



I BEATI PAOLI

Digital & Interactive Storytelling for
The Alternative Tourism Experience



POLITECNICO
MILANO 1863

Final Thesis of Roberto Rizzo
Supervisor Prof. Mariana Ciancia

M.Sc. Digital & Interaction Design
School of Design
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A.Y. 2018-2019

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*To my hometown, Palermo.
My bitter-sweet place in the world.*

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0. Abstract

Italian Abstract

L'argomento di questa tesi di ricerca è lo storytelling digitale e interattivo applicato al settore turistico e alla narrativa dei luoghi, in particolare delle città.

Il processo di ricerca, serendipico ed esplorativo, si basa su dati empirici e qualitativi, tipici dell'interaction design contemporaneo.

Si specifica che i dati empirici sono frutto di uno studio inerente ricerche pregresse pubblicate in svariate discipline del sapere. Tra queste la narrativa, il cinema, il videogioco, il patrimonio dell'umanità e la realtà aumentata nell'ambito mobile e locativo .

I dati qualitativi sono frutto di test sull'utente, eseguiti in fase di sviluppo progetto, e volti a consolidare le affermazioni dei dati empirici accumulati precedentemente in fase di ricerca.

Ai dati raccolti, inoltre, si accosta l'indagine riguardo la figura del il designer e il progetto per lo sviluppo di un prodotto sistema servizio complesso come può essere quello inerente lo storytelling digitale e interattivo all'interno del settore turistico.

L'indagine di questo studio si svolge in tre tempi. La ricerca teorica e l'accumulo di dati, segue la realizzazione di progetto con metodologie affini al product-service-system design e design thinking, e si conclude con la validazione di test con conseguenti risultati quantitativi

e qualitativi nell'ottica user-centered.

La lente d'osservazione riguardo gli argomenti trattati appartiene alla sfera dell'interaction design su due livelli principali: Il macromondo dell'interazione di un'esperienza complessa e coerente, e il micromondo dell'interazione specifica con l'elemento virtuale.

Infine, lo studio si sofferma sull'approccio multidisciplinare nella fase progettuale che spazia dal game design all'illustrazione, affrontando il complesso equilibrio che intercorre tra plurime discipline convergenti verso un prodotto unico e consistente.

Un prodotto coerente che sia un risultato bilanciato tra un'approccio creativo libero e sregolato e un approccio creativo misurato, scientifico e preciso.

English Abstract

The topic of this research is Digital and Interactive Storytelling applied in the tourist market and in the locative narrative, especially the city narrative.

The research process, serendipitous and explorative, is based on empirical and qualitative data, through a design-driven approach.

From one side, the empirical data are set from previously published researches in multiple different areas of knowledge.

Between these areas are the narrative, the film, the videogame, the human heritage and the mobile-based Augmented Reality.

From the other side, the qualitative data are set from users tests during the design phase. It turned out useful to consolidate the empirical data statement.

Meanwhile, the analysis explores the relationship between the designer and the complexity of the production of an interactive storytelling product in the tourist marketplace.

The study is set in three phases. The first, the theoretical research and storing data for design guidelines. After a prototype is realized through product-service-system and design thinking methodologies. To conclude, user tests are performed through a user-centred approach, and the qualitative results are stored.

1. Introduction

The lens of investigation of this project belongs to the discipline of Interaction design. The topics are covered from both the macro and micro point of view; the macro-world of interaction during a whole consistent experience, and the micro-world of specific interaction with virtual elements.

Last but not least, the research focuses on the multidisciplinary approach in the design phase that goes from game design to character design. An approach that should face the unstable balance between multiple disciplines in order to achieve a uniquely coherent and consistent product. Likewise, a product that should be the result of a perfect balance between free creativity and measured precision design.

This Thesis is experimental research based on the balance between the triangulation of data and user-centred design.

The path that brought to final considerations of this study is iterative and based mainly on discovery and mix of different disciplines.

In the second chapter, we will broadly see what is digital and interactive storytelling, and we define the milestones of the discipline.

The third chapter is composed of a part of empirical data and numbers on the growth of the tourist field and experience tourism trend, meanwhile, we will discover the relationship between narrative and places.

The fourth chapter takes an eye on the state of the art of Augmented Reality (AR). We will see how this technology is not only related to visuality but is mainly based on senses and sensation more than technicality.

The fifth section is a set of guidelines and good practices of design in the field of AR mobile-based games. We will see mass mainstream games like Pokemon Go treated from a more critical point of view, from related studies and researches.

The sixth chapter is about the relationship between AR, experience tourism and Human Heritage. We will discover new market segments, and how the insights from previous researches could help in project development.

2. Digital and Interactive Storytelling

Last but not least, the project chapter. This section is the core of the research, in which all the statements of previous chapters are used to develop an interactive storytelling experience for alternative tourism.

We will see how to use more than one stories and how to mix them to produce a new narrative that fits with an interactive experience, mainly through AR mobile locative based technology.

As indicated by the title of this book, the story of the project is the story of Beati Paoli from the city of Palermo or at least a new version of the story.

2.1 What is Digital and Interactive Storytelling ?

We live in an age when more than ever stories play an essential role in our daily life and could have a significant influence on society, bringing to impactful behavioural changes and influencing people's actions and thoughts.

Thus, when we are playing *Ori and the blind Forest* (Moon Studios, 2019) or watching *The Witness* (Love, Death, Robots, Netflix, 2019) we are consuming narrative products in two different ways. The first as an active user, the second as a passive spectator. This situation is what is defined by Carolyn Handler Miller (2014) as "lean back" and "lean forward" experiences, more precisely leaning forward toward the screen, manipulating the action, and leaning back on the couch, pas-

fig.1 Ori and the Blind Forest. Cover



sively watching what's going on in the story. To better understand how the spectator evolved into a user, it is essential to understand what is Digital and Interactive Storytelling and how this discipline works.

To bring more clarity about the definition of Digital and Interactive Storytelling, it's better to split the definition into three words - Storytelling, Digital and interactivity - that are analysed in the following paragraphs

STORYTELLING

We start from the last word — storytelling, which usually is misinterpreted to its content, the story. On the contrary, storytelling is mostly an activity and is relevant to give a more profound definition of it.

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In the abstract, storytelling could be a magical and powerful craft. It can be the activity that transports the

audience on a thrilling journey into an imaginary world. Still, it can also reveal the dark secrets of human behaviour or inspire the audience with the desire to do noble deeds (Miller, 2016).

In practice, when it comes to storytelling, people associate it to the consumption of narrative entertainment. However, by definition, the narration is also strictly related to the activity of story-making and what concerns the free creation of imaginary worlds and events more or less linked to the real world.

In simple terms, whenever the audience is watching a new episode of a TV series or is reading a book and in every moment a story is created by scriptwriters or game designers, the Storytelling word appears as a passive or active definition of human activity.

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DIGITAL

Proceeding on the analysis of the definition, the term Digital is a consequence of the technological advancements and New Media.

From a small functional aspect, the most significant difference between traditional types of narratives and digital storytelling is that the content of traditional stories is in an analogue form. In contrast, the content in digital storytelling comes to us in a digitalized way.

At the actual state, there are plenty of new storytelling formats like Virtual Reality Game or Mobile App, as the

fig.2 The Witness. Scene



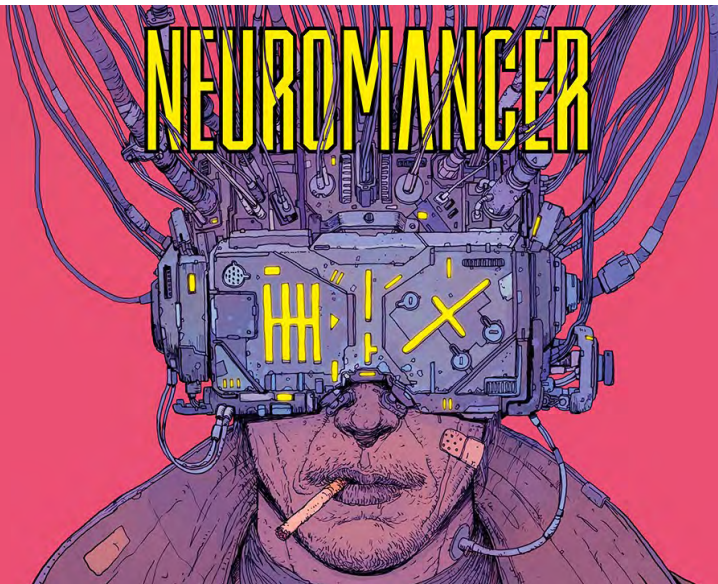
printed book or the moving picture in the past (Murray, 1997). These formats bring to fresh opportunities for original projects and expand toward unique characteristics in narratives such as higher level of persuasion, engagement, freedom and immersion.

For instance, as declared by Huxley (1932) and Bradbury (1953), the more persuasive the medium, the more dangerous it is, as for William Gibson's *Neuromancer* (1983), the imaginary world has become so powerfully enticing that it has subsumed physical reality itself.

These last quotes are fascinating, tough dystopian, ways to envision the possible future, at the same time are an accurate, feasible way of power acquisition of digitality in storytelling, and in human life in the next tomorrow. Having said that, as our world is digitalized, it is hard

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fig.3 *Neuromancer*. Illustration



not to speak about digital storytelling. Digital storytelling is humankind's newest way to enjoy narrative entertainment. Still, it is part of this same great tradition that comes from analogue storytelling.

INTERACTIVE

Last but not least, Interactivity is here briefly introduced as it is going to be investigated much more in-depth in the next chapters.

For sure, one of the things that distinguish digital and interactive storytelling from classical storytelling is that members of the audience can become active players in the narrative. They even have a direct impact on it (Miller, 2014), either as a co-creator, an influencer in the story-plot or an active character, consequently being more involved and engaged in narrative experience.

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fig.4 *Black Mirror Bandersnatch*. Netflix



For instance, whenever the audience passively enjoys a story, like a movie, a TV series or a theatrical piece, is experiencing a traditional method of storytelling. Likewise, when the audience can change the path of the story like in *Bandersnatch* (Netflix, 2019), or the behaviour of a character like in many video games, is experiencing a digital and interactive narrative product.

To sum up, Digital and Interactive Storytelling is the activity of story-making and/or story consumption in which the audience and the creator are an active part of the story and process, and the digital media are the vehicle to deliver the content.

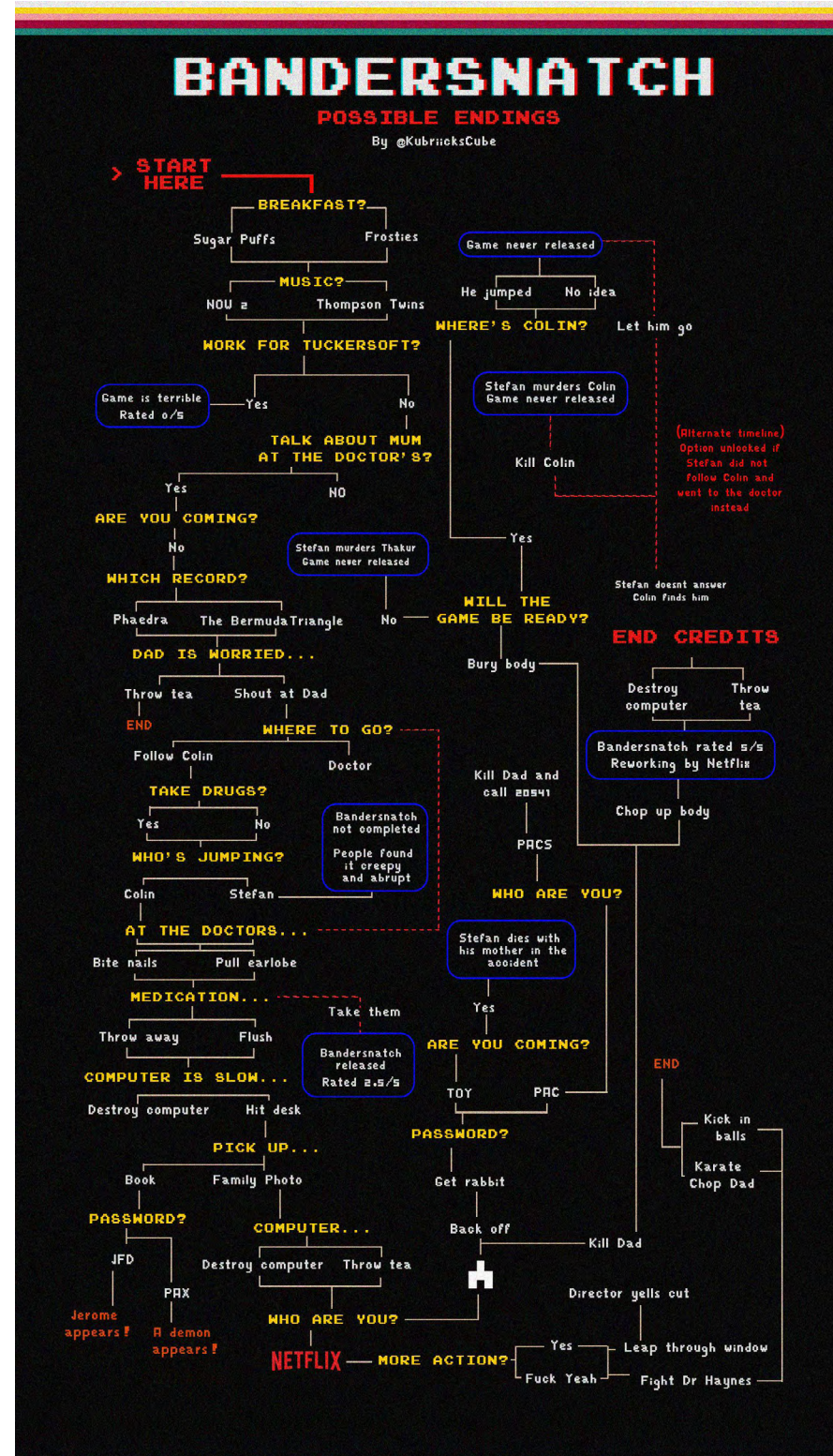


fig.5 Bandersnatch flowchart.

2.2 How the medium shape the way we tell stories. The Digital Era

Storytelling, like any other form of human activity, has been influenced by social progress and new technologies.

Technology now affords a dramatic set of positive outcomes for humanity massive social change, positively brilliant entertainment, and a more compelling understanding of self (Kolko, 2011).

Stories have been socially consumed in different ways during the centuries, from word of mouth in the Prehistoric Era to the Greek Theatre Drama, through the invention of the press and the Novel book, until the primordial Digital Age with DVD, slowly fading to now the Tech Era. We are in the immersive age, or Tech Era, where it has become possible to live in first person the story, like a real character in the story, like in the famous *Holodeck* (Murray, 1997).

To be more transparent we can mention as an example the AR game experience *Wizards Unite* (Niantic, 2019), based on the Harry Potter universe and tailored for a mobile device, involves a series of new technologies like GPS, mobile camera, etc. All merged for the delivery of a final experience-product-game in which you become the Wizard around the world.

Murray (1997) says that as regards the computer, the

more we cultivate it as a tool for serious inquiry, the more it will offer itself as both an analytical and a synthetic medium: technologies are extending our powers faster than we can assimilate the change.

Despite this vision of rapid technological progress, the path that brings a field to such an advanced status is neither easy, nor immediate. There is no magic leap toward significant changes.

On the contrary, the process of production is prolonged and granular. It's not a coincidence that every time we refer to the very first works produced for a new medium, it is common to use the Latin word *incunabula*. A term that means for cradle or swaddling clothes, defining something still in its infancy (Miller, 2014).

Nevertheless, we are living in a historical moment in which the digital storytelling works couldn't be strictly

fig.6 *Wizards Unite*. Cover



defined as incunabula, likewise can not be considered even too advances. Not surprisingly, creating a piece for a new medium like VR or AR remains still very challenging but not impossible, nor too stuffy.

Many limitations occur, and it's hugely stimulating to seize the potential for narrative purposes. Not to consider that new technologies often have plenty of technical problems that must be coped from creators and developers together. As a result, creating works for a new medium is thus a process of discovery, and a great test of the imagination.

Typically, projects created for a new medium go through an evolutive process, for which Carolyn Handler Miller (2014) identifies three significant steps:

1. The first step is almost always repurposing, which is the porting over of materials or models from older media or models, often with virtually no change. For instance, comic books could be read on classic paper support and now is also possible to read them on an e-book reader or a specific reading app for tablets and phones;

2. The middle step is often the adaptation approach or a spin-off. In other words, an established property, like a novel, is modified somewhat for a new medium, like a movie. Producers of TV series have been taking this

approach with the Internet by creating webisodes (serialized stories for the Web) and mobisodes (serialized stories for the mobile devices) based on successful TV shows (e.g. *Lost:Missing Pieces*, *Star Wars Episode I*);

3. The final and most sophisticated step is the creation of totally original content that makes good use of what the new medium has to offer and does not imitate older forms. For example, *Pokemon Go* (Niantic, 2016), takes full advantage of the opportunities provided by the Internet, the GPS and the AR technologies.

With certainty, in recent years, virtual reality is one of the means in which the highest results have been obtained in the experimentation between Storytelling and new media.

When it comes to Virtual Reality, it isn't impossible to refer to Aldous Huxley (1932) and Ray Bradbury (1953) when they said that the more persuasive the medium, the more dangerous it is. As soon as we open ourselves to these illusory environments that are "as real as the world" or even "more real than reality", we surrender our reason and join with the undifferentiated masses, slavishly wiring ourselves into the stimulation machine at the cost of our very humanity. In this dystopian view, the new entertainment technologies are as scary as fascinating, even though we find ourselves

very far from the idea of immersive alternative digital reality described by these writers or present in the Holo-deck of Janet Murray (1997).

Recently, the Oculus Company (from Facebook), well known in the field of VR market as hardware and software producer, has released a series of games/experiences from the world of Star Wars, made by George Lucas in 1977. Notably is the last released *Vader Immortal episode III* (ILMxLAB, 2019). This product is the perfect example to show how a world and its related stories could be experienced by the audience at a deeper level of engagement thanks to the medium and technology advancement. In other words, no teenager from the '70s would have imagined being able to be thrown in a spaceship and meet Darth Vader or being part of the resistance and save the galaxy as Luke Skywalker has

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fig.7 *Vader Immortal*. Cover



done several times in the Star Wars Saga.

It is worth to note that this experience defines new scenarios of production and new possible ways of consumption of stories, setting new thrilling adventures, and exploring virtual worlds are simply a starting point.

It is also important to point out that critical changes have been identified in the business model and the content production of the storytelling industry. Despite the classic model of producer and consumer still exist, other branches of production, distribution, and content creation have been followed both from users and producers, this is what could also be defined as the evolution of content, mainly these changes are a consequence of the Internet and the World Wide Web.

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Concerning the material found on the Web, most of the time we see the User-Generated Content (UGC) that is primarily created by the audience, split into four genres: virtual worlds; social media sites; video sharing sites; and websites featuring fan fiction.

Among others, for its success, fanfiction is noteworthy for spreading mainly at the beginning on the Web, and for being yet in vogue.

There is no magic recipe, thanks to the fact that it is based on a printed or produced story or drama. It is afterwards written by fans instead of by the original author. As a result, fandom can keep in touch with their beloved characters and the story never ends.

Last but not least, another critical factor to consider is the differences between traditional stories and digital stories due to the implementation of new media.

While Digital Storytelling still shares many characteristics with the classic form of narratives, such as plays, novels or movies, it's worth noting some peculiarities.

Usually, works of Digital Storytelling are malleable and not preconstructed, often the plot is non-linear and the user could be a co-creator or could experience the story actively as opposed to an ideal vision of the author as the sole creator. The audience as a passive receiver lives the traditional stories until a defined and unchangeable ending, while in the digital medium is possible to leave open space to different outcomes.

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No matter if we are creators or audience, stories are at the dawn of a new Medium Era. It is the process of shaping and refining the content and the technology that inevitably will define a new pillar in the narrative field. Public and authors as pioneers go through a process of discovery and learning that is necessary, and at the same time, thrilling every time a new story is disclosed. On the whole, Storytelling is significantly influenced and shaped by the medium in the way the story is consumed or produced. The more technologies improve, the higher is the chance for the audience to be more engaged and live or manipulate the story directly, the more are the opportunities for developing new ways

and methods of creation.

2.3 The effect of Interactivity in Story Making and Story Consumption

Before digging deeper into the vast field of Interactive Storytelling, in order to better understand the core meaning of it, it is necessary to define the term Interactivity and also Interaction Design.

According to the definition of James Kolko (2011), Interaction Design is a creative process focused on people, is a dialogue in which a designer speaks, and the user speaks back. Still, it is also a dialogue between a person and a product, system, or service. This dialogue is both physical and emotional and is manifested in the interplay between form, function, and technology as experienced over time.

Furthermore, Interactivity is a two-part word. The first part, *inter*, a prefix, means “between”, implying a two-way exchange, and so a dialogue. The second part, *active*, means doing something, being involved or engaged. Thus, the word as a whole indicates a dynamic relationship between two entities.

Besides that, if we narrow down in the context of narrative content and so Interactive Storytelling, it could indicate a relationship where both the audience and the material of the story are responsive to each other. From

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one side, the audience can manipulate, explore, or influence the content in a variety of ways. Likewise, the content responds and also demands in order to receive a reply from the audience (Miller, 2014).

As the content is interactive, the story unfolds or ends accordingly to inputs from the audience/user, and it is experienced in an entirely different way from the traditional form has been experienced before in conventional storytelling.

Interactivity, in few words, is the ‘secret sauce’ that makes digital media a completely different animal from traditional storytelling forms, like movies, television, and novels (Miller, 2014).

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More precisely, not to be vague, when talking about Interactive storytelling, as said before, it should be considered multiple factors — the audience or better the user, the narrative content, and also the author.

1. Notably, how the word used to define the audience in the interactive narrative is the singular user and not the plural users. The use of the singular is not by chance, because a member of the audience lives the individual journeys through the interactive environment like a solo traveller, and each route through the material is considered unique (Miller, 2014).

