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# PRESSING PLAY



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**How can gameful design strategies inform  
the production of physical spaces that invite  
collective and autonomous engagement?**

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*Adelle Lin  
Interior Design Thesis  
RMIT University 2013*

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**READING\* THE BOOK**  
(WITH YOUR MOUSE)

THERE ARE A NUMBER OF  
NARRATIVES *RUNNING*  
*THROUGH* THE BOOK

WALK THROUGH CHEAT SHEET ON PAGE

OR 

**\*AS PLAYING**

*For a number of years I had been working with the notion of games and play within my practice as a means of intervention and affectation. Before this year, my approach has been rather naive based on anecdotal experience and a surface level consideration of the very developed field of game design itself, hence my investigations into games this semester.*

*My interests in gameful design as a strategy for the production of space is to offer people the opportunity to learn play within their everyday context. It is understood that there is a learning process in games, where you need to first learn the rules, then you play the game and often as a natural tendency of either personality or boredom, the rules get be broken - often something new gets discovered. Learning to play with everything from space to systems, people may start to feel like everything is malleable, therefore having agency towards shifting the existing intent of their environments.*

*Within the New Games Movement, 'The Well Played Game' sees Bernard DeKoven argue for a new understanding of play, away from competition, advocating for more improvisational games, in which players take on the role of game designers. This type of thinking can help change the nature of their core interactions, empowering them to take more risks and therefore creating new outcomes.*

## INTRODUCTION

**“You can discover more about a person in an hour of play than in a year of conversation.” – Plato**

*One way of framing what players do when they play a game is to say that they are making choices. For example: How people move pieces, their bodies, what cards to play, options to select, strategies to take, how to interact.<sup>2</sup> This study investigates how human computing technologies can be used to inform both the production of physical spaces and the associated social interactivity experienced in contemporary gaming scenarios.*

*Although games can be played alone, I am interested in how people can play together. Through the experience of collaborating and competing within the framework of play, I would like to encourage others to do so more naturally in their day-to-day life. Due to the nature of game design being in itself a collective act, shifting rapidly from conception, to play testing and then playing the game, my projects have naturally taken an immersive and collaborative approach.*

*Furthermore, with the exponential growth in computing technology and our increasing engagement in virtual realms, what are the possibilities for the relationships and nexus between so called real and virtual spaces? As observed by Gordon Pask, gaming technology that claims to connect, is in fact often divisive and can isolate people in physical space – technology spaces are not social spaces. This research intends to explore the potential for gaming to connect and provoke productive exchanges between people and also space.*

*In order to establish the role of play within this study, it is important to consider it within the context of games because the two are intimately related concepts. The meanings within game interaction are mediated by play and the goal of successful game design is meaningful play. Therefore although it is natural to think that the most successful way to engender play is through games, however due to the nature of the outcome of games needing to be quantifiable, it can sometimes detract from producing emergent outcomes.*

*Open-ended imaginative play builds a set of skills including self-regulation, which is what children develop when at social, imaginative, unplanned unsupervised play. It is these types of skills that are considered useful to address some of the issues contemporary and near-future cities are facing.*

*However, when approaching the subject of games within a non-game context, the term gamification often comes up. It is also the case that whereas true play is always engaged in voluntarily, many gamification designs leaves you with no choice. Observing the baggage that comes with this term of incentivising engagement, I refer to the term “gameful design” – design for gameful experiences used in a number of papers as the preferred terminology used in this project.*

## **GAMES**

## **PLAYFULNESS**

*The notion of gamefulness—the extent to which spaces engender or allow for a spirit of gaming and playing—might be considered an additional criterion by which we measure a city’s livability<sup>7</sup>. Gamfulness is a concept embraced within the projects created in this study, and should be considered as complementary to but distinct from playfulness.*

*In designing the projects to date, a series of gameful design levers have been identified to provide a framework for design - relational, systematic, experiential and environmental. These levers are presented as gameful design choices and although are by no means a definitive list, the levers discussed are identified as important to the production of space. The concept of these levers will be explored and used as a framework to discuss the projects within this study.*

*The projects although temporal and interventionist in nature, begin to suggest ways that we can be gameful within our every spaces. However, gamefulness isn’t something we should hope to experience, but instead aspire to create. Overall I hope to make spaces that attract other makers / hackers, producing spaces that stimulate thought, inspire questioning and a kind of hacking, where users and visitors are situated in the space of possibility.*



Levers were identified as a simple machine during the renaissance, usually where force is applied across a pivot point, to help move a load.

Diagram 1  
Describes the concept of levers used to slide between binaries in the design process.

# LEVERS

*In this study, the term lever becomes a tool for design, as described in Diagram 1, allowing the designer a certain degree of consciousness / control of the design process when setting up gameful scenarios.*

*Throughout the study, a list of game elements / levers was developed and in the following chapters, they are unpacked through four*  
*- relational, systematic, experiential and environmental.*

*They provide a useful framework such as in the project for which to critically analyse the projects that have been carried out over the semester and also in putting forward the propositions of a gameful urban interior.*



*The position of the slider along the continuum describes the condition within the element my projects are aiming for.*

# SYSTEMATIC

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*From a systematic and relational perspective, I was often concerned with the level of structure within the game, how strict to be with rules? What would be considered enough of a reward for people to play?*

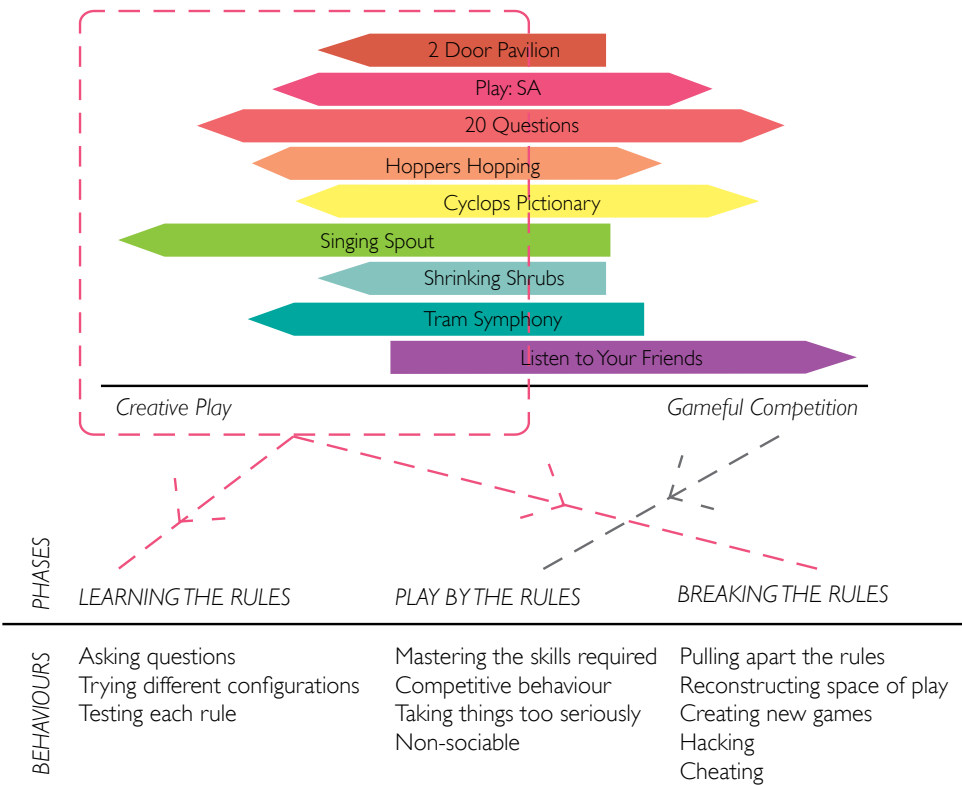
*In the following chapters, we explore the concept of rules, rewards, familiarity and emergent systems as a levers for constructing gameful scenarios. These systematic elements work with the environmental elements of designs to create the relational and experiential aspects of the gameful scenarios.*



As designers, we can never directly craft the possible space of your game. You can only indirectly construct the space of possibility, through the rules you design. Rules are not the experience of play but are about setting up scenarios that lead to these meaningful outcomes, and successful rules can help extend a player's lusory attitude - suspension of disbelief, state of mind required to enter into the play of a game and therefore gaining a players trust in the game. To achieve desired outcomes of generative play requires the rules of the game to be open ended enough to allow for this, sometimes even suggesting the possibility of breaking them.

As discussed in the introduction, from analysing the projects, there seems to be three phases which are explored in the Spectrum Diagram below:

- Discovery and learning through 'playing around'
- Mastery and competitive play
- Boredom, which can lead to breaking of and playing with the rules



# RULES

- Some of the qualities of rules:
- \_Rules limit player action
  - \_Rules are explicitly and unambiguous
  - \_Rules are shared by all players
  - \_Rules are fixed
  - \_Rules are binding
  - \_Rules are repeatable<sup>10</sup>

Where players sit within the play spectrum can give clues as to the types of rules and rewards suitable. See Appendix for detailed project diagram

Two types of rules are explored within the projects – operational rules and implicit rules. Implicit rules are the “unwritten rules” of etiquette and behaviour that usually go unstated in play whereas operational rules are the “rules of play” that players follow when they are playing a game. Operational rules direct the players' behaviour and are usually the kinds of rules printed out in instructions and rule books for games.



When rules aren't objectively stated and understood, the players perception of the rule are more like to allow for open-ended play. The tension between open-ended and pre-scripted play became really apparent when designing '20 Questions', where the consideration was to allow people to be playful with the concept of conversation in a networking environment. The rules were simple – if you start a conversation with someone, you got to collect a card off them and you couldn't collect from the same person twice. Through this, I found that soft rules that provide enough structure, but are open ended enough for people to improvise are most effective.

This was also observed in 'Cyclops Pictionary'. During the playtest, players were given pictures of line drawings, which they the copied onto the wall. This was critiqued as being too prescriptive and didn't allow for much imagination. When this was changed to giving players a generated word, this created more conversation and negotiation, as was considered more fun.

Consider the implicit rules offered by the design of spaces, can emphasizing them or subverting them could be used as a method to design play? Within the games in 'PLAY:SA', 'Longroom Bowling' worked with the long laid out timber floor as cues to create a bowling alley, subverting the implicit rules of the space meant to transition visitors to the exterior. One of the younger players, after having played a few rounds began to rearrange the pins to try to create challenges for himself. It is this breaking the rules which we are hoping to aim for!



Rewards can be considered as something that gives pleasure, and when used correctly can be powerful motivators. How can play be rewarded? In other words what pleasures can induced within a gameful interaction to encourage play?



This research is interested in the framing of rewards as either outcome or process orientated. Outcome orientated rewards are more related to wining or achieving the perceived outcome of the game, the pleasure are therefore more intrinsic to the artificial construct of the play space, whereas process orientated rewards focus on rewarding discovery, exploration, collaboration which tend to bring about extrinsic pleasures and open-ended play. The scenarios within projects are not always binary and can often overlap.

‘Shrinking Shrub’ offers visual, process orientated rewards for curiosity and exploration of the player, bringing awareness that there is beauty in wasted spaces. Exploration and curiosity was also rewarded in ‘PLAY:SA’, where clues were given and the notion of playing with the building was rewarded with inclusion of a fun experience. ‘Message board’ attempted to use the concept where showing up at a certain time would reward players with a message left in the space.

Challenge is an important way to shape player pleasure, where a balance between boredom and anxiety needs to be reached.<sup>11</sup> This was observed with ‘Listen to Your Friends’ and ‘Cyclops Pictionary’. With ‘Listen’, the most challenging environment - the bouncing pillow according to the players were agreed to be the most fun, and with ‘Cyclops’, players agreed that when they only had a word and not visual cues, it was more challenging and more fun.

Generally I found that explicit rewards aren’t necessary to sustain engagement, as enjoyment of the game and the player’s natural competitive nature can sustains it. However objectives need to be clear and simple in order to get people involved, such as in ‘Cyclops Pictionary’ and ‘Listen’. As discussed in the section called Conflict, competition itself can be a powerful incentive. The tension between whether the reward for competing would overshadow the process orientated reason for designing the game was heavily considered in ‘20 Questions’.

