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# Ways of Being

## Pervasive Game Design Ethos in Urban Codemakers

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### ABSTRACT

In this article we describe our approach to pervasive game design and provide examples of how this ethos is embedded in practice vis-à-vis the *Urban Codemakers* game universe. The theoretical foundations for this approach are outlined and unpacked: moving from Heideggerian phenomenology to a Situationist aesthetic for intervention in urban spaces. We illustrate the necessity of emphasising an understanding of the player's *thereness* for design; best surmised in Heidegger's term *Dasein* (there-being). In so doing, we collapse any Cartesian distinction between virtual/real, material/ideal, and subject/object for game design, to instead, a comprehension of different phenomenological worlds within which the player is necessarily embedded and embodied.

## Keywords

Ontology, Phenomenology, Pervasive Game, Game Design, Psychogeography

## INTRODUCTION

*“The total lack of ludic solutions in the organization of social life prevents urbanism from rising to the level of creation” — (Nieuwenhuys 1959, 315)*

The city is not an architectural space that often affords recreational, creative or otherwise playful public activity. Whether we think of cities as spatial organisations emphasising management and control, or of influential designers, architects and urban planners, such as Buckminster Fuller or the early Le Corbusier, advocating efficiency and homogeneity (epiphenomena of control), one does not often associate play with such spaces. The ideational and material content of the cityscape is consistently rigid and unyielding; play requires plasticity. Designing for play in cities is therefore a disruptive act, a phenomenological *melting*, as the embodied meaning of one’s world liquefies, blends together with something alternate, alien to *Das Man* (Heidegger’s term for the public sense of Being, ‘they-self’): the purpose of pervasive game design is to provoke new ways of being-in-the-world.

In this article we provide an overview of the pervasive game *Urban Codemakers*, and discussion of its theoretical foundations, interwoven with analysis of particular sessions of play. Over the past six years, games of *Urban Codemakers* have been played in Melbourne, Ogaki, Istanbul, Sydney, and Adelaide. In each case, the character of the game has been shaped equally by the rules of engagement and the urban planning of the host city, specifically the neighbourhoods that provide the ‘game level’. The game sessions invite engagement with, deviation of, and reflection upon the various layers of each city (e.g. technological, material, geographical, organisational, socio-cultural and economic); how it came to be, and what it is becoming. Ultimately, the goal of this

experience is to open up the urban space as a site of potential, with play as the medium for experiencing other ways of being-in-the-city. Wayfinding in such design is not primarily a process of navigating from one place to the next, but catalysing new modes of experiencing urbanity.



Figure 1. An urban code in play during 2016 in Melbourne, Australia.

### Urban Codemakers

The first *Urban Codemakers* game took place in Melbourne in 2010; although, it drew upon mappings and reinterpretations originating in the world of *Ludea*, established in 2005. This world of *Ludea* is defined not in terms of place but as a way of being. It was originally defined on the Ludea website as such: ‘If you have played a game then you have been to Ludea. It is that space you go to when you are ‘in-game’, in the zone, or otherwise immersed in play.’ Each of the nine games of *Urban Codemakers* played to date aim to bring this way of being to the city through play.

Although there are multiple versions of *Urban Codemakers* (and the game continues to develop), they share the same mechanics and play experience. Players choose one of three factions representing different approaches to urban space: *revert* to the past, *renew* the present, or *remake* the future. They then play out an urban adventure / treasure hunt style game over a period of days, or in some cases weeks, on the streets of the host city with the action narrated via an ecology of connected media in response to players as they explore the game. For example, in the 2010 game, eight different guilds (each aligned to one of the three factions) provided urban planning characters for players to roleplay in-game. Signage in Guildford Lane indicated that these were actual guilds recently opened in Melbourne, with further evidence provided via photographs of guild workers (see Fig. 3) operating within the city facilitating the game. Images of the guild signs accompanied by short descriptions appear throughout this text indicating the typical narrative flavour of the games, and various approaches to urban planning in the *Urban Codemakers* game universe.

Urban codes (defined in detail in section 1.2) are the main resource in the game. These are placed by the ‘game masters’ to delineate the game space and lead players to locations in the game – images and clues appear on related websites and social media feeds. Marking a location with an urban code appropriates that place into the game world and enables its mechanics: find, collect, claim. Each code claim earns points (in some variants codes have different point values or enable strategies for bonus points) for the player and their faction, and the faction with the highest score renames the city.