2. The author in the story-making process always plays the leading role of creator, but waive at his demiurgic

power of creation to gift the people with something that has never been offered to audiences before in the passive entertainments, choice and control.

More in detail, the ability of the user to make choices and see the results, the capacity to control aspects of the narrative, are synthesized under the definition of Agency. This ability of the user is one of the primary vital characteristics of interactive storytelling. It is always an element built into an interactive narrative since the beginning of every project. Of course, it is up to the creative team to decide what kind of Agency the user will have and how it will be integrated into the work.

Although the Agency is such a significant characteristic, it can be a risky proposition to give it to the users without thinking ahead to the various ways they might use or misuse it.

Great examples of a high level of Agency are present in video games, like *World of Warcraft* (Blizzard, 2004) or *Red Dead Redemption* (Rockstar Games, 2010) in which the player is free to explore the world and define his own story-path. However, despite the illusion of freedom mentioned in the examples before, it is very common that the user makes some choices that affect the story somewhat, having the illusion of freedom, avoiding dramatic changes in the main plot that, in broad terms, is defined by design by the author.

3. The narrative content in interactive production is

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fig.8 WoW, Burning Crusade. Cut-Scene

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fig.9 Red Dead Redemptrion. Cover

something that could envelop the user in a rich, fully involving environment. The experience might even be multi-sensory, meaning that it may stimulate multiple senses; this characteristic is called immersive but is not the only one.

Other six characteristics strictly related to Interactivity in the narrative come from the world of the videogame (Handler Miller 2014):

1. Stimulus and response. From a click to voice control.
2. Navigation. The ability to discover the environment. It works great when related to the immersive setting.
3. Control over objects. The user can control virtual objects

4. Communication. The user can communicate with other characters, those controlled by the computer and other human players.

5. Exchange of information. From forums, blogs to real-life events, exchange of information is always part of the game-story even though it could be external to the gameplay.

6. Acquisition. The nature of the material can range from virtual to concrete, and they can also collect virtual objects or assets in a game (a magic wand; the ability to fly) or receive an upgrade in status.

On the one hand, it could be misunderstood that digital and interactive storytelling is something only related to the videogames field, surely it is possible to declare that

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many elements are ‘stolen’ from videogames and that many innovations promptly come from that industry. We find examples in game-free narratives in many genres of digital storytelling. To name a few, interactive fiction, interactive cinema or immersive experiences like *O.R.Pheus* (Hriberšek, 2012), in which the user experiences an alternative glam reality about a story on psychology and disease in what was an ancient II world war bunker in Munich.

Producing a new work of interactive narrative is not, for sure, an easy task. For that reason, the authors use both tools from traditional storytelling and digital storytelling.

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Reaching success is a matter of great content and design. In order to achieve this goal, stories are built upon

O.R. Pheus. Cover



themes with deep emotional and psychological underpinnings, no matter which tool is implemented for production.

One of the oldest agents, but still commonly used, is the three-acts-drama. It is composed of a complete action, always with a beginning, a middle, and an end (acts I, II, and III). Articulated by Aristotle in his work *Poetic* (2000), still present in the motion picture industry as described in Syd Field’s *Screenplay in The Foundations of Screenwriting* (2008). For Field, the story unfolds in the first act inciting incident, the second act turning point, and the third act climax.

Another way to keep hooked the user is ramping up the tension. Introducing an element of uncertainty can also increase dramatic tension. Uncertainty is a close cousin to suspense, which is the burning desire to know what will happen next. For instance, one of the most used methods is the ticking clock, present from mobile videogames to real experiences such as escape room, giving a limited period to accomplish the goal, thrill and excite the user.

Cut scenes are also another massive tool used by the author to show the specific beat of the plot in the story-line, especially when there is a higher level of Agency. A great example is the videogame *Assassin’s Creed II* (Ubisoft, 2009), in which the use of cut scenes is fundamental for dramatic turns and twists in the plot.

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fig.11 *Assassin's Creed II. Gameplay*

What is more, the digital world has brought a series of significant advancements and new tools in productions, here a few of the most used in the industry.

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Interface and navigation to give the users the ability to know and control what they see and do and where they go.

Assigning a role to the user in the plot and check from their point of view is an excellent method of exploration, especially for the virtual world, either on-screen or Virtual Reality Headset.

Artificial Intelligence that has become very important and is spreading in all the fields, in particular in narrative production is an excellent tool for non-characters players development.

Internet of Things or better known as *IoT* and Sensors are also expanding freshly for interactive, immersive

experiences to enable objects of the real world turning into magical elements in the story (Rose, 2014), great use of this is in *Sherlock Holmes and the IoT* (Weiler, 2019).

Other elements that are still assimilated by the audience as standard are audio, graphics, moving images, and the text “glued” together. Even though these are daily elements, we should consider them as the basis of the work, in order to always be consistent.

Manipulating time and space are additional characteristics unique in interactive narrative. Both allow the user to switch from when to see a story or change point-of-view. For example, in an immersive environment, it is possible to see changes in weather or seasons, and sometimes it also has an impact on the story. It is possible to check in multiple universes and periods what is the action and the consequences in history.

In brief, the manipulation of time and space is one of the weirdest but most popular and valuable tools of design in interactive storytelling.

In a work of digital storytelling, the structure not only supports the narrative and gaming elements but also helps determine the nature of the Interactivity.

The structure should not be confused with the plot. The plot consists of the basic beats of a story, the “what hap-

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lest building blocks are the decision or action point, the places where the user can make a choice or perform an action. These latter are called nodes.

One of the most common methods of building blocks is a division in level or open-world touchpoints in the subdivision of space in maps; this style of design is prevalent in video games.

One secure method for designing an interactive story is to use the if/then construct, based on boolean logic, and the story deploys only through two possible options for each decision or action, this is also called binary choice. Similarly, there is also a more subtle type of choice mechanism available, the state engine. In this method, the state of the story changes continuously according to a

single or multiple choices. A consequence of the if/then constructs is the branching structure. It is made up of a great many interconnected if/then constructs. Every so often, the user will come to a fork in the path which may offer several different choices. Nonetheless, this method could quickly run out of control; for that reason, authors use the faux choice, giving little meaningful Agency with the illusion of real impact on the story-plot. In this construct, several options open up to the user, but no matter which he is going to pick, the result will be the same. Another way to bypass the problem is the use of the cul-de-sacs, these are areas of the main story path where the user is

fig.12 *Sherlock Holmes and Iot*. Cover

pens next”. The structure is the framework of the story. It connects the essential pieces of the narrative and ensures that the work flows in a satisfying way (Handler Miller, 2014).

Most of the time in interactive narrative, the main smal-

free to explore, but these areas are walled in, and ultimately force the user back to the main story path.

In the list of useful rules for the project, for sure one that is relevant is “bushiness,” which offers a maximum amount of choice but which prevents extensive branching by having many of the links share communal outcomes.

Probably the best and most used construct of design in interactive storytelling in the last few years is the Critical Story Path.

Perfect for free exploration for the user, interact with other users and make up a personal adventure.

Carolyn Handler Miller (2014) individuates four elements for design Critical Story Path:

1. Make a list of all the critical beats, the things the users must experience or the information they must discover in order for the narrative to make sense and to build appropriately;
2. Determine what needs to be conveyed through cut scenes;
3. Determine the necessary actions the user must perform in order to trigger the critical beats;
4. Determine the optional interactive possibilities between the essential actions, things that might enrich the narrative or heighten the gameplay, but are not strictly necessary to make the story progress.

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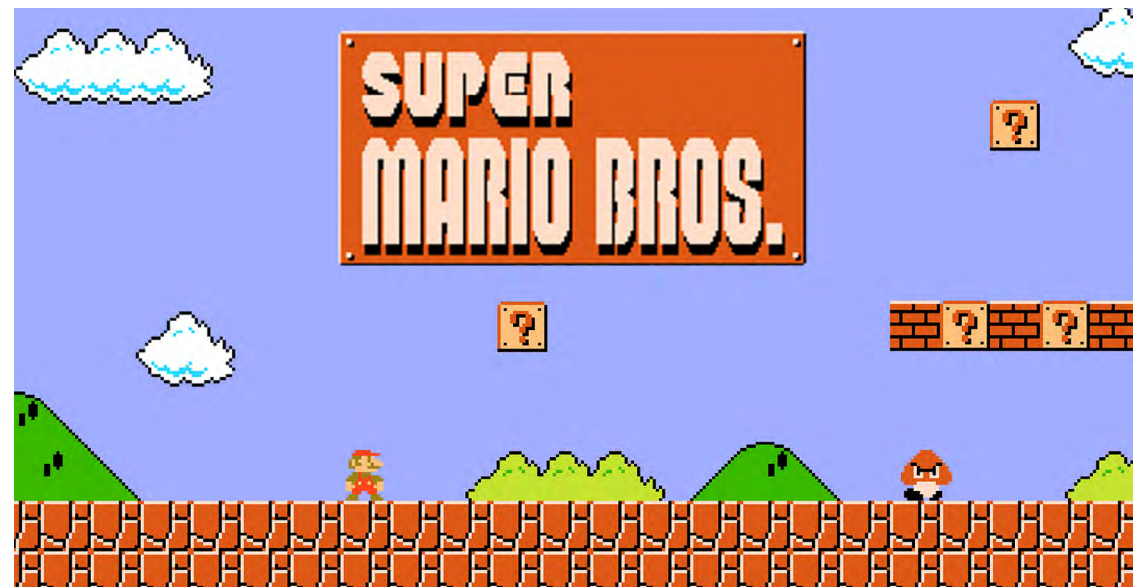
In support of the critical story path, there is the “pearl” structural model. Every pearl is a world in which the user is free to move in. The user must accomplish his tasks in order to have access to the next world. Super Mario (Nintendo, 1998) is a cult game with a similar structure.

According to Roach’s mode for a videogame, players/users can do three different things in each node:

1. Actions must be performed in order for the story to proceed correctly, make sense, and become emotionally satisfying;
2. Playesr can do enjoyable things that enrich the story and add depth to the experience but which are not critical to the overall narrative success;
3. Players can activate the trigger. They can do or en-

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fig.13 Super Mario Bros. Gameplay



counter things that bring about a change in the mood, narrative structure, character attitudes, environment, or experience.

Another model described by Murray (1997) is the electronic construction kit. In this model, users are given several story components, like characters and settings, and they can use them to assemble their narratives. It is an open-ended construct, very similar to the game, *The Sims* (2000).

Although these are just a few most common methods, there are plenty of other constructs that are applied according to specific contexts and situations.

In short, the critical success for a good result is that Interactivity must be meaningful to be satisfying. In other words, the choices offered must make sense, must have consequences that make sense, and what the user does must have a genuine impact on the story. When there is a lack of these characteristics, it is hard to pull out a proper narrative product.

In terms of design, the interactive narrative structure take inspiration from the classic narrative structure as shown in this paragraph. Despite the influence of classic narrative structure, the interactive narrative structure remains a world apart that change and influence drastically both the production phase and the audience experience.

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2.4 The importance of being digitally Transmedial

Layering on digital storytelling is almost impossible not to bump into the word Transmedia. The term is composed of ‘trans’ that means across, and ‘media’ that means multiple media.

As regard, the connection between transmedia and storytelling, a complete definition is given by Robert Pratten (2011, p.1) ‘Transmedia storytelling is telling a story across multiple media and preferably, although it does not always happen, with a degree of audience participation, interaction or collaboration’.

This definition is unequivocal and essential because, in its view, Pratten sees the bounded and robust correlation between interaction and transmediality.

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Zooming out to the big picture, Transmedia Storytelling works adhere to some basic principles also applicable to every interactive project (Handler Miller, 2014):

- The project exists over more than a single medium, usually three or more;
- It is at least partially interactive;
- The different components are used to expand the core narrative;
- The components are tightly integrated;
- The story contains at least one main point of entry that could be also public (like the rabbit hole in ARG);

- The story contains spaces which are designed to encourage members of the audience to contribute content (cheese holes);
- Transmedia stories, while not necessarily games, often contain some gaming elements and a playful sensibility;

Before being more specific, it is crucial to make a clear difference between the experience and transmediality. The first refers to the way the user lives and experiences the story in specific touchpoints of the transmedia project. The second is a form of project quality in the storytelling industry.

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Significantly, transmedia storytelling suits perfectly for Storyworlds. When we are talking about the storyworld, we are referring to diegetic universes composed by a possibly infinite amount of narratives that belong to it. Although storyworlds could be built up at the beginning of the creative process, it could also happen that is a consequence of the main story evolved during the time and spread in substories in parallel stories. Nowadays, diegesis is a common practice, and there are many universes well known by the big audience like *Star Wars*, *Harry Potter* and *Marvel Cinematic Universe*, to name but a few.

About Transmedia and Storyworlds. One of the main

advantage that transmedia practice gives is the multiple access to single parts of a universe from different access point/devices that allow content to be right-sized, right-timed and right-placed and to form a more substantial, more profitable, cohesive and rewarding experience (Pratten, 2011).

Being transmedia, therefore, does not only mean a good practice involved in storyworlds.

Many stories use transmedia to be told. For the Academia, the first transmedia production considered able to catch the attention of the public was *The Blair Witch Project*, which was made in 1999. It consisted of just two components, a movie and website. The website (www.blairwitch.com) has become an Internet classic.

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For instance, another way to apply transmediality is in multiform stories. These beautiful stories reflect a different point of view of the same event.

The fragmentation of the story structure represents a pattern of historical fragmentation, and the pattern of readings echo the characters' efforts to reconstruct the past in order to restore a lost coherence (Murray, 1997) Transmedia storytellers, like all good storytellers, aspire to captivate their audiences and induce them to experience a willing suspension of disbelief, a sense of living the virtuality as a reality, a blurred line between fictitious and real. They want their audiences to buy into the story, become absorbed in it, with touchpoints of



fig.14 *The Blair Witch Project*. Cover

both traditional and digital storytelling, the choice of the media is up to the project team.

Transmedia can generate robust responses on the part of the audience participant, making the narrative more interactive and experience more involving.

Sean Stewart in his TEDx (2010) had a much simpler perspective on the selection of platforms. For him, we are just going to take whatever is the best and most exciting way to bring the user to the story or entertainment. The strategy should focus on the audience in order to choose the right medium more than adapting the story on media.

On the other side, the audience could determine the degree of involvement in the story, some members of the audience prefer to consume just one part of the story, others prefer to dive through more samples and media, others want to immerse themselves and discover whatever is possible.

Even Hollywood has been swept up by the beauty of transmedia, and many TV series have decided to promote and enlarge the experience of the story through canals like mobisodes, webisodes or social media accounts for specific characters.

Additionally, transmedia is also an engine for marketing to promote and introduce to new seasons or episodes of TV series and movies, under the form of experiences. Some examples are the *Hidden cinema* (Sweney, 2019)

for the launch of the third season of *Stranger Things* or The *HBO Westworld Experience* (Campfire, 2018) at Comic-Con. The latter, an immersive experience that gave to the audience the possibility to enter into a little tiny reconstructed part of the Delos amusement park in the storyworld of *Westworld*.

Strange but true, the *Love Plus+* (Konami, 2009), a transmedia promotional game in Japan, was one the weirdest case of study with a highly unusual twist: to promote geek (otaku) tourism. *Love Plus+* was a virtual romance game created for lonely-hearted bachelors, primarily computer geeks who not only lacked social skills but who also lacked real-life girlfriends. The game itself allowed these young men to virtual court girlfriends and developed a life-like relationship

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fig.15 *The Westworl Experience*



with them. If they earned enough points, they could take their girlfriend on a romantic getaway to a real Japanese resort town, Atami. The hospitality industry in Atami played along with the game and did not ask any questions when a young man would register for a double room but had no visible companion with him. Over 1,500 players have turned up in Atami, clutching their hand-held devices but not the hand of a young woman (Handler Miller, 2014).

Good practice in digital transmedia storytelling projects is always to understand the audience and provide an enjoyable experience, not too complicated, not too simple, not too confusing or overwhelming. Of course, it is critical to give to the audience a way to enter the story in line with interactivity to participate in a meaningful way.

Lastly, it is essential to differentiate platforms to give to each one the right amount of contribution to the overall story. Working at a transmedia project means to develop all components at the same time and to think about how to integrate them in the story.

On the whole, Transmedia storytelling, also named multi-platforming, integrated media, and cross-media productions, is a relatively new approach to narrative. In this approach, a single entertainment property is consolidated over multiple forms of media, at least one of

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which is interactive. It is a unique way of combining media to tell a single story. It is a convergence that firmly ties up digital elements like technology, hardware, software, and interactivity.

2.5 The importance of the dimension of reality in digital storytelling

Stories, to be genuinely successful, need to belong to the real, or at least to be perceived somehow authentic. They should fit the sphere of the real-world, blurring the line between palpable and illusory. The more this line fades, the more the audience is involved and perceives himself as part of the narrative.

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Although the elements for an interactive success story are many, what makes a tale believable and carries the audience to the next level within the story dimension, is defined as a reality touchpoint.

Story-makers have always tried to aim at producing reality touchpoints for centuries. So far, technology brings us closer to achieve this goal.

The most widely used technique to connect the public with the story is the break of the fourth wall.

This method consists of breaking the imaginary wall that separates us from the storyworld in this dichotomy real/unreal, regardless of the medium in use.

For example, in the TV series *House of Cards*, the pro-

tagonist (Kevin Spacey) often addresses the public and involves it in his stream of thought.

Breaking the fourth dimension and make it possible to get in touch the viewers with story and characters is undoubtedly a great way to connect narrative and reality. However, with the term reality touchpoint, we refer to the capability of the audience to perceive in the real world the existence of the storyworld, not necessarily during the story consumption. Either it comes from an event, a location or an individual. In order to give things the benefit of the doubt to the audience, it is necessary to undermine the illusion that the story belongs to reality.

For example, the city of London shows off plenty of spots in which it is possible to admire tangible places from imaginary characters and stories. First among all

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fig.16 Baker Street 221b. Inside house



of them, is the address 221B Baker Street in which it is possible to visit the house of Sherlock Holmes, known by everybody as a fictional character but most of the time perceived as real.

Another case is always in the city of London. The White Chapel district, in which it is possible to walk around streets and perceive the risk of bumping into *Jack The Ripper*. In this case, the spectators are immersed in this gloomy district, frightened, especially at night, even though they know the story is fictional. As a result, the environment and feelings are authentic. We are talking about real emotions and sensations from pure fictionality.

70 This capacity of transition from fiction to reality is a dodge (expedient) that should be taken under consideration for the development of high defined experience: ARG (Alternate Reality Games) is an example of great use of this technique.

To conclude, the main goal is to bring the participants of the story through a climaxing process that starts from a traditional way of passive reception, sliding slowly to an active immersion, until a conscious believability of the tale.

This type of process requires different layers of design and the necessity of being transmedial, digital and interactive.

Shortly, for a maximum level of engagement, even pro-

longed in time, mixing real elements with fictitious elements allows the non-distinction between history and reality. The user must not be able to separate the true from the false. Consequently, he will not be able to understand if he lives his own life or a narrative superimposed on it. This trick allows reaching a high emotional level and the distribution of the narrative through an unforgettable experience.

2.6 ARG an example from transmediality to reality

One of the best mixes of narrative, interaction and transmediality could be found in the Alternate Reality Games (ARG)

Before introducing ARG, among everything, it is interesting to stress a concept about alternate reality enounced by Janet Murray.

In *Hamlet on the Holodeck* (1997) she said:

The alternate version of reality is now a part of the way we experience and think the World. To be alive in this century means to be aware of our possible alternative selves, of possible alternative worlds and the endless intersecting stories of the actual World.

This establishment, quite apart from its poetic, blurs the line between real and unreal and identifies the merging

point between fictionality and reality.

It detects a new awareness of consciousness and our relation toward existence, it also generates doubts about all the possibilities and possible realities, and brings up to a series of questions like: What is real and what is not? Are we characters in our story? What is illusory? What does exist?

All these questions belong to a thrilling and mysterious perception of the World, let us call it just 'the blurred line', in which Alternate Reality Games correctly locate themselves.

In a conventional description, ARG is a game in a fictional alternate reality that takes place in real-time. Therefore, merely reducing ARG at this definition could be very restrictive.

Rose (2011) defines ARG as a hybrid of game and story. The story is told in fragments; the game comes in piecing the fragments together.

A step forward in which not only the game is an *alpha*, but also the story is the *omega*, and both create the core content of an ARG.

It is a balance in which we have from one side ludology focusing on how and from. On the other side, narratology focusing on what (Szulborki, 2005).

Additionally, these pieces of game and story, technically the content of ARG, are widely distributed over a series of supports and materials, it is impossible not to

say that this necessity of distribution requires upstream a design that involves transmediality. In fact, since the beginning of ARG, transmediality has always been the primary method of production. Still, today it involves a more extensive amount of support thanks to technological advancements. This design process for this specific way of narration is an excellent resource for interactive storytellers and designers, suitable if the goal of a project is to deliver an experience at the borders of illusory realism.

First and foremost, one of the primary uses of ARG in the big entertainment industry is for marketing purposes in many different businesses, for the launch of a new movie, a new season of a TV series, a new Video-game, for the promotion of a new album or a concert. This new way of delivery of the content to the masses is mostly a ploy for the audience to come and to own the story, in ways that movies, games and other instruments cannot match. An ARG is most of the time a thrilling, involving and immersive experience that works much better than a traditional and obsolete promotional way of advertising, especially right now in the era of the experience economy.

A great and successful example of ARG for marketing purpose has been made by 42 Entertainment to promote the movie *The Dark Knight* from Christopher Nolan,

the name of it is *Why So Serious?*

This experience involved facts antecedent the movie plot in which the user goes through a non-linear path of the story, connecting with other users relying mainly on the web and the networked World. Crucial was the transmission of information that does not just travel from author to audience, or in a closed-loop from author to the audience and back again; it spreads all over the place, and more or less instantly.

