Visuality, Gameplay Gestalts & Glocality: Abstracting Game Studies to the *Voyages Extraordinaires* of the Mobile Age.

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Abstract

This paper employs emerging frameworks from *Game Studies* to reflect on the mobile age as an abstracted game environment. It contends that abstracted notions of space, time, rule structures/infrastructure, connectedness and presence/absence, apply to both players in a game environment and humans going about their lives in the mobile age. Three aspects are considered: visuality, gameplay gestalts and glocality. Each of these aspects has an immediate literal interpretation, yet each also embodies a perceptual shift, the implications of which are yet to be fully realised.

Visuality	**Gameplay Gestalts**	**Glocality**
Geometric	Repetitive patterns	Locality as backdrop
Iconic	Cognitive view of gamestate	Extended sense of place
Games greater sophistication	*Games, Mobile Age similar sophistication*	*Mobile Age greater sophistication*

Background

This work started with the long-term hypothesis that computer games, and more generally, distributed information systems and communication networks are extending our popular notion of 'location' beyond the realms of space-time and text, and this evolving new, not primarily text-based, language may allow us to better conceptualise notions that sit awkwardly in our current models, or which are impossible to express in space-time based linguistic frameworks: non-locality and entanglement, for example [1].

It draws on two results from earlier work in abstract visual notation for mathematics [2], firstly on the distinction between recognition of formalised visual object and perception of pattern, if there is one, and secondly on the understanding that a system used only by one person cannot constitute language irrespective of how internally consistent it may be.

In contrast, in computer games, the meaning of icons, places, processes, rules, objectives, etc. is formalised during game development (which may be ongoing) and shared amongst the community who play it. When I ask the question 'where are you located in the structure of the computer game?', I do so with the knowledge that experienced players have a sophisticated, if tacit, understanding of just what they are juggling (or attempting to juggle) at any one moment, plus some notion of their abstract path through the game and its states, whatever they may be. I also accept that text alone will probably not be adequate to explain this understanding to someone who

does not play this game (genre), and thus such dialogue should include the visual, and even the temporal, if possible.

From my own background, the question of 'where are you located in the structure of the (computer) game?', mapped naturally into two frameworks, the first a physics space-time fibre bundle model: a base space with various attributes attached to each point of that base space [3], the second a film and theatre studies model: the shot is the basic unit in film, entering and exiting the stage is the basic unit in theatre [4], and by analogy knowledge of the basic unit of a computer game is required. While neither of these models could possibly function alone for computer games, together they provided a perspective which motivated a screenshot methodology (visuality attached to a game moment), asking questions about the active components and what a player perceived they could and would do (gameplay gestalts attached to a game moment), and finally the extended location question itself (glocality attached, or not as the case may be, to a game moment).

A pilot survey using screenshots and open-ended questions was given to 112 students. Responses to these questions provide background information and some examples for the present work. The structure is as follows:
- emerging analytical frameworks in game studies
- visuality: geometric to iconic
- gameplay gestalts: repetitive patterns to ways players think of gamestate
- glocality: locality as backdrop to extended sense of place

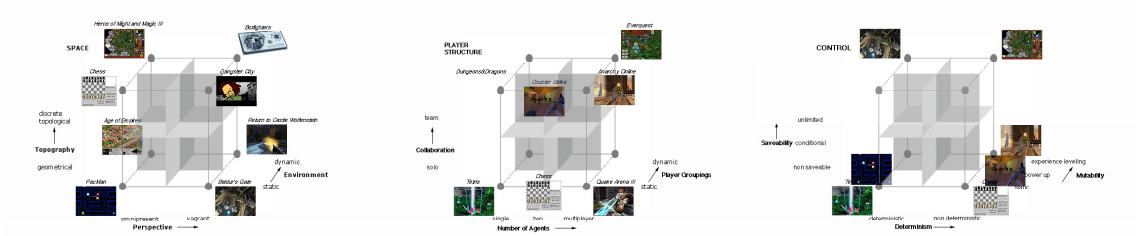
Game Studies: space, time, rules, ludic structure, design patterns + component framework

It would be rather ambitious to try to summarise here the current state of Game Studies as a discipline and I will not attempt to do so. Instead I outline briefly five foci or frameworks relevant to the question 'where are you located in the structure of the game?'