## MASTER CODEMAKER

A spatial approach to urban codemaking is key to the approach of the Master Codemaker. Seeing the role of the urban designer to put in place codes that inform people without words: nonverbal and visual signs that control and regulate the use of space through its design. He creates both visual codes, spatial codes and behavioural codes that are designed to work together to form a new language – this may be the ‘Third Language’ evolving from evolution’s third replicator: genes, memes, and urban codes. This is a linguistic way of being, taking signs literally at face-value and constructing meaning from the design of the city.

Figure 2. The in-game description of the Master Codemaker guild.

## En-coding

Within *Urban Codemakers* the experience pivots around the discovery and collection of the ‘urban codes’: material markers of laser-cut plywood and acrylic (see Fig.1). The design of these markers draws upon the pictographic language used by transients during the Great Depression, the psychogeography of the situationists (described in section 2.2), the play community of the new games movement, the world-building politics of micronations, and the technology of mixed and augmented realities. Equipped with appropriate software and a mobile device, the player may activate the urban code artefact (see Fig.1) as a machine-readable code and reveal further information via a digital layer. Through repeated scanning of multiple codes the player may find patterns, such as sounds attached to codes of different shapes and colours, becoming aware of synaesthetic relationships encoded by the designer.

The urban codes are oriented to shift players into modes of being where the narrative of the game has an existential significance. Whilst Gadamer, following Heidegger, spoke of the process of understanding as a hermeneutic circle, wherein understanding is a constant process of negotiation between the text and one’s broader being-in-the-world (1976), we alter this slightly by adding the third dimension of height to the metaphor: whilst one’s understanding is certainly cyclical, it is also vortextual, moving up and down between various modes of experience. Borrowing from Erving Goffman, we term this experiential movement *keying* (either upkeying or downkeying; see Conway & Trevillian (2015)). Further, as is emphasised by the vortex (rather than circle) metaphor, design as a practice intends to suck you in, or throw you out of its world.





Figure 3. Urban codemakers in action during 2010 in Melbourne, Australia.

Generally speaking, in games it is possible for participants to key between three levels of being-in-the-world: Social, Operative or Character (SOC, see Conway & Trevillian (2015) for an in-depth overview), each providing a distinct ontological accent. In the Social, horizontal movement may occur between various social roles: worker, consumer, friend, mother et cetera, but play does not exist until one moves vertically, upkeying to the Operative World. In this mode of experience things take on a ludic accent; the material value of entities become secondary to their ludic value, their potential for play. In the Character World one assumes a persona assonant with the fictive realm of the game; the person speaks and acts entirely consonant with being-in-the-gameworld, not just as a player but as a *role*-player.

In *Urban Codemakers*, without the additional layers of knowledge provided by digital mobile technology, the participant often fails to upkey to the Operative or Character World, staying resolutely in the Social, experiencing the code simply as a material object made of laser-cut plywood and acrylic. Recognising the *Urban Codemakers* aesthetic

as the formalism of geometric abstraction, they may also acknowledge it as a piece of abstract art, although outside a formal gallery context. In practice this manifests as both danger and opportunity for the boundaries of a play session; as these Social-Actors take, and sometimes re-lay (or relay), urban codes without comprehending their Operative or Character World significance for the *Urban Codemakers* game, so the borders of the game contract or stretch and take on new, unintended organisational structures and possibilities for phenomenological transformation.

To provide context for participants to upkey to the Character World, a narrative framework is established within each *Urban Codemakers* iteration to frame experience for that particular urban space, embodied in artwork, a website, and text hinting at the various factions and characters. As introduced earlier, in the first iteration of the game, character images depicted them as council workers, architects, or masked operatives shaping the city behind the scenes. Expanding on this narrative was the public installation of a series of signs in the Guildford Lane complex in Melbourne, identifying eight guilds originating in the Micronation of Ludea. Guildford Lane has historically been a hub of commerce and trade and at the time of the game was home to many galleries – it has now become largely residential with the development of new apartments overlapping the conclusion of the game in 2011.

In the storyworld the guilds represent different epistemologies; competing strategies for urban renewal and development; and speculative fictions on the possibilities of urban codemaking to reshape ways of being-in-the-city. Within the context of this article, these positions play out speculative ways of being-in-the-world provided by urban codemaking; we will return to these guilds throughout the article to articulate the various positions afforded.