Not to bother with the description of the whole experience of *Why So Serious?* There are some touchpoints that, still, are highly remarkable. Participants at the game were introduced by finding fake US dollars at San Francisco Comic-Con (2007) with the Joker's face stamped on them instead of the classic president's face (this is called Rabbit Hole). In these fake dollars, an al-

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fig.17 Dollar. Rabbit Hole of Why so Serious?



most hidden code printed on it gave access to a website in which riddles should have been solved. After which, it was possible to call a phone number and receive some hints from a recorded message of Harvey Dent, fictional character and Mayor of Gotham City. This massive ARG also involved the use of an aeroplane to deliver to the audience another phone number for receiving new hints, and the use of cellular phones hidden in cakes around bakeries in the city of San Francisco that brought users to a crazy treasure hunt.

Stressing these specific touchpoints of the experience is relevant to enlighten the idea that combining the emotional impact of stories with the first-person involvement of games, can create a compelling experience. Marketers had figured it out and have understood that when the audience discovered something, they would like to share, engaging and entertaining the audience is the new wave sensed in the new economy.

Nevertheless, ARG is not a mere form of promotion. For the tribes behind ARG, which means people passionate about that genre, this type of game is a real form of art. Every year, many ARGs are launched by small teams operating with modest financing, most of the time is on a smaller scale. Nonetheless, that does not mean that it is less exciting or well designed than the ones with high money investments and bigger teams.

As regards secondary ARGs developed, it is worth to mention *The Rosewell Experience* (Miller, 2014). This ARG settled in Rosewell, New Mexico, has been entirely produced and created by one person, James Airhart, with a draconian budget of only 2000\$.

Rosewell town is famous around the World for its association with UFO and aliens. The ARG has been played for two weeks in the summer of 2012, upon a saving hearth adventure from Aliens. This case is significant for its peculiarity of being a location-based ARG. It has been played into a specific geographic place with active incorporation of social elements into the narrative and was mainly successful around newcomers in town, especially because many of them kept playing to learn more about the history of the area.

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Developing an ARG is not easy, especially for new entry-level creators that want to experiment with this interactive transmedia fiction game. Skills required are many, and the best choice is to team up with people passionate about it but with different skills. However, some basic rules and elements are usual in ARGs. These components are beneficial for the creation of every type of interactive storytelling work.

The first element common in every ARG takes the name from the very well known novel *Alice in Wonderland* By Lewis Carrol, *The Rabbit Hole*.

The Rabbit Hole is the first clue given to the audience in order to have access to the game, usually is a piece of important information about a dangerous situation, or a message in a video, or even some unusual letters printed at a concert's t-shirts like in another famous ARG, *Year Zero*, an experience used as a marketing campaign for the launch of Trent Reznow new concept album . The reason why the rabbit hole is so hidden and sometimes hard to find is to keep the TINAG (This Is Not A Game) philosophy (Szulborski 2005, p. 1) and keep the faithful veil of reality on it. A well-executed rabbit hole comes when the audience has not even noticed that the game has begun (Szulborki, 2005).

As the game has started, progressively people become part of the community to collaborate, this community take the name of *Cloudmakers*, titled after the yahoo

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fig.18 Year Zero T-Shirt



group formed during the ARG *The Beast*. In this phase, the game becomes more and more real thanks to solving complex puzzles.

Closing up on puzzles, these types of mini-games are always present as very challenging and rewarding for players. The desire to uncover the secrets hidden in the story drives the people playing the game. Additionally, ARGs' puzzles are usually very complicated and require active collaboration from the community with different skills.

Regarding this part, the body of the ARG, it could be possible to visualize two types of members, the players and the lurkers, in which the latter are the ones that are simple spectators that enjoy the full development of the narrative as the story unrolls.

At the same time, as from one part we have the players and lurkers, on the other side, behind the scenes of the game, there are the puppet masters, the creators of ARGs. Being a puppet master involve a lot of planning and development. Usually, there is always a team of puppet masters. This role is set up as a man in the dark, and the responsibilities are not only before the launch of the game but also during the play, in which some stories could change accordingly to triggered events, not to mention that could be possible to change the game in the meanwhile is evolving. It is not by chance that famous puppet masters are considered like magicians

and celebrities in the ARG community.

As said before, one of the main goals of ARG is to engage the player in the fictional World, motivating them to explore the full creation. In order to achieve this, the already cited Agency comes to help. Defining interactive points and devices are a suitable method to identify in which branch of the story point could be given a higher level of Agency to players.

Last but not least, Character is one of the best ingredients for a compelling experience. Usually in the design phase it is not essential only the part of the creation of the Character, it is also very crucial the way the Character is presented in the game, how it is made believable and how it acts in the game. It is savvy to keep the numbers of characters as small as possible; no more than three is already a significant number (Szulborski, 2005). Having a low amount of characters gives the possibility to focus better on their design and believability, giving the wish to the players to interact with them. Is very common to portray characters in multiple ways, especially on the internet in which specific websites are released about them even a long time before the game starts in order to keep the veil of believability. Other times information is released during the game, recently it has become very common to use social media such as Twitter or Facebook. Very complex characters sometimes are built by a team with artificial intelligence and

uses of chatbots.

All in all, characters could be the critical success of an ARG sometimes, permitting them to discover their outer life (presence in the World) and inner life (self-awareness) to the players is a reliable method of engagement.

These aspects of design are just a few basic ones, more complex problems are usually faced during the development of an ARG, more examples of past projects and design could be explored in additional resources and bibliography.

Wrapping up, what matters is to understand that these are just tools and materials useful for the development of an excellent interactive story, which is always the core content of the experience, no matter what type of interactive fiction we are working on. Probably the biggest lesson learned by ARG is to keep our story real and to fade the borders between fictionality and reality. The audience loves when a story becomes part of the real World, is tremendously significant to give them even just a sip of the unreal World created.

2.7 Beyond Videogames. Lance Weiler and the Columbia Lab

Needless to say, when it comes to speaking about interactive storytelling, many works are either full-fledged games or include game-like elements.

Murray (1997) asserts that games and drama are actually quite closely aligned, and that games are even a form of “abstract storytelling”.

Although both disciplines, playful and narrative, influence each other. It is impossible to deny that games are sophisticated resources that, most often, incorporate key design elements identified and replicated in other forms of interactive storytelling.

Carolyn Handler Miller (2014) spots some standard features present in both video games and storytelling, here a shortlist of the most significant:

- dramatic and exciting;
- full of action;
- intensely competitive;
- demanding of one’s skills, either physical or mental;
- regulated by specific rules;
- structured, with an established way of beginning and ending;
- Furthermore, played to achieve a clear-cut goal; in other words, to succeed at winning, and to avoid losing.

Above all, the role-playing mode, prevalent in video games, could be seen as the correspondent of the single-story thread built up from the unique experiences of every member of the audience in digital narrative. This consideration points out that, in a certain way, it is not even right to make a clear distinction between the words audience, user, player for what concern digital storytelling experiences.

Wistfully, video games sometimes are too overestimated as a source of design for interactive stories. Furthermore, this approach can close boundaries, avoid interdisciplinarity and cut off all the possibilities for the new waves and streams of digital interactive storytelling. Moreover, it can shadow possible new trends to follow for the next era of digital storytelling that yet it has to come. Luckily, someone is already at work with it.

Pioneer in interdisciplinarity and interactive storytelling is the designer and director, Lance Weiler. His projects are always a mixture of countless disciplines aiming at investigating not only the classic topic of interactive storytelling, such as ludic or learning experience, but also studying new approaches to storytelling such as hacking, culture investigation, ethics, anthropology and many other aspects. In his pieces, he focuses on how new technologies such as IoT, A.I., and Machi-

ne Learning could influence the narrative product, the design process, the user experience and the audience. At the same time, he searches on how these technologies could also be implemented as tools of production in the creative process of story generation, and much much more.

It is a matter of significant interest to show some of the most recent projects and practices in which technologies are used in an authentic, fresh way.

The most recent published and acclaimed work in collaboration with Rachel Ginsberg, Nick Fortugno, has been "*Frankenstein AI: A Monster Made by Many*". A total experience, involving elements of theatre, dance, collaborative storytelling, philosophy, Mary Shelley and, of course, artificial intelligence. Here a brief description to give an idea of how technology is used and is a tool and part of the narrative at the same time.

The modern Frankenstein (Rafsky, 2018), an A.I. creature, is seeking to understand humanity. Designed as experience in "three acts", the project has users share deeply personal memories and emotions. First in pairs, then in a small group, and lastly, in a single performance that took place with a broad audience, so that the A.I. could "learn" what it means to be human. The resulting data from these interactions was fed into the machine, combined with a corpus that includes the text of Shelly's "Frankenstein" and other human and onli-

ne information, and then parsed for the sentiment. Based on this information, which is assigned one of 12 pre-programmed emotional states, the machine asked the group questions ranging from “How do you talk to someone to fall in love?” to “Why do humans kill each other?” The answers were fed back into the machine, processed in real-time by the A.I., and the cycle continued.

While not all users may understand the science behind the project, they will likely be swept up in its imaginative theatricality, an aesthetic that could be described as “futuristic Gothic.” The set pieces include a dimly lit room where red velvet chairs ring tables outfitted with touchscreens that resemble an Ouija board married to an iPad. A dance performance of “algorithmic choreography” that mimics the process of machine learning; and the physical manifestation of the monster itself: a large plexiglass tank filled with smoke and abstract visualizations of code and projections of bits of imagery culled from the internet.

The Q&As afterwards served to demystify some of the processes and worked towards the project’s overarching goal to broaden public participation in the debate about what an A.I. future looks like outside the tech world before it is too late. The narrative device of “Frankenstein”, was a timely and resonant metaphor. The machine, as in the novel, is meant to hold a mirror up to

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humanity. The “monster” of A.I., is neither utopian, nor dystopian and needs to be understood, not feared.

In that vein, story-makers should not feel that A.I. threatens their auteur role. In their view, A.I. should be seen as a useful collaborator, rather than usurper, whose artistic value is in what we learn about being human through interacting with machines.

To illustrate the point, despite the piece’s impressive technology and creativity, the most memorable moments emerged from the group dynamic involved in “teaching” the machine the meaning of the human condition. It is hard to decide what is more absurd – the machine’s need to understand love, or the fumbling attempts by a group of mostly strangers to explain it.

Interesting at a level of interaction between narrative and audience is almost at the end of the A.I. performan-

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fig.19 Table at Frankenstein A.I. Detail



3. Experience Tourism / The City as the Narrative Space

ce. At one point, the A.I., seemingly fed up with inadequate explanations of human life, cut to the chase and asked: “What does it all matter?” After a pause, one man exclaimed to laughter, “That is your job!”.

Alan Turing would have been ecstatic at a scene like this. The audience no longer recognizes the automaton as artificial. Fiction and Reality no longer exist or are the same thing simultaneously. Thanks to new technologies we are diving in the black sea of uncertain beauty and mystery, it is up to story makers to investigate how far we can go.

All in all, the case study of Lance Weiler is one of many examples to say that games are an excellent source for interactive storytelling projects, but not the only one. Likewise, experimenting with technologies, media and grafting new disciplines into storytelling is a way to explore to understand not only storytelling, but also our relationship with the rest of the world. After all, stories are always a means to better understand our existence and to better understand ourselves.

3.1 Contemporary Tourism

Tourism is one of the world's growing economies in the last few decades. Innovation is the primary way in which this business is going at the moment; more precisely, digital innovation is the primary path.

According to UNWTO, United Nations World Tourism Organization (2019), tourists in the world, only in 2019 were about 1.4 billion with a yearly growth at around 7%.

The numbers were three-time bigger than thirty years ago in 1990.

Further, this confirms that this sector is one of the biggest and most powerful engine moving global growth and economy.

With the development of technology, tourism improved in many ways. Booking a hotel, a room or an entire apartment is a matter of seconds thanks to specific platforms, such as Airbnb, Booking.com and others, the same is for flights and car rentals.

Moreover, given the widespread use of GPS technology on smartphones, being somewhere we do not know is not a big deal. Plenty of apps help us localising ourselves and find spots like restaurants and monuments, to name but a few on this category, TripAdvisor and Yelp. Another great tool that has changed the face of travel is Google Maps. It encourages people to venture out on

their own (via car or bike), exploring the place without the fear of losing their way, making even attractive the idea of being lost.

Tourism is more and more diversified, individualised, and the touristic experience is easily spreadable and shareable. Vacations are no longer an annual family affair; people now take a break when they want to, often utilising their weekends for instant gratification. Recent years have also seen a steep rise in solo travellers who do not think twice before rewarding themselves with a holiday, even if it means going no further than neighbouring locations.

90 Also, the destinations to reach changed drastically, before big main cities and famous places like London, Paris, Bangkok were the principal places visited in the world.

Today the trend is inverse, people now look forward to having a new experience and do not shy away from looking for lesser-known, yet exciting and unusual destinations. Social media help in the process of sharing and recording travels and travellers are more and more eager for new experiences in order not to fall into triviality.

Not to cover the whole facets of travelling and staying focused on the research, is better to narrow down on cities' tourism analysis and taking a look at a classic journey.

Visiting cities is a common way for the tourist to get away from daily life, whether it is for a weekend or a week. Therefore, after a while, every journey seems to turn into something very similar for every city. We visit museums and monuments, we go to the best viewpoints of the city, and we eat or drink in some very well rated local on trip-advisor, these loops keep going on, only the background changes.

Not that these types of activity could be considered boring or unsatisfying, but sometimes many things are missed and catch the mood, or the atmosphere of the city is harsh when hidden by the noise of frenetic steps standardised by the mass-market tourism. Then, we should ask if it is just these ways to consume a new city or is there something more? There is something hidden? How can we catch the local culture in a few hours or days? Are we sure this is the only way to live in a city as a foreigner?

Of course not, every city has its intangible feeling, its intangible knowledge and connections that create the real life of that place, a way that could help to discover this aspect could be the use of technologies and digitalisation to deliver a new type of experiences.

3.2 Starving for experience

What is Tourism experience? We refer to this as a set of activities in which individuals engage to generate a pleasant and memorable remembrance of places — allowing each tourist to build his or her own travel experiences so that these satisfy a wide range of personal needs, from pleasure to a search for meaning.

Tourist behaviour is strictly related to the multi-sensory, fantasy and emotive nature of tourism products.

Meaning and Value are drivers for picking off the next destination; accordingly, the tourist demands for satisfaction and sharing. At the same time, the free will in choosing a touristic experience is strictly limited by the offers in the market. Digital services could become the new blue ocean in the experience of tourism and become the next offer in this sector.

Experiential travel and tourism will be a crucial area of growth in 2020.

According to Expedia (2018), there are three main drivers when it comes to travellers choosing a tour. The activity that the traveller will do, the opportunity to have a once in a lifetime experience, and cultural adventures. Travellers want to do something. This something could be arts and crafts, dancing, outdoor sporting activities, cooking, the list is endless.

By the latest research carried out by Booking.com

(2018), 60% of travellers think that an experiential tour is more valuable than a regular tourist trip. Experiential tourism is a trend that is continually developing and something every travel agent should be able to offer to their clients.

From a different POV, the customers' one, this type of buying is called experiential purchasing.

Experiential purchasing is about a lot more than merely buying goods or services. Experiential purchases serve the purpose of acquiring a life experience while material purchases serve the purpose of obtaining an object. Research (Thomas & Millar, 2013) has demonstrated that experiential purchases are associated with more happiness than material purchases.

For the majority of leisure travellers momentarily, it's all about the journey, not only the destination. Tourists want to connect with a place on an emotional level, and, as a result, it becomes much more than settling for a busy trip packed with a full itinerary in all the touristy hot spots. For many, travel is seen as a way of understanding and appreciating alternative ways of life, learning new things about cultural and natural landscapes, and even as a means of self-discovery, the modern traveller craves a higher level of authenticity to their experience.

If we look at TripAdvisor, in 2018, the app turned the sections *Attractions* into *Experience*, always in the app

one year before, operators added more than thirty thousand new experiences pack.

Staying in the app-world, the AirBnB CEO Brian Chesky said that three out of four millennials declared to prefer to buy an experience more than a physical good.

Additionally, very influential data are from Expedia Group, which incomes from experience were 500 million only in 2017.

This aspect has also been analyzed by Verganti (2009) in the experience economy and the retail marketplace. In which experience and entertainment are blending to deliver a new way of promotion and consumption.

94 Some other very useful data (O'Neil, 2018) helps to find out how the tourism market changed over the years and how digitalization and experience tourism influenced this process.

In particular, travellers want to stay connected to the network. They wish to have access to services 24/7 still on. Contiguously with Booking's Data (Carter, 2018) that reveals 80% of clients prefer to obtain Infos and services autonomously.

While from Google's data (Google,2018) we find out that 70% of travellers prefer to use a smartphone as a primary tool during their travel, especially if they have to look for an attraction or to get directions, supporting the phone, vocal assistants are becoming more and

more popular to get information. Still, personalization keeps being a top trend for brand delivering experiences regarding the tourist sector, more than 57% of travellers think that events should be suited to individuals based on personal preferences, personal behaviour and characteristics.

All of these are numbers in support of the idea that the tourism business is not only moving toward experience tourism, but also this trend is changing drastically in every aspect thanks to digitalization.

3.3 Narrating the space

Space has traditionally been viewed as a backdrop to plot, only because the narrative, by definition, is a temporal art involving the sequencing of events. Against this traditional conception, it is advancing the argument that space serves other narrative roles: it can be a focus of attention, a bearer of symbolic meaning, an object of emotional investment, a means of strategic planning, a principle of organization, and even a supporting medium. **95**

On the one hand, it can be an object of representation. It can function as the environment in which narrative is physically deployed, or, put it differently, as the medium in which narrative is realized (Ryan, 2016: p.7).

We use space to denote specific explanatory characte-

ristics of the environments or settings within which characters live and act: location, position, arrangement, distance, direction, orientation, and movement. (Ryan, 2016).

A metaphor often used to describe space is space as a network. As Lakoff and Johnson (1980) observe, space as a network is a dynamic system of relations that allows movement, and that is often actively created by the subject. Because of this inherent dynamism, this metaphor corresponds to a modern concept for what is a city, a system of relations between distinct neighbourhoods, public spaces, workspaces, and leisure areas.

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There is an intimate connection between space and time. This phenomenon is movement since it takes time to move from one point to another.

Gabriel Zoran (1984) calls the emplotment of narrative space through character movement the “chronotopic level.” (p.135). While on the topographical level, space is a container for all the sites mentioned in the story, on the chronotopic level, these sites are linked into a network. The movements that connect the sites of a narrative network are not only physical but mental; a character “thinking” of a place can make this place a significant part of the story, even if it is not physically accessible to the characters. It is, therefore, possible to

have plots without actual movement. While the chronotopic level connects the various sites of the storyworld through movement, the symbolic level structures narrative space by dividing it into distinct areas, and by associating these areas with various kinds of values (Ryan, 2016: p. 21-22).

Ryan (2009) proposes five levels of narrative space:

- 1) Spatial frames, the immediate surroundings of the characters, filled with specific things and defined by a set of objects that they contain;
- 2) The setting, a relatively stable Socio-Historico-Geographic category that embraces the entire text.
- 3) Story space, the space relevant to the plot, as mapped by the actions and thoughts of the characters, almost the same as the Zoran’s chronotopic space. It consists of all the spatial frames plus all the locations mentioned by the text that is not the scene of actually occurring events.
- 4) Storyworld, the story space plus the reader’s imagination based on the principle of minimal departure.
- 5) The narrative universe, the actual world in the text, plus the counterfactual worlds constructed by the characters as beliefs, wishes, fears, speculations, dreams and others (Ryan, 1991).

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The Austrian narratologist F. K. Stanzel was one of the

first literary scholars to pay attention to the presentation of space in the narrative. In his book *A Theory of Narrative* (1984), he suggests two strategies of spatial description: perspectivism and aperspectivism. Perspectivism is a highly immersive representation of space that “encourages the reader’s illusion of being directly and vividly presented with fictional reality” (Stanzel, 1984: p.123). In a perspectivist description, the narrator (or the focalizing character) occupies a certain point in space, and the scene is described from this particular point-of-view. This strategy enables the reader to grasp the locations of objects concerning each other.

- 98 In a study of how people describe their apartment, Linde and Labov (1975) identified two basic cognitive strategies, which they called the “tour” and the “map.” In the tour strategy, the speaker moves through the apartment as if it were a maze (though apartments have much simpler spatial structure than mazes), typically entering it from the front door, following hallways and describing the rooms situated on the right or the left. While in the tour strategy speakers look at the apartment from the inside, in the mapping strategy, they occupy an external, elevated, static perspective. It is very similar to the Roman mnemonic techniques of the *loci*, or memory palaces that typically took the form of a mental walk through a building. Each object en-

countered during the walk was associated with one of the items to be remembered through a made-up story. An approach concerned with the particular will focus on those texts that make the characters’ experience of space into a prominent narrative theme, as well as on the attribution of symbolic meaning to the various regions and landmarks of the story world. Thomas Pavel (1986) calls “*salient ontologies*.” These ontologies can oppose the world of everyday life to a world of magic, dreams to reality, images to existents, or, in narratives with embedded stories, higher to lower levels of fictionality.

Emotional space has a particular affinity with stories and with memories—it is because they are linked to stories that spatial objects inspire unique feelings, either positive or negative. A chessboard best symbolizes strategic space. The squares on a chessboard have no intrinsic emotional value for the player; they only matter because of the actions that they allow to perform. (Ryan, 2016: p. 39). The contrast between strategic and emotional space bears strong affinities with the contrast between space and place. While emotions typically relate to specific locations within space, rather than embracing space as a whole, strategic planning concerns possible movement, and movement requires a spatial extension

(Ryan, 2016: p. 42).

All in all, space is not just a setting in which the narration takes place. It is much more from many points of view. Within the digital world, narrative and space are becoming much more visible and experienceable, that gives new opportunities in storytelling and as we are going to see also in a different sector such as tourism.

3.4 The city and the narrative space

As Janet Murray (1997) observes, “*The interactive process of navigation*” (p.12) is the peculiar characteristic of New Media spatiality.

100 The development of mobile technology, global positioning systems (GPS), and augmented reality counters the tendency of computers to entice sedentary users into virtual worlds by replacing simulated environments with real-world settings and by sending users on a treasure hunt in physical space.