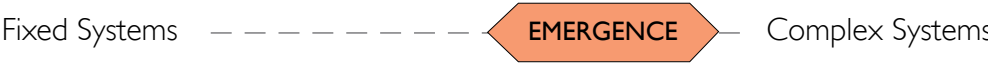
REWARDS



Cyclops Pictionary - Seeing what other players had “drawn” seemed to reward

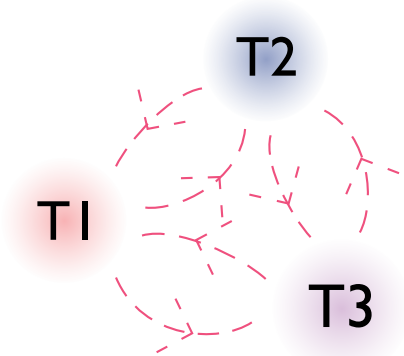
EMERGENT SYSTEMS

Systems that are emergent systems generate unpredictable patterns of complexity from a limited set of rules. In an emergent system, the whole is greater than the sum of the parts.

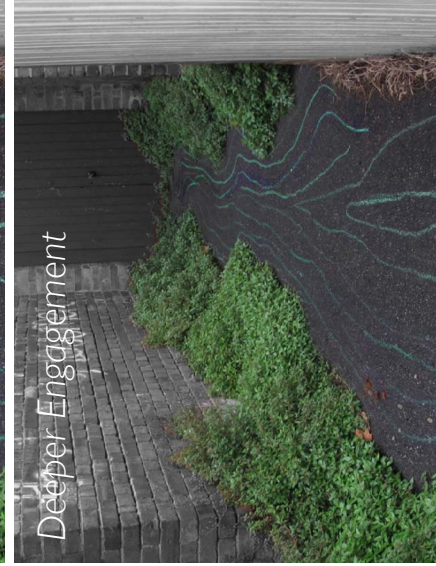
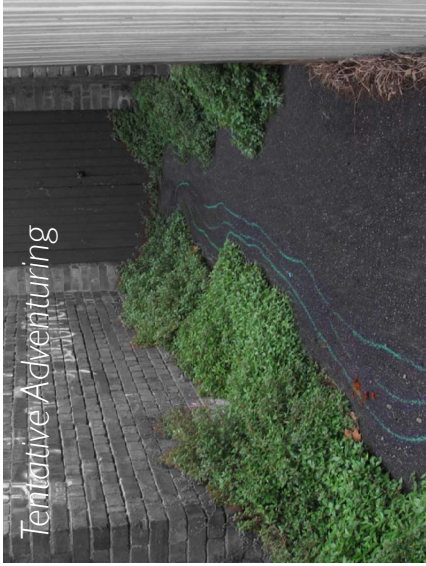


This is referred to within Gordon Pask’s Conversation Theory - through recursive interactions called “conversation” their differences may be reduced until agreement — that is, agreement up to a point which Pask called “agreement over an understanding” — may be reached. A residue of the interaction may be captured as an “entanglement mesh”, an organized and publicly available collection of resultant knowledge, itself a major product of the theory as devotees argue they afford many advantages over semantic networks and other, less formalized and non-experimentally based “representations of knowledge”.

Diagram: Any two concepts can produce the third, shown as the cyclic form of three concepts — note that the arrows should show that both T1 and T2 are required to produce T3; similarly for generating T1 or T2 from the others. T3 emerges from the system as a new idea, something that could not have happened if T1 and T2 had not “conversed”.<sup>12</sup> Furthermore, context dependent interactions change from moment to moment depending on what is happening in other parts of the system, creating patterns that change dynamically over time.



# CREEPING SHRUBS



What is this the role of visual engagement techniques?

How does one create and reward curiosity in people to explore a space that isn't a destination?

## DESCRIPTION

The project uses chalk and animation techniques to simulate programmable LED strips that light up upon engagement by the audience with the site. The LED motion themselves simulate the notion of the shrubs growing into the space, shrinking and contracting it. **Potentially creating narrative affinity with the space.**

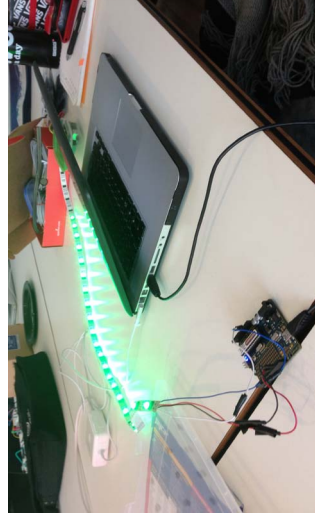
## TOOLS



## COLLABORATOR

Fringe Festival Melbourne  
Creative Technology Practitioner

## TECHNOLOGY TESTING

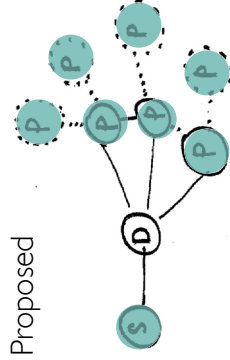


## RELATIONSHIPS

Current



Proposed



## RULES OF THE GAME

The LED strips will begin to light up upon approach to the site to create intrigue. After which various types of movements towards the site will trigger various types of LED patterns. The more adventurous the explorer the more, visually rewarding the experience.

## SYNTHESIS

- The chalk simulation is evocative of the intention of the project, however as it wasn't installed fully it is difficult to evaluate the success of it.
- It can be speculated that the project would speak to the imagination of the individuals, however as the narrative created is particular to the artists and not the visitor, this probably wouldn't encourage prolonged engagement or collaborative behaviour.
- **Prolonged engagement would require a program to be built within the space to truly give meaningful rewards for exploration.**



From a digital game design perspective, the act of opening up a door can be rewarding in and of itself, and seems to trigger a believe that opening a door moves us forward into new places and experiences, which I explored within 2 door pavilion.

Long room Bowling, Cyclops Pictionary and 20 questions used mechanisms that people were very familiar with to appropriate sites allowed people to quickly get to the level of breaking the rules and creating their own version of the interaction.

**In attempts to create initial engagement, I found that using familiar cues, as a good starting point as people don't spend too much time tying to unpack instructions or working out puzzles.**

# FAMILIARITY



A

B



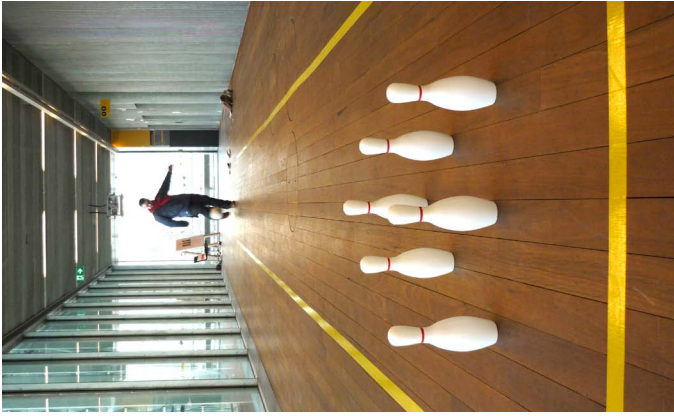


# PLAY:SA


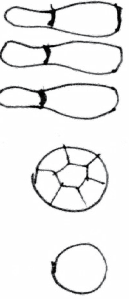


DESCRIPTION	A series of gameful elements implemented within the Design Hub in conjunction with the Convergence Festival 2013.		
COLLABORATOR	RMIT GEElab		
SYNTHESIS	___ Familiarity to the game is important when trying to engage strangers quickly.		



*Can subversive play change the relationship visitors have with a serious architecture that doesn't encourage play?*



## LONG ROOM BOWLING

RELATIONSHIPS	TOOLS	
Current		
Proposed		

### DESCRIPTION

The change in floor material inspired a bowling alley to be simulated, drawing attention to the nature of the long room.

### SYNTHESIS

- \_\_\_ Long room bowling was effective as it was **visible**, didn't require much explanation, and **allowed for changing of the original rules** - throwing / kicking ball in different ways, reconfiguring the pins themselves
- \_\_\_ **Visitors ended up staying longer in the corridor than they normally would and became much more aware of the materiality of the space**

# RELATIONAL

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*People and our relationships to them significantly bind us to place through memory of those relationships. Play and gaming can contribute to creating those relationships and memories. Thus there may be a role for play and gaming in making place.*

*The project seeks to design for interactions, and therefore considers the relational aspects of the projects such as interactivity, conflict, social structures and invitations as a key element to unpack.*

*It is important to consider gamefulness not as an isolated experience, but as gameful relationships with other players and non-players. Jane Jacobs discusses “a defining aspect of city life is the constant dealings with strangers, successful city neighborhoods work on the basis of a complex working order”<sup>13</sup>. The experience of collective play that games create is therefore an important dimension of the project.*

As Bernard Schumi is often quoted as stating “There is no architecture without event.” An event is only as successful as the interactions that happen during the course of it. It is important to differentiate interactions that would happen naturally versus explicit interactivity, how players participate with designed choices.



The design of feedback is an important area to study in terms of how space might perform in response to interactions with space through occupation. Performance comes in difference ways – harmonically responsive (registers you are there), actually provokes you (attitude), where there is some kind of transformation of space that provides (neither harmonic / provocation) suggests new options or new opportunities. Part of the research investigates the mechanisms of cybernetic systems (self-regulating systems): consisting of a sensor that measures some aspect of the system of its environment, a comparator that compares this measure to a set of value and decides whether or not to take action and an activator that creates a change in the state of the system<sup>14</sup> Sensors are built and tested in a couple of scenarios described in this section as well as considered in 3 propositional projects - Spout of Oratory, Tram Symphony and Shrinking Shrubs.

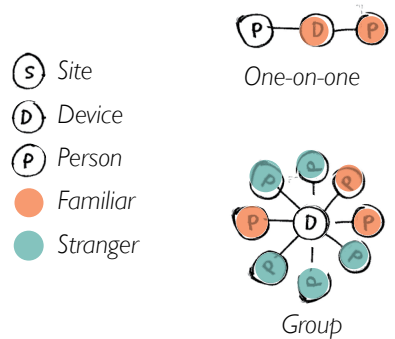
In Gordon Pask’s Conversation theory introduced in the section Emergent Systems, we focus on the interaction of two people in conversation. The two people usually reach agreement about a certain topic through deduction. However what’s important is the 3rd, 4th and other topics that then arise as residue of the interaction, captured as “entailment / entanglement mesh”<sup>15</sup>, thus the interaction leading to a body of resultant knowledge, which only could have arisen due to the conversation being had by the two people in the first place.

Therefore it became important to consider the types of “conversational” outcomes from various types of interaction models.



# INTERACTIVITY

How can individual relationships can be transformed into group ones?



The group interaction described here is the most simplistic one. Other types of group relationships will be discussed in the “conflict” element.

Another aspect for consideration, is the amount of interactivity through existing technology that pervades our lives sometimes acts to reduce connection. The Homogenous Home is a critique about work and home being homogenous, undifferentiated landscape in the centre of the home, the proliferation of technology, and being able to access the same data through ones TV, phone, iPad / the like, and computer further creates similar landscapes throughout the home<sup>16</sup>.

In addition to creating homogeneity in the physical environment, multi-purpose computing devices often interrupt us<sup>18</sup> or enable us to easily follow tangents through data, creating a complex virtual environment with too many potential paths for exploration. This unordered complexity of the virtual environment, combined with a homogeneous physical environment, makes it difficult to enter into physical and virtual configurations that are well suited to focusing on a particular task. This limits the compatibility and reduces restorative qualities between people, their environments.

Homogeneity is believed to result in a less fulfilling experience, creating environments that are not well adapted to the complexities and variety of life in the home. A couple of quick studies at work and home using the force sensor systems built begin to reveal highlight this point. Movement patterns picked up by the sensors remain relatively constant across both half hour periods within the study. How can we change our Homogeneous landscapes?

Although not addressing the traditional notion of home within this project, the lines between home, work and learning spaces are becoming increasingly blurred as the city begins to provide for us in the nature of the home. Therefore this project aims consider notions of homogeneity within the context of an urban lounge room.



# TRAM SYMPHONY



*How can the notion of public transport be transported back to the concept of being a social rather than a solitary function?*

*Does shifting the function of elements in these spaces change our relationship to the space ?*

## DESCRIPTION

This project investigates how we interact with and within public transport interiors. Pressure sensors are installed on the handle bars of a tram, where people can hold onto as per usual.