Given the *modus operandi* of pervasive games, emphasising gross physical movement and player-to-player cooperation, their design can encourage physical activity and social communication. In comparison with the use of mobile devices to simply track mundane physical activity,

pervasive game play, offering a novel state of being-in-the-world, can encourage novel bodily action and cooperative movement tied to the gamestate.

The most recent iteration of *Urban Codemakers* is currently testing this hypothesis to assess whether kinaesthetic play and aesthetic experience have an impact on wellbeing and physical health. It evaluates players via a musical game of tag through the collection of biometric, mood, and well-being data to measure the impact of play on such phenomena. In this game, the urban codes play the additional role of musical motifs in a spatially arranged sound design, exploring a sonic layer that builds on the freeform wayfinding of earlier designs. This mode of engagement again explores alternate ways of being in urban space enabled by play.



## CROSSMEDIA ECOLOGIST

The Crossmedia Ecologist takes an ecological view on urban codemaking. Seeing urban spaces as networks of forces, some social, some economic, others material or information based in their nature. It is somewhat between a traditional 'village' based view – letting spaces grow of their own accord – and seeing urban designers as being responsible for nurturing, rather than controlling, spaces. Making them liveable and functional, this way of being sees the city as a living ecosystem.

Figure 4. The in-game description of the Crossmedia Ecologist guild.

## THEORETICAL FOUNDATIONS

### Being-in-the-GameWorld

In phenomenology, *Da-Sein* (There-Being) and being-in-the-world are phrases used by Heidegger that largely replace 'human', 'consciousness', or 'mind' in his philosophical project. This replacement operates as a critique of those prior terms, and its ontological thrust is twofold. Firstly, to indicate the foundational relationship between Being and context: one's being is a *there-being*, an *embodied* understanding of being, from the micro (body, age, gender identity) to the macro (historical, political, geographic, socio-cultural etc.). Secondly, as being-



in-the-world one is *being-in-meaning*. This is not a selective process of a mind but an inescapable ontological fact. To be in a world is to care (*Sorge*); whether this manifests as fear, love, hate, apathy, depression et cetera, one is always-already *in*, meaning negotiated through one's inherent *thereness*.

Significantly, understanding is not just synonymous with acts of mental representation, as with Descartes' 'thinking thing' (*res cogitans*), but is embodied, situated. For example, one shows understanding of a glass not only by mentally representing or describing its chemical structure, or each step involved in grasping, lifting, tipping, and sipping; one may also illustrate understanding by picking up the glass and drinking from it. Merleau-Ponty is emphatic on this point, "Whether a system of motor or perceptual powers, our body is not an object for an 'I think', it is a grouping of lived-through meanings which moves towards its equilibrium" (2005, 177). We can expand on Merleau-Ponty's point via Heidegger's famous tool analysis where he uses the example of a hammer, differentiating between appreciation of the hammer as a Euclidean object, versus using it to strike a nail or break a rock. He defines our everyday encounter with the world as the latter, as *zuhandenheit* (readiness-to-hand), meaning objects we first and foremost *use* in a contextually-sensitive manner, e.g. hitting the nail, rather than observe in a detached analytical way, which he named *vorhandenheit* (presence-at-hand).

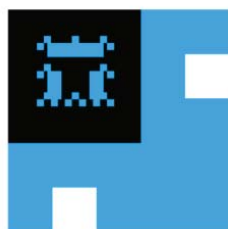
The key point: we do not typically encounter objects in the analytical mode, but as ready-to-hand (*zuhanden*). For example, I am hanging a painting: with skilled use the hammer, nail, picture frame, lighting and wall all recede from mental circumspection, becoming *zuhanden* equipment in the pursuit of my project. Only if the wall resists the nail, or the hammer is too heavy, does skilled coping breakdown; I then inspect the hammer in a *vorhanden* manner, analysing its suitability for the task.

Being is being-in-the-world, and to understand one's world is to skillfully cope within it *as* some-body. Merleau-Ponty once more: "We

must therefore avoid saying that our body is in space, or in time. It inhabits space and time” (ibid., 161). We are, in essence, a ‘clearing’ (to use Heidegger’s term) wherein meaning (emotional, intellectual, social, tactile et cetera) comes into being. Taken together, solidified over time, these networks of meaning constitute phenomenological ‘worlds’ (the *world* of fashion, of banking, of medicine etc.) which are fundamentally historical; their meaning is always in process and open to negotiation.