Here some points in this connection between space, place, and narrative:

1. Allowing active participation in story-rich virtual worlds.

By proposing practically, rather than conventionally, desirable goals to the players, and in many cases by projecting the player as an individuated character si-

tuated in a real-world, video games present a built-in affinity with the narrative.

2. Exploiting the properties of digital maps to create new forms of narrative.

Within a concrete gameworld, some objects have “behaviours”, and some others are inert stage setting (Juul, 2014).

The space of a game world is made, in other words, of both meaningful destinations and small transit areas.

3. Anchoring narrative in real space through mobile technology.

Like recreating the genius loci of a city, collecting stories about various spots of the city and making them available through mobile technology.

Ruth Page (2011) has observed, the experience of listening on-site vs accessing the stories from the Web present significant differences whereas the on-site listener can turn around, following the directions of the narrator (“on your right”; “opposite this building.”).

The secret is the experience to lie halfway between a treasure hunt and *flânerie*, between a search for hot-spots to discover the plot and a stroll through the city open to serendipitous discoveries.

Finds in these spots is not a concrete object but a new

way to look at the environment.

This new way resembles archaeology. It allows the user to look beyond the surface of the present and to dig out artefacts from the narrative underground of the city. Just as legends from the past and tales about ancestors create a sense of place, the stories told by citizens about buildings and neighbourhoods that are no longer there give a soul to the city (Ryan, 2016: p. 128).

A groundbreaking step that has brought to living space and the narrative in such a physical/digital way comes from ARG.

As already noted, before the digital age, most games took place in a specially designated area of space, described by Huizinga (1950) as *the magic circle*. In ARGs, there is no magic circle, no formal boundary between the real world and the playfield. This means that as the players perform the tasks of everyday life, they must continuously be looking out for the possibility of an intrusion of the game into their life. Additionally, The playfield of ARGs thus includes both the physical space of the world and the virtual space of the Internet (Labitzke, 2013). often heard about ARGs is that they deconstruct the boundaries between games and reality, life and fiction, or the virtual and the real.

Can one consider ARGs a form of locative narrative? The clues to the mystery can be situated either in the

virtual space of the Internet or in physical space. However, anchoring in a specific place leads to a considerable reduction of the potential number of players, but an augmentation of reality.

Scott Ruston (2010, p.119) calls “*the basic place-making capacity of storytelling*” are as varied as the applications of this technology.

Nevertheless, while locative narratives have a bright future for tourism, museums, and events such as cemetery walks, they can alienate us from the world as much as they can provide valuable information. For those who resent the mediation of a technology that cannot avoid drawing attention to itself, location-based storytelling utilizing wireless networks is more valuable as a metaphor of how a story can turn space into place than as a way to capture the unique spirit of the place. Because this spirit, even though it is fed by collective memories and by stories reported by others, does not exist objectively, but is shaped by each of us individually.

Like Potteiger and Purinton (1998), we use the term “*landscape narrative*” to refer to stories that are told by being inscribed or marked in the environment. We use “landscape” in a sense used by geographers to refer to environments shaped and modified by human action, a long tradition of research in the discipline but, again,

not attuned to the interests of narratology. However, in using this term “landscape narrative,” we need to be clear that we are not focusing on “stories” about landscapes, but rather on stories that are told by “draping” them over the places where they occurred.

We argue that these “landscape narratives” are of four broad types that revolve, in part, around the spatial and temporal scale of the events themselves, here described:

1- Possibly the most common strategy for organizing a landscape narrative is to tell a story from a single point, the point narrative. Point narratives are conventional because they are relatively economical, easy to create and use such a simple means of applying the text to the landscape, a sign or plaque. This type of narrative is commonly applied to monuments or universal heritage sites, sadly without great success.

2- Sequential narratives is another standard method. It is structured linearly along trails or paths, mainly when the story involves a point-to-point chronology. Sometimes it is highly structured while others are very flexible. Typically, these narratives are intended to be experienced over a moderately short visit lasting from an hour or two to perhaps one or two days. Pilgrimage is an outstanding example of a sequential narrative.

This type of narrative is also shared across archaeological and historic sites, rather than forming a global story arc; they encompass a large number of independent episodes or substories.

This genre of Stories are told from a series of vista or vantage points, with one element of a story told at each point, but not in strict chronological order. They permit a simplification of spatial and temporal complexity—facing the problem of narrating simultaneous events.

The visitor stops are organized around a carefully framed arrangement of sights that highlight essential periods and events for their significance and for the ways they relate to other significant elements of the local topography and history (Stiebel, 2000).

3- Themed visits allow perhaps the most considerable freedom in structuring landscape storytelling. They involve sewing a seldom disparate set of events, issues, periods, perspectives, and places into a unifying story. The elements of the narrative would be a miscellany of superficially unrelated sites. Visitors can choose between multiple routes, each developed around a thematic narrative.

4- Hybrid narrative. In some cases, these hybrid narratives involve creating metaphoric or symbolic relationships among inscriptions, monuments, buildings, land-

scape elements, and design, as well as letting visitors make the connections as they wish.

Telling a story spatially in landscape involves critical choices about the position, distance, direction, perspective, and movement on the ground. The geography of the site is a constraint: stories have to be woven around distinct historical locations. Of course, the need to divide, segment, and pace are constraints faced by other forms of storytelling, VR games, for instance, face the same problem.

This means that creating a landscape narrative is not, of course, merely the writing of a story on place, but rather the rewriting of this story to make connections among significant moments and places that would otherwise remain unconnected spatially and temporally.

Narrative theory points to the critical role played by the reader, viewer, or listener in constructing meaning from narrative forms. Interestingly, relatively little research has been undertaken on the experience of visitors and tourists at historical sites (Hanna and Del Casino 2003; Lamme 1989; Till 1999). Urry's (2002) notion of the "tourist gaze" and Dicks's (2004) idea of tourism as a form of cultural display focus on issues other than narrative and tourist experiences.

Noteworthy in this regard are so-called "discovery

tours," types of adventure tourism that employ movement to lend a sense of progression and plot development.

Most traditionally, we are used to following guides that have to memorize or read scripts that could be presented as the written text. The difference between the written text and the live performance lies in the contributions of the inflexions, tone, nonverbal cues, and gestures of the guides to the interpretive experience. In other cases, guides have almost complete freedom to change, invent, and embellish stories, depending on visitor interest. This style is closer to some of the "ghost tours". Such tours can be easily customized to fit visitor interest. Between scripted and unscripted tours are those in which guides have some flexibility knowledge of an attraction deep enough to answer spontaneous questions. The magic is hidden in where the guides stop and why, which places the guides highlight and why, and how they organize their tours or walks to tell a coherent, exciting story.

The next step is to deliver a free-tour to tourists and give them more agency and pleasure in discovery, mostly like a virtual guided tour.

For example, multimedia maps could be an option. They would show videos of the gestures and dramatic elements used by guides to tell their stories about the place. The issue of guides and spoken narrative also

raises issues about the performative elements of space and narrative. On many occasions, the location of a speech, public address, or story is just as important as the narrative text itself.

These symbolically significant locations often serve as a means of amplifying the narrative power of the text.

The most obvious area for future development is the study of how different media, especially for spatial computing, affect our conceptions of space and place.

Broadly speaking, much can be gained by focusing on how landscape narratives interact with other media to shape modern and postmodern conceptions of space, place, and history to create a widened notion of visual rhetoric (Olson, Finnegan, and Hope 2008), regional identity, placemaking, sense of place, place images, and the role of film and television in mediating the experiences of space and place.

At the current status, there are some primordial products. Companies like Walking Papers Media (2013), Geogad (2013), Audio Travel (2013), and Visual Travel Tours (2013) created a mobile tour for sites for a wide range of customers including city governments, museums, hotels, restaurants, designed for a different audience that want to discover more on places.

Thanks in part to the rise of geo-tagging, location-based information is becoming much more accessible for

people to find.

These systems allow users to overlay geo-tagged information on top of base maps and satellite images in what is generally called “mash-ups.”

Visitors standing at historical sites can use their phones and other mobile devices to access all sorts of primary and secondary material, including narratives, counter-narratives, comments, and criticism.

Narratology gains from geography because the essence of narrativity can be described as bringing a real-world to the imagination and vice-versa. Suddenly spaces turn into places and get populated by an evolving world inhabited by active characters who relate emotionally to it and each other. At the same time, geography provides narratology not only with the concepts of space and place but also with tools to describe story worlds (maps and other visual representations of data), with systems to anchor stories in the real world (GPS), and with a rich corpus of work on how people experience space and place (Hubbard and Kitchin, 2011).

As for geography, it needs narratives and narratology because, if it wants to capture the experience of space and place in its emotional, existential, and phenomenological dimensions, its most valuable source of data are the stories people create involving space and place.

In conclusion, from one side, tourism is in a new trend

phase in which digital services are spreading in the market and in which experience is one of the most valuable elements of a unique journey.

On the other side, narrating the space is a method to overlay with meaning and value also real places, and that allow new methods for the storyteller to deliver a new amusing way to experience the story delivered to the audience.

In few words, a way to bring innovation in the tourism market could be found in the mix of retail theatre, experience economy, digital and interactive narrative and narrating space, in order to create a new digital service to discover places and deliver a valuable experience to audience/tourists/users.

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3.5 Walking through Hidden Bars

When walking through big cities, sometimes even small ones, it is possible to bump into unusual places that hide inside a cocktail bar or restaurant, these genres of bars are called hidden bars.

The hidden bar concept originates from the old American speakeasy, an unauthorised establishment that was selling alcoholic beverages during the Prohibition period in the U.S.A between '20 and '30 of the 21st century. After the Prohibition ended, speakeasies started disappearing slightly, but their style, their mood and the

taste of that time have always fascinated many people. In the last decade, thanks to their aura and their attitude, plenty of speakeasy-style bars spread all around the world. However, half of the magic has been lost, the simple fact that they look like a speakeasy does not give any additional touch of magic compared to traditional bars. No secret words are involved in getting in, nor mystery and complexity to find them.

Meanwhile, half of the hidden magic lost became a new trend that found its place on the previous quoted hidden bar.

Hidden bars are substantially cocktail bars, not easy to find and are usually based on a story.

The way to get access to this genre of bars is very similar to the rabbit hole trick from ARG. Most of the time even if we know the existence of these bars and

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fig.20 Fake entrance from fireplace. USA



we try to find them on google maps, they are not well localised, the position is approximate on purpose in order to give the people the pleasure to find the entrance of the bar. Additionally, to get in is not always a matter of opening a door, not even to catch them, sometimes a ritual or a specific action is required.

For instance, *Please do not tell*, one of the most famous hidden bars in New York requires to get in by picking up an unassuming red phone inside of *Crif Dogs*, a famous hot dog place on St. Mark's Place, and then, magically a wall slides out showing an elegant bar. The spectator jumps from an urban setting to a glamorous, elegant surround. The surprise effect and the sudden switch are a typical key to success for places like this one.

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Another one, *Ladies and Gents* in London, entails going through a Victorian bathroom. No one would

fig.21 *Please do not tell* entrance



fig.22 *Ladies & Gents* entrance

ever expect to find such an old British cool bar in a public toilet. It sounds quite disgusting but achieves the wow effect excellently.

Probably, one of the hardest bar to reach is *Bank Bar* in Manila. To locate this bar, people use Google Maps. Still, when they reach the place, they face an actual bank, how to get in is still not clear, even on the web, there are not so many information.

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We have seen great examples of hidden bars. Therefore, there is a city that promotes more than any other in

fig.23 *Please do not tell* inside



world tourism for hidden bars. It is in Hong Kong. The amount of hidden bars in this city is incredibly high, and that is also thanks to the visionary studio NCDA and its founder Nelson Chow, an arch star in terms of interior design for public leisure places. Nelson Chow does not see interior design as a matter of space, colour, movement and beauty, but starts his projects from stories, is not by chance that his projects are displayed in his website under the label Stories and not Interior design.

114 Chow defines himself first as a storyteller and then as a designer. He looks at his bars as wondering places out of time and space in which tourists and locals can immerse themselves in these micro-narratives released under the configuration of a bar.

Foxglove in Hong Kong is plausibly the most known

fig.24 Foxglove detail of hidden entrance



fig.25 Foxglove inside restaurant

bar from NCDA studio. The deceptive facade of this bar is a gorgeous umbrella store, once inside, you have to figure out which umbrella handle to pull down to get into the restaurant. Then a mesmerising world pays homage to a fictitious globetrotting English gentleman with a theatrical blend of gentlemen's private club and intimate jazz bar. The Narnia-like experience continues with two private rooms, again accessed via secret entrances. It is by pushing the right button in the lift to have access to the cocktail bar and to know the right word to say to the maitre to have access to a private room. It is a Russian doll that makes the audience feel like they are Alice in Wonderland discovering a new world, or better a new story every time.

Another thrilling experience for tourists in Hong Kong is the reach of *The Old Man*. For several years the

Award-winning first bar of Asia is situated in one of the narrowest and darkest alleys of such a brightest city. Once the visitor can finally reach this dingy street, a faint light in front of a door without a handle illuminates an inscription; Please stay quiet. A peephole in the door allows from the inside to see what is going on in the street. If the guests stay quiet for a couple of minutes, someone from the inside will open and welcome the new clients in a show that celebrates life and multiculturalism of Hong Kong. Everything settles in the background of what is supposed to be the first British house of the first western man remained in China.

116 Many are other good examples, yet it would take a whole specific book to describe all of them. For every bar, there are one or more stories and multiple experiences, what they have in common is the narrative soul that has

fig.26 The Old Man inside



generated this kind of concept of public space always on the borderline between reality and dream.

What do hidden bars have to do with interactive narrative and tourism?

First, hidden bars deliver a story through real-world activity, most of the time, to sightseers looking for a new alternative attraction in the city they are visiting. Moreover, the scenography they recreate for the imaginary frame of the story and the methods to have access to the story's elements is remarkable in the space setting and every single detail in a multi-sensorial practice.

The hidden bar experience is an unusual way to explore a story and discover an alternate reality. What is consumed in these places is not a cocktail, it is a narrative product that gives a chance for a while to immerse the audience into a parallel world, delighting them with multiple leisure activities. The process goes through a defined set of activities. Hunt's treasure to find the bar, small riddles to get in, interior exploring of the story world and finally drinking a cocktail as a reward. Customers transform into an active audience. They are not visitors in the urban landscape anymore. They turn into explorers and at the same time, characters in the story. To sum up, everything in a hidden bar is made for delivering a memorable experience that will remain in the heart of the tourists. The goal is performing a story to

deliver the experience and produce the memory.

All in all, the visitors will remember the greatness of the journey, and they will have the chance to tell a personal story on when they bumped into an unlikely unique situation of their life, like a character in a book or a movie.

4. Technology / Spatial Computing

4.1 Spatial Computing, The User Active/Passive Interactions.

In this part of the analysis, we are introducing a new way of seeing the user and the product, going beyond two-dimensionality, or rather screen-based classic interaction design.

Starting from scratch, remaining within the sphere of human-machine interaction (HCI), there are three main ways by which we interact with computers:

- *Visual*, Poses, graphics, text, UI, screens, animations
- *Auditory*, Music, tones, sound effects, voice
- *Physical*, Hardware, buttons, haptics, real objects

Not going into detail into the specific interaction level, it is sufficient to know that these ways of interaction are included in the Cycle of a typical HCI modality loop that consists of three phases:

- The first is generally the affordance or discovery phase, in which the user finds out what they can do;
- The second is the input or action phase, in which the user does the thing;
- The third phase is the feedback or confirmation phase, in which the computer confirms the input by reacting in some way.

Although the HCI modality loop is a useful tool in spatial computing as well, with better hardware and new

sensors coming up, we have new ways to both talk to computers and react to us.

The primary trend is passive augmentation and hidden interaction.

This trend brought to some new, mostly passive, inputs like:

- Location
- Breath rate
- Voice tone, pitch, and frequency
- Eye movement
- Pupil dilation
- Heart rate
- Tracking unconscious limb movement

122 The less the user thinks about them, the more useful they are. In each case, the machine will react to the shift, without direct response or instant feedback, modifying the experience according to data acquired.

For invisible interaction, this is a tremendous innovation that, over time, will lead to highly technological products that are less and less invasive, or better, noticed by the user.

On the other side, here are listed some aspects of active augmentation regard exploring new modalities of interaction in Spatial Computing (AR/VR):

Physical

For the user input: controllers.

As regards controllers, probably it is useless to mention some examples, the progress of these technologies is speedy, despite this, it deserves to be mentioned *NASA Ames' VIEWlab* from 1989, sadly not yet been commoditized at scale.

In any case, controllers are mostly similar to the ones belonging to game consoles, they look like almost the same and incorporate quite the same features, such as:

- A primary select button (almost always a trigger);
- A secondary select variant (trigger, grip, or bumper);
- A/B button equivalents;
- A circular input (thumbpad, joystick, or both);
- Several system-level buttons, for consistent basic operations across all applications;

For the computer output: haptics (more information in the next chapters)

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fig.27 NASA Ames' VIEWlab



Audio

For the user input: speech recognition.

Speech recognition is living its first golden age in development, thanks to Home Assistants like *Amazon Alexa* and *Google Home*. However, it is a technology that remains, most of the time, constrained into domestic ambient. It is tough to implement at the same level in public, mostly because voice commands are not precise, no matter how entirely are understood by the machine. Nevertheless, we see daily improvements, just think about *Apple Siri* vocal assistant.

For the computer output: sounds and spatialize audio (more information in the next chapters)

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Visual

For the user input: hand tracking, hand pose recogni-

fig.28 Alexa Dot. Home Assistant



tion, and eye-tracking.

Hand-tracking is when the entire hand movement is mapped to a digital skeleton, and feedback inferences are made based on the hand's motion or pose.

As regards hand pose recognition, the computer has been trained to recognize specific hand poses, much like sign language.

Eye-tracking comes into action when the eyes are moving continuously, so monitoring their location makes it much easier to infer attention and intent. Sometimes even quicker than the consumer is aware of themselves, provided that eye movements are changed before the brain simulation refreshes.

To date, trends are moving towards a process of customization, both on the platform side and on the user side, take us to a new train of thought: spatial computing enables computers to be as personalized and varied as the average household of the individual and how they organize the household belongings. Spatial computing will allow for more user customization. Consumers would naturally begin to make their inputs on measures on their movements (Pangilinan, Lukas & Mohan, 2019).

For the computer output: Head Mounted Display (more information in the next chapters).

Finally, new forms of interaction and new ways of thinking about the user emerge when dealing with spatial

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computing. These must necessarily be taken into consideration since, given the convergence of all companies towards this area, spatial computing is and will be the next field of action of interaction design.

4.2 Spatial Computing, What is AR?

According to Donald Norman (1988), spatial software is the technology that will make the computer's user interface a seamless part of the three-dimensional world in which we live, work, and play.

Practically speaking, in terms of technology in the market, when we are speaking about spatial computing, most often, we refer to virtual and augmented reality.

The research of this thesis focuses mostly on augmented reality (AR); therefore, in the process of analysis, we will encounter many similarities with virtual reality. Subsequently, it is essential not to divert the focus from the technology under consideration, also for the project developed.

Hence, what is Augmented Reality?

The most commonly used definition of AR is a digital overlay on top of the real world, consisting of computer graphics, text, video, and audio, which is interactive in real-time. It is experienced through a smartphone, a tablet, a computer, or an AR eyewear equipped with software and a camera (Papagiannis, 2017).

Therefore, AR is not strictly confined to this definition; the new wave of AR is heading toward the relationship with context.

Contextual information changes AR experience and content, as it transitions from an experience that is the same for every user to an experience that is unique to only one user and his location, his preferences and his needs. The emphasis will be on providing a meaningful and convincing experience which will enhance his reality.

An adaptive way of interaction in which both the stimuli and the contents are fluid and can change at any time as they respond to user's changing contextual data to provide timely and relevant information and experiences determined by him and his environment.

Only six years ago, Facebook CEO Mark Zuckerberg referred to AR as "*a new communication platform* (Hof, 2014)." He writes, "*One day, we believe this kind of immersive, augmented reality will become a part of daily life for billions of people.* (Zuckerberg, 2014).

Probably the real impact of this prevision will be when AR becomes a mega platform that incorporates other new parallel technologies such as wearable computing, cameras, the Internet of Things (IoT), machine learning and artificial intelligence. Together, these technologies will disrupt the reality as we know it; all we have to do is wait.

As already mentioned, we are entering the second wave of AR, and the user is the context that defines a more immersive, integrated, and interactive experience.

Of great significance, the entire world becomes a trackable target, AR technology not only sees us and the environment that surrounds us; it begins to understand our activity and responds to us.

That way, our interaction with technology becomes even more natural as hardware and software disappear, and the experience becomes central (Papagiannis, 2017).

For instance, different fields of applications are emerging: Augmented Health, Augmented Learning, Augmented Retail, Augmented Work, Augmented Entertainment.

This trend demonstrates that AR is no longer just about technology; it is about defining how we want to live with this new technology in the real world, and how we are going to make meaningful experiences that help advance humanity.

In a few years, AR will radically change the way we live, work, and play, not admitting that it is already doing it.

4.3 AR means new eyes

Augmented Reality (AR) is giving us new eyes, and this statement is not about sight, but rather about the new way we and the machines see the world.

Likewise, we experience the world in three-dimensions; there are 3-D depth-sensing cameras used to recognize, map, and understand our spatial surroundings. Not so many years ago, these cameras were mounted on specific products with targeted purposes, such as *Kinect* for Xbox from Microsoft. Instead, nowadays, it is easy to have a camera like that in almost every smartphone. Most of the time, they are promoted and sold under the captivating name of AI camera.

For instance, the *Kinect* allowed us to transform ourselves into controllers and allowed us to immerse ourselves more and more with video games. Also, there are many innovative applications of this product, especially in the world of digital art.

A notable case in the use of this technology is in the piece by Chris Milk's "*The Treachery of Sanctuary*" (2012). It is a brilliant example of *Kinect* used in an art installation. You are invited to stand in front of a series of three interactive panels that represent the creative process through birth, death, and regeneration. Your body is mirrored back to you like a dark shadow with different transformations occurring in each panel. For



fig.29 *The Treachery of Sanctuary Experience*

example, in the first panel, your body disintegrates into rising birds.