Aarseth in [5], observes *'The defining element in computer games is spatiality. Computer games are essentially concerned with spatial representation and negotiation, and therefore a classification of computer games can be based on how they represent, or, perhaps, implement space.'* He thus defines a typology of spatial games [6], based around space, time, control, player structure, rules, and subsequently [7] adds location/proximity (in connection with mobile games and location based media).

Generally each of these aspects itself decomposes into three dimensions, space is mapped in terms of perspective: omnipresent to vagrant, topography: geometrical to discrete topological, and environment: static to dynamic; time is mapped in terms of teleology: finite to infinite, representation: mimetic to arbitrary, pace: turn-based to real-time; rules are mapped on whether they are objective based, location based or time based. Location based rules break down into universal and those conditional on

position. If the space of mobile games is to be included categories involving relative and absolute proximity (to objects, places, humans, or other entities) need to be defined.



In *Allegories of Space: The Question of Spatiality in Computer games* [5] he makes a distinction between continuous outdoor environments and indoor labyrinths in which the player is confined to predetermined topological paths, whilst being offered an illusion of freedom of movement. This early paper also includes also historical screenshots and observation of evolution in the notions of space as represented / employed in computer games.

He also observes in [8] *The game requires analysis practiced as performance, with direct feedback from the system. [...] To show we understand a game, we have to play it well.* Applied to games as primarily spatial systems we see that understanding of spatial configuration and relationship will figure in basic function representation computer games.

Mario Brothers	Possible actions/active components *All the game elements on the screen are active buttons. I click on the arrows to go up and down or click on some another key to make the character jump and pass the hurdle etc.* Where are you located in the game? *I have almost reached 40% but there are many different ways that can be taken to achieve the objectives. This game is still more open than closed.* [35]

Juul [9] notes *If we play the game [...] all our actions have a double meaning.* He examines game temporality, using the metaphor of mapping between two timelines (this mapping may or may not contain stretching, discontinuities, pauses, and flash-backs). That he needs to define *game state, play time, event time, mapping, speed, fixation, and cut-scenes* as mutually distinct is informative of the complexity in temporality that is possible. He begins with abstract games as state machines, evolves to real-time games with worlds, subsequently defining mapping as *the player's time and actions projected into a game world*. This is violated by modern games with cut-scenes (film time and *a different way of creating the event time*). They raise questions of the chronology of time in games (as they do in film), where flash-forwards would interfere with the illusion of freedom of choice for the player.

He also demonstrates a long history of inconsistencies between coherent time and level time, ignored by players for equally as long, and violations of game time, some features continuing while the game is paused. *It seems not to matter.* There is the question of save games creating a vast tree of the player's numerous unfinished (abstract) paths through the game, and that of the overall experience of game time for the player: how is game time evolving culturally? Does it ever map to metaphysics?

Jarvinen [10] outlines a typology of rules, again starting with games as state machines, but equally concerned *with digital games as especially suited to creating a self-imposed and varying rhythm to the change of game states,* citing their temporary, as well as their temporal nature.

He looks at *the structure and implementation of the game environment as a significant rule element in digital games*. The example is Tetris which has visible rules (the possible shapes of the blocks = 4, thus tetra), but the topological nature of the labyrinths discussed by Aarseth, or the collision points in CounterStrike maps also create implicit constraints invariably resulting in some patterns being possible and others not.

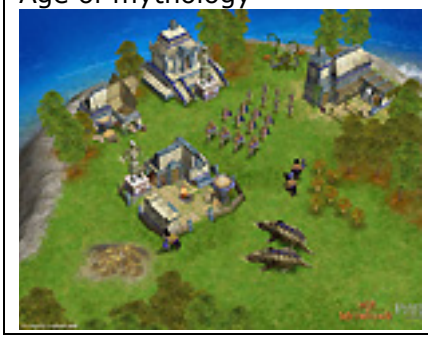
The typology beaks into rules that govern: game components, procedures, game environments, and the implementation of the game theme. Component rules and procedure rules are core to all games, environment rules are necessary for spatial games. These are presented as hierarchies or layers of rules, with theme rules (and interface) rules last. That component rules and procedure rules are separated from environment, theme, and interface rules, shows a distinctly different typology to that of Aarseth (which is a typology for classifiying spatial games) and leads us to ask *what the player is doing* rather than *where in the space-time-objectives the player is located*.