This experience of interpreting and generating meaning through an embodied involvement with the world is ‘worlding’, and when we assume particular roles in a world (‘carpenter’, ‘lecturer’, ‘consumer’, ‘wife’ et cetera) we are ‘Daseining’; though this raises the question of authentic versus inauthentic Dasein, such discussion is outside the purpose of this article.

To reiterate a few key points: purpose and competence are often not mentally deduced but *felt*, as equipment becomes an expansion of one’s being-in-the-world. Rather than engaging in mental representation, one simply picks up and uses the golf club, the game controller, the mobile phone in a way appropriate to Dasein. Consequently, and this is where the context of a pervasive game is particularly important, the object appears as particularly actionable *always in relation to its environment*; using the hammer in a specific way and for a specific purpose, for example as a tool to construct a chair, only makes sense within a culture and society where the Dasein of ‘carpenter’ exists. Therefore ‘world’ and ‘being’ are mutually constituted as being-in-the-world.



## LOCATIVE URBANIST

The guild of the Locative Urbanist adopts an approach to urban codemaking based on technology. His approach is driven by a push to remap the city via computer simulation, form-based codes and augmented reality. While this may sound cold and calculated it is motivated by a philosophy that sees urban space as having a greater flexibility when its various flows are monitored and made tangible via technology – a ‘bottom-up’ approach to codemaking in which the codes are generated via interaction between people, space, buildings and technology. This particular way of being perceives the city through the lens of an epistemic world-view.

Figure 5. The in-game description of the Locative Urbanist guild.

## Homo Paideia

Following this, we are essentially playful; when a bucket becomes a seat, a child's fort, a helmet, a basketball basket, or a weapon, we are simply shifting the meaning of phenomena encountered in our various worlds. This is not to argue, as Sartre holds, that we are the sovereign lords of being (i.e. existence precedes essence); we are not wholly in charge of where, when and what meaning occurs. To do so is to sustain a weak form of Cartesianism that Heidegger wholly negated in *Being & Time* (2008).

Instead, as per Heidegger, we hold that meaning is always-already present, and further a process of negotiation *within* the historical situation, between not only person and world, but between things, between worlds, between the essence of an entity and its environment. I am not free to choose to be a gamer if 'gamer' is a phenomenon beyond the horizon, i.e. hermeneutic parameters, of one's current world.

A more (post) modern twist on this, as Andy Clark provides (2003), is that we are *natural-born cyborgs*. Simply put, a unique ability, as a species, lies in our extraordinary capacity to incorporate (in-corporus) the being of our environment. This sounds rather like science-fiction or poetry, but consider how, in practice, we skilfully cope with tennis racquets, hats, pianos, doors, cars and keyboards as assimilations into our sense of bodily space; how we are always projecting ourselves futurally. For a very mundane example, even something basic such as using a door only makes sense to us as part of a larger project; fulfilling the Dasein of 'waiter' I open the door to access the kitchen to pass an order to the chef to preserve my job to pay my rent, and so Dasein's essential futural projection continues.

A designer of pervasive games should understand this ontological position intuitively; to design a game is to negotiate with entities and their environment in provoking revelation of meaning in players. Yet attempting to shift what a phenomenon means to a player can be

stretched only so far before the game becomes unintelligible. If design is essentially a gesture directing the recipient (to design-ate), then the communiqué must take into account its users' perceptual prejudices; knowledge creates perception, as to perceive some *thing* is to already know what you see (otherwise one asks “what am I looking at?”).

Therefore, a central question for the initial design of *Urban Codemakers* became, what does the city and its various phenomena *mean* in this historical moment and within this social-cultural environment, to this demographic of city-dwellers, and what is the space's psychogeography? How can we acknowledge, and therefore shift this understanding through design, in a provocative and productive manner?