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Whereas, most recently, many mobile applications are popping up thanks to the use of AI cameras. A great example is *IKEA Place*, an application that allows you to place one of the furniture products inside the room and allows you to instantly understand the footprint in space, or how the piece shows itself in the room design.

The leading technology behind these cameras is called SLAM (Simultaneous Localization and Mapping); in a few words, it creates a map of its surroundings and understands its location within it. One of the best uses is on Google's self-driving car that also uses SLAM technology with its camera and sensors. The car processes both map and sensor data to determine its location and

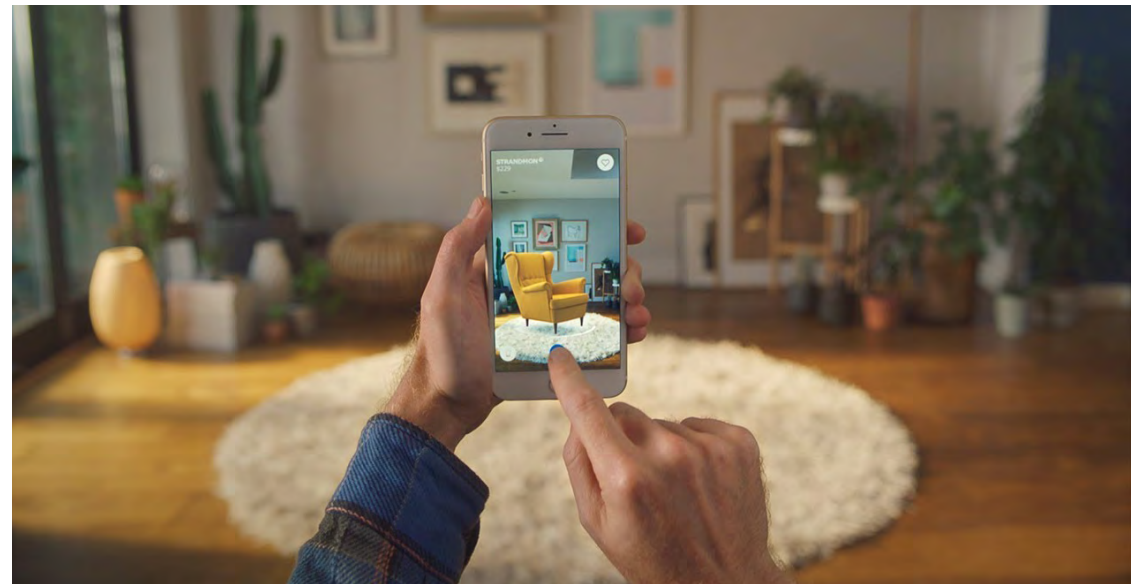
detects objects around it based on their size, shape, and movement.

Intel has implemented another best use of this technology. *RealSense Interaction Design Group* and its team have created a compact prototype of a wearable device that uses RealSense 3-D camera technology to help vision-impaired people gain a better understanding of their environment.

In the same wave, *OrCam* (2010) is a project worth mentioning. It is a device designed for visually impaired people, and it uses machine learning to help users interpret and better interact with their physical surroundings. It detects faces, objects, products and paper currency. The OrCam system features a camera that sticks on a pair of glasses and scans the wearer's field of view continuously. It feedbacks the wearer through a bo-

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fig.30 *IKEA Place*



ne-conduction speaker that transmits sound as it reads aloud objects, words, or people's names (Papagiannis, 2015).

It is important to note that the ability to see and interpret our surroundings with the help of computer vision also enables us to filter our reality and selectively see, or unsee, the world around us. This concept brings toward a new definition of mediated reality, and it differs from virtual reality, or augmented reality, in the sense that it allows us to filter out things we do not wish to have thrust upon us against our will (Mann, 1999).

132 Based upon this idea of mediated reality, a group of students from Pennsylvania university has designed in 2015 The “*Brand Killer*” (2015). It is a custom-built head-mounted display that uses OpenCV image processing to recognize and block brands and logos from the user's point of view in real-time. It is an ADBlock for Real Life.

This lead toward a consideration, AR has the potential to improve people's lives and encourage changing ways of interacting with each other and our surroundings. Surely the positive side of Mediated Reality is that it could be a way to provide focus. However, when we plan AR's future, we will need to question whether digitally filtering, mediating and replacing content with one's option would improve our reality or detach us

from the environment and one another.

Achieving positive goals is in the hands of interaction designers of the future.

4.4 Sensory Design

In the future, AI-powered spatial computing will significantly extend our capacity to collaborate and use information. Our relationship with technology will be as productive as reality. Technology will be present in more human-readable forms. Technicality will disappear, and the need for a more calm technology will transform the design for products and devices into a design for human and senses.

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As can be seen from the previous chapters, AR, although it may have been relegated to devices and technologies in its early days, today a more human and sensory oriented idea of design has developed, so designing for AR means designing for the senses.

As spatial computing uses the space around us like a canvas for digital experiences, from a user point of view, voice, sight, Touch (in 3D), gestures, and other natural inputs directly connect us with information. On the other side, computer vision, machine hearing, and machine touch can output data like camera's exact location; dimensions of space around the user; identify objects, people, and speech; and much more, what is

generally called sensory data.

Although the senses are our primary goal, it is right not to forget that technology plays a significant role in achieving this goal. As AI continues to advance, the sensory design will continue to become more natural, giving our devices natural human senses.

Additionally, the future design of AI-powered spatial computing requires a vast range of skills and a deep understanding of human nature by all concerned. It is necessary to think more globally, cross-culturally, and inclusively.

134 Apart from this broad introduction on the next future of spatial computing, it is time to get back to the main focus of this chapter, senses and sensory design related to spatial computing and mostly on AR.

Historically our designs have been limited by medium and dimension, and the sensory design opens up a world of possibilities far beyond any present design medium. By definition, Sensory Design is an adapted, industry-wide, spatial computing language inspired by humanity (Pangilinan, Lukas & Mohan, 2019).

Why we understand and experience our environment is this link between a brain, body and senses. We can hack our perceptions of reality by developing for the human senses and cognitive abilities. We could even claim that Sensory Design is constructing experiences perceived

as real.

The idea of changing someone's perception of reality by design, and the possible consequences, is overwhelming.

An accountable approach requires some specific project aspects to take into account, Silka Miesnieks (Pangilinan, Lukas & Mohan, 2019) pinpointed some of them, here listed:

- Be human-centred by building a language around intuitive human interactions. We can do this only by understanding fundamental human behaviour, our bodies, and our cognitive abilities;
- Be collaborative by sharing our insights, listening to feedback, and learning from a wide range of people,
- Be design leaders through our work, sharing our insights openly and collectively;
- Define the principles, methodologies, and patterns we can use to work more effectively together and improve on the products we build;
- Respect people by respecting their physical and digital privacy; giving them control, or agency, over the tools we build; and thinking first of their well-being over a pat on the back;
- Do good human behaviour by building systems to lead to greater empathy for our diversity of skills, cul-

tures, and needs.

Some fundamental pillars for spatial computing driven experience have already been identified and should be taken into account when designing in a sense-driven context.

- Multi Sensoriality to make products more intuitive, enhancing the pleasure of the experience;
- In 5 to 10 years, the 3D digital design will be as standard as the 2D digital design is today. Our bodies will be the joystick of the spatial computing world of tomorrow, and the world around us can be selected, edited, redesigned;
- The new user interface model for spatial design allows globally positioned digital structures to behave as if they are physically real;
- Design elements put in the environment can not be managed in the same way as pixels were on a screen. Digital environments in 3D space must adjust to the surrounding environment's lighting conditions, dimensions and context;
- Among the others, believable spatial cooperation unlocks the extraordinary creative and economic power of that AR. When it feels like you are in the same place, interacting instinctively with our entire body, seamlessly constructing digital-physical things alongside real human team members with decisions enhanced by AI,

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then the power of remote emotional and physical interactions becomes the catalyst for spatial computing adoption. In other words, human connection is the killer-application for AR (Pangilinan, Lukas & Mohan, 2019).

All in all, let us push ourselves to develop tools that use sensing technology to show empathy for a better future for products and users.

4.5 Senses for AR

When it comes to Augmented Reality, most of the time, people think it is something leftover at sight, far from it, AR, as mentioned before, is a multisensory experience in which more senses process together for a new creative potential.

In this chapter, we will discuss the other senses and how they contribute to delivering a total experience to the user, starting from the tactile sensation.

Touch

AR makes it possible to reach the virtual, further blurring our ability to discern between the actual and the virtual.

Purely perceptively, Touch helps us to navigate and comprehend the real world, allowing us to perceive, texture, the weight of objects and environments. Thus,

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we acknowledge, discover and verify the physically existent.

Haptic is the term used to define the experience of tactile feedback, achieved through the device that delivers a highly believable illusion of this sense.

Currently, many universities are researching haptic feedback, especially for spatial computing.

A great success screen-based is GHOST (Generic and Highly Organic Shape-changing inTerfaces), a project launched in 2013 across four universities in the United Kingdom, Netherlands, and Denmark.

It consists of a Lycra flat screen monitor that can be deformed at will, unlike glass, which allows you to reach and manipulate objects or data.

Of course, there are already innovative products that overcome the concept of 2D screen-based experience.

Always part of the GHOST project is *UltraHaptics*, now part of *Ultraleap* (2010-2019).

This device allows you to feel virtual objects in midair. It uses high-frequency ultrasound waves, an infrared sensor tracks the precise position of a user's fingers in 3-D space and enables ultrasound to be accurately directed at a user's hands, producing the sensation of Touch.

At *MIT Media Lab*, they created a book that you can wear and experience with your entire body. The sensory fiction prototype consists of a haptic vest that is

connected to an ebook allowing the reader to feel the protagonist's physiological emotion

Building new ways of communicating with and empathizing with a character by not only seeing and listening, but also experiencing how feelings are expressed through tactile feedback. From the interactive storytelling point of view is a huge step forward.

It is worthy of note that interactions with our hands are representative of language and emotion, augmented Touch redefines a sense of human Touch in a virtual age by assigning new meanings to tactility. This aspect is crucial for the design that could become more and more a game-changer for a successful product.

Hearing

Audio and hearing play an essential role at this point in the analysis of this thesis since the project involves the sense of hearing as equal to that of sight.

Sound helps us to be present in our world or else it will move us somewhere to her dimension, or even time travel.

Audio may help illuminate your world, accompanied by sound effects or Music, by directing your focus and concentration along a road, even pointing out things that might not otherwise have been noticeable.

Augmented audio can permeate barriers that can help to promote understanding and empathy. It can inspire you

not only to see the world through the eyes of someone else but also to observe it *in situ* (in the same physical place). It may encourage you to take action and effect change in the real world in which we live, even if it is engaging in a conversation with someone you would not usually have.

So we will see more sound being added in AR to improve immersion, from sound effects to voice interactions. In addition to navigation, the sound will contribute to storytelling and Entertainment in AR.

Probably the great innovative product that allowed new forms of audio interaction is *AirPods* from Apple launched in 2016.

140 They work pretty smoothly. Users can access *Siri* by double-taping an AirPods without removing your iPhone from your pocket, and the AirPods automatically at-

fig.31 Apple Airpods



tach to your Apple devices, such as your *iPhone* and *Apple Watch*, with instant sound switching between the devices.

This new way of talking and hearing is an entry-level touchpoint for a new way of vocal interaction that opens a wide range of new opportunities in the interactive storytelling field, like speaking with NPC, just to give an example.

Sound in AR has many applications, such as playing with sound, helping blind navigate spaces, stimulating imagination and others. This analysis focuses mostly on storytelling and how sounds take a significant impact on that in the AR environment.

In short, the future of sound in AR will not only use audio to supplement visuals to enhance believability, but it will also be explored in its own right as a method of interaction with its unique characteristics distinct from the other augmented senses (Pangilinan, Lukas & Mohan, 2019).

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Smell and Taste

They are the only two senses directly connected to the limbic system of the brain, which is responsible for emotion and memory. Smell and taste can be carriers of stories, memories and emotions.

Although it would be exciting to investigate taste and smell, currently all projects are on an experimental

basis due to the difficulty of reproduction of odours and flavours. There are some research projects such as *The Dead Man's Nose* or *Synesthesia Mask*. The Dead Man's Nose investigates by using the smell to reproduce the Battlefield of Waterloo. Synesthesia Mask is a DIY project that consists into a mask helping the user perceiving smells from colours. However, this is not the place to investigate in-depth this executive aspect still in its infancy, perhaps too experimental.

In brief, it is vital to consider other senses when designing interactive experiences for spatial computing. Not only for engagement and immersive but mostly for addressing a complete perceivable experience without any possible lack of comprehension.

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fig.32 Synesthesia Mask



4.6 Storytelling and AR

AR is a powerful interaction tool, but above all, it is a technology that lends itself well to use in the narrative market, and therefore in interactive storytelling's range of action.

Stories tell us about the world. The best stories and storytellers make us feel immersed, just like we live the story. Stories take us to places, moments, locations, and other periods.

AR is a modern medium of communication with great possibilities to expand the human condition, to rethink the way stories are told, interpreted and experienced.

For that reason, the AR is suitable for a more deeply immersed and directly engaged user.

If you watch a film or experience something that is technologically portrayed or improved, it does not mean you do not use your imagination anymore; you keep applying it, enhancing what you experience further. AR will not supersede or replace the human imagination. Alternatively, it will expand it in new ways to further issues like learning, design and empathy, and even add a new dimension to innovation.

Moreover, the best experiences with AR will be the most creative ones. It is essential to keep in mind that we don't just simulate reality, nor are we restricted to the principles of the real. This medium is the prime pla-

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tform for modern expressive modes. It is these new and unique manifestations of imagination that keep driving wonder.

One of the primary perceived sensations among the users is the idea of presence.

Presence is a term mostly used in Virtual Reality to denote the experience and feeling of really “being there” in the simulated environment created by the machine as if it were a real place.

Whereas, Presence in AR is the experience of the virtual world blending with the surroundings as if the content were “really here” in your physical space, fusing with the environment. (Papagiannis, 2017).

144 A sense of presence in human perception evoking both emotional and physical responses is not unusual with new technology. The first time anyone encounters AR or VR, presence is typically compelling, but since the novelty wears off, the perception presented can become normal, and the presence will decrease.

We must push beyond the obsession with technology tricks and towards relevant content and meaningful experiences.

Strictly related to the concept of presence, there is the idea of *Aura* (Botler et al., 2004). *Aura* could be defined as a combination of the cultural and personal importance of an object or its location for a user or group of users.

Aura is personal because it defines the psychological response of an individual to an object or place and the personal nature of the *aura* is essential because ‘*aura*’ can only occur if the individual can connect the object or place with his or her knowledge of the world.

Part of the beauty of context is the integration of the real world (such as an event or place) and the unique meaning you add to it: your thoughts, tales and experiences.

AR pioneer Ronald Azuma (Papagiannis, 2017) states that a compelling AR experience occurs when we have a meaningful combination and connection between the real and the virtual.

This mixture of virtuality and reality is balanced by two strategies, Reinforcing and Remembering.

Reinforcing strategy recognizes a reallocation which is inherently stable, whether you increase it or not. You should increase it in a way that binds itself to the reality of that position and creates an interaction that is more impactful along.

Remembering is quite similar to Reinforcing, except for being more introspective. Remembering merges memories and stories with the real location where they happened, creating a robust sense of contextualized presence.

We are looking at the disruptive and innovative im-

part of this technology. The possibilities of AR reach far beyond the projection of images, concentrating on real-time perception, communication, immersion, sensory integration and a full new understanding of our environment. The user world will be evaluated continuously to get the most relevant experience.

Through posing these stories in a different time and space paradigm, AR experiences differ from and intentionally depart from the film: real-time incorporation in situ (locally in place) and with contextual relevance above and within reality.

Rony Abovitz, President and CEO of *Magic Leap*, says, “*We have been testing these experiential storytelling moments and trying to make a mixed reality, not a novelty, but a way filmmakers and others can create real experiences and things that elevate and add to the universe of something like Star Wars’ properties*” (Papagiannis, 2015, p.121).

Taking a step back towards visual AR, there are some best practices useful for the production of any narrative work involving this technology, here some of the most used and exciting for a digital storytelling project.

First of all, *Digital Try-On* helps you to be a part of the story. Whether you are wearing a digital mask, face paint, a clothing item or a prop, this practice reminds you of make-believe and wear costumes play, allowing

you to become someone or something else. The body is part of the experience of the increased material that is connected to you and moves with you, blurring the lines between the virtual avatar and the physical human. Second, the hole in the wall/floor/table, a sort of digital *trompe l’oeil* painting style.

This technique helps transform the virtual material that enters your physical space through a visual illusion. It combines the virtual story elements with your physical environment to improve your presence and immerse yourself further in the story around you. This technique is mostly present above many *HoloLens* applications like *RoboRaid* (2016).

Thirdly, there are the *ghosts*.

Ghosts are elements of storytelling in AR which works with the technology thematically. Ghosts worked particularly well in the early, glitchy days of the technology because the tracking and computer vision did not have to be precise or completely accurate. This is a great tri-

fig.33 Microsoft HoloLens



ck that could turn into a storytelling tool in which is provided with the access to the user to another dimension or a new world otherwise inaccessible to the naked eye.

Moreover, probably one of the most appreciated techniques from the audience is the living picture.

Living Pictures portrays a mystical experience with AR, like the portraits in the story series Harry Potter in which the characters portrayed in the paintings shift and communicate within the outside world. The inanimate is now becoming animated, springing to life with the Living Pictures Storytelling convention. It breaks the illusion of something that is supposed to be static or frozen in time and provides a gateway into another world of content coming alive inside the picture.

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Nowadays, the chief end of developing interactive storytelling products for AR platforms is mostly based on unique user experience. Nonetheless, a new wave of shared space and coexistence among users is slightly spreading.

Sharing a physical space with others is not always feasible. There are, however, some investigations. *Skype for HoloLens* (2016) and *Holoportation* (2016) from Microsoft Research, for example, bring people together online over distances to play and work together on a shared AR experience.

Holoportation is a new type of 3-D capture technology that allows the transmission in real time of high-quality 3-D images of people anywhere in the world. This innovative perception of the virtual and real space augments human memory and extends the way we tell stories, including the personal ones.

Other experimental aspects can be identified in the relationship between objects and their ability to tell stories, literally, talking objects.

The most innovative mobile-based app in this is *Blippar* (2011). The AR digital exploration browser software from Blippar is a blend of computer vision, machine learning, and artificial intelligence to help you discover more about your environment. By pointing the camera to everyday objects such as items, food, flowers and even pets on your smartphone, the app recognizes what

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fig.34 Blippar



you are looking at and offers ways to engage further with the subject.

TechCrunch referred (December 2015) to Blippar as “building a Wikipedia of the physical world” with its visual browser. If this “contribute and consume” model is applied, it really could become an augmented Wikipedia for humanity.

Another exciting aspect of storytelling and user is related to the relationship that exists between the perception of ourselves and ourselves in a virtual world when we assume perceptible appearances to others. We are slowly shifting to become augmented humans or augmented characters of our life, investigating our perception and way of action is another challenge to face in the future.

To conclude, interactive storytelling and AR are two

disciplines that influence each other. In the next future users will benefit from the illusion of non-mediation. Reality and virtuality will become one unique thing in which technology drives storytelling and vice versa, with no contrast anymore.

4.7 AR is AH

We rapidly slid from the idea of developing technology able to deliver AR products to create meaningful experiences for the user, according to the primary trend of human centred design and human life design.

It is hard to define what AR is since defining a type of reality means defining a new universe, but it is possible to give some short examples of what AR is.

Surely, AR is many things. It is visualizing experiences, the before and after of a place giving additional meaning in situ. It is additional information in our environment, like *Google AR translator*. It is a magical explorative experience, *Ingress* by Niantic, for instance. It is a multi sensorial experience. It is a calm hidden technology. It is a communication experience. It is a sensorial superhuman experience. It is a way of measuring reality. It is customizable. It is a human fact of our daily life.

As our world is becoming Augmented through AR, we

fig.35 Scene from video HyperReal



should start to visualize and define ourselves as augmented humans, that is why it is possible to say that AR is AH.

5. AR Games as a source of Design for Interactive Narrative Experiences

5.1. Augmented Reality Games

Unlike traditional video games, mobile augmented reality games are not imprisoned in the screen-space but provide for interaction with the world that surrounds us. They incorporate real locations and objects into the game, therefore tapping into a set of pre-existing thoughts, emotions and real-life experiences of its players, which in turn provides the material for a much richer gaming world and user experience.

Augmented reality does not necessarily add anything meaningful to the gameplay. Players will not have “more fun” just because some 3D objects are placed in the environment! Game designers and developers should think hard before incorporating AR into their designs to assure that the game truly benefits from it.

Augmented refers to the virtual part of the game. The 3D content must bear more meaning in the context of the game than a simple icon on a 2D map can convey.

The reality, however, is often underestimated in augmented reality games. During the game design, people focus too much on the virtual part, and as a result, the game loses much of the inherent potential of augmented reality. Instead, the real environment needs to be embraced by such games and brought into the context of the game, thus creating a contextual mobile augmented reality game. If the game is closely tied to reality,

players become much more engaged in the game, than if the actual location of the game is entirely meaningless in game terms.

Mainly, AR Games are divided into three categories, True mobile AR games, Loosely coupled mobile AR games and Contextual mobile AR games.

- **True mobile AR games** depend heavily on the user moving about the game space. Here, this spatial movement is crucial for playing the game. Most often a combination of GPS and inertial sensors is used, but computer vision tracking is also possible. The game is experienced by the player on the screen of a mobile device or by using head-mounted displays. For this group, we distinguish between loosely coupled mobile AR games, and contextual (strongly location dependent) mobile AR games.