## RULES OF THE GAME

Passengers are not told of the game. The strength that passengers hold onto the handle bars controls the type of tone or sound that is played by a pa system.  
Two of the sensors triggers a musical scale, one triggers ambient music clips and another trigger various sounds recorded in a suburb.

## SYNTHESIS

- The sounds created a pleasant sound scape within the tram environment
- People that engaged with the bars were **pleasantly surprised**
- More thought is required for the types of soundscapes
- **Visual cues of the sensors needs to be considered** i.e. more or less obvious? Make the covering for the sensor to be much more appealing, e.g fluffy covering. Maybe vibration feedback
- Testing time was not long enough to engage the broader social implications of the device

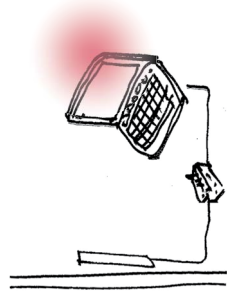
## SENSOR LEGEND

- Lower Bar Sensor
- Upper Bar Sensor
- Varying sounds corresponding to each sensor

## COLLABORATOR

Game Designers from RMIT EGL

## TOOLS

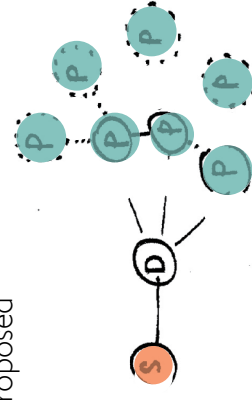


## RELATIONSHIPS

Current



Proposed



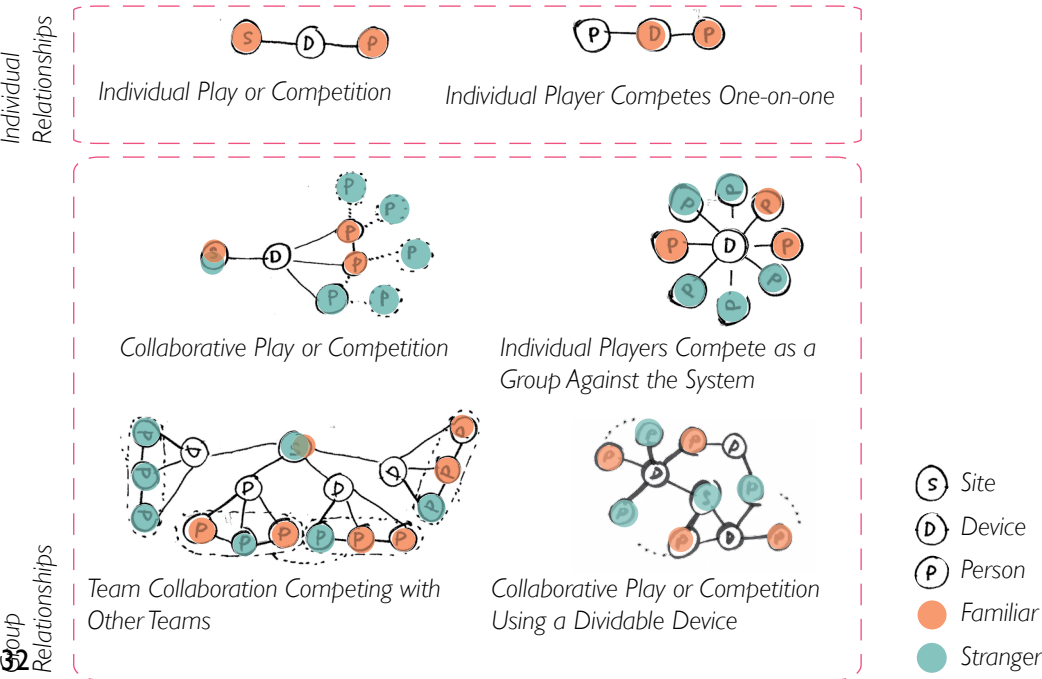


In this study, the games created are systems that often include the use of devices, players always interact with the system in an instance of conflict - collaboratively or competitively. Collaboration and competition are ways of creating connectivity, where the game is situated along the continuum of competition and collaboration is a design choice made when designing a game.



Competition, in which the desire to be ahead of others is often a powerful enough reward, being better than someone else, or your previous self is often considered a motivator within games. This not only favours outcome of reaching the goal, but reaching it better than someone else – stats, leader boards become important. If a game is overly dependent on using competition as a motivator, we begin to approach the dangers associated to “gamification”.

This study is therefore primarily interested in the collaborative element within gameful situations and is interested in converting one-on-one gameful conflicts into the various types of group conflicts.



CONFLICT

SOCIAL-  
ISATION

What relationships to players have outside the bounded environment of the game? Can players form relationships that span beyond the game interaction?

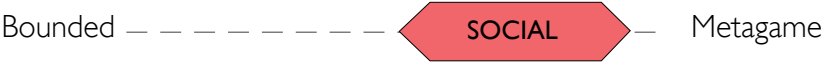
Pask describes a future scenario brought about by game.

*“By 2020, the habits of 2002 have become even more deeply ingrained. Mostly people engage in games, problem solving and abstract invention. They appear to interact through their games, although no meaningful interpretation of these interactions can be found, except in terms of empty symbols and formal systems of numbers.*

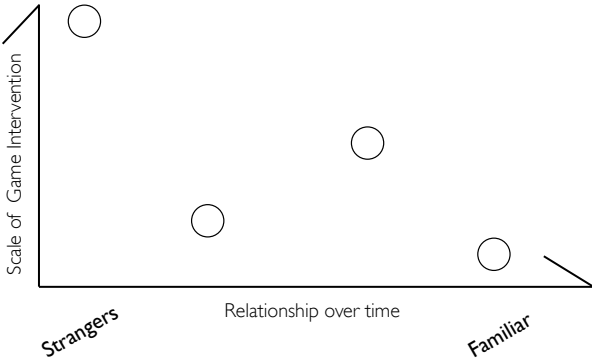
*People do not go out. They eat in their dens. In contract, the info environment is busy executing programs and forming patterns of immense complexity and – if they could be perceived – profound beauty. It is difficult to gauge their attitudes, for only a few will reply to questions.*

*Q. What is life? R. Thought.”<sup>19</sup>*

It is this sort of implied behaviour that my projects wish to dispel. An important aspect of gamefulness is to be able to create sustainable engagements beyond the game itself - the metagame aspect. Trust and safety are elements found within a bounded game, therefore any metagame relationships need to be able to set up these same parameters.



The diagram below describes the concept of using levels of game intervention over a project life-cycle to enable team relationships to move from stranger to familiar. These types of bonding is often carried out beyond the project itself.



# 20 QUESTIONS



How can a game subvert yet enable the core values of a social event?

## SAMPLE QUESTIONS:

“Describe something you are learning right now.”

“Out of the five senses, which do you enjoy the most?”

“Let’s have a staring contest.”

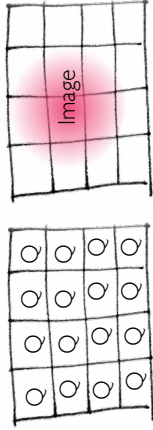


“Oh hey, it’s a puzzle.”

## COLLABORATOR

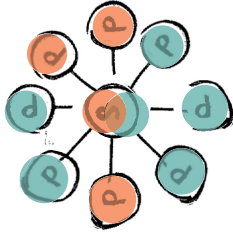
Founder of Hopping Melbourne

## TOOLS

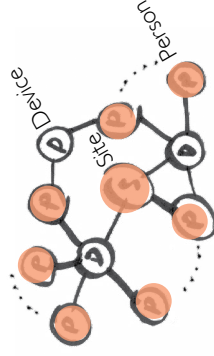


## RELATIONSHIPS

Current



Proposed



## DESCRIPTION

Hopping Melbourne is an inter-disciplinary gathering of designers and makers that hops between urban Melbourne space. As a doocracy, each month the organisational responsibility passes on to someone else. The brief created for this session was to **enable conversations leading to productive outcomes between people dropping in and out.**

## RULES OF THE GAME

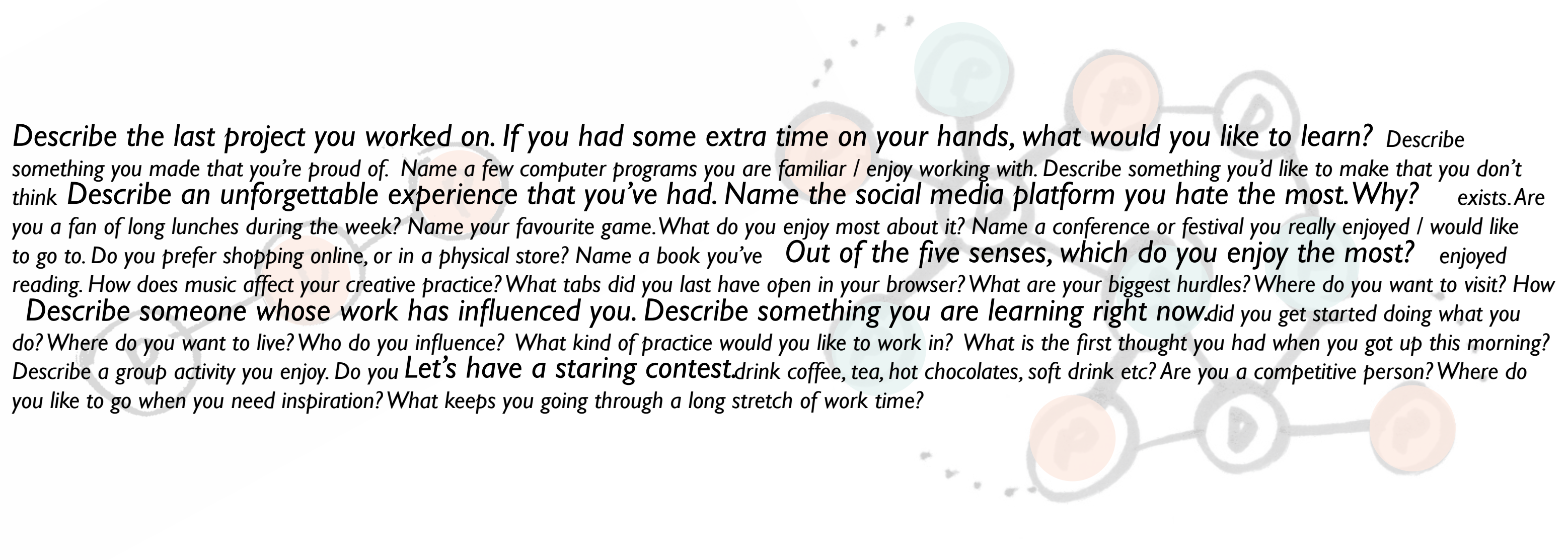
Each person gets distributed a set of 3 question cards. When someone initiates a conversation they get to pick a card from the other person. No picking cards from the same person twice. The back of the cards indicate that the cards can get put together like a jigsaw into a larger image. Players aren't told this.

## SYNTHESIS / FEEDBACK

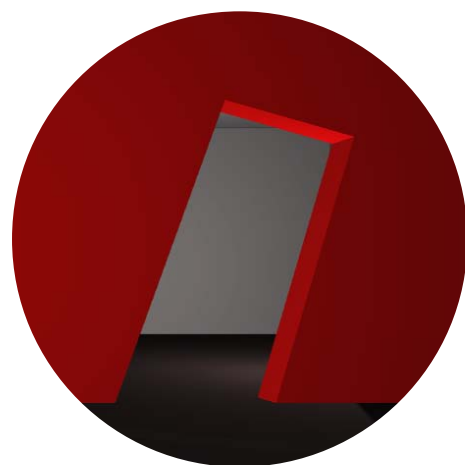
### “Great questions!”