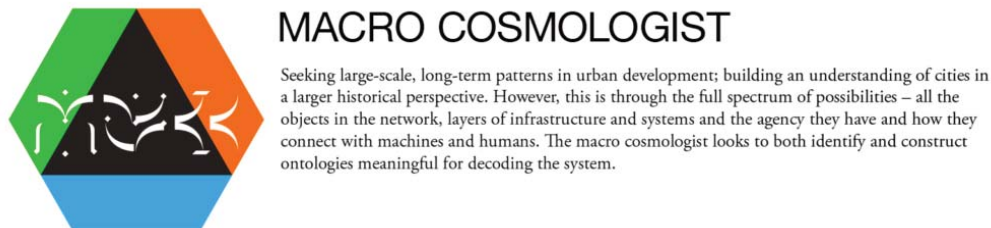


Figure 6. The in-game description of the Macro Cosmologist guild.

## The Situationist International

As an artistic project *Urban Codemakers* is inspired by the ethos and strategies of the Situationist International (SI), an organisation that grew out of the Letterset International. It was founded by an international collection of intellectuals and artists including Guy Debord, Michèle Bernstein, André Breton, Asger Jorn and Atilla Kotanyi.

There is congruence between hermeneutic phenomenology and the SI's metaphysical formulation; as Heidegger is anti-Cartesian, against the ontological separation of body and mind, so is the SI against the cold rationality of urban architecture and planning, which they believe fails to

consider impact upon the context of daily living and human wellbeing; the *Da* (situation) of *Sein* (Being).

Though there was and remains debate on the formation of the group, its goals and methods, we are concerned with three terms that became central to the SI's writings and practices. Firstly, the concept of 'psychogeography' is captured in Ivan Chtcheglov's 1958 piece (written originally in 1953), *Formulary for a New Urbanism*:

*"A mental disease has swept the planet: banalization. Everyone is hypnotised by production and conveniences – sewage system, elevator, bathroom, washing machine... It has become essential to bring about a complete spiritual transformation by bringing to light forgotten desires and by creating entirely new ones... the need of constructing situations as being one of the fundamental desires on which the next civilisation will be founded."* (1993 [1958], 169)

As a practice, psychogeography is concerned with the "study of specific effects of the geographical environment, consciously organised or not, on individuals' emotions and behaviour" (Debord 2016 [1958], online). Chtcheglov specifically advocates a design style that is poetic, humorous and, as he remarks, is driven by a "need to *play* with architecture, time and space" (1993 [1958], 169, emphasis in original). Suggesting future technology would allow for a kind of plasticity in architecture responsive to the situation, Chtcheglov supports a "*Continuous Dérive*" (170, emphasis in original); as the architectural space around one changes, one is playfully disoriented and awoken to poetic possibilities. The concept of psychogeography naturally allies itself to a phenomenological analysis, emphasising embodiment and emotional response, favouring a *zuhanden* experience of space and personal wayfinding over a *vorhanden* analysis of the architecture or pursuit of Cartesian coordinates.

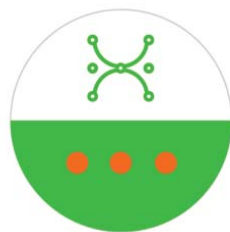
Dérive ('drift') was articulated by the SI as a strategy of experimental behaviour, embodied as an unplanned journey through a space guided by the space's psychogeography in a *zuhanden* manner, as Debord describes in *The Theory of the Dérive*:



*“In a *dérive* one or more persons during a certain period drop their relations, their work and leisure activities, and all their other usual motives for movement and action, and let themselves be drawn by the attractions of the terrain and the encounters they find there.” (2006 [1958], online)*

Here is another instance of ‘worlding’; wayfinding becomes a method of bringing into existence novel ways of being-in-the-world through the collective experiences of the players. Of course, this begins as novel, ephemeral and strictly personal, but, repeated over time, across identities, groups, cultures and cities, this phenomenological transformation may find persistence in one’s sense of being-in-the-city. As Debord remarks in *For a Revolutionary Judgment of Art*:

*“REVOLUTION IS NOT “showing” life to people, but bringing them to life. A revolutionary organization must always remember that its aim is not getting its adherents to listen to convincing talks by expert leaders, but getting them to speak for themselves, in order to achieve, or at least strive toward, an equal degree of participation.” (2016 [1962], online, emphasis in original)*



## URBAN MYTHOLOGIST

Abstractions are good for finding patterns in systems; stories are good for binding meaning to place. Meaningful connections between the narrative of a city and the processes that bring it into being are essential to hosting a play community. The Urban Mythologist looks for patterns and using metaphor builds stories around these patterns to bring them into ways of being for others. Urban myths are not only fantastic tales of ‘that one time when’ but segue into seeing – and being in – the city in a new way. The urban mythologist turns abstract patterns into stories.