- **Loosely coupled mobile AR games** are actually played without, or tiny relation to enclosing places. Due to this, they can easily be performed at different locations. Sometimes they have specific constraints like, e.g. playing in streets or on side-walks, but can still be replaced with reasonable adjustment as the obstacle is found in many similar locations. Currently, most true mobile AR games remain loosely coupled as the following examples that can be played virtually almost



fig.36 Ingress Trailer

everywhere. *Ingress* or *The Jurassic World*, for instance, are AR games that have almost no relation with the place in which the game takes place.

Contextual mobile AR games have a strong relation to the game area they are played in. This can be a real place, highlighting the storyline of a game visually, acoustically or olfactory and therefore indeed creating a mixed reality experience. Due to their strong relation to the surroundings, these games are typically hard to move to different places. For example, *The Breda AR City Tour* is a tour game that is strictly related to the german city of Breda.

Wetzel et al. (2011) defined some guidelines that still today are exceptionally functional for the design of an

Augmented Reality Game. Here are shown as a resource that could also fit production for Interactive Digital Narrative for Locative based experiences.

General Guidelines

- Overall, it is better to justify the use of AR;
- Engage players physically. One big advantage of mobile augmented reality games set in the outside world is the fact that players have to physically move around to explore the game area. Try to create situations where they not only have to casually stroll along but have to walk faster or even run. Giving the players time-critical tasks can significantly increase their involvement within the game.

Virtual Elements

- Create meaningful AR content. The visual features that augmented content brings into the real world need to live up to their potential. Furthermore, overly large objects are also a prime example of engaging AR content. If players encounter such objects, they cannot just “zoom-out” to view the whole object. Instead, they need to lean back and hold the device up high, walk several steps to the side and might even be able to enter a virtual building.

- Create fully-fledged characters. By choosing professional sounding voice actors and emotionally engaging dialogue, you can create convincing characters. Equipped your characters with believable personalities and emotions, and get the players involved with these emotions. When trying to create compelling virtual characters, give them (possibly unsuspected) social behaviour.

- Create rich scenery. When creating virtual content, it is appreciated by the players if there is a considerable amount of it. Atmospheric scenery objects help the players to immerse themselves into a place.

- Go beyond the visual. While the visual augmentation of the real world is the central aspect of every AR game, don't forget that there are other ways to augment reality as well. Audio, for example, is always a great choice to emphasize a specific ambience.

Real World Elements

- Make the journey enjoyable. The paths the players walk along should be designed to fit the theme of the game and narrative structure. This could be a street where the buildings give a heightened sense of interest at specific points. An additionally bright start and endpoints (and perhaps middle point) should be cho-

sen for placing content to create a dramatic build-up and a reward for the players. When plotting routes for the players to follow and locations to visit, try to keep everything new without the players having to walk back the same way they came. One way to overcome this problem, if there are no other solutions, might be to provide new and exciting virtual elements for the second visit.

- Comprise atmospheric elements from reality. Location scouting should not be limited to only looking for visually exciting places. Although this is an evident and essential quality to look for, other aspects are also worth investigating. Every site can also have certain audible, olfactory or other features that can significantly affect your game and are worth exploiting.

- Include other (non-digital) media. Augmented reality games do not necessarily have to focus entirely on digital technology, and the utilization of real-life props creates a more encompassing game experience.

- Think about security. Walking around while being immersed in an AR environment significantly inhibits the user's abilities to correctly judge dangers or notice them in the first place. Therefore, it is recommended to be very cautious when placing the virtual content and

deciding where the players will walk along.

- Plan ahead. Scouting the game locations in advance is a crucial step to make sure that the conditions are suitable for the game in terms of mobile phone connectivity, ambience, crowds etc. Besides, it is always wise to also check the calendar for events taking place that can completely change the chosen space. Therefore, check the physical suitability for not only your chosen locations, but also the temporal one.

Social Elements

- While single-player experiences can be fun, we found that enabling and encouraging collaboration between users has direct benefits for their engagement and is therefore desirable.

- Use complementing roles. To foster collaboration, it helps if players perform different tasks with their devices as this way each player is needed. Not all players necessarily need to be equipped identically, therefore. It is, however, a good idea to encourage device sharing or showing the screen to the other player. This brings the players physically close together and creates collaboration when they jointly work on a problem.

- Use non-player characters. One of the most rewar-

ding experiences in mobile augmented reality games can be the inclusion of other people in the game. This creates an element in the game that is not part of the virtual game space and allows natural interaction with the players.

- Encourage discussions. Engagement into a game can be increased when a player has to voice his thoughts and discuss them with fellow players. One possible topic can be strategic discussions in action-oriented games, another way is presenting a dilemma to the players where they are forced to make a decision.

162 • Avoid crowded areas. People are one very unreliable element for mobile AR games. It is hard to foresee how strangers will react when they see the players equipped with (possibly strange looking) devices. However, this especially becomes a problem when it happens to be crowded.

Technology and Usability

- Make the technology part of the game. Augmented reality games require technology to be played.

- Keep the interaction simple. As augmented reality games are still new to most players, the technology itself typically occupies a lot of their attention already. Espe-

cially when they are played in the real world, players are often on their own without access to playing aids for example.

- Take display properties into account. Similar to computer vision tracking and GPS, there are two main options for merging the real world with the virtual content and creating an augmented reality.

- Take tracking characteristics into account. All tracking approaches that can be currently applied in mobile augmented reality come with inherent weaknesses (and strengths). The other standard option is to use a combination of GPS and orientation sensors to calculate the player's position and direction. With this approach, one can achieve constant tracking in the complete game area (unless the players enter a building) and therefore create a continuous AR experience. The main drawback is, of course, the somewhat limited quality if the positioning which leads to virtual objects that jitter and float around. The problem becomes, even more, severe when using standard smartphones that use less advanced sensor technology than dedicated devices. This can be very distracting for the players.

- Avoid occlusion-rich areas. Mutual occlusion between real objects and their virtual counterparts is a com-

mon issue within AR applications. If a virtual character moves around the corner of an actual house, the house should hide the character from sight. If an accurate virtual model of the real environment (and accurate tracking) is available, it can be used as a stand-in object to achieve the desired visual effect. But what about trees? Cars? People? Temporary construction sites? Scout out the locations in advance and be aware of these real-life obstacles. If it is not possible to solve the occlusion technically in a convincing manner, the virtual objects should instead be placed elsewhere.

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- Design seam fully and for disconnection. When playing mobile games in the real world, technology can often malfunction. There might be areas without GPS signals or mobile reception. Make sure that the game does not break in such instances, and never expect perfect conditions for network communication.

Although these guidelines are a rich source of design, designers of interactive digital narrative should consider which steps could be taken into consideration, and which one is useless in the process of creating interactive stories in which playing is not the primary goal.

5.2. Location-based Augmented Reality Games.

Pokemon GO as a successful case

The world of augmented reality gaming is spreading and becoming increasingly essential not only for the ‘for-fun’ gaming industry but also as serious games in different domains. The scientific research follows the rapid development of this emerging field carefully and in many cases, paves the way for its future.

Location-based games have a long history, dating back to pioneering experiments with mobile and GPS (Global Positioning System) technologies in the early 2000s. Players of these games were tracked through their mobile devices as they traversed the (usually urban) landscape, chasing or ‘shooting’ each other, collecting virtual items, and completing missions or quests

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fig.37 Pokemon Go



(De Souza e Silva and Hjorth 2009; Drakopoulou 2010; Leorke 2018).

At the current state, Location-based Mobile AR games merge AR and GPS technologies in parts with the well-known concept of pervasive gaming (Oppermann and Slussareff 2016). Today, Through the success of *Pokémon GO* and *Ingress*, the genre of mobile AR games has proven to be ready for the mainstream.

Ingress (Niantic 2012) is built on the concepts of its early predecessors, bringing digital gaming into public space. However the big leap was in 2016 for the release of Niantic's follow-up to *Ingress*, *Pokémon GO*, that took location-based gaming to new heights of popularity. The game reached 65 million active players in its first months of release, and at the time of writing has generated over US\$2 billion in revenue, breaking previous records.

To better understand this phenomenon, we should also understand what type of user/Player is involved in Location-based Mobile AR games.

A valid system of classification could be taken from *Bartle's Player Taxonomy* (Bartle 1996). Although it was developed for players of multi-user dungeons (MUDs), it seems suitable for classifying *Pokémon GO* players:

What emerges is that in this case, players can start com-

munity ventures (Socializer), and they can collect items, e.g., Pokémon and badges (Achiever). The exploration of new locations is a part of the game (Explorer), as well as fights with other players individually or at a group level (Killer). Substantially the players of *Pokémon GO* reflect all the four categories of Bartle's in one.

In the context of game studies and game design, researchers have mainly focused on players' motivations and reasons for playing (Yang and Liu 2017; Zsila et al. 2018).

For *Pokémon GO* to transform its players' relationship with the people and the physical environment around them through the game. Of these, the study by Vella et al. (2017) is perhaps the most comprehensive to date. Their findings are mostly positive, concluding that the game produced a sense of belonging, facilitated conversations between strangers, and strengthened social ties, due in large part to the game's accessibility, ubiquity, and the level of enthusiasm and passion from players (Vella et al. 2017, p. 15–16).

Other studies of players' experiences of social interaction and public space include Lee et al.'s (2017) analysis of 'hotspots' where players exchanged advice and stories about the game; and Oleksy and Wnuk's (2017) analysis of the game's potential to facilitate place attachment amongst players.

Having something in common to talk about with strangers, the game-related discussion often occurred in the respondents' memories in addition to helping other players with the game. Some players described making new friends while playing, sharing happiness. Bonding through playing *Pokémon GO* was also mentioned several times in interviews. Also, a sense of community emerged in many of the respondents.

Many of the respondents' memorable experiences were funny stories. The game drove players to do things that they would not normally do if not for *Pokémon GO*.

Some of the players' memorable experiences were related to spectating other players. Often this was admiring how parents and children are playing together.

Pokémon GO acted as an 'ice-breaker' for strangers playing the game around others in public.

In addition to the general location where memories took place, respondents discussed sightseeing while playing the game, ending up in or discovering new places on their trips for hunting Pokémon. Respondents also discussed travelling especially for Pokémon hunting or catching Pokémon while they were doing travelling for other reasons.

As Leorke (2018, p. 58–61) points out, a second essential claim made about location-based games concerns their potential to transform everyday locales through play and encourage players to visit new locations and

see familiar areas from a new perspective.

5.3 Play and Learn in Location-based AR games

In this chapter, we focus on design guidelines that can facilitate the creation of engaging and motivating MARGs (Mobile Augmented Reality Games) not only for the game process but also for the learning activity. The results are a valuable resource for every digital AR experience and project that involves short gaming interaction or gamification.

Heinrich et al. (2019) discuss in their research on which are the triggers of activity changes of particular importance: What causes the players to desire to use the mobile game and what ends the usage? And they individualize two types, "Daily bonuses" and "events".

"Daily bonuses" provide a reward with game resources. For instance, the reward scheme at *Pokémon GO* seems to be so attractive that it motivates players significantly. Additionally, friends asking to play collaboratively is also perceived as a very relevant trigger.

As regards ending triggers, the most important trigger is the need to return to real-life activities, "no fun anymore".

However, not only triggers are relevant at the beginning or at the end of the game. The main goal of Hein-

rich et al. (2019) studies on Ingress and *Pokemon Go* is to identify and investigate what mechanics are perceived triggering the desire for long-term involvement of mobile location-based AR games, such as *Pokémon GO* and *Ingress*.

The primary motivating factors identified in the study are:

- Outdoor and physical activities;
- Teaming up;
- Exploring formerly unknown environments;
- Collection of in-game items, such as capturing Pokémon ;
- Competition and fights;
- External triggers as incentives. Pokémon GO's game design contains many external incentives, such as community days and raid battles. Since motivation diminishes with time, the design of serious games needs to set new stimuli repeatedly to build up engagement;
- Accessibility and availability. This is expressed on the one hand by the ubiquitous availability of locations linked to the gameplay, and on the other side, by the fact that gameplay is supported during movement activities;
- Successful reward schedules. Points and badges are generally known to have only weak motivational effects. With the reward scheme "Daily Bonuses".

When we are talking about games played in real-wor-

ld places, it is necessary not only to focus on how to start the experience but also on what happens when the experience is going on. What emerged by several studies, is that meanwhile the gaming is flowing in the discovery process, the players learn about places, areas and point of interest.

The identification of learning-induced by *Pokémon GO* could be associated with Incidental Learning. Incidental Learning refers to any learning that is unplanned or unintended, occurring when engaging in a task or activity, just as chasing Pokémons.

The unintentionality of Incidental Learning does not exclude post-learning intentional reflection, even if there is no agreement among scholars on that point (Kelly 2012).

Incidental Learning has been taken into consideration in special connection with the 2.0 world, since, in today's life, a lot of time is spent on surfing the Web, primarily via mobile devices (Wang 2014).

While students are doing a gaming activity which contains hidden information, they learn 'by the way'.

Games like *Pokemon GO* are often built around the idea of mapping real-world actions to a parallel virtual game world, with interplay at particular POIs. In this process, physical or digital maps (Nadarajah et al. 2016) often guide players' navigation between POIs.

The concept of augmented Learning spread to a wide range of subjects (Alhaija et al. 2017; Han et al. 2017) and often involves game-based Learning and mobile outdoor activities (Brom et al. 2010; Dunleavy and Dede 2014). As discussed by Klopfer (2008), augmented mobile games have the potential to connect gameplay, real-world and schools. As with PokéStops, which included the point of interest represented by main spots like Busts or Human Heritage Sites with its social and learning function.

In a study by Laine (2018), Educational Mobile Augmented Reality Games (EMARGs) are used with success across different subject areas.

However, an effective learning process requires that the learner is motivated to learn the topic at hand. In reaching this status in the learning/playing process, motivators should be applied, and disturbance factors avoided.

A motivator is a positive force that helps learners become interested in the task at hand, and to maintain that interest throughout the learning process.

A disturbance factor is a negative force that distracts the learners for the task and the experience.

Teemu, Laine and Haejung Suk (2019) from previous research of Laine and Suk (2018), propose 24 design guidelines divided into six categories. For each guide-

line, they identify which motivators (M) the guideline helps strengthening, and which disturbance factor (DF) it helps to diminish.

The first category is Gameplay

1. Provide opportunities for competition and collaboration, and allow the player to choose their preferred gameplay mode.

Competition (M), Teamwork (M)

2. Encourage world exploration by physical movement; however, make sure that the extent of movement matches with the requirements of the pedagogical setting (e.g. available time, safety requirements) and provide per-player customization option of the amount of required movement.

Physical movement (DF), Physical movement (M)

3. If the game requires physical movement, allow players to use navigational skills but provide an appropriate level of guidance if they cannot find the place (e.g. analysis of movement patterns).

Navigation (DF), Navigation (M)

4. Avoid repeating similar content and game activities for a long time (even if the player repeatedly makes a mistake), and try to surprise the player occasionally.

Monotony (DF), Surprise (M)

5. Nurture engagement through tension (e.g. timed tasks, limited resources) but ensure that the overall experience leaves the player relaxed.

Immersion (M), Tension (M), Thrill (M), Relaxation (M)

6. Provide a way for the player to find hidden and/or surprising things to proceed in the game.

Discovery (M), Surprise (M)

The second section is Scaffolding and progress

174 7. Allow the player to practice AR interaction before playing the game for the first time.

Inconvenient AR interaction (DF), Inconvenient interaction (DF), AR Interaction (M), AR Content (M)

8. Provide an in-game tutorial on the essential game features, as well as contextual and personalized scaffolding hints (e.g. based on the player's location and their skill level) to the player.

Lack of Scaffolding (DF), Lack of tutorial (DF), Unclear instructions (DF), Feedback (M)

9. Provide clear instructions on the game's objectives and on reaching those objectives.

Unclear instructions (DF), Advancement (M)

10. Show the progress of the gameplay to the player by, for example, points, trophies, and milestones.

Feedback (M), Achievement (M), Advancement (M)

The third section is Customization and control

11. Allow customization of gameplay experience by the player and by the teacher (e.g. story creation, challenge creation, changing preferences). This can be done with a dedicated story editor, for example.

Lack of control (DF), Lack of customization (DF), Control (M), Technology (M), Fantasy (M)

12. Allow the player to control and manipulate the game world, including characters and interactable game objects.

Lack of control (DF), Control (M)

The fourth section is Pedagogy

13. Detecting the player's skill level and adjusting the difficulty of challenges and other parts of the game content so that the player can stay in the ZPD.

Below ZPD (DF), Beyond ZPD (DF), Wrong age group (DF), Challenge (M)

14. Avoid overemphasizing pedagogy at the expense of

watering down the fun factor of gameplay; strive for seamless integration of learning content and game mechanics.

Too educational (DF), Fun(M)

15. Ensure that a game session length complies with the intended pedagogical setting (e.g. a classroom) and allow continuing the gameplay at a later time.

Lack of time (DF), Too short (DF), Lack of access (DF)

16. Be fair when the player makes a mistake; use a constructive carrot rather than a stick.

Unfairness (DF)

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17. Nurture understanding of the player on how the game and the pedagogical content can be of use in the real world (i.e. real-world relevance). The relevance of AR content to the real world context is especially of importance.

Usefulness (M), AR Content (M)

18. Provide challenges that do not rely too much on remembering facts, but understanding them. If the cognitive load is necessary, allow dividing it among team members, for example.

Cognitive load (DF), Teamwork (M)

19. Provide positive disturbances (e.g. disturbing content, conflicting content) to challenge the player's ideas and make them think deeper.

Disturbing content (DF), Conflicting content (DF)

The fifth section is Immersion and fantasy

20. Provide a sufficient level of realism, fantasy and immersion to help to achieve suspension of disbelief (Brown 2012).

Lack of realism (DF), Quality of graphics (DF), Technical faults (DF), Lack of technical performance (DF), Believability (M), Fantasy (M), Fun (M), Immersion (M), AR Content (M)

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21. Give the player a chance of becoming a "hero", thus feeding achievement, altruism and fantasy.

Achievement (M), Altruism (M), Fantasy (M)

22. Provide a well-written story (or another structure) that connects together various game components and helps to immerse the player in the experience. If possible, connect the story to something that the player already knows.

Lack of Control Fantasy (M), Immersion (M), Nostalgia (M)

The sixth and last section is Media and technology.

23. Utilize rich media content that facilitates immersion in the game experience, but use mock-up testing with end-users to ensure that the media used in the game are appealing and acceptable

Inappropriate graphics (DF), Quality of graphics (DF), Inappropriate sounds (DF), Appearance (M), AR content (M)

24. Apply state-of-the-art technologies to implement the game, but also create and execute plans for technical and usability tests to ensure that the technology and the game content work in most situations.

178 Technical faults (DF), Lack of technical performance (DF), Language errors (DF), Technology (M), Novelty (M), AR content (M)

Of course, becoming aware of various motivators and disturbance factors and following related EMARG guidelines to avoid them does not guarantee disturbance-free learning experiences. There always exists a possibility for disturbance factors that cannot be controlled by the designer. Designers are therefore suggested to employ an iterative design-implementation-evaluation process, preferably with end-user involvement in all phases, that allows such rising disturbances to be identified and seized early.

These guidelines are taken under consideration during the design of the research project. For example points three, five and six from the first section are followed guidelines in the project. Same as for points nine and ten of the second section. From the third section, points fifteen and nineteen have been experimented. Last but not least, fundamentals for designing the journey are point twenty-one to point twenty-four. All of these aspects are discussed more in detail in the project's chapter of this research.

fig.38 Pokemon Go and Ingress Maps



6. Interactive Storytelling for Heritage

6.1. Interactive Storytelling and Cultural Heritage

Digital storytelling in cultural heritage contexts has been universally recognized as a path that institutions of cultural heritage, including museums and historic sites, need to invest in to attract and engage their audiences (Pujol et al. 2013; Twiss-Garrity et al. 2008).

The production of digital storytelling experiences for cultural heritage is a result of collaboration in multidisciplinary teams:

- *Domain experts.* These include museum curators and experts in museum content and topics (archaeologists, historians, art history experts, etc.). They provide the interpretation material on which the storytelling experiences are based.
- *Exhibition designers.* They are responsible for the setup of the museum exhibitions and the equipment that is made available to the public to them. They provide a view of what the visitors need, in terms of common questions, interests and approaches that work, or not, in the Gallery or Site.
- *Storytellers.* They provide the plot of the story and author its textual parts.
- *Digital asset designers.* They are in charge of digital asset creation and the combination of such assets into interactive activities, composing thus the complete storytelling experience.

In this analysis, we focus on mobile experiences, addressed to visitors that are present at a cultural site, establishing early on their objective, taking into account the institutional needs and budget.

An interactive storytelling approach for story design and implementation in cultural contexts requires specific and detailed guidelines for each step. We are starting from the collection of the interpretation material to staging of the story in the physical space, to the creation of assets and the compilation of the end experience (Katifori, 2018).

Here are shown some of the main stages for production individuated by Katifori et al. (2018)

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First, personas feature among the design tools available to the author when compiling a story. They can be used to “tag” particular story elements and assets such as images, videos and other material.

Nevertheless, in the sense of heritage or museum, introducing oneself at a site alone is relatively rare for a visitor; instead, visitors tend to visit as part of a family, friendship, or larger tourist group. With that in mind, creating storytelling applications and experiences for groups of people, and not just individuals, would be significant for future projects.

As Crawford (2005, 17) suggests, “*Stories are about people, not things*”. The attempt to create storytelling

where the objects themselves are the main objective and the plot and characters are built around them results in experiences that are bound to leave the visitor feeling that something is missing, that “*the experience is not a story*” (Roussou and Katifori 2018). Crawford (2005, 20) suggests that story-makers should concern choices that characters make, either dramatically salient ones or less obvious ones.

One more difficult issue to address is the potential discontinuity between the actual physical environment in which the audience encounters the story, and the story itself. Even if the story takes place in a specific historical site in which the tourist is present, if there is a discrepancy in the time, the consumer must resolve this past-present temporal disconnection through storytelling, a reality that could have a detrimental impact on the entire experience.

Perry (2018) suggests developing experiences which are set in the present, exploring concepts and ideas that were manifest in the past, but through a contemporary lens. In this sense, the visitor is using their own experiences to help make sense of history.