Lindley [11], [12], prefers orthogonal categories for the classification of games (related to game genre), and locates them with respect to their relative ludic, narrative or simulation structure. In particular in [12], he focuses on time structure in ludic space in terms of separate levels: discourse (temporal structure of the experience of the player), performance (actual events revealed to the player as part of the play experience), simulation (authored logic and parameters of a game + interactive choices of player determine represented world some of which is made available by virtual camera) and generation (system of functions, rules and constraints constituting a space of possible worlds of experience created by game designers).

Gameplay gestalts are defined in this framework as patterns of moves: *[…] learning a gameplay gestalt, understood as a pattern of interaction with the game system. Playing the game is then a matter of performing the gestalt. It is what the player does, within the system and as allowed by the rules of the game. [...] In general, it is a particular way of thinking about the game state from the perspective of a player, together with a pattern of repetitive perceptual, cognitive, and motor operations.*

This in turn produces a very interesting definition of narrative: *[…], the apprehension of an experience as a narrative requires the cognitive construction of a narrative gestalt, a cognitive structure or pattern allowing the perception and understanding of an unfolding sequence of phenomena as a unified narrative.* The notion of gameplay gestalts thus captures something of the distinction between games and film or narrative, including interactive film/narrative viewed as navigation rather than play.

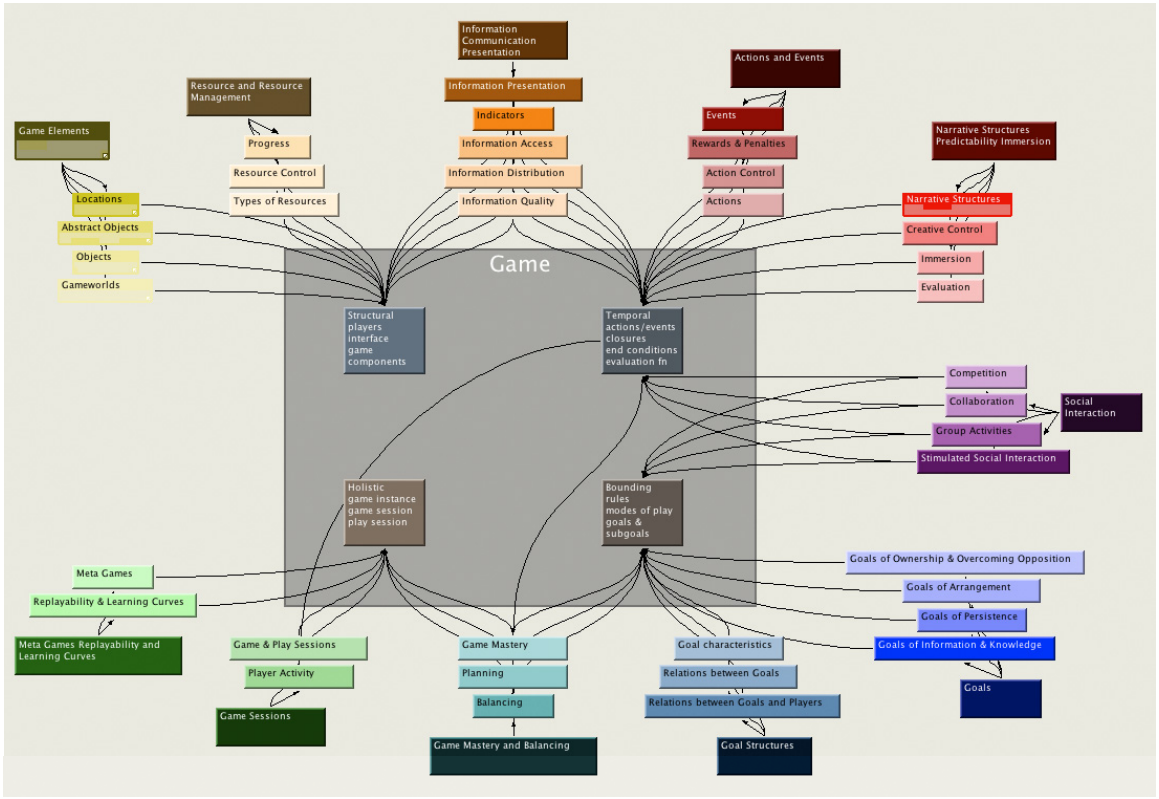
At a deeper level, the perceptual states associated with gameplay gestalts offer a place for new expression, where ideas are perceived in process, the most obvious example being real time strategy games such as *Civilization*, the *Age of* series: *Age of Empires*, *Age of Mythology*. Friedman comments [13], *Simulation games are maps-in-time, dramas which teach us how to think about structures of spatial relationships,* […] *The clearest way to conceptualize space is not with words, but with images*.

