit this loop in the game software. They have used it to invent a new form of playful encounter based on the disjunction of their actual embodied location and the apparent onscreen location of their icon that such a "freezing" of the icon's position on the game map allows. The goal is for a player to position his icon at a given place so that later another player will move so that his own icon will appear onscreen close to the first one, or, better still, will touch it. This practice is called 'cara-gattai', cara standing as an abbreviation for character or icon, and 'gattai' referring to the concept of joining, or rejoining. Unintended by the designers, this practice testifies to the way the Mogi users engage in an active and innovative appropriation of the game: they are "active users", a theme of growing concern for Science and Technology Studies [11] and particular relevant to online game communities. Extract n°5 provides a typical 'cara-gattai'-related exchange

Extract 5

1. D (16:07:41) : Congratulations for the gattai

2. F (16:09:22) : Did you see it ?

3. D (16:12:55) : I found it immediately *It seems that Mr G was trying hard since yesterday*

D initiates the exchange by relying on the gattai as something noticeable, that was even standing out (she could notice it 'immediately', turn 3) that may be casually remarked upon. F collaborate to that treatment of the Gattai as an interactional resource by returning a question inviting D to elaborate on the conditions of her noticing.

We have observed several instances in which either a player initiated an attempt to do 'cara-gattai' with another and discussed this accomplishment with others, and some in which other players suggested that idea to a player which was moving so that the possibility of 'cara-gattai' with another player could be anticipated. 'Cara-gattai' is a fundamentally a public performance whose accomplishment by two players (one acting deliberately and the other collaborating deliberately or participating unwittingly through his current displacements) rely on the noticing and the appreciation of an audience of skilled connected players, liable to make inferences from positions and movements of icons on the screen to potential or actual co-proximity events. Sexual undertones that play on the embodied intimacies of (public) mediated co-proximity events are often alluded to, displaying a particular mode of appreciation of 'cara-gattai' as a public performance.

In the following extract, one female player spontaneously and emphatically 'exclaims' on the '(cara-)gattai' performed by the other player, he asks her about their exact gattai configuration which he has not seen itself (displaying his interest in the actual iconic consequences of that achievement), and she answers by developing the sexual implications of the configuration she has noticed.

Extract 6

1. A (15:31:50) : *(lol smiley) Gattaaaai* *[B]¹³ is mounted over C*

2. B (15:33:36) He he *(strong arm)* *(musical note) What, am I on top* *(question mark)*

3. A (15:34:38) : You are on top *A rider on a horse*

The development of 'cara-gattai' as a shared playful practice among the community of players stems from the ability to assess and monitor the distance of icons on game maps with respect to the possible production of a co-proximity event), and on the way the design of the game supports the noticing of screen-mediated co-proximity events. Moreover the practice of doing 'cara-gattai' ostensibly relies on the disjunction between what happens in the screens and in the space of ordinary perception: 'cara-gattai' is meaningful in the way it actually disjoins co-proximity and co-presence, while preserving co-presence a salient feature of the situation, as a potential relevant development that maybe mentioned, discussed and joked upon. It shows how players orient towards a dual accountability regime, in which they work to make their location and mutual positioning accountable both in the 'physical' space of 'ordinary', embodied experience, and in the mediated spaces constituted by Mogi players' screens. Doing 'cara-gattai' is a way to play with the meanings of co-present situations while keeping actual co-presence at bay. This displays co-presence in the location-aware community as something which is fraught with potential dangers, and that is to be eluded most of the time. Through the collective practice of 'cara-gattai', the very meaning of face to face or co-present encounters is reshaped.

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¹³ [B] refers to a pictogram describing the player B

Conclusion: From supporting new forms of encounters to design concerns

A key feature of the public order in a location-aware community is the publicity of locational data and the way these can be exploited as interactional resources. Because players' positions (in the absolute, and with respect to one another) are publicly accessible, the game interface makes the noticing of a player's position by others a possible and mundane occurrence. Such noticing is usually performed so as to turn the current location of a given player into a meaningful event (presenting such location as unusual, or remarking on a chance co-proximity), that is worthy of notice. Location becomes a 'mentionable' item that can be discussed between acquainted players. It is a 'safe topic' to initiate or fill an encounter, much as the weather in a rural 'British' village. .