Figure 7. The in-game description of the Urban Mythologist guild.

## Interpretive Phenomenological Analysis

In applying these ideas to the design and comprehension of pervasive games, and in this case expanding on the ways in which urban codes operate, we used Interpretative Phenomenological Analysis (IPA). IPA developed as a method to apply phenomenology to collective experience, countering its misreading as a philosophical standpoint that advocates subjectivism (as seen in Sartre). As mentioned, Heidegger’s

phenomenology is founded upon understanding the human as *not* the sole arbiter of an entity's meaning; rather, meaning is generated in negotiation with the entity and situation, hence Dasein (There-Being).

The goal of IPA is to find commonalities in the experience of phenomena as embodied in a lifeworld (*lebenswelt*), a common structure of experience shared between people. Upkeying players into the world of *Urban Codemakers* revolves around the concept of revealing a different way of being-in-the-city; making the city itself as 'ready-to-hand' for play-ability. If the participants can experience the city in a ludic way, then they may comprehend that space as ideationally plastic, shifting Dasein, their Being-*there*: the city becomes a site of potential, malleable, to be remade by the group.

This is where IPA can help design, and, in our example, illuminate links between wayfinding, psychogeography, and urban codemaking. Players may engage in wayfinding through the *Urban Codemakers* world in two basic ways: I *feel* this is the right way (ready-to-hand), or, experiencing breakdown in understanding, I *think* this is the right way (present-to-hand). Our design focuses upon achieving the former; we want participants to engage in a frictionless, embodied sense of equilibrium and satisfaction as much as possible. Simply put, the goal of this design is to pull the player up into another phenomenological world; our idealised player is not trying to *get* to a particular location, but rather *discovering* a new way of being-in-the-city.

This aligns with the goals and processes of psychogeography, but in augmented form, orientating and keying players via the urban codes. As abstract works, the markers are exceedingly polysemic when stuck to an innocuous building wall; the dissonance of this intensely colourful, polygonal and altogether alien 'thing' in the city is juxtaposed by the grey, red and black of concrete, brick and tarmac. Such design generates the vortex, the possibility for one to key into the Operative or Character World; urban codemaking attempts to mark a new spatial organisation

upon the carapace of the old through a phenomenological melting of one into an-Other.

With this intended experience in mind, how do we use IPA in practice? Each player's being-in-the-world has its own unique configuration, yet all share a phenomenological 'lifeworld' (*lebenswelt*) both macro logically, as inhabiting the same society, culture, time period et cetera, and micro logically, as connected with other players via the framework for exploration designed by the Urban Codemakers. Critical to IPA is the way in which questions are framed to players. Using the example of wayfinding, again the question is not 'What do you *think* about finding your way through the city?' but 'How do you *feel* moving through the city?' and further, not 'Describe your process of figuring out the right way' but 'Can you discuss the *feeling* of the right way by describing a particular moment?' This approach is new to our process, therefore we are yet to formally interview players in a structured study, however, playtesting and observation have indicated some possible avenues for exploration; indeed players already tend to speak in this manner about their experiences.

Going forward, we are using IPA to perform a kind of playful twist on the phenomenological reduction via *Urban Codemakers*, comparing competitive versus collaborative modes of play, designs that highlight the paidic to the ludic, and those that utilise augmented reality as a form of mapmaking for the player. The aims of this approach are fourfold: firstly, to achieve a deeper understanding of the essence of the *Urban Codemakers* experience, its baseline commonalities across variation; secondly, to activate urban spaces in a form of 'readymade' level design transforming them into an alternate phenomenological world; thirdly, to explore strategies for pervasive game design that combine aspects of treasure hunt and urban adventure; and fourthly, to humanise urban spaces and engender a sense of community and connection in opposition to feelings of alienation commonly associated with urbanity.