Age of Empires  [35]	Possible actions/active components *This screen shows the boats that my army has, I am sending them across the river. Each boat has its own health meter. I am now asking or controlling my boats to dock on the other side of the body of water.* Where are you located in the game? *This picture is a small section of the map that the game is played on. I am crossing a crucial point of the map; a body of water, to gain control of a piece of land, which could strategically help me, gain control of the game.*
Age of mythology 	Possible actions/active components *The components are food collectors, myth units and military forces. The mission is to collect enough resources and transport the forces to another place. My preferred action is to collect resources as much as possible, it is of great importance to prepare for the battle.* Where are you located in the game? *It is a stage of the whole campaign. If it fails, I can not continue. The strategy is to cumulate resources, train military forces and attack.*

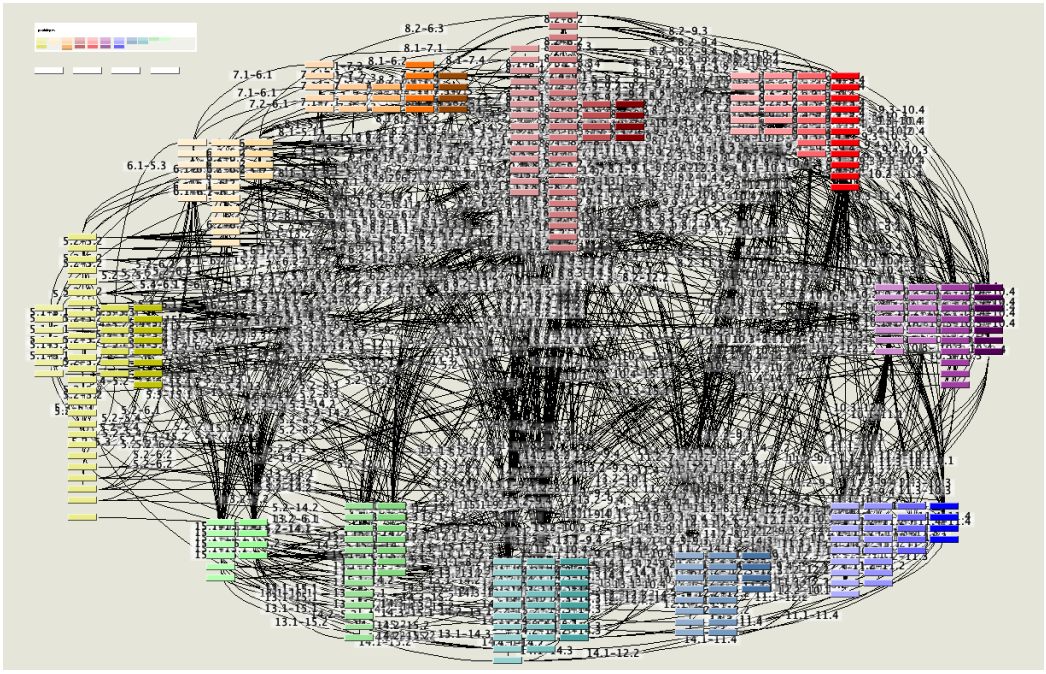
Evidently there are many analytical frameworks emerging in Game Studies. However, they frequently have different foci, and it is a non-trivial matter to map language, concepts, names and definitions from one to another. In academic meetings on game design and analysis, each participant spends a significant amount of their allocated time defining their terms before presenting their main hypotheses or results. This also happens in game development, and calls for a common higher level language have been made by numerous game designers [14], [15], [16], [17], over a number of years. Some of these involve pattern based languages, one of which I outline here.

Bjork and Holopainen [18] in their recent book *Patterns in Game Design* define 296 interrelated design patterns in 38 subgroupings: Gameworlds, Objects, Abstract Objects, Locations, Types of Resources, Resource Control, Progress, Information Quality, Information Distribution, Information Access, Indicators, Information Presentation, Actions, Action Control, Rewards and Penalties, Events, Evaluation, Immersion, Creative Control, Narrative Structures, Competition, Collaboration, Group Activities, Stimulated Social Interaction, Goals of Ownership and Overcoming Opposition, Goals of Arrangement, Goals of Persistence, Goals of Information and Knowledge, Goal Characteristics, Relations between Goals, Relations between Goals and Players, Game Mastery, Planning, Balancing, Game and Play Sessions, Player Activity, Meta-Games, Replayability and Learning Curves.