The 'noticing format' warrants mentioning his location to the concerned player, and invites further elaboration by the latter. It therefore projects a particular form of mediated encounter, namely a text message interaction. Because such noticing involves the first players making claims about the second player's 'informational preserve' (where he/she is or where he/she stands), to which the latter has 'first epistemic rights', some ritual constraints are operating in such encounters. Their occurrence is possible, legitimate and expected mostly between acquainted players which have constructed a particular sense of familiarity through repeated exchanges in the game. The first turn is usually framed as a carefully crafted question rather than plain assertion so as to let the second player provide the first account of his whereabouts. Though such mediated encounters are routinely performed between familiar players, some repair work and remedial exchanges may be occasionally needed that testify to the moral sensitivity of the publicity of location within that singular 'form-of-life'.

Two types of events are particularly constructed by noticing location of other players as noticeable: unusual locations or mobilities, and onscreen co-proximity events. Such events are treated as instances of 'co-presence-at-a-distance' that enact the potential relevance of face to face encounters, and require specific forms of interactional micromanagement. Rules that are sensitive to the frequency of such events (and therefore to the number of connected players) are also bing developed and revised as the Mogi community of players evolve. Some of these rules or maxims aim to account for the way players may be allowed to ignore such occasions, or to determine what could count as a proper treatment of them. The issues that such co-presence-at-a-distance events raise and the ways they are managed is a characteristic of the evolving culture of the Mogi community. Such interactional and moral issues should be more generally relevant to account for social behaviour in the augmented public spaces that location aware communities inhabit.

They also account for the ways co-presence events might be fraught with potential danger. Co-presence at a distance happens to be treated as threatening, particularly when one of the co-proximate players is in a private place such as her/his home. The problem of interpreting the proximity of another player as a case of 'stalking ' is an example of such dangers. A very interesting feature of such 'stalking' events is the way they can be made public by the the participant who feels threatened, and turned immediately into an issue within the community of players.

Co-presence-at-a-distance events are so central a feature of collective location-aware behaviour that members play with it. They try to arrange the onscreen proximity of their icon with that of another player, without being physically proximate. Pure mediated co-presence-at-a-distance there becomes an end in itself, and such ludic (unintended by the designer) behaviour has even been given a name: 'cara-gattai' (or doing cara-gattai).

With respect to design issues, our study shows that one of the main focus for design should be the way the location of players is presented within the various interfaces of the game. This is a nexus of tension. On the one hand it is a key resource for the development of game-related encounters (and of the distinctive experience that goes with dwelling in a location-aware community). Therefore one would wish to multiply the formats under which location is made available to the players. An example of that design strategy is the way the designers introduced a feature on the mobile screen map (the 'radar' interface) showing the distance with the closest player, even if the latter was way too far to appear on the map. This innovation illustrates the design strategy oriented towards the providing of new affordances for making visible and noticing game-mediated co-proximity, and the reinforcement of the "infrastructure of encounterability" that characterizes the location-aware game.

On the other hand the way location and displacements are made visible and accessible is a highly sensitive moral issue. Two years ago, the designers introduced a feature which provided the name of the neighbourhood the player was located, along with the other informations which became visible when one clicked on his icon. This feature immediately aroused indignant reactions from the players, who did not want such information to be publicly divulged. Even an information as trite as the name of a neighbourhood district (in a world where 'geometric' locations are already publicly available) might be problematic, for if you know the person well enough, you might more easily tie his/her location thus labelled to some forms of activity relevant to him/her. This proved to be too great an infringement of personal territories. Keeping location data 'geometric' and therefore as 'neutral' and impersonal as possible gives more leeway and legitimacy to the ways acquainted players may notice each others' location, mention it, and collaboratively accomplish various forms of consequent encounters.

The design of the formats under which locational information is made visible, legible and publicly accessible is a two edged process, for whom the determination of proper trade-offs must rely on detailed ethnographic understanding of

the interactional resources available and legitimate in a given location-aware public order.

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