- “It was good to have rules, which we started observing then it got broken, and then everyone ended up making jigsaws”
- “Liked how people still started taking the questions to use, naturally put it back into the jigsaw”
- “Good way to prompt conversation, never ran out of things to talk about”
- **“Like how the rules were soft, so could be changed around, make your own rules”**
- “Liked how the pile sat in the centre so whenever needed something, could pull from it”





**Describe the last project you worked on. If you had some extra time on your hands, what would you like to learn?** Describe something you made that you're proud of. Name a few computer programs you are familiar / enjoy working with. Describe something you'd like to make that you don't think **Describe an unforgettable experience that you've had. Name the social media platform you hate the most. Why?** exists. Are you a fan of long lunches during the week? Name your favourite game. What do you enjoy most about it? Name a conference or festival you really enjoyed / would like to go to. Do you prefer shopping online, or in a physical store? Name a book you've **Out of the five senses, which do you enjoy the most?** enjoyed reading. How does music affect your creative practice? What tabs did you last have open in your browser? What are your biggest hurdles? Where do you want to visit? How **Describe someone whose work has influenced you. Describe something you are learning right now.** did you get started doing what you do? Where do you want to live? Who do you influence? What kind of practice would you like to work in? What is the first thought you had when you got up this morning? Describe a group activity you enjoy. Do you **Let's have a staring contest.** drink coffee, tea, hot chocolates, soft drink etc? Are you a competitive person? Where do you like to go when you need inspiration? What keeps you going through a long stretch of work time?



# INVITATION

This leads to the tension between the formality of the invitation and structure of a game – on one hand, ambiguous games are less intrusive and allow for selective engagement. However it doesn't necessarily create a group / collaborative dimension. How do we involve strangers in gaming and playing in public—they do not know a game is being played and so any interactions need to be respectful of them.

In 'Tram Symphony', 'Shrinking Shrubs' and 'Singing Spout', sensors were placed in places that people of the public could discover unwittingly, and had autonomy over whether to engage or not. On the other hand, structured games with specifically delineated game spaces work well to create socialization but then it is limited by their temporal nature, such as 'Listen to Your Friends' and 'Cyclops Pictionary'.

Some of the games here in Play:SA begin to address that, providing ways of communicating with others in a building, somewhat involving an element of chance. '2 Door Pavilion' starts to unpack the implication of doors and corridors in terms of encouraging engagement spatially.

**WHAT SAYS TO SOMEONE “JOIN IN”?** If a pathway changes its destination from time to time - either a continuation of the corridor or an open functional space, does this have implications on how often someone visits the pathway?

Another important consideration is to achieve double seduction for players - being seductive



enough to invite play and then retaining the players within the space<sup>20</sup>. This is explored throughout the projects, from explicit invitations to play in 'Listen' and 'Cyclops' to incidental invitations of 'Tram Symphony' and 'Shrinking Shrubs'.

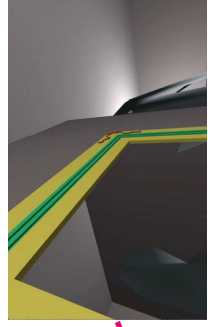
# 2 DOOR PAVILION



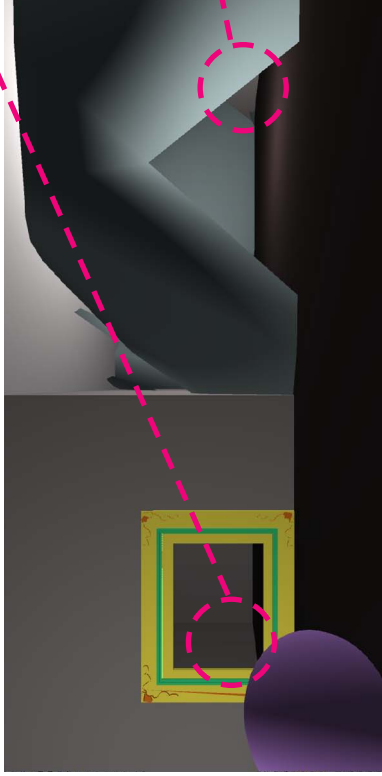
Jumping to Look In



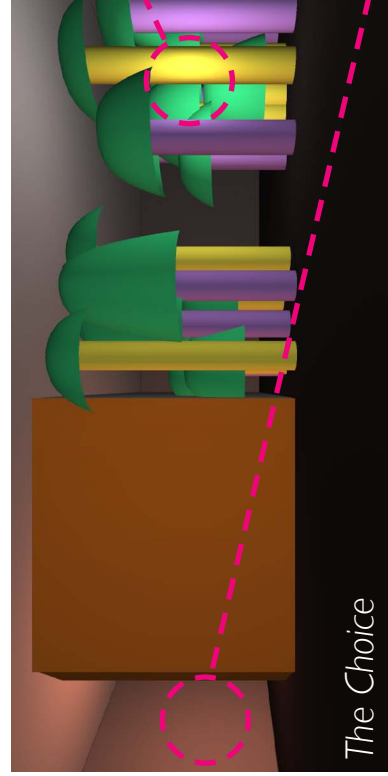
Checking Out the Geometric Door



Looking up into the Frame



Checking out the Cave



The Choice

 Player position and corresponding viewpoint

## DESCRIPTION

The project expands on the concept of doors to other openings within a series of rooms that the player is confronted with. ***This is an invitation, a formal way of engaging them to make a decision so they feel like they're making a choice about the next step.***

***The project is interested in the players appetite for fantasy*** and therefore introduces openings that are highly unlikely within the real world.

Doors are powerful tools for framing the content beyond, however the project is not concerned with what is beyond the door at this stage. It does however begin to explore the ***placement of objects within a scene, a lone purple sphere appears throughout***, not as a content framed by the doorways but potentially as narrative cues for the player.

## RULES OF THE GAME

Go left or right beyond the openings

## SYNTHESIS

\_\_\_ The tendency is towards the open door, geometrically shaped door, picture frame opening and hidden curved wall opening.  
\_\_\_ Only one person chose the mushroom forests - going too far into the realm of fantasy? not supported by a real fantasy environment.

\_\_\_ The sphere created a level of intrigue, - players drawn to it, tried to move, jump over it  
\_\_\_ Did not address the group dynamic that is important to the research.

***How to make this a collective adventure?***

# EXPERIENTIAL

.....

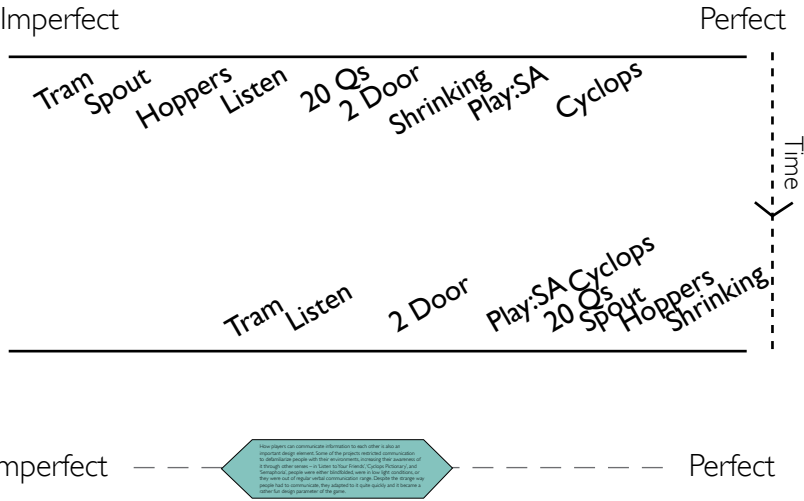
*An example of urban play aimed at shifting people's perception of the city exists clearly through the set of strategies employed by the Situationist International, which enables "the playful becoming aware of, reimagining, and exploration of the city; in other words, the affective realization of the city."<sup>21</sup>*

*Therefore what are the narratives through which we experience gamefulness? What levels of simulation and information is communicated towards our experience?*

# INFORMATION

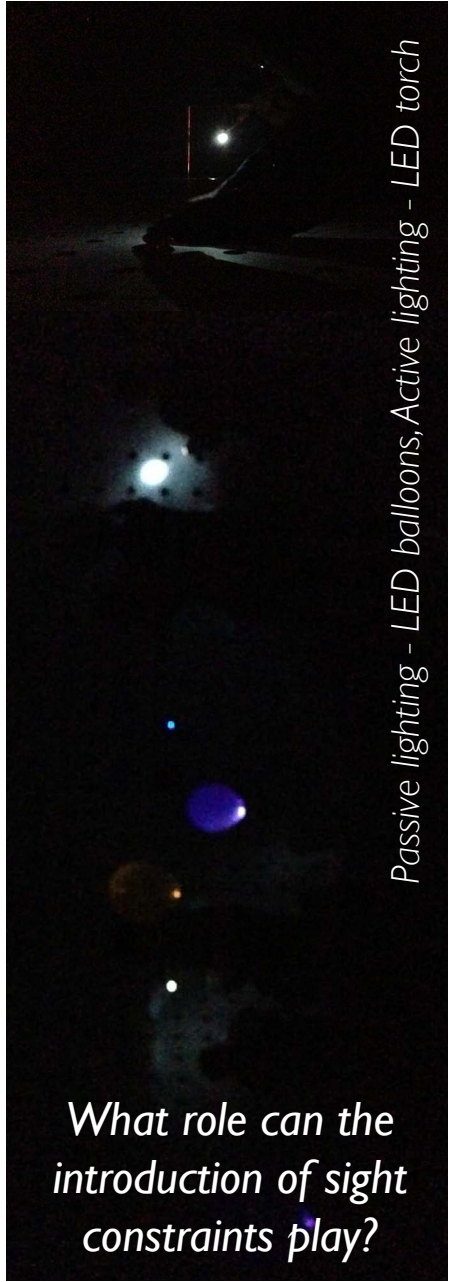
LOOK CLOSE

Information distributed to players can be a powerful lever. Perfect information describes the scenario where all players have the same amount of information, whereas imperfect information indicates that some information is hidden from players and is kept within the game. The shift of information that occurs within a game also needs to be considered.



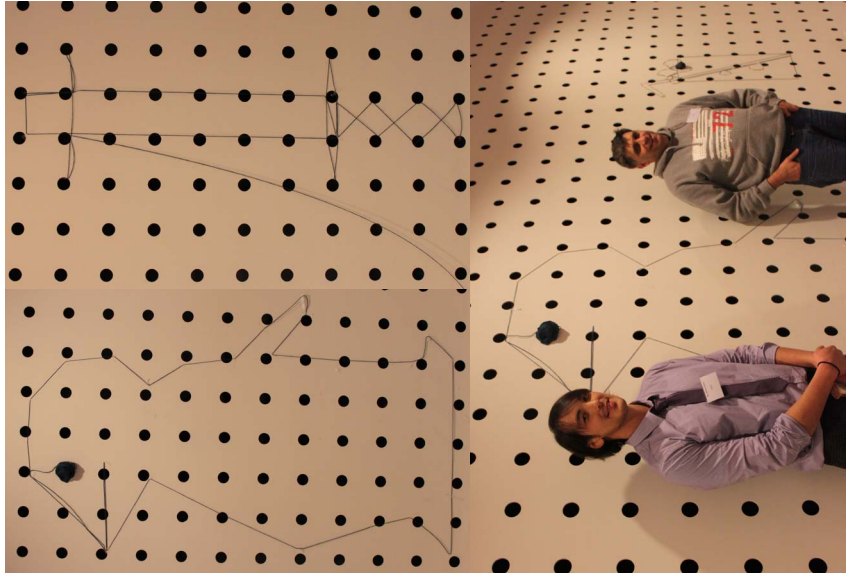
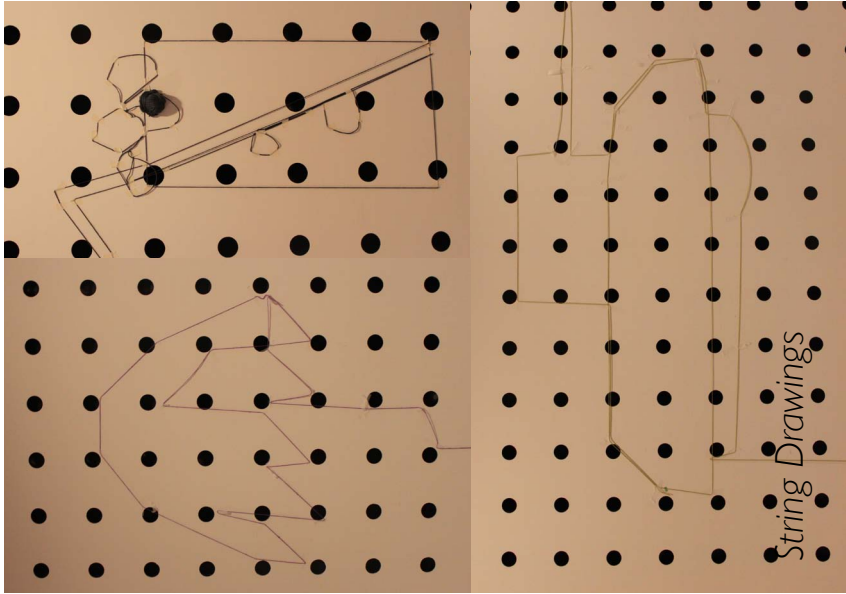


# CYCLOPS Pictionary



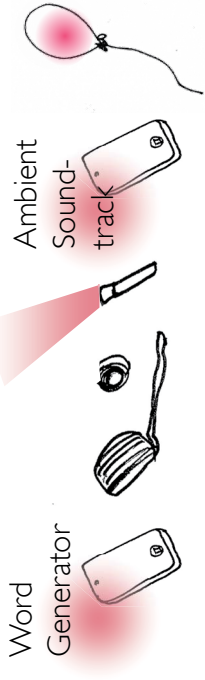
What role can the introduction of sight constraints play?