The focus of the user’s need for “interactivity” is in two main points:

-Interacting with the exhibits: Several users felt that elaborate exhibits (e.g. scientific instruments) would be

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better showcased through an interactive activity explaining their different parts and their use, if such an action could fit in the overall story concept.

-Interacting with the story plot: As already mentioned, although the stories featured several branching and decision points, most users could feel that they are too guided and the story is too “linear”. We should avoid giving them the role in the story of a spectator, an “invisible” and transparent character that follows the main character with no possibility to interact with him or her in a meaningful way.

As Crawford (2005) explains, the story “richness depends on the functional significance of each choice and the perceived completeness of choices offered”.

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From the study of Katifori et al. (2018), visitors seemed to request “more interaction”, which seemed to translate to more control over the story plot.

Main challenges faced when introducing interactive storytelling in on-site mobile cultural heritage experiences are:

- A shared vision has to be established to avoid conflicts between the various experts taking part in the process;
- There needs to be a good understanding of what an interactive narrative is, and what are the opportunities, challenges and limitations that it could bring in the process;

- Authors need to follow concrete guidelines and learn how to use new types of authoring tools;
- Group personas need to be defined to target group visits, which are much more common than single ones but often overlooked by technology experts;
- The stories created should be about people and not objects, regardless of whether these people are invented characters, historical persons, or even the visitors themselves;
- Experiences need to be carefully staged in the physical space to help the narrative unfold and create a connection between past and present;
- Interactivity should be meaningful to the visitor and focused on the visitor-exhibit interaction as well as the interaction with the story plot;
- A delicate balance between the physical world and the story world is needed to avoid having visitors absorbed by their mobile’s screen.

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6.2. The idea of Presence

Terms such as “completely immersive” and “as-if-real” have become synonymous with the rise of audiovisual, multimodal and interactive technology capable of occupying our perceptive system and simulating environments that elicit a sense of ‘being there’. (Bowman & al., 2007).

Spatial Presence has originated as the most significant subtype of Presence, according to the theories of telepresence and teleoperation mediated by machines (Steuer, 1992).

From a media-psychological standpoint, there are two aspects involved in spatial Presence:

1. A simulated spatial environment where one feels located;
2. For that mediated environment to offer perceivable options for activity (Wirth et al., 2007)

In Virtual and Augmented Environments, Spatial Presence perception could be divided into three phases. The first one is about place illusion (I am here), the second is plausibility (this is happening), and the third one is body ownership (it is my body). The higher is the level of display of the environment, the better is the level of immersion.

With Interactive Digital Storytelling, we find a media experience, which utilizes a storytelling engine (system), offering action possibilities (interactivity) to influence the narrative (immersive) experience intentionally. Immersive experiences evoke Presence. Likewise, to reach an order of immersion and the idea of Presence, we could find some good examples from Immersive Theater (Jenkins, 2004):

1. The ability of spatial stories to evoke pre-existing

narrative associations;

2. Provide a backdrop where narrative events unfold;
3. Embed narrative information within their mise-en-scene,
4. Provide resources for emergent narratives.

Spatial Presence exists according to space. It is space, marked with disparate anchors of locations and areas, each carrying meaning, temporal significance and memories, which serves as the backdrop against which our individual life stories unfold.

Space is not a small container nor an a priori. It is an experiential environment whose qualia and character are produced through behaviour, ritual, and human activity (Drucker, 2011).

Space allows action and movement, which is carried out as a tool through the body, over a temporary period, allowing a narrative. It is vital not to confuse or restrict affordances to minor things one does inside an environment. They are a relational complementarity between subject/environment, subject/object, object/environment, all at the same time (Gibson, 1977).

An excellent study on the idea of Presence in Historic Sites is the *SPIRIT project* of Spierling, Winzer and Massarczyk (2017). The results from this study are beneficial for the development of interactive locative storytelling AR-based, both for Cultural Heritage Sites

and none.

Just to have an overview on the research, the *SPIRIT* research project is a location-based Augmented Reality (AR) storytelling application that has been developed to support the imagination of lively historical events at places of cultural significance. One hundred seven random voluntary visitors were observed using the app, before filling questionnaires that were then analyzed. Further, there have been differences in the experience of Presence concerning the AR representation, as well as in the comprehension and appreciation of the story's content.

190 The visual recognition used for the project is based on the ORB algorithm (Rublee et al., 2011), searching camera images for matching pixel patterns in a set of a reference image. That means that the camera should

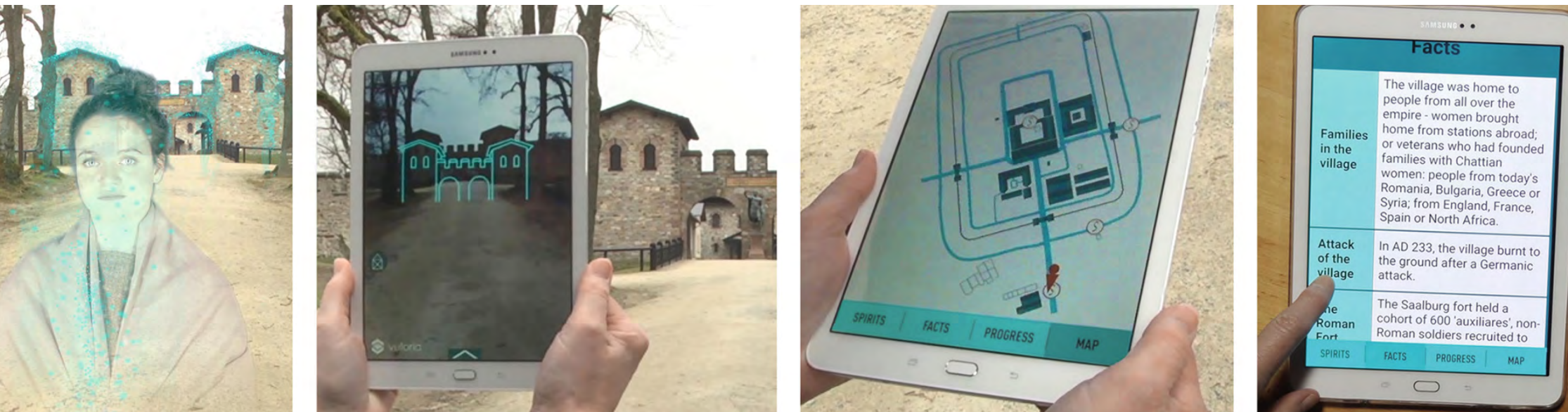
recognize a lively location on previous learning from pixel-based images. However, on days with frequent changes in lighting conditions, the system might still have difficulties, resulting in recognition failure as well as in false positives.

The augmented content consists of prepared video sequences with live-acting characters. Bluescreen production and chroma-key postproduction let them look like floating in thin air on top of the device's camera image of real surroundings.

In the study, there were many positive reactions to the first appearances of Augmented Reality (“*Oh how cool*”, a girl trying to ‘*feel*’ the ghosts) and awareness that the real environment is seen through (friends/partners try to join the spirits in the camera image, “*I can*

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fig.39 *SPIRIT* project screens



see you”). However, although the majority thought of the romantic aspect as positive or neutral, about a quarter of the interview partners expressed negative remarks about it (“*Amusing, but unnecessary*”/“*I was rather bothered by it, because it is [...] not so much related to the Saalburg, rather a private story, appeared inappropriate to me.*”) Others indeed realized its relationship to the Saalburg (“*Why not! I mean, when I just want to present how life was here in general, then it’s probably just necessary*”).

Based on the quantitative evaluation founded overall, users liked the app and would recommend it.

The regression analysis suggests that the “*Perceived presence of ghosts*” has the most substantial influence on the extent to which users of the app could immerse themselves into the history, “*Audio*” has the most significant impact on the extent to which users of the app feel ghosts present. The variable “*Suspense of the story*” has a powerful influence on the area to which users like the story.

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fig.40 SPIRIT project user test



6.3 The Hidden Heritage

A study by Tanis Grandison (2018) analyses the process of folklore and space sensemaking here shown.

Folklore consists of two main components. The Folk; defined as two or more people with a commonality, delineated into four broad categories of Things we (i) Say, (ii) Do, (iii) Make and (iv) Believe (McNeil, 2013). For something to be folklore, it needs to be ‘traditional’.

Social Media Sharing has brought to an idea of folklore more liquid. By looking at it as a flow, we can see how in the context of digital media, the flow of Folk is critical because it affords individuals methods of appropriating place-based narratives in ways that are meaningful to people, like place-tag on Instagram.

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Critical Heritage can be understood as oppositional to Authorised Heritage Discourse (AHD) which constructs categories of value, systems of protection and cultural identity. AHD is also associated with an educational imperative whether through heritage sites, museums or digital resources. AHD necessarily excludes more complex narratives that belong to minority groups whose histories are not formally recognised through funding or institutional systems (Smith, 2006).

In “*the modern discourse of anti-tourism*” (Van Neunen, 2016), a new way of exploration is translating into

the desire of travellers to go beyond superficial tourism experiences and connect to locals and local knowledge (Paulauskaite et al., 2017). The use of digital technologies has fostered a transformation of tourists experiences and expectations towards more meaningful complex and authentic ones (Buhalis & Law, 2008), (Wang et al., 2012).

The evolving use of digital media within Critical Heritage affords numerous opportunities for exploring narratives, spaces and identity in a variety of ways, the hidden Heritage have the chance of emerging at direct contact with the audience finally.

194 **6.4 Driver of the next-generation tourists**

In a study from Gapiuk, Estupiñán and Szilas (2019), they analyse the effect of a higher level of interactivity on the Interactive Narrative Experience.

The outcomes of this study are three different types of drivers that are useful in every locative storytelling experience, and so for Cultural Heritage Sites.

Control

The feeling of control over the storyworld is one of the critical elements that can determine user engagement (Riedl & Young, 2006) and sense of Presence (Lombard & Ditton, 1997). But in a branching story structure, this

feeling is limited by the number of possible paths of the story offered to users (Riedl & Young, 2006). The user experience in the narrative is likely to be homogeneous if they are prompted to make the same choices over and over, which could lead the user with an impression of loss of control over the story.

Curiosity

The user can be “curious” about story progress, “What will happen next?”, and the consequences of her decisions on the interactive story, “What will happen if I choose this option?”. Roth et al. (2009) noted that when curiosity appears, users experience a temporary uncertainty which leads to a particular physiological state, enjoyable for most users. For Roth et al. (2009) such a repetition of increased and reduced curiosity “create a chain of pleasant affective dynamics”.

Frustration

Nylund and Landfors (2015) made a distinction between bad and good frustration. According to them, bad frustration is related to technical problems. At the same time, the emotional state causes good frustration in the game and which allows a more profound sense of immersion and engagement.

All in all, Obsolete options should be removed once they have already been made and Repetitive options

7. The Project

give the impression that you are in a loop and you lose the motivation to continue.

Some respondents users noted, *“I want to repeat this experience to know the other possible situations.”* Here is where we should bring the tourist, into a higher level of curiosity and a deeper level of exploration.

6.4 Conclusion on Cultural Heritage and Interactive Digital Narrative

To conclude, both Interactive Digital Narratives and AR mobile-based technologies are a new way to experience both Cultural Heritage and Hidden Heritage, especially to bring out the latter and augmenting the sense of presence and belonging to places.

Additionally, what emerges is that stories belonging to cities and related to specific areas situated in unusual spots could become points of interest, and could benefit from a new flow of new tourists. The literature and researches about the relationship between Digital Narratives and Cultural Heritage are excellent sources of inspiration and implementation for the design of new experiences and the production of new interactive stories.

7.1 Discover and Define the Problem/Opportunity

The research path of this thesis can be considered simultaneously serendipitous, exploratory and analytical. The problem/opportunity definition carried is a divergent approach that moved in parallel on two apparently distant disciplines, tourism and digital interactive storytelling. In a process of re-alignment of the fields considered, we will see how the outcome is more a hybrid product for the entertainment and the tourist markets within a *Blue Ocean* (Kim & Mauborgne, 2004).

By triangulating data and sources, what emerged in the preliminary research is:

In the tourism market, we found a growing trend towards the experience economy (Verganti, 2006). Tourists are looking for more customizable experiences and trust more and more in the digitalization of services, see more in chapter 3.

As for digital mobile-based services for tourism, there are already many types of tech facilities ranging. From booking a flight (e.g. *Expedia*, *eDreams*) to finding local restaurants and attractions (e.g. *Tripadvisor*, *Yelp*) to more experience-oriented services such as *Airbnb Experiences* and *Spot by Locals*. These services, although digital, face a front-end flat 2D screen-based user interface approach that, despite innovation, remain

mainstream.

Instead, this research look at new emerging technologies in the mobile field, in particular, as analyzed in chapter 4, Augmented Reality (AR).

As widely shown in previous chapters, AR is a technology that has found particular success in the mobile market share in various disciplines. In the tourism division, it has been used mainly for marketing purposes, navigation in the urban scenario (e.g. *Tunnel Vision* for New York Subway) or to break down language barriers. At the same time, we recognised in chapter 6 the use of AR as a technology used for interactive storytelling and tourism purposes.

200 By adding an example, several are the museums that have expanded their range of cultural offerings with new interactive experiences for alternative routes within their facilities. It is certainly worth mentioning the successful *Skin and Bones App* of The Smithsonian National Museum of Natural History. The app consists of mobile AR visualization of internal parts of the stuffed animals, for its success has begun one of the main case studies of interactive AR experiences for cultural activities.

Restrictively, this sort of interactive experience does not exploit the problem and opportunity of a public space like the city one, which is actually the table of analysis of this study.

As regards the city and the AR for cultural experiences, there are already many experimental, non-commercialized projects. Of particular interest is the *Breda AR city tour*. In the Breda' journey, users can view AR 3D animations in defined hotspots of the city of Breda and learn about historical events related to those places.

Similar to the Breda's concept is the Timetraveler Augmented *The Berlin Wall App*. The project uses the mobile device as a window on Berlin, overlying historical multimedia excerpts that adhere to monuments and buildings, telling daily stories about the life and misfortunes of Jewish families during Second World War in Nazi Germany. Last but not least is the google experience *Stonewall Riots*. At google labs, they developed this project to tell the Story of the *Stonewall Riots*, celebrating the 50th anniversary of the New York City LGBTQ movement with virtual informative sculptures visualized through the mobile AR in certain meaningful spots of New York.

Furthermore, Google's project moves in the field of emersion of the *Hidden Heritage*, one of the main topic carried out in this research. Just to remind what already written in the previous chapter, Hidden Heritage is the set of knowledge, stories, events and traditions that are either invisible to visitors or difficult to find, see for more in chapter 6.

What is certain, from the examples shown, Interactive

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storytelling combined with locative AR proves to be an excellent means of delivering for the cultural content, particularly for Hidden Heritage.

In synthesis, the market problem/opportunity could be detected in a product capable of delivering an interactive digital experience that takes place in the city's public domain. According to "*the modern discourse of anti-tourism*" (Van Neuenen, 2016), it should satisfying a new way of exploration in translating the desire of travellers to go beyond superficial tourism experiences and connect to locals and local knowledge.

In line with new technologies and design practices, the product should take advantage of Digital and Interactive Storytelling and AR as tools and method of design for the delivery of Hidden Heritage content.

7.2 The objective and target

This project aims at discover the relationship between the city of Palermo and the story of *Beati Paoli*. The project objective is designing a digital interactive AR story , locative based, for a touristic audience.

The main targets identified are the user and the investor, in the next pages are described more in details.

personas/target audience 01



the user / audience / gamer

01

basic data

Digital Nomad interested in visiting and experiencing new cultures. Always looking for new experiences that enrich his stay.

Name: **David**

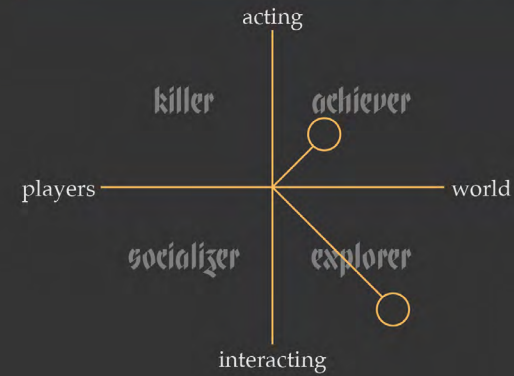
Age: **29**

Residence: **Berlin**

Profession: **Marketing for travel**

02

type of player



motto

03

personality



04

needs and painpoints

- + Experiencing new cultures
- + Understanding locals
- Traveler looking for something new

wherever i go, i bring netflix with me

personas/target audience 02



the buyer / sponsor

01

basic data

Owner of a very famous pub in the city, is reached by many tourists. He wants to sponsor his place in a new different way.

Name: **Sergio**

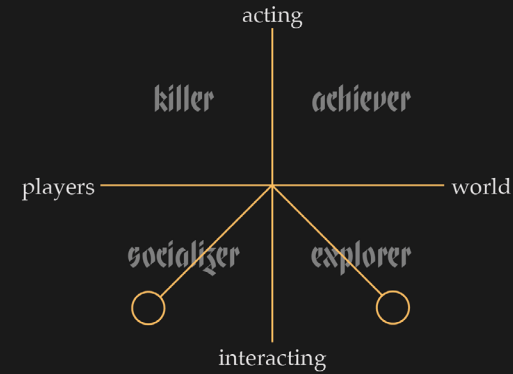
Age: 33

Residence: **Palermo**

Profession: **Owner of activity**

02

type of player



motto
make my city a better place

03

personality

Introvert ————— Extrovert



Analytical ————— Creative



Thinking ————— Feeling



Passive ————— Active



Analogic ————— Digital



04

needs and painpoints

- + Create a new source of flow for his local
- + Deliver a better experience to his customers
- Limited funds

7.3 Develop. Define the city and the Story

Defining the place where to develop the project is fundamental but also a critical step. For every place, there are positives and drawbacks, and for this reason, it is necessary to evaluate carefully the choice of the city. For instance, a big city disposes of a higher amount of stories, but also more disturbance factors like traffic flow within the territory, long distances or occlusion-rich areas, to name but a few. Meanwhile, a small town could lack meaningful places but has not so many crowded areas.

In the beginning, the candidate cities for this study were Vienna, Milan and Palermo.

In the choosing process, a set of parameters has been established.

The city should have encouraged exploration for physical movement in the short-range.

The city should have a set of alive traditional folkloristic elements in the Hidden Heritage.

The city should have multiple real spots in which exist meaningful connection with more than one story.

All the cities considered have potential, however, Palermo wins over the other two mainly for the short-range exploration as it is not a large metropolitan city.

Moreover, there are some additional reasons for this choice:

The first, Sicily is a region that has invested mainly in tourism in the last five years, and the city of Palermo sees an increase in the influx of tourists with an extraordinary annual growth trend of 40% (OTIE, 2019), especially following the proclamation of the *Arab-Norman route* as *UNESCO Human Heritage*.

The second, although devoid of scientific value, being a native of this city, access to folk culture and knowledge of the spaces is more straightforward. This situation has allowed moving faster, wasting fewer resources in research and study of local culture, especially in lack of time when developing a thesis.

The third is that the city of Palermo, like many others in Southern Italy, still shows a great feeling for popular culture, which has remained immune to the Globalization process. This popular culture pours fervently into everyday life made up of stories that permeate urban environments and generate a more dense and hidden Aura of meaning beyond the simple spaces and buildings. Nonetheless, the city boasts a large pedestrianized historic centre (the second largest in Europe), which becomes the perfect not-too-crowded setting for the development of any history.

The story definition is also an exploratory process of research. It is essential the correspondences between

the story and the territory. Moreover, the spaces should lend themselves to actual story development.

Additionally, stories, to be genuinely successful, need to belong to the real, or at least to be perceived somehow authentic. They should fit the sphere of the real world, blurring the line between palpable and illusory.

The stories considered are *La Vecchia dell'Aceto*, *Il Conte di Cagliostro* and *I Beati Paoli* (Complete plots available in Appendix).

All three are easily positioned within walking paths that would allow tourist walks even in places less travelled but of great interest. In this way, the tourists could get in touch with local people and the city's daily life, exploring alternative tourism routes.

All the three stories belong and define at a folkloristic and cultural level the city inhabitants, not to mention that these narratives are keys to reading and understanding the city.

Practically speaking, three guided tours were carried out with historians and anthropologists. The tours allowed the fragmentation of the various story-beats in stages, enabling us to understand from the beginning how the narratives unfold during the experiential walk. Although the whole three stories are of equal value, *La Vecchia dell'aceto* turned out to be a narrow-minded and obscure story about a dark city of Palermo painted as an ancient forge of poisons and death. As far as intri-

guing and macabre, remains attractive in the eyes of a small circle of users.

Il Conte di Cagliostro is a story that also echoes at an international level, it is even the subject of operas, musical compositions, novels and films. Nevertheless, it still lacks in terms of touchpoints with the territory. If the Count of Cagliostro is originally from the Alberghe-ria/Palazzo Reale district of Palermo, he remains the character of a Sicilian esotericist and alchemist wandering around the various royal courts of Enlightenment Europe. While the spirit leaves the intrigues of identity and the mystery of adventures of great interest, on the other hand, the person remains often and willingly little linked to the city where he leaves nothing but the traces of his misery through the sources of his mother and sister who kept living in misery in the city.

I Beati Paoli, on the opposite, seems to be a perfect story for the purpose. There are many elements linked not only to the territory but also to the city's culture. The narrative is considered the most suitable for a broader audience, local and not, and for its secure adherence to the urban route in the city. Strange but true, from the ambiguity of this narration there is huge hidden potential discussed in the next chapter on unbuilding the story.

7.4 Unbuild the Story

The first thing to understand about the story of the *Beati Paoli* is that it is firmly rooted in the territory of Palermo and after even in the rest of Sicily. Undoubtedly interesting are the three narrative layers of reading of the same story that often and willingly blend together.

The first is the layer of popular narrative, which has been handed down mainly orally and which belongs to the folk's culture, even though it remains devoid of historical foundations.