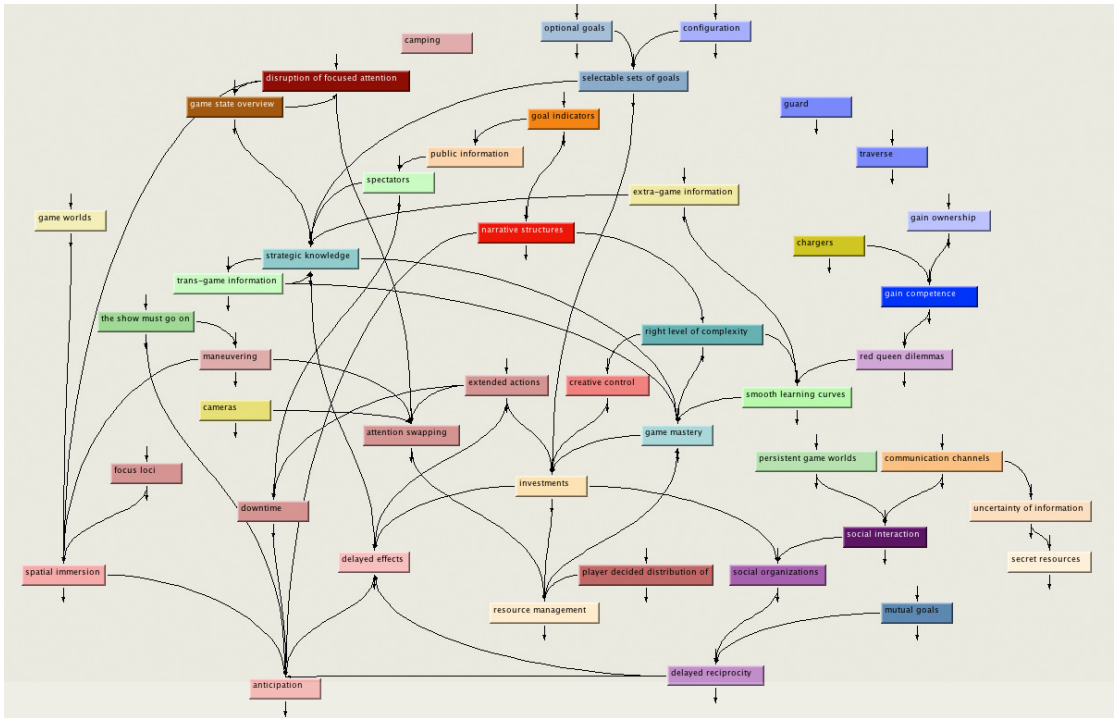
Their methodology, based on that of the architecture design patterns of Alexander [19], abstracts generic patterns from actual instances of games. In addition, they define an activity based framework for describing games: holistic (game instance, game session, play session), bounding (rules, modes of play, goals and subgoals), temporal (actions/events, closures, end conditions, evaluation functions), and structural (players, interface, game components). While there does not exist a predefined 1-1 mapping between the patterns and the activity based framework, in the following spatial arrangement I juxtapose their elements in a progression from concrete to abstract to provide a visual reference structure for discussion of glocality.



Relationships between individual patterns occur in 3 pairs: instantiates/instantiated by, modulates/modulated by, potentially conflicting. Mapping all the first pair produces a highly interconnected object. [20]



Mapping a smaller number (in this case one relevant to mobile age from each subsection, plus a few extra) can produce an informative relational structure, assuming one is familiar with, or has access to the pattern definitions.



Mobile, GPS, & wi-fi, games are relatively unsophisticated, yet as they emerge [21], the inclusion of their design or activity patterns (intentional or emergent) in a game language, suggest mapping *seeing learning and understanding* in the mobile age as the gestalts of a game environment, albeit infinite, dynamic, simultaneously geometric and discrete topological, sporting location, time and objective based rules, and an emergent player presence/absence viewpoint somewhere between first person and game state overview. This is not to suggest that the current language is fixed or sufficient or that there is a 1-1 mapping between the still relatively closed and predefined game environments and the open mobile communication environment. Rather it suggests that in the not so distant future they may be not so conceptually different, and they could benefit at present in critical exchange of their aspects of sophistication.