Passive lighting - LED balloons, Active lighting - LED torch



How can we shift spatial relationships through encouraging gameful exploration?

## TOOLS

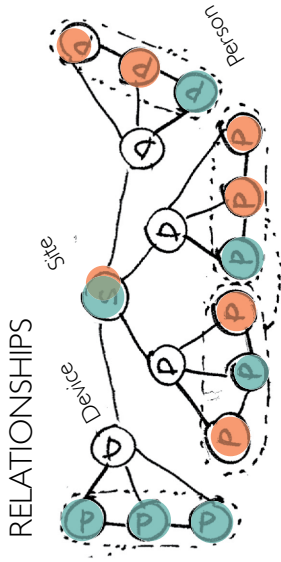


## COLLABORATOR

RMIT GEElab  
Fellow Architecture Student

## DESCRIPTION

Using key elements of the site – the dots featured in the Multipurpose Room, a game of spatial pictionary was created.



## RULES OF THE GAME

Aided by ambient lighting using LED lit balloons, teams of three were given a torch, a ball of yarn, some tape and a generated word. Participants used the coloured yarn and sticky tape to connect dots on the wall to “draw” an image of the word. Once groups have created their image they would guess what other groups have created. Scoring mechanism - teams that guessed the most correct answers would win, as well as team drawings being guessed correctly the most, negating motivations to cheat.

## SYNTHESIS

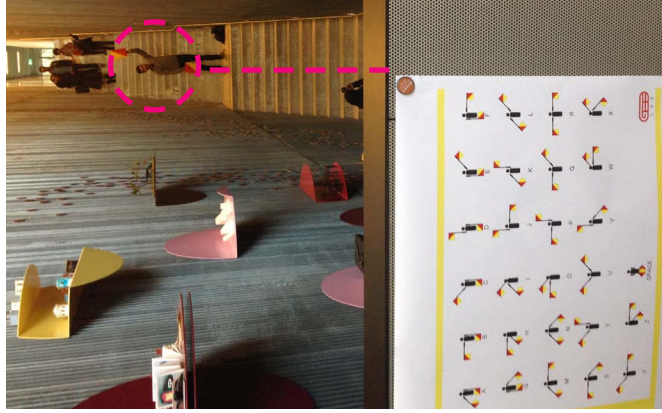
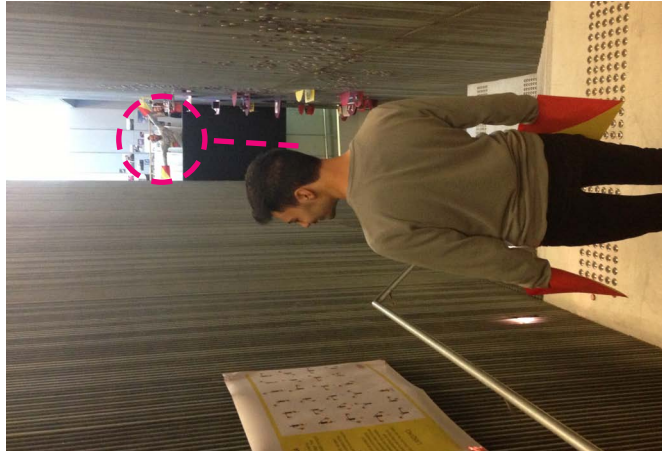
— **Due to low levels of focus light, groups had to cooperate and work very closely together with each other. They looked like intense explorers of the site, increasing intimacy with the site**

— People that were reluctant to join the game ended up really enjoying themselves and bonding within the 10 minutes of game time

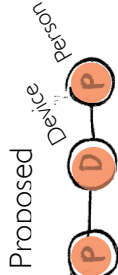
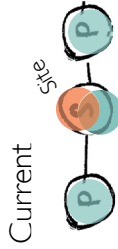
— Scoring mechanism didn't work out as paper and pens were not prepared beforehand, so the groups went around guessing each others drawings, which people seemed to enjoy. Next time paper and pens to be prepared.



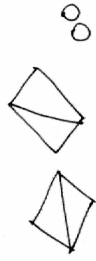
# PLAY:SA



## RELATIONSHIPS



## TOOLS



## DESCRIPTION

Semaphoria aimed to draw attention to a crossing siteline between a staircase going from Level 3 to Level 2 and a balcony space on level 2 that is only visible when someone is standing at the balcony.

## RULES OF THE GAME

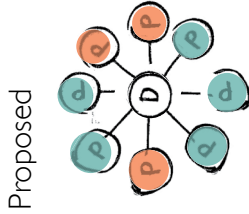
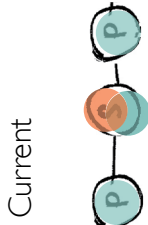
Player 1 on the staircase spells out a word using the semaphore code shown on a chart. Player 2 on the balcony must work out the word player 1 is spelling and action out the word back.

## SYNTHESIS

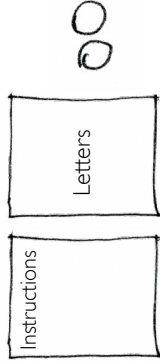
- \_\_\_ **Allowed people to slow down and think about what they were communicating**
- \_\_\_ **The large gestural motions made added a performative element to the game**
- \_\_\_ Due to there being an exhibition set up around the space, the impact of the siteline was lessened
- \_\_\_ It was hard to draw attention to the game as the clutter of the exhibition made the game instructions less noticeable. Also, the game wasn't something recognizable which people could immediately respond to



## RELATIONSHIPS



## TOOLS



## DESCRIPTION

Message board aimed to draw attention to the height of the staircase void and the feeling of vertigo when one looks down.

## RULES OF THE GAME

Single letters were magnetized to balustrade sides facing the void spelling a message for whoever looked in. Signs were posted on the landing to indicate to passers by a note had been left for them.

## SYNTHESIS

- \_\_\_ Could be further developed as an **internal message board for the building**. Potentially digitally.

Games  
simulate a scene,  
but games themselves  
are simulations. A interactive  
simulation game that has  
an instance of both are  
usually interactive  
theme park  
rides – Pirates  
of the Caribbean at Disney

Quest being one considered a successful one. It is not a video game, not a ride but a new  
medium with more emphasis on the real experiences, less on virtual ones. In this simulation, there



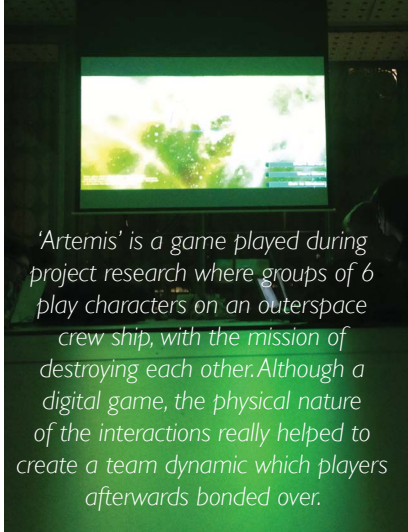
is a balance between letting  
guests have control over their  
adventure, and making sure that  
each adventure is a great one –  
autonomy vs scripted experience.

Simulations can be cased based  
where incredible attention to detail  
is paid to get the scenarios as realistic  
as possible. This is rather resource  
heavy and can often draw attention to the  
deficiencies in the game as opposed to the  
overall game experience, which is the focus of  
generalised simulations. 'Message Board' and  
'Semaphoria' and 'Listen' are examples where  
generalised simulation techniques were used to  
create gameful scenarios.

In digital game design, real  
doorways and corridors  
tools that simulate real life  
mapping circuit, creating  
and thresholds within an  
Pavilion' explores these

life spatial cues such as  
are one of the game design  
and help our brain's basic  
the sense of boundaries  
artificial environment. '2 Door  
two typologies.

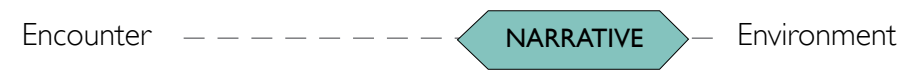
# SIMULATION



*'Artemis' is a game played during  
project research where groups of 6  
play characters on an outerspace  
crew ship, with the mission of  
destroying each other. Although a  
digital game, the physical nature  
of the interactions really helped to  
create a team dynamic which players  
afterwards bonded over.*

# NARRATIVE

A narrative is constructed through the environment it is set in and the individual encounters  
within it, therefore considering the degree to which the narrative is pre-scripted is an  
important design lever. Also, the narrative techniques become quite different for when the  
game is within a digital realm or physical state. What are the opportunities offered by hybrid  
environments?



As this study is based mostly in the physical world, instead of the game environment being  
constructed from scratch, it consists mostly of a re-appropriation of narratives  
embedded in existing spaces or encounters. 'Play:SA' and 'Tram Symphony'  
both deal with this in different ways. 'Play:SA' gives new narrative to the RMIT  
Design Hub either as an impromptu bowling alley or a giant message board,  
whereas the 'Tram Symphony' turned a boring hand rail into a musical  
instrument upon encounter.

I am investigating how to sustain continuous engagement. How can narrative elements play  
a role in this? I have found that collaborative engagements require a key driver, anchor or  
embeddedness in order to become meaningful. The use of narrative can be  
a very powerful anchor for a game, people like to follow a story and is  
very important to the experiential qualities of the game. Complexity of  
program, which is important to create engaging narratives is harder to achieve  
within installation based interventions (unless really large scale) and is what I  
hope to address within my program that designs for the gameful urban interior.

'2 Door Pavilion' begins to explore the placement of objects within a  
scene, a lone purple sphere appears throughout, not as content framed by  
the doorways but as narrative suggestions for the player, raising questions  
about how players perceive. The sphere although not built in with any  
interactive capability did draw attention from players of the game, suggesting  
the possibilities of further exploration of anxious objects that subvert player expectations<sup>22</sup>.

Having performative elements<sup>23</sup>, where participants are invited  
to contribute to the overall mies en scene of the installations, such as  
drawings on the wall in 'Cyclops Pictionary', gestural communication in  
'Semaphoria' and role playing within 'Listen to Your Friends' creates greater  
visibility for the narrative and begins to connect elements of the game with  
the broader public.