The second is the level inherent in the novel by Luigi Natoli (1977), considered the Sicilian historical novel par excellence, the equivalent of *Promessi Sposi* from Alessandro Manzoni in the Italian culture.

The third concerns the historical sources and studies that have been undertaken during the last two centuries by the historians Villabianca, Renda (1988) and Castiglione (1987). Additionally, we are going to see how relevant are the anthropological investigations conducted by Giuseppe Pitrè (1870) on the origins of the mafia phenomenon and the origin of *Beati Paoli*.

To dissect extensively on all three narrative strands and on which is the most suitable or appropriate for design use is a daunting task. All levels of reading of this story are of equal interest. Although popular narra-

tive and Natoli's novel are more widespread and common, it is undoubtedly the historical sources the core of everything.

So which narrative should have been developed? How could it be delivered?

Creating a new plot from scratch containing the whole three narrative lines has been the most plausible solution. Despite the challenge of such a work, the mixing of stories is useful in order to give an extended and complete vision of the whole cultural fragmentation that characterize this narrative.

For this reason, it was necessary to find a way to give the user a complete, consistent and coherent experience.

In this investigation it is not possible to explain in detail the content of all three narrative lines, an entire volume would be necessary. Below the synopsis of each narrative-line.

In the folk's tale, the *Beati Paoli* is a sect of hooded men. They gather in underground caves to judge and issue sentences against anyone who was the author of an injustice that has gone unpunished by the fallacious and unfair justice system that has characterized the Kingdom of Sicily for Centuries. The association act in the dark, moving through underground alleys derived from the branches dug by the old streams of *Kemonia* and

Papireto. The members of the sect are always hooded and unaware of the identity of the other associates. The group act without personal interests and towards a single common purpose, acting in the name of justice even at the cost of relinquishing death sentences.

This narrative line is unfounded with evidence or facts but as a folk's tale, it lies deeply in popular culture. It is still used as a fairy tale for restless children who are threatened to be kidnapped in the night by the *Beati Paoli* if they don't behave properly. However, some inhabitants still believe in the truthfulness of the myth, they think that the association of *Beati Paoli* still exists and they think it is not a tale anymore. This proves how rooted it could be a story in the citizens' hearts.

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About the Natoli saga, he partially used historical and folk sources to write a very successful novel, in which the Beati Paoli act as a backdrop to the vicissitudes of the protagonist *Blasco da Castiglione*, a knight-errant wanderer who, continually crossing paths with the sect, will come to understand himself better and discover his real noble descent.

The novel is unquestionably the most known version of *I Beati Paoli* among the middle-class people of Palermo.

As far as the plot is concerned, the sect appears almost totally identical to the one represented in the popular

myth. However, some tricks have been inserted for narrative purposes. Reference is made to the fact that the sect communicates in the Capo district utilizing a popular code language and that it uses auctioneers and innkeepers as intermediaries of communication. For instance, it is common that in some inns, there are three candles lit in front of the sacred images of the Madonna, Saint Michael and the saints' Peter and Paul. This way meant that at midnight a meeting had been called. Alternatively, in the streets, the auctioneers announced specific messages about the sale of various foods as the bread at a specific weight somewhere, in that case, they indicated the place and time when the unfortunate target would be offended or executed by the group.

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Last but not least, the narrative line of historical sources. Though the studies of the various historians mentioned above are quite different from each other, the most reliable and concrete hypothesis is that the sect was founded and disappeared during the middle-age to arise again after four centuries.

The origin is set in time during the *Middle-Age*. The first name was *Vendicosi*, and the founder should have been *Adinolfo* originally from Pontecorvo in the province of Sant'Oliva in Lazio. Historical sources show that Adinolfo was executed and accused of being the leader of the Vendicosi during the eleventh century.

The “rebirth” is set in time at the dawn of the sixteenth century with the foundation of the order of the Minimi of San Francesco di Paola at the ancient seat of the church of Sant’Oliva, by the will of the Viceroy Ettore Pignatelli, shortly after his settlement.

The Viceroy Pignatelli is an indefinable and incomprehensible but fundamental character in the historical literature of Beati Paoli. In fact, according to Renda (1988), his reign was characterized by profound injustice and a particular bloody action; on the contrary, for Villabianca, Pignatelli is a just and pious man.

The double personality of the Viceroy and his greyness fits perfectly with what truly is the Beati Paoli. Clerical and religious men who, hooded as Franciscan clergymen, wander the city by day in search of information and by night gather to declare the fate of the evildoers. According to historians, these friars coincide with the Minims of the Order of St. Francis of Paula, a group founded by the Viceroy.

Sources show how the Viceroy knew St. Francis of Paula. While he was a war prisoner in France, he had the chance to meet the Saint, after that meeting he was devoted to this figure for the rest of his life and he wanted to found a clerical order in his honour. At the time of the foundation of the order of Minimi, the sanctification process of San Francesco di Paola had not taken place yet. San Francesco was still the Blessed of Paola.

Indeed, a unique name that undoubtedly recalls that of the sect of the Beati Paoli.

So why did the Viceroy decide to found this association?

Mainly because he was a decisive protagonist in overturning the political orders of the kingdom of Sicily. He used the sect for surveillance purposes, a secret society that would gather information and take out inconvenient individuals. In the background of this story, there are the Pisan families settled in the city right in the Capo district where the whole story takes place. These families were known also for their bloody methods of action that allowed them to make a social class escalation. From a wealthy bourgeoisie, they managed to seize political power during the 16th century. They acquired the titles of nobility and formed a new aristocracy, which still makes up today the noble class of Palermo.

7.5 Rebuild the Story

In order to deliver to the user the information scattered on the different narrative levels, it was necessary to write a story from scratch and justifying the use of AR. There are two modern versions rewritten for this project. The first discarded after a first focus group test, and the second that is the current story of the experience.

In both versions, in order to justify the use of techno-

logy as an integral part of the narrative, the Beati Paoli is still alive and present in modernity. Additionally, the player has the chance to become a “hero”. Both the plots are thought to aim at oscillating from Tension to Relaxation by alternate delivery of puzzle and cut-scene video.

In the first version of the story, the user would come to discover the existence of the secret association and get in touch with them. He would have to gain their trust to avoid being kidnapped and disappear.

Following an initial test, the first story was found to be in some ways bloody and devoid of any ultimate purpose by users. It emerged the importance of finding new drivers that would better justify the users’ actions but above all that would convince them to complete the experience, more details are discussed in the user testing section.

The final story of the experience was introduced following the need to create a competitive team-based mechanism in the audience, introducing competition as motivation factors. Users access the experience in groups and then continue individual narratives that, however, influence the scoring mechanism for the team to which they belong.

Here a brief synopsis of the plot:

We are in contemporary Palermo, and the Beati Paoli is a group of people without identity who dispense justice

in the city. Augmented reality is the means to access this parallel reality in which these individuals meet, the smartphone then becomes the access key and visual filter for this dimension.

In this world, however, there are two types of Beati Paoli, now in contrast following a fracture of thought that occurred in the past, on the one hand, the Red Beati Paoli and on the other the Black Beati Paoli. The two teams accuse each other of lust for power and to come to terms with organized crime in order to seize the city. The purpose of the user is to be able to infiltrate the council meeting of the opposing team, accused of programming a digital attack on the servers of justice, with the intent to destabilize the power and finally seize control over the city and consequently over the whole Sicily.

Once logged into the experience, in a purely random way the user will be assigned to one of the two teams and will be contacted by an adept who, asking for his help, will guide the user in the digital experience as a guide.

The user will then be informed about the facts previously described during the synopsis and will discover at the same time that one of the objectives of the game is to accumulate more points and is also to finish the experience before the other players to reach the maximum score. Here it is provided clear instructions on the

game's objectives and on reaching those objectives.

This mechanism of scoring and time has been included because of the first test. At the same time, it emerged the desire for collaboration, but above all, the desire for competition results to be the main driver.

The experience continues towards a stage route in 7 key locations where the user/hero face some problems, puzzles and riddles to reach his goal until the final reward that coincides with the touch reality point in which the virtual story turns out to be “as-if-real” experience.

In the design process, there have been taken under consideration many guidelines discussed all around the previous chapters. The main guidelines considered are the ones from Miller (2014) and are here listed:

0. The experience might even be multi-sensory
1. Stimulus and response. From a click to voice control.
2. Navigation. The ability to discover the environment. It works great when related to the immersive setting.
3. Control over objects. The user can control virtual objects
4. Communication. The user can communicate with other characters, those controlled by the computer and other human players.
5. Acquisition. The nature of the material can range from virtual to concrete.

7.6 User testing. First test

The project was designed to be tested several times. Four tests have been scheduled; However, due to the emergency of global pandemic COVID-19, only two of them have been performed.

THE FIRST TEST (FOCUS GROUP)

Participants

Eight users took part in the focus group—seven residents in the city of Palermo and one international student. The age range of the users is between 19 and 34 years old.

The Elements

The elements used for this test are a paper map, an iPad with google maps in case the testers needed help in finding the required places to reach, a token, and images of the places to give a complete sense of context.

Running the Test

To give a greater sense of context, the narrator presents himself as a member of the sect of the Beati Paoli. He declares that he has got in touch with the users because the sect has identified them as possible new members. However, they must demonstrate specific skills and get

to know the origins of the sect in order to join it. In case of failure, the penalty would be the risk of kidnapping and their disappearance.

The narration was cut into pieces and delivered orally, accompanied by photos of the places only after the users had identified them on the map of the hotspots to be reached. They were also asked to indicate the route they would take to get to each location. No game mechanics were provided for this test. The user was simply asked to locate on the map the location they were shown for the next step.

Results

222 A focus group took place when the narration of all those tested ended.

What emerged mainly is that all the users put a certain level of commitment in identifying the places of the next steps and felt a certain sense of satisfaction in being able to access the next phase of the narration. It emerged so the need to maintain certain suspense between one step and another for an idea of progressive reward.

All users needed to search the map for the places to reach; this confirmed the need to insert a map. However, all respondents said they would have preferred a fixed route rather than choosing the roads to take. It would seem that users do not want agency power in the choice

of routes to take.

Furthermore, there was a greater interest in curiosities and historical facts than in the narration of the experience, this makes us understand how the real content of the narration is the historical component that unveils the mystery of Beati Paoli.

At the same time, it emerged that the first story of the experience lacked a precise aim. The idea of being able to proceed alone along the route, even if guided by the desire for discovery, lacked a valid final goal, hence the need to include game mechanics and competition in the experience. All the interviewees expressed their opinion against the use of drivers such as trust or knowledge acquisition; at the same time, the threat of kidnapping is unlikely and banal as a penalty.

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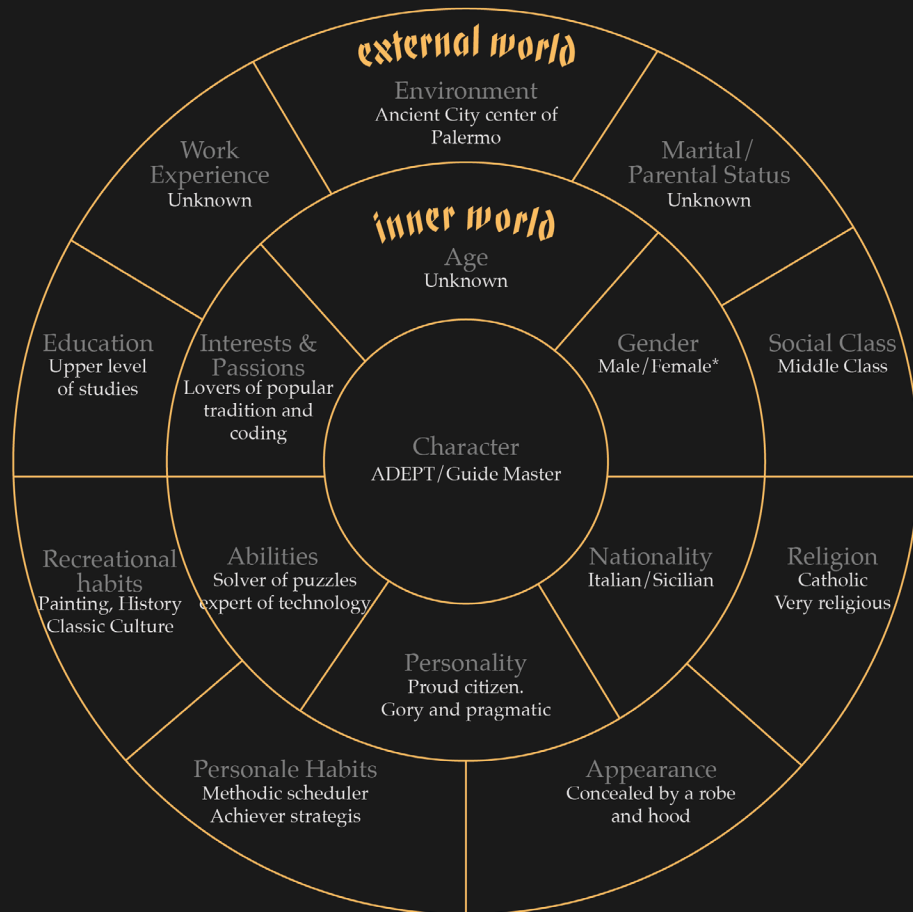
7.7 The definitive story

After the first story has been discarded, a second and definitive one has been defined before new tests. In the next pages the schemes describing all the elements of the new one.

First is shown the characters, then the storyworld, then mood and the plot. At the end is described the focus of the interactive experience and the relation of time and space.

the echaracters

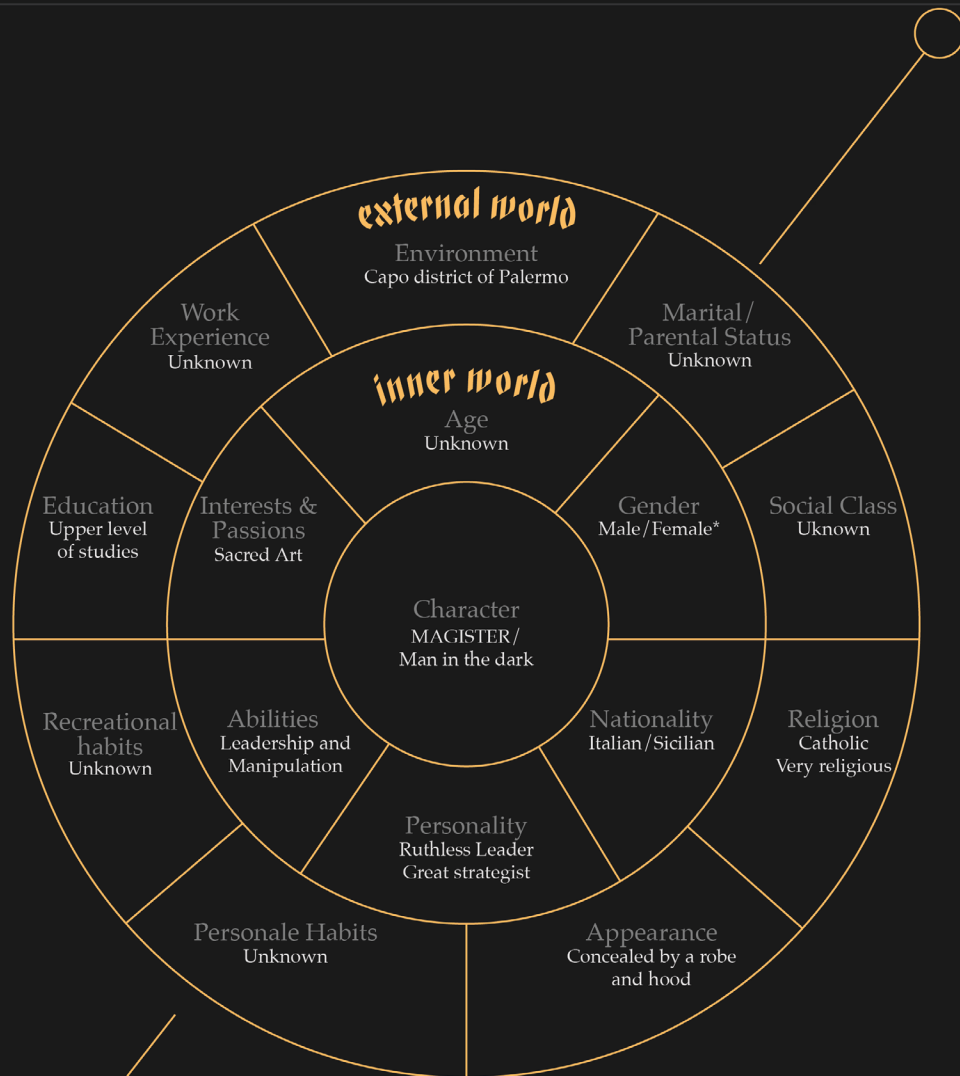
- — Characters from the Game/Experience — -



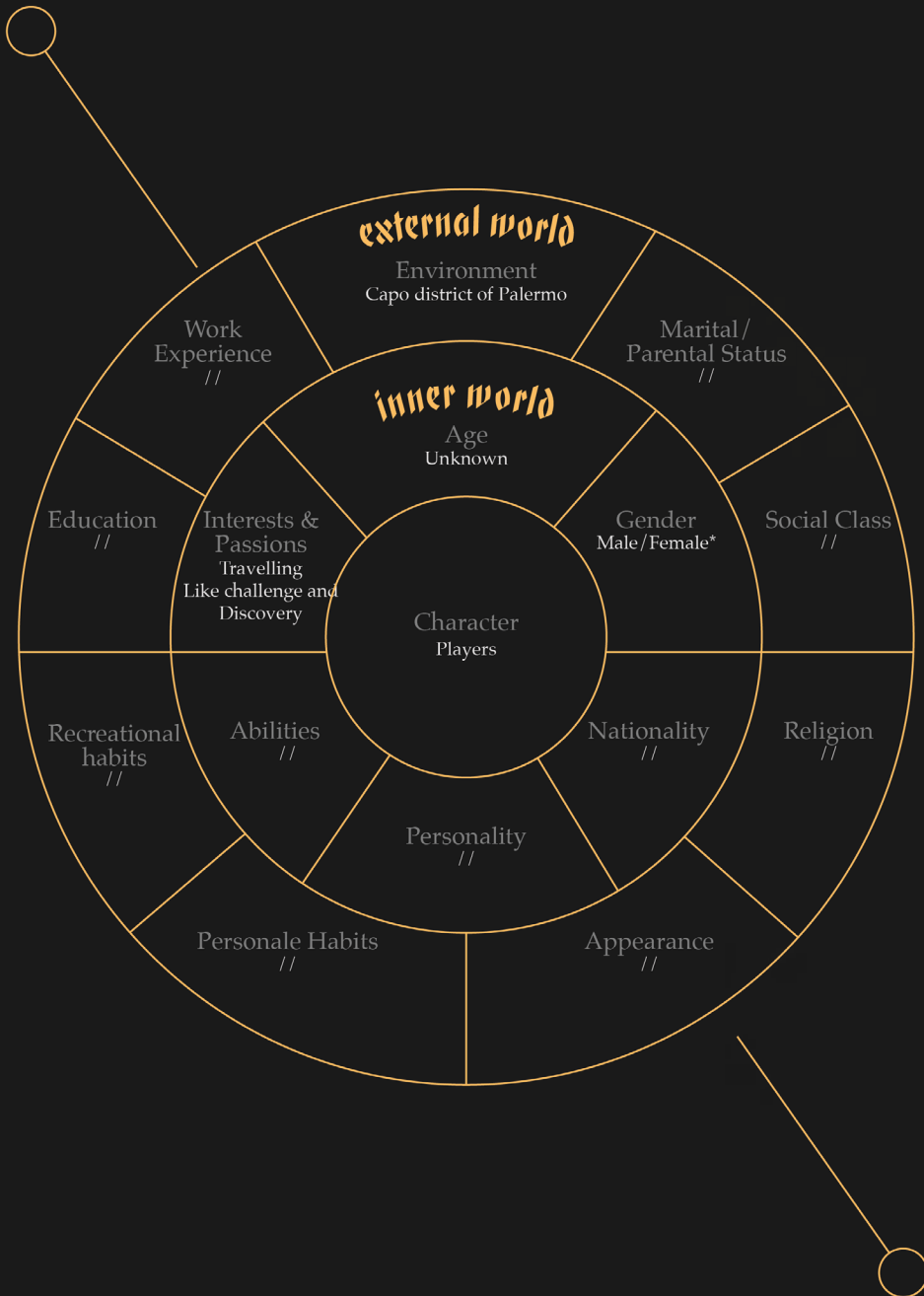
The Adept

It is worth noting that the character is a guide in adventure and a helper in times of difficulty, it is also a careful connoisseur of the Sicilian tradition and the Beati Paoli.

Like a Virgil for Dante, he guides the player through the experience and delivers parts of the story



The magister of every faction is a man in the shadows that no one knows. His task is to guide the sect towards the established goals and preserve its anonymity. He's the figure who keeps in touch with the outside world and politics. In the history of the game will prove to be a traitor with his participation in the opposing team.



The player is a character we can't know. However, his goal is defined. Compete against the opposing team to prevent their evil plan from being carried out. Consequently become part of the Beati Paoli and discover this part of Palermo's history.

the world

topos/ Environment

Regarding physical space, the city of Palermo is the Macro world in which history takes place. The ancient district of the Cape is the Micro world where everything takes place. Within the Micro world there are mainly seven environments where story take place. The virtual world is made up of all the elements that are accessible through the smartphone tool in AR. The virtual elements are always linked to the main environments in which the story takes place.

telos/ Life Goals & Objectives

The evil Beati Paoli aim to conquer the city, reveal themselves and take power, this also thanks to the help with organized crime. The good Beati Paoli are trying to keep peace and justice, so they are facing the rebels to prevent the city from falling. In this ambiguous game of mysteries one group accuses the other of staining themselves with the will to seize the city's power.

epos/ Background Story

Since there is no absolute truth, the characters of the Beati Paoli are grey characters. On the one hand perceived as good and fair by popular tradition, and on the other as murderers from historical sources. This two opposite visions generate two different types of Beati Paoli. In the history of the experience the unique group of Beati Paoli