Visuality: from Geometric to Iconic

One aspect in which computer games differ from the mobile age is in their relatively sophisticated level of visuality. This occurs in a number of ways. The first and most literal is that computer games are fundamentally spatial: there exists a 'geometric' visuality. The second and more abstract is that computer games are fundamentality iconic, either explicitly with icons, or implicitly at some gross level of the simulation: there exists a second level of 'algebraic' visuality. Many, if not most, recent computer games demonstrate both simultaneously. Furthermore it is evident that players distinguish or manage the dual nature of visuality in computer games on a regular basis, without formal training.

Myst  [35]	Possible actions/active components *At this point, a player is just starting the game and discovers that the premise of the game is to walk around and to explore. You can look around in all directions and may see movements off in the distance (animals, etc.). If there is a level, or buttons visible, you discover that these types of things can be pushed or pulled.* Where are you located in the game? This scene thrusts you right into the very essence of the game and makes you ask, what am I doing here? Which way should I go? Am I playing this game right? These are the same questions you will ask even if you near the end of the game. The opening scene is a tone and environment setter.

Visuality in computer game environments is explicitly designed for *seeing, understanding and learning*, whether abstract visual iconic, or 3D immersive realist. Humans are able to play, manoeuvre and master environments featuring relatively arbitrary assignments of meanings and shifts in mode. They know what the icons mean, or they know that discovering the meaning

is part of the game objective. They understand the visual space can be literal and abstract simultaneously.

Diablo II  [35]	Space: *The representation of space of this game is 3D. The game world is changing dynamically. I do feel present in the game world. My perspective is vagrant and it's third person in this game. I can move in 2 dimensions. The movement is open and continuous. There's a map available all the time in this game. If I need the map, I just click on the 'TAB' key and the map will come out.* Interface: *At the bottom part of this screen shot, the big red and blue ball represent for the character's health and magic power. The brown square next to the red ball indicates how the character uses its weapon. The brown square next to the blue ball indicates what kind of spell or magic trick the character is using. The 4 little boxes next to the brown spell square represent the potions that the character carries. The yellow bar represents the character's running ability. The thin line above the yellow bar represents the character's experience points so far. As to the upper part of this screen shot, the three little pictures represent the company of the character. The little bar at the middle indicates the name and energy of the monster the character is fighting now.*

In the sense of Kondor, *To understand a pictorial statement requires the full knowledge of and belief in Egyptian religion, mythology, science and everyday practice, i.e. it needs total intellectual involvement*. [22], players submit to the hieroglyphs of the gameworld. Hieroglyphs and visual symbolism have existed in eastern performing arts for more than a thousand years (Balinese dance, Chinese opera/theatre in which it is possible for the meaning to be passed from sleeve movement to sound [23]). More recently, in the 1930s, Artaud [24] suggested that actors should become *living moving hieroglyphs* and that theatre needed a language of its own not based on text.

It seems that multiplicity of abstraction is actually *native* to computational media, and that the visual literacy previously lost to our civilization, Kondor [22], is starting to reform of its own volition, not in the open negotiated spaces of the mobile age (via MMS), but in the transitory and evolving spatial game environments which impose rules, interfaces, and sometimes arbitrarily assigned relational structures, on a cycle determined by the release of the latest titles. In essence computer games are the perfect 'suspension of disbelief'. As Friedman states in his early article [13], *The way computer games teach structures of thought - the way they reorganize perception - is by getting you to internalize the logic of the program. To win, you can't just do whatever you want. You have to figure out what will work within the rules of the game. You must learn to predict the consequences of each move, and anticipate the computer's response. Eventually, your decisions become intuitive, as smooth and rapid-fire as the computer's own machinations.*

Gameplay gestalts: from repetitive patterns to a particular way a player thinks of gamestate

Patterns of uses and actions that go along with mobile communication can be viewed as gameplay gestalts. In order to illustrate this for discussion, I juxtapose some game design patterns against some statements in Höflich *A Certain Sense of Place, Mobile Communication and Local Orientation* [25].