# ENVIRONMENTAL

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*This study is concerned with how we map ourselves within our environments as an important factor to cultivating gamefulness. All games are played within an environment, whether virtual or physical and have material qualities. Furthermore, with the rise of hybrid games, there is now a crossover of the digital layer over the physical layer.*

*Only one project explores this crossover - 'Listen to Your Friends' whilst the other projects constructed either sit within the physical or digital layer. However this study is mindful of the potential of hybrid gamefulness as a type of spatial investigation and will continue to explore this in later propositions.*

*Other elements to consider within gameful designs are the role of place and locatedness of players.*

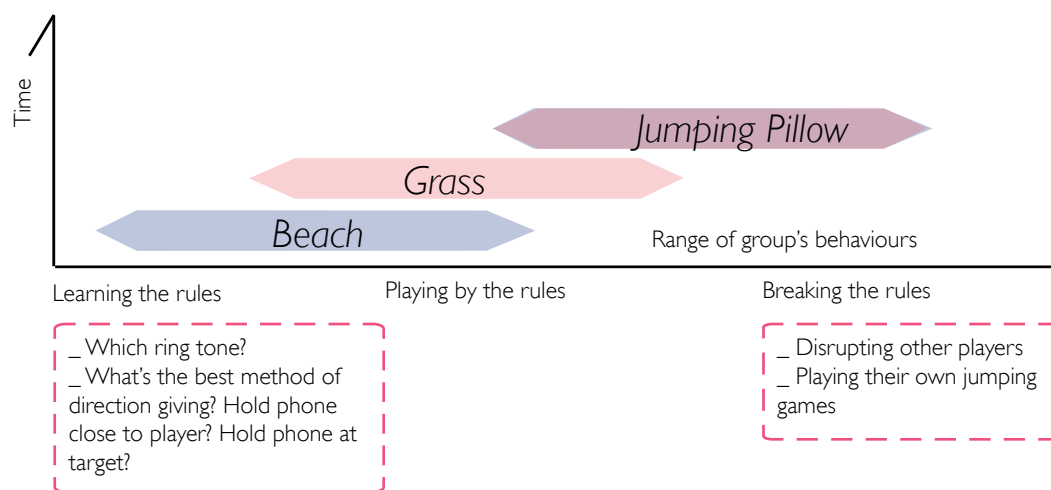


The concept of architecture being another one of our “skins” as discussed in Arakawa and Gins’ ‘The Architectural Body’. “Procedural knowing, a term covering both instinctual sequences and encoded knowing, that is, habitual patterns of activity... If thinking is thought of as a subroutine of this sitting procedure, it too must be regarded as procedural”<sup>24</sup> How we live and learn is closely inter-connected to the immediate perception of our material environments, whether it is perceived, experienced through a digital or tactile environment.

Perceived / Coded — — — — MATERIALITY — — — — Tactility

Listen to your friends game was inspired by trying to engage in different movements than the environment suggested - such as running instead of jumping on an inflatable surface. By creating a game that can be played in three locations, I was able to document the development of procedural knowing. The materiality of the environment was rather critical in how well the game was played.

I mapped the three games across the learning - breaking the rules continuum discussed in the introduction, observing that when the conditions of the game got difficult at the jumping pillow, due to the high ambient noise factor and the constant movement of the stones, some players decided to ignore the objective of the game and just played.



*The True value of Rebound Therapy lies in the fact that part of what occurs is not “on earth”. The essential value of the process is that, for a brief moment, ‘earth’ is left behind, and a new freedom is found in controlled movement away from gravity’s straitjacket, in a sort of relaxed ‘poetry of motion’ available to all, irrespective of any disability.*<sup>25</sup>

## SPATIAL INVESTIGATION

“Activating an architectural procedure, a person comes alive to her own tacit knowing. They elicit specific landing-site dispersals, that which transpires as site awareness, is coordinated beneath awareness. With architectural procedures prodding the body to know all that it is capable of, our architecture becomes an intrusive and active stage set.”<sup>26</sup>

The first project within ‘2 Door Pavilion’ draws upon this tacit knowing of the person, trying to shift the environment that the person is used to by changing the path that the opening leads to at different points of the visit. Does this disrupt a person’s tacit knowing of it’s environment? Could this simulation of getting lost allow adventures in known places? It is this tacit knowing, and our ability to contextualise space that may require a more extreme version of this.

Arakawa and Gins, with their Bioscleave House <sup>[1]</sup> and Yoro Park<sup>[2]</sup> project also pose various methods of utilising architectural procedure to design for the architectural body. Two or more instances of a tactically posed surround constructed to be adjacent to one another will yield the desired result, that is, will have effectively produced and

enclosed area that will get the disperse-to-contrast procedure going - paired rooms, apartments or houses, areas of terrain. Other suggested methods: Divide a room into six sections, each constructed according to a direct scale, having twenty entrances to a house, multiple vantage points in as many ways as possible.<sup>27</sup> The second project in ‘2 Door Pavilion’ begins to extend upon this, by confronting players with multiple pairs of entrances to choose from. This however begins to question the merits of using a virtual project to test a physical hypothesis.

Virtual — — — — SPATIAL — — — — Physical

It is not about simulating game experiences but to learn and build through physical space, as design in the virtual world uses ways of eliminating inefficiencies in physical spaces in order to create more interesting game play. Can any of those inefficiencies be applied to physical space design?

# LISTEN TO YOUR FRIENDS



How do people respond to the same set of rules in different environments?

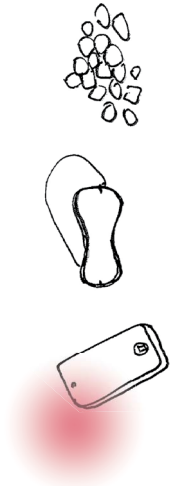


How do people adjust when traditional communication methods are challenged?

## RULES OF THE GAME

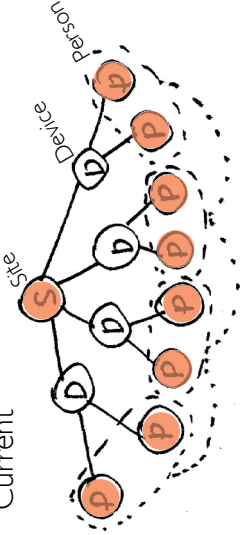
Players were put into pairs, one blindfolded the other being the leader of the blind could only communicate using a ring tone and no other verbal or physical communication. The objective of the game being to pick up as many stones as possible from the site.

## TOOLS



## RELATIONSHIPS

Current



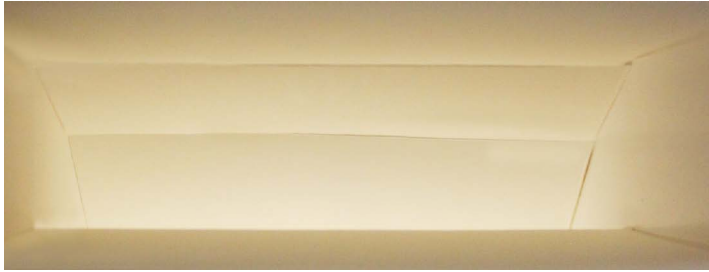
## LEGEND

- “Blind” Person’s Ear
- Phone Ring Tones

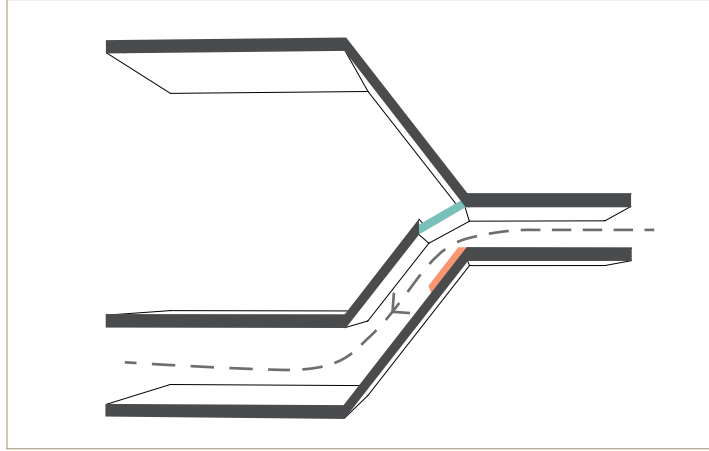
## SYNTHESIS

- People formed bonds really quickly in teams
- People adapted easily to communication constraints
- An objective was enough to activate competitiveness, without the need for a tangible reward
- The new language in this case was generally quickly created**, some pairs did take longer
- Site conditions are influential** - When the conditions of the game got difficult at the jumping pillow, due to the high ambient noise factor and the constant movement of the stones, some players decided to ignore the objective of the game and just played
- The Rule of no verbal or physical communication was upheld through the whole game

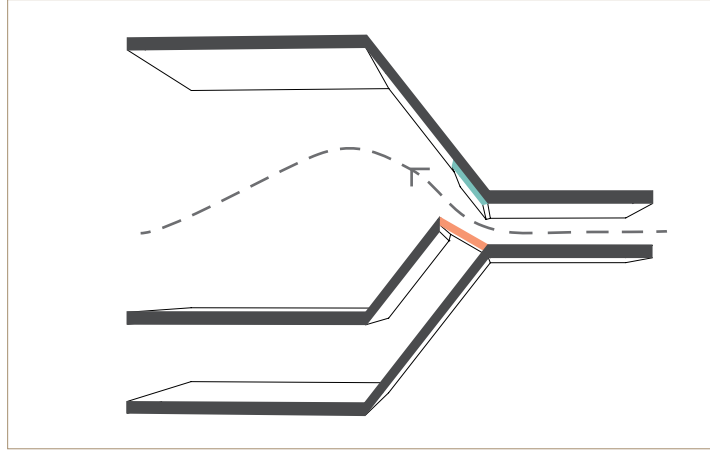
# 2 DOOR PAVILION



Entry Perspective

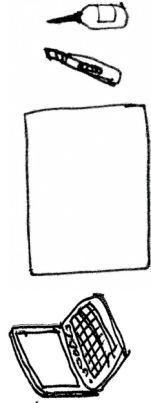


Plan Diagram



How can typologies within a gaming convention be transposed and spatialised back into real world scenarios?

## TOOLS

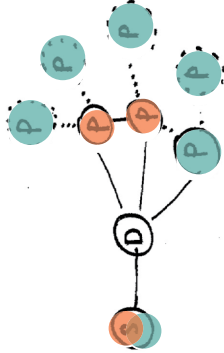


## RELATIONSHIPS

Current



Proposed



## RULES OF THE GAME

Follow the path ahead

## DESCRIPTION

Doorways and corridors are one of the game design tools that simulate real life and help our brain's basic mapping circuit, creating the sense of boundaries and thresholds within an artificial environment. Two door pavilion explores these two typologies.

The images and diagrams here indicate a corridor that leads to two possibilities, a continuation of the corridor or an entry to a larger room. The door openings are switched at different times, exploring the concept of misdirection. **Players will not know which route they will be given upon each approach.**

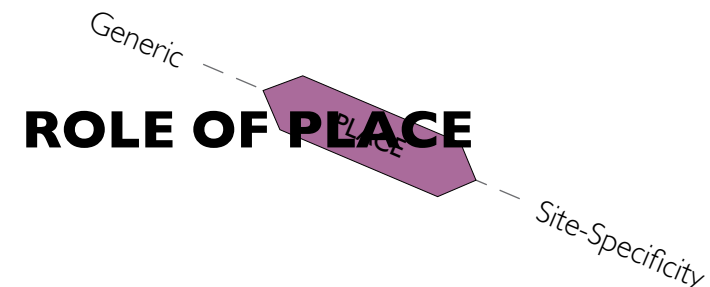
## SYNTHESIS

— Within a game design perspective, this could be used to **disorientate the player, making the player wonder whether they had come to a new part of the map.** However in reality, due to players more easily having bearings on their physical context, how could this mechanism be effective? — **Instead of moving walls, this is often seen in way finding and signposting mechanisms.** However this then changes forced directional flow to allow choice. How important is the role of choice within games?

# LOCATEDNESS DIS

CO-PRESENCE

Not to be confused with locatedness discussed next, role of place describes where projects are sited geographically. This has an important influence on the projects. Most of the projects began as site-specific projects, such as Cyclops, Play:SA. However Singing Spout which started out site-specific response, has taken on generic quality. Whereas Listen to Your Friends could become something that could be taken to different locations, therefore could be considered a generic.



Partially discussed as emergent outcomes from interactions, consider Richard Sheldrake's concept of our minds projecting outwards in a field like manner; therefore affecting the material constructs around us. This speaks of the importance of being within vicinity of each others mind fields and the lasting social relationships that can be built with sustained co-present engagement.