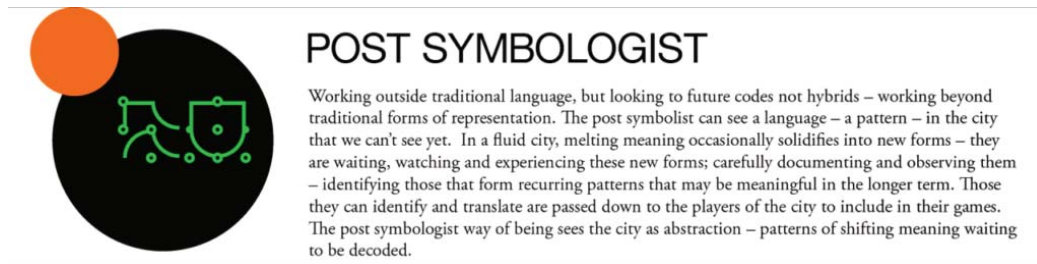


Figure 8. The in-game description of the Post Symbolist guild.

## DE-SIGN

As outlined, design is an act of communication, but this should not be viewed solely as an act of addition; it is also an act of subtraction. As the prefix ‘de’ indicates, to design is to move away from one sign as much as it is a movement towards the generation of another. Though this holds true of all design, it is especially acute in pervasive games, where the designer is frequently confronted by a very stubborn accretion of human history. This is all the more evident in a city, which is of course the primary site (and sight) of *Urban Codemakers*. Train stations, skyscrapers and car parks are all macro-objects that broker little interaction with their material affordances unless one is willing to commit a crime or spend enormous sums of money (perhaps both). Whilst one can toy with secondary qualities, e.g. the colour of a building’s wall, manipulating primary qualities, e.g. the length or width of the wall, is outside the scope of most designer’s budgets and permissions.

Therefore the metaphor of melting is especially important for designers of pervasive games; design in this genre is not a *sui generis* act of creation, as is possible with digital games (within the bounds of the software’s affordances), but an alchemical process of morphing the experience of space in cooperation with the accretion of history that a city embodies.

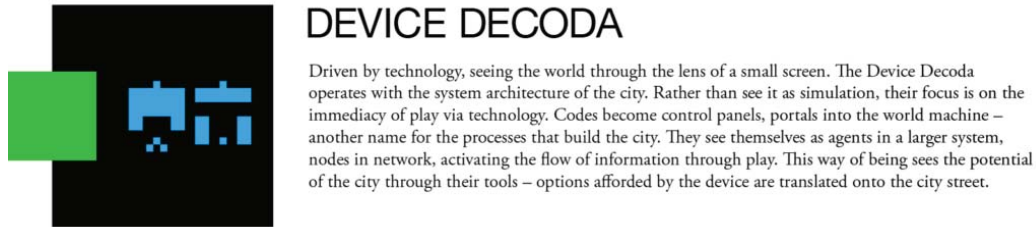


Figure 9. The in-game description of the Device Decoda guild.

## De-coding

The design impetus of *Urban Codemakers* is to encourage searching, collecting and scoring. These modes of engagement upkey the participant from Social-Actor to Operator-Player; the urban code simultaneously upkeys from abstract art piece or unfamiliar material marker to game token. All of a sudden, its value as an art piece, or as a material object, becomes secondary to its value as signifier of immaterial game points. In switching to a lusory attitude (Suits 2005), e.g. searching for the codes to score points, the person enters another way of being-in-the-city, decoding the codes and larger gameworld.

As mentioned, perception is highly selective, and when one upkeys to Operative, or possibly Character World, one's entire perceptual apparatus recalibrates to facilitate this sense of being-in-the-world. As the now-player moves through the city, the laneways, churches, skyscrapers, car parks and so forth are *re-vealed*; no longer sights of staid business or uneventful passage they are upkeyed into the gameworld, and become sites/sights for play. Not all of the urban codes are physically collectable, in some iterations of the project the codes are scanned by mobile devices bringing out digital layers of engagement. The consistent aesthetic of the codes indicates that there is something meaningful and tangible, yet covert, to be experienced in the city. This first layer of engagement sees the codes operate as a set of signs or signifiers of an alternate world; the mobile device is the key that activates another layer of reality for the player. The mobile application used in these devices



is designed as a scanner – it presents a tool ‘ready-to-hand’ and in observing players it is used as such.