Gameworlds **Game Worlds**	*The environment in which the gameplay or parts of the gameplay takes place is determined by the spatial relationships of the game elements.*	*Action space: the entirety of the place frequented by an individual [30]* *... Making plans and agreeing on appointments has become more flexible […] No specific time or particular place is arranged. Rather both parties navigate until they meet each other at one place. [34]*
Objects **Units**	*Units are groups of game elements under the player's control that let the player perform actions to influence the Game World.*	*A person is not just a being in motion – he or she has always stands in relations to others. Understood as such, he or she is a participation- or interaction-unit and therefore a fundamental unit of public life. [25] [31]*
Abstract Objects **Cameras**	*Camera is an abstract game element that decides what is the player's current view to the game world.*	*… One is even visually absent to the mobile phone user on the street. Street talkers are so engrossed in their conversations that they do not apprehend what is going on around them despite their eyes being wide open. [29]*
Locations **Outstanding Features**	*Outstanding Features are parts of the Game World that cannot be manipulated but by their shape, color, or texture convey information to players.*	*This reflects the importance the fountain has always had as a meeting-point and place of gathering – and now as a communicative island for mobile phone users. [25]*
Information Distribution **Public Information**	*All or part of the information of the game state is available during the game to people other than the players*	*Squares belong to the interface of people's whereabouts: they are public spaces in which people come together. [25]*
Information Access **Communication Channels**	*Communication Channels are the medium and the methods players can use to send messages to other players.*	*It is actually transformed into the sense of belonging to one's communicative network. [28]*
Actions **Maneuvering**	*Controlling the movement of game elements in real-time games.*	*Having a sense of place means being able to orient one self and move in space, keeping in mind that the spatial environment is also always an aesthetic and behaviorally relevant environment. [25]*
Actions **Attention Swapping**	*Players have to move their attention between different parts of the game.*	*A person shows others in non-verbal ways that he is briefly turning to a telephone conversation, without wanting to endanger the fundamental order of communicative events. [25]*

Actions **Camping**	*Staying in one location in the game for extended periods of time and perform the same action repeatedly.*	*A person will seek a quiet location where he or she can talk without being disturbed by others. [25]*
Action Control **Downtime**	*The player cannot directly affect the outcome of the game for a period of time.*	*The non-verbal performance of mobile phone usage is commonplace: the mobile phone user turns his or her back toward other people and then talks and either stares at the floor or walks slowly around. The purpose of these actions is to indicate that the mobile phone use has moved into his or her own private place and that he or she is concentrating on the phone call. [32]*
Events **Disruption of Focused Attention**	*That players' attention is forcefully moved from one aspect of the game to another.*	*At the same time, the conversation draws the involvement from the present situation and transforms (to its own benefit) the former principal activity in the here and now into a temporal secondary activity. [25]*
Immersion **Spatial Immersion**	*Perceiving movement in the game from the perspective of oneself moving.*	*People are in a situation of 'absent presence', meaning that they are both here and not here simultaneously.[33]*
Group Activities **Social Organizations**	*Social Organizations are more or less stable group of players who have common long-term interests within the game.*	*Participation units - singles and withs [31]*
Stimulated Social Interaction **Social Interaction**	*Social Interaction is when two or more players have two-way communication between each other, i.e., the other players can respond to the individual player's communication.*	*Talking on the mobile phone in the presence of others lends itself to a certain social absence where there is little room for others social contacts.[32]* *The individual releases himself from the co-operation with others to the point that he (temporarily) ignores their presence [33]*
Goals of Persistence **Traverse**	*The goal to try and move a game element from one position in the game to another.*	*First, there are those who swim through the social flow and cross the square efficiently while telephoning, and then there are those who (at least temporarily) walk slowly around in circles or S-patterns while on the phone. [25]*
Meta-Games **Spectators**	*People, possibly former, current, or future players, who observe the actions that players do in a game without being able to affect the game themselves.*	*The presence of a third party is always a factor because the caller can never be sure where the person he or she is calling is at the moment. [25]*
Replayability and Learning Curves **Orthogonal Unit Differentation**	*When Units in a game can be described by actions, abilities, and characteristics that are orthogonal to each other regarding functionality.*	*The individual as a 'vehicular unit' and the individual as a 'participation unit'. [31]*

Glocality: Locality as Backdrop to Extended Sense of Place

In Jules Verne's *Voyages Extraordinaires*, which were in part subversive attempts to deliver science education during (oscillating) periods of science being banned from the French curriculum in the late 19th century [26], the protagonists would constantly verify their coordinates, usually against some absolute reference system.