Distance — — — — — — — **LOCATEDNESS** — — Co-presence

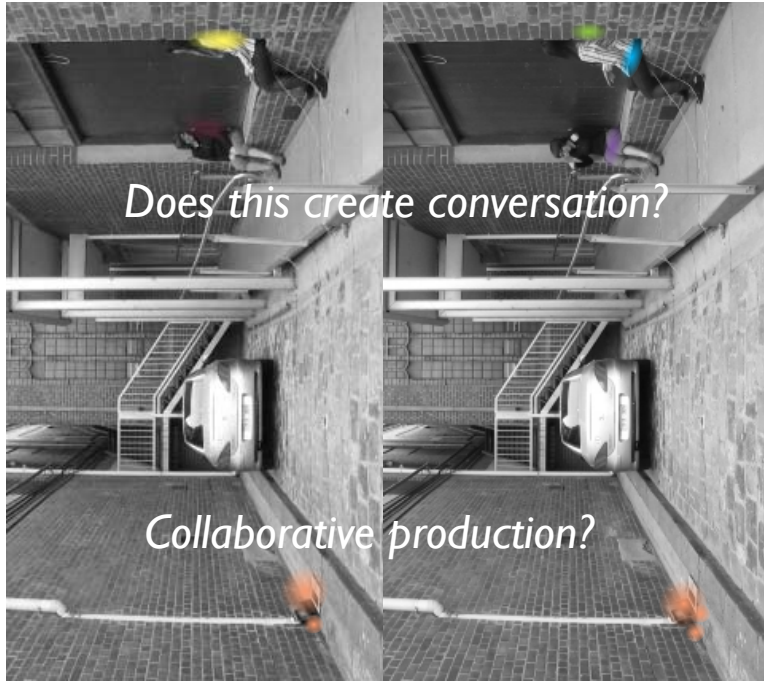
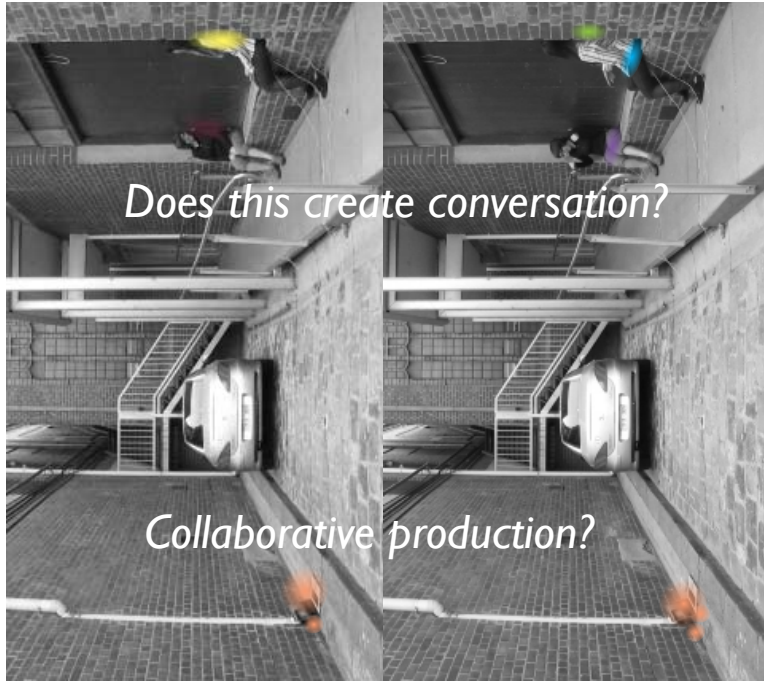
Referencing a scenario described in Pask's Microman, he describes a future in 2120 where the average person is usually distributed across the information environment. They may literally inhabit many places at once; many people may also be in the same place – for instance in one brain – at once. No one is obliged to be splayed across his or her friends.<sup>28</sup> We are not yet at that stage yet, but the internet has allowed us to come close, Hoppers Hopping begins to explore the spatial dimension of online collaborative tools as collocating mediums. However, are the same synergies achieved by being in the same space?

Interestingly, the study that was being conducted in the spreadsheet that Hoppers Hopping played out was a questionnaire of how the gatherers got to know about the event, most were connected already on Twitter; yet they found value and conversation created in being physically present in the same room. The level of engagement and conversation could not be equalled by a virtual one. When people connect they're more likely to create, there is an exchange which results into a new thing that cannot be pre-determined.

# TANT



# SINGING SPOUT



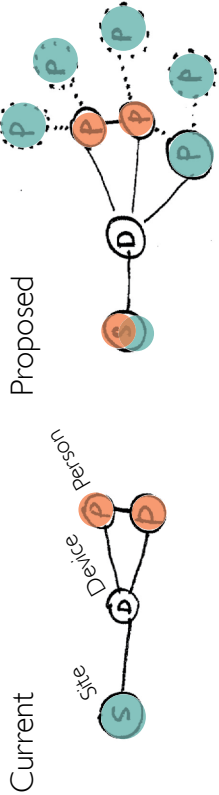
## DESCRIPTION

The project investigates how to create engagement between strangers waiting in line. Is it possible to create a collaborative activity in this circumstance?

## RULES OF THE GAME

Patrons are not told of the game. The way that the audience sit in the alcove controls the type of tone or sound that is played by a pa system. Sensors are placed on areas where the two shoulders are anticipated to rest in the corner as well as the seating point on the ledge. The sensors either triggers a tone on the musical scale or a cricket and dog barking sound.

## RELATIONSHIPS



## SYNTHESIS

- It was interesting initially just to try to work out what sounds were created by each of us. Once we started recognizing the sounds, we then started experimenting with the motion rhythm of our bodies. The shoulder sensors worked well in the corners as it created an interesting set of movements such as moving side to side or body rolls.
- We then tried to coordinate sounds between us, however it was noted that we would concentrate more on our own sounds as we had more control over that. Perhaps there could be more rewards towards trying to coordinate sounds.
- The sensors could work as switches where one person could switch a sound on and the other could switch it off, which could be used for other elements besides sound.
- **Once we stopped focusing on consciously creating sounds, in the act of conversation, our natural body motion also created an interesting conversational interplay.**

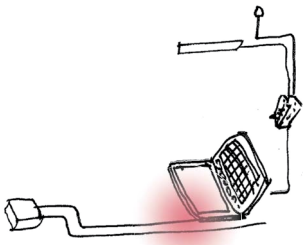
## Sensor Legend

- Left Shoulder Sensor A
- Right Shoulder Sensor A
- Seat Sensor A
- Left Shoulder Sensor B
- Right Shoulder Sensor B
- Seat Sensor B
- Varying sounds corresponding to each sensor

## COLLABORATOR

Fringe Festival Melbourne Creative Technology Practitioner

## TOOLS





# HOPPERS HOPPING.....

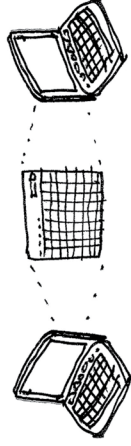
## LEGEND

- Data Capture
- Player A's Conversation Thread
- Player B's Conversation Thread

## COLLABORATOR

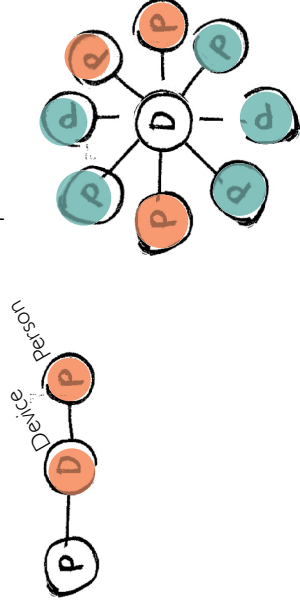
Founder of Hopping Melbourne

# TOOLS



## RELATIONSHIPS

Current



## RULES OF THE GAME

Respond to conversation and don't type over someone else's square

## DESCRIPTION

The project explores the spatialising of a 2 dimensional data storage space - an excel spreadsheet., Which is hardly ever used as a social media tool. However, having an online collaborative function allows simultaneous interaction with the same interface.

## SYNTHESIS

- The grid structure actually allows for a really interesting nonlinear conversation experience***
- In being careful not to type over each ***other's text, typers hopped around the squares, allowing the conversation to spread very performatively***
- It would be useful if the conversation trail could be colour coded so as to be able to trace the conversation when it is done
- Could use to create a collaborative game

*What happens when an existing collaborative data capture tool gets subverted into a tool for real time collaborative communication?*

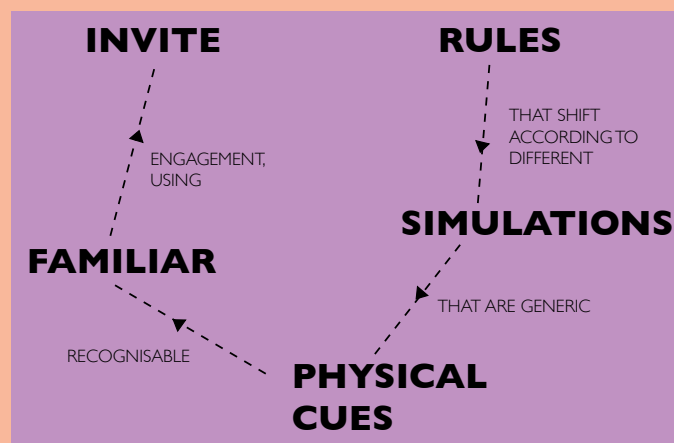
Hopping Hoppers												
File Edit View Insert Format Data Tools Help All changes saved in Chrome												
	A	B	C	D	E	F	G	H	I	J	K	L
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Through this study, I have immersed myself into the world of games and play - exploring technologies, systems thinking and most importantly the games and play communities that exist in Melbourne, whom I wish to continue collaborating with and also designing for. Although I wouldn't consider myself an expert, I feel like I have overcome the naivety towards the field mentioned at the start of this book. In pursuit of my own design language, I have developed:

- \_ A framework for gameful design - levers
- \_ Spatial devices that appropriate and recontextualise spaces
- \_ Social devices that enabling various degrees of engagements
- \_ Collaborative relationships and platforms that assist in designing
- \_ Technological toolkit that enables the development of above devices

In designing with the levers, I have not used the levers in isolation but as groups which become design constraints. Below and to the right are examples that begin to explore how I would use this strategy within a series of precincts / events that use various combinations of levers.



### THE ENTRY

Consider an entrance (door / opening) that changes over time depending on the activity / event happening within the site.

## TO BE CONTINUED (TOWARDS A PROPOSAL)

As I mentioned, gamefulness isn't a ride we get on and then get off, but hopefully a way of thinking that contributes towards society. How are gameful communities enabled? The design of the spaces for these communities have requirements of basic functionality of production, but also display, dissemination and exchange.

Cedric Price's Fun Palace describes an environment is configurable by the program of its inhabitants<sup>29</sup>, where as Non-stop City by Archizoom, imagines a qualityless city in which the individual can achieve his own housing conditions as a creative, free and personal space for activity<sup>30</sup>.

Gameful spaces don't need to be a blank canvas, but in themselves allow for playing, hacking, gaming so that players can re-imagine and reinterpret what they know. My spatial interventions hope to enable and sustain gameful urban interiors.

### SECRET SPACES

Allowing players to work towards getting to certain spaces which aren't immediately accessible could encourage appreciation of the space.




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**“Think of a gameful city as a counterpoint to a smart city. Where a smart city promises increased control and legibility to large organizations, a gameful city promises increased autonomy and influence to individuals.”<sup>31</sup>**

.....

## ANSWERS

FOLLOW BUTTON INSTRUCTIONS TO PLAY  
ROLLOVER CIRCLED WORDS FOR DEFINITION  
CHOOSE THE RIGHT PUZZLE PIECE A OR B  
CLICK ON DOORS  
ZOOM IN ON LEVER  
ROTATE PAGES TO READ PROJECTS: CTRL SHFT+  
CLICK ON  TO GET TO RELATED TOPICS

mult.