As mentioned, upon scanning codes with a mobile device digital layers are activated, displaying architectural interventions into streetscapes or adding notes to a musical score collected from the street. These encounters are designed to encourage free (or ‘paidic’) play. In their comments surrounding these experiences (see Conway & Innocent 2016), players often highlight the pleasure of bringing-forth and sustaining novel ways of Being. Discussing activity with other players, playing together, and engaging with seeds of narrative embedded in the processes of play bring to the foreground and make more tangible the new world within the city. Language has a dominant role here too, as familiar places are renamed within the fiction of the game world. Many players noted they had held onto the codes collected after this process, and in some cases arranged and built them into model cities after play to remind them of the experience.



## ZONE CONTROLLER

Like a city planner, they set the rules and space for play. Designation and design are their key roles, and as such, they tend to be unpopular – a ‘necessary evil’. Finding patterns in urban space is key. There are the large-scale patterns of zoning that govern the overall structure of a city and the ways these intersect with infrastructure – commercial, industrial, residential, and mixed zones need different systems to support them. Then there are the micro-zones that emerge amongst this space; sometimes those that are transitory – transforming a site into something else for a while. Players who synchronise their ways of being at one place at one time create temporary autonomous zones where the rules operate differently, if only for a short time. This way of being relates to space and how it translates to place.

*Figure 10. The in-game description of the Zone Controller guild.*

## CONCLUSION: THE SPACE-TIME SMELTER

“We will not work to prolong mechanical civilisations and frigid architecture that ultimately lead to boring leisure... The architecture of tomorrow will be a means of modifying present conceptions of time and space” (Chtcheglov 1993 [1958], 169). The goal of *Urban Codemakers*, as a pervasive game design, is to provoke this re-conception of space.

Perceiving, interacting, and imagining the world that emerges through their own particular experiences via urban codemaking, players begin to reveal a different way of being-in-the-city; instead of a space that often results in a breakdown or indeed prohibition of play, the city instead becomes ripe for a lusory attitude (Suits 2005). This act of becoming is not simple, however, when the designer is confronted by the mass of history, chronological, material and ideational, that most cities represent. As with all significant mass, its gravity is felt; its pull sets parameters, known areas that players move towards and around; landmarks represent particular density, and therefore significant areas of attraction; the constellation of object relations creates tidal movement, and common ways of moving through and between spaces. This all generates friction for the designer of pervasive games, and as she attempts to rework the city's meanings, so it resists and, oftentimes, is abrasive or outright obstinate.

In speaking of our design approach, we therefore find it fruitful to think in terms of smelting; to extract an inherent but hidden quality of the cityscape, to work within its parameters in generating something new. Indeed, this is embodied not only in our design practice but also in the player activity. As the codemakers move across the environment they rely on its local affordances as part of the hermeneutic process of interpreting the parts to understand the whole, and indeed, interpreting the whole to understand the parts. As we have suggested, this is not simply an hermeneutic circle, indicating a flat back and forth, but a *vortextual* movement, not dissimilar to Whannel's discussion (2010) of modern media consumption, wherein one's Dasein moves vertically.

As the players of the pervasive game become more adept, more aware of the various layers of the gameworld (or as hoped, simply more prone to project this lusory attitude onto the everyday), they may move up and down between phenomenological worlds wherein experiencing phenomena takes on a markedly different accent. For some, this is a revealing of the urban code as score token, which leads them into an Operative mode entailing an instrumental movement across the cityscape

allied to a strategic use of mobile devices, transport systems, and indeed other players. Though this is a fascinating mode of being and very appropriate for certain games and genres (such as chess or certain sports), for the authors' design intentions, this is too close to the mundane practice of viewing entities as commodities, highlighted by Heidegger as the essence of technology, En-framing (*Ge-Stell*); all things come into meaning as homogenised resources for consumption. Overall, this highlights a failure on behalf of the designers to fully melt away the encrustations of the Social World in their design of the Character World.

For others, the markers become indicative of a new set of pathways, social relations and engagements with entities that can take on a variety of meanings unmoored to any instrumental or otherwise extratelic purpose. In this Dasein, to be an urban codemaker is to dwell autotelically, paideiacally, incorporating a more playful sense of existence less bound by rigid, ludus exigencies. This way of being is the idealised player of the designers' hermeneutic vortex, as it is in this mode the possibility of smelting one's immediate environment is greatest, hopefully *re-vealing* one's world. The probability of creation, identified in the article's opening quote (Nieuwenhys 1959) as required for the wellbeing of urban living, is augmented. In this manner, the design of *Urban Codemakers* is a modest attempt at applying a paidic panacea to the quotidian oppression of urban life.

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