> One particular motif occurs again and again throughout Verne's works. Appearing at times almost obsessional in its repetition, it punctuates each 'voyage' with clocklike regularity and seems to continually preoccupy every Vernian hero. This simple theme – central to the ideological composition of these texts and to their pedagogical functioning – is the following: the verifying of one's present location, the determination of one's exact place, the precise calculation of one's coordinates. Whether measured in geographical space (like Cyrus Smith and the castaways of *Mysterious Island*), in time (like Phileas Fogg of *Around the World in 80 Days*), in investment capital (like the industrious hero of *Little Fellow*), or in social standing (like Robert Morgand of *The Thompson Travel Agency*), the basic ingredients of this leitmotif are invariably the same. The yardstick is a universal, fixed, abstract, and highly ordered superstructure (latitude and longitude, time, economics and so on), a kind of pre-existent grid or 'meta-standard' that is always exterior to the protagonists and viewed by them as inherently determinative.
> It is through this narrative 'tic' of constant self-localisation, for example, that one can understand the role of the many maps, sextants, timepieces, calendars, travel guides, diary journals, and almanacs that are so prevalent in Verne's oeuvre. They function as anchoring instruments linking the 'voyage' to a stable macrocosmic context. Further, they underscore the difference between subjective experience and objectively verifiable fact and highlight the essential antithesis between them. [26]

Given visuality as both geometric and iconic (with arbitrarily defined meaning varying from game to game), and gameplay gestalts as both repetitive patterns in time and a particular way a particular player thinks of gamestate (and I do not claim to have proved either of these statements in this paper), the question of *present location in the game* will engender a family of responses simultaneously outside the confines of any absolute coordinate system and outside the confines of any local coordinate system, where a local system refers to the capture of a moment in a game. One player reports location in terms of the character attributes they have earned, another may report location as crossing a crucial point of a map, and yet another in terms of level of difficulty chosen, and the number of the quest they are currently undertaking at that level of difficulty. The question becomes more complex in persistent multiplayer game worlds such as Everquest, which have their own economies both ingame and outside the game (on eBay for example).

It is as if the previous (Vernian) means of self-localisation (maps etc.) have become simple game elements with which players (and game designers) play. Thus one can use the (higher level) categories of game design patterns to approximate a system within which a particular player's understanding of where they are becomes a configuration in the abstract system. This is a mathematical way of mapping location, but across different game genres, the notion of glocality, or being inside and outside at the same time, emerges.

This approach arose out of asking open-ended questions through a locality as backdrop (or screen-shot) about game objective, choice of game moment, choice of game, game interface and its customisation, possible actions/ active components, rules that define the gameworld, global strategy, space/configuration, time/rhythm, tempo, sound, realism physics AI, identity avatars, NPCs, other players, player control, experience, archiving/saving games, narrative/history, and finally: *where are you in the game?*

To the final question, players respond in terms of winning conditions, strategy, accumulating resources/health, character attributes attained, initial scene/usual action scene, location on game map, time remaining, percentage of the game to finish (especially puzzle games), level and quest number, immersion in historic environment, current actions (especially first person shooters), multiplayer environment and whether interplayer communication is taking place, physical location in 3D environment (on top of a tower), excitement of the particular moment (start of a race), choices amongst the exploration options available (action/adventure games), score, intention to talk to the NPC (non-playing character) in the screenshot to obtain information, need to complete current level, number of lives remaining, increasing game tempo, intention to purchase objects.

More importantly players usually provide at least two aspects, one of which is inside, or related to, the locality, the other outside, strategic, an objective: *just one stage of whole campaign – implication for strategy; at a crucial point in map – implication for strategy; in a usual action scene – far enough in game to have character attributes listed; in a narrative – but only interested in action; winning condition – historical environment – other players – action; winning condition and 3D physical location; at start of game - level of excitement; action just completed – preferred next action – location with respect to teammates; as a moment of high eye hand coordination and focussed attention – as a character fighting.*

Being inside and outside at the same time, or glocality in the sense of Meyrowitz [27], seems to exist by definition in computer game environments. They are (most often closed) microcosms of aspects of the mobile age.

Conclusion

Questions addressed by emerging frameworks in Game Studies and emerging frameworks in the Mobile Age have significant overlap at a philosophical level, though they manifest quite differently at the present time. This paper has attempted to foreground their overlap by simply juxtaposing the two in terms of visuality, gameplay gestalts, and glocality. It necessarily provides detail of the current work in game studies as a way of *listing concepts of interest* to both disciplines. Thus, given space restrictions, it has not been possible to elaborate on their similarities, differences, and points of synergy. It is hoped that such debates will arise out of this juxtaposition, and that some common language can be elaborated.

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