ENDNOTES

<sup>1</sup> Salen & Zimmerman, *Rules of Play*. p. 260  
<sup>2</sup> *ibid.* p. 33  
<sup>3</sup> *ibid.* p. 33  
<sup>4</sup> “New Games for New Cities at FutureEverything.”  
<sup>5</sup> Dixon et al., “From Game Design Elements to Gamefulness: Defining ‘Gamification’.”  
<sup>6</sup> Mollick & Rothbard, *Mandatory Fun*. p.3  
<sup>7</sup> Alfrink, “The Gameful City.” p.2  
<sup>8</sup> *ibid.* p.8  
<sup>9</sup> Schrock, “What Would John Dewey Think of Hacker and Maker Spaces?”  
<sup>10</sup> Salen & Zimmerman, *Rules of Play*. p. 125  
<sup>11</sup> *ibid.* p. 350  
<sup>12</sup> Pask, *Conversation, Cognition and Learning*. p.56  
<sup>13</sup> Jacobs, *The Death and Life of Great American Cities*. p. 103  
<sup>14</sup> Salen & Zimmerman, *Rules of Play*. p. 227  
<sup>15</sup> Sheldrake & Azmayesh, *Consciousness & The Extended Mind Part 1*  
<sup>16</sup> Hooker, Woodruff, & Aipperspach, “Heterogeneous Home.” p. 6  
<sup>17</sup> *ibid.* p. 7  
<sup>18</sup> Fogarty et al., “Predicting Human Interruptibility with Sensors.”  
<sup>19</sup> Pask and Curran, *Micro Man*. p. 210  
<sup>20</sup> Salen & Zimmerman, *Rules of Play*. p. 337  
<sup>21</sup> Walz, *Toward a Ludic Architecture*. p. 310  
<sup>22</sup> Gablik, *Has Modernism Failed?* p. 36  
<sup>23</sup> Calleja, “Experiential Narrative in Game Environments.”  
<sup>24</sup> Gins & Arakawa, *Architectural Body*. p.52  
<sup>25</sup> *ReboundTherapy.org*, “Rebound Therapy Benefits.”  
<sup>26</sup> Gins & Arakawa, *Architectural Body*. p.62  
<sup>27</sup> *ibid.* p. 75  
<sup>28</sup> Pask & Curran, *Micro Man*. p. 206  
<sup>29</sup> Tapp et al., *Deus Ex Machina*. p. 55  
<sup>30</sup> Stauffer, *No-Stop City*.  
<sup>31</sup> Alfrink, “The Gameful City.” p.41

BOOKS

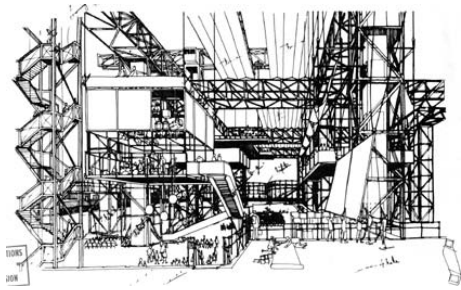
Alfrink, Kars, In: Steffen P. Walz, and Sebastian Deterding. “The Gameful City.” In *The Gameful World. Approaches, Issues, Applications*. Cambridge, MA: The MIT Press., Forthcoming in 2014.  
  
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[2] Arakawa & Gins,  
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[3] Price, Cedric  
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<http://www.audacity.org/SM-26-11-07-01.htm>



[4] Stauffer, Marie-Thérèse  
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Accessed from:  
<http://archizoom.epfl.ch/page-16244-en.html>

## IMAGES

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and David Malvaso

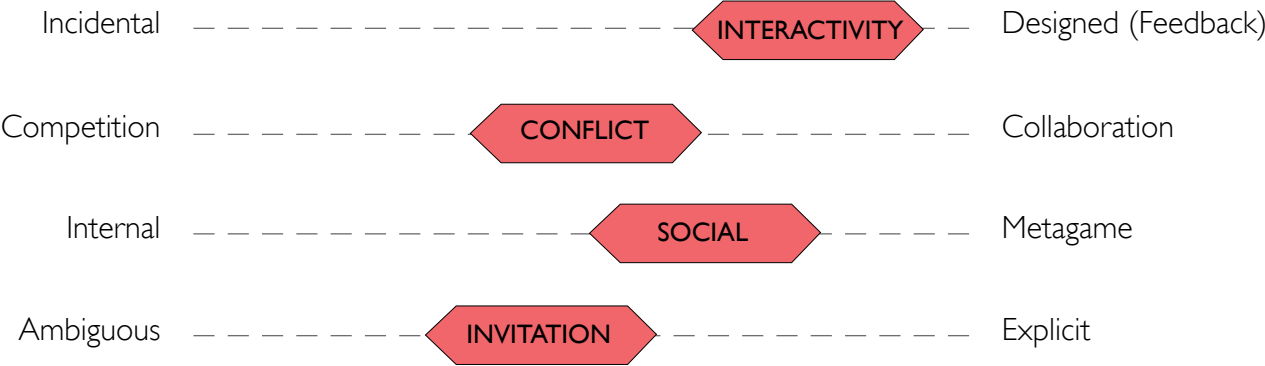
# APPENDIX

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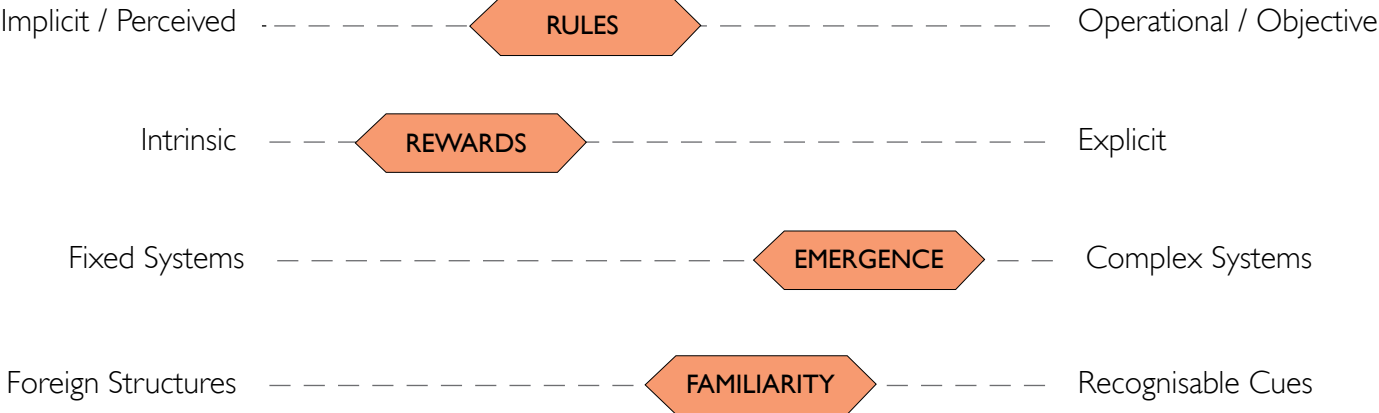
# RELATIONAL

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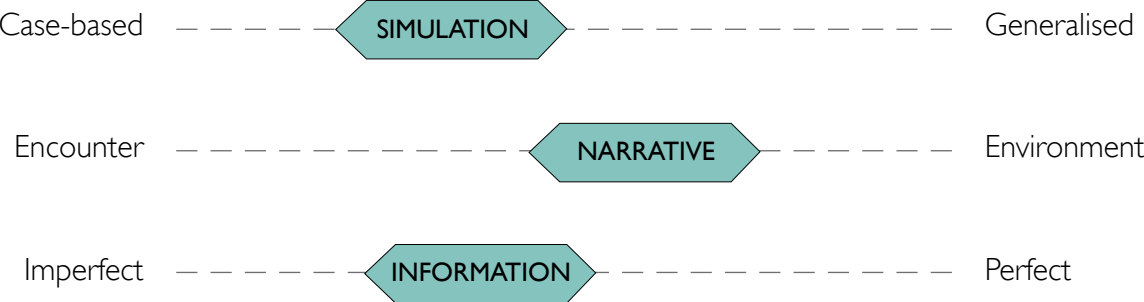
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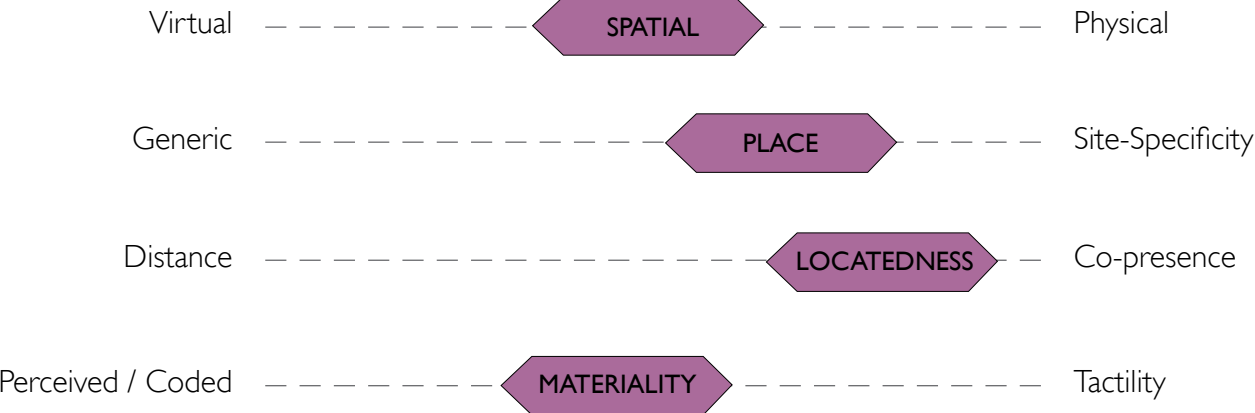
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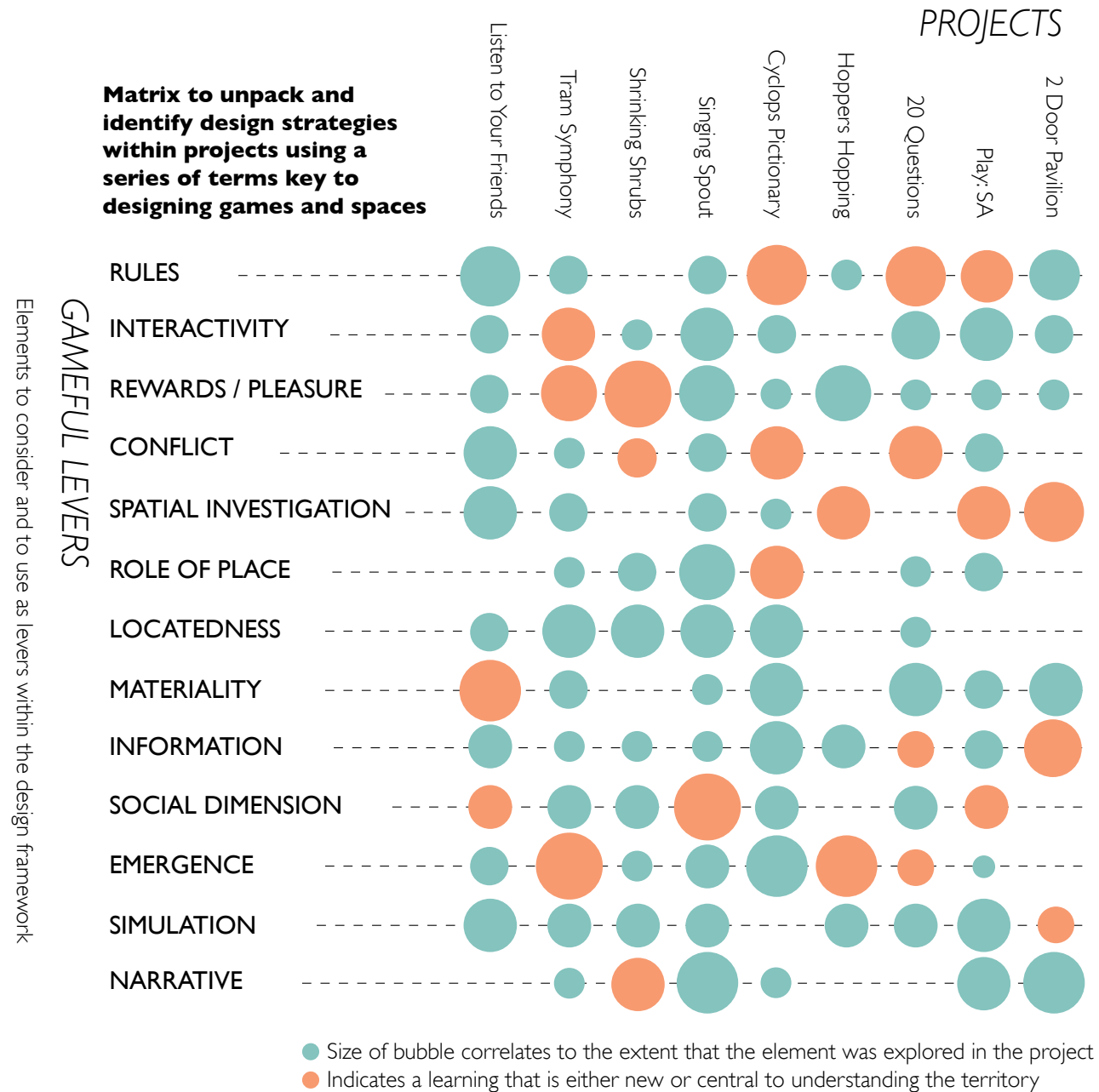


# ENVIRONMENTAL

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## LEARNING TO BREAK THE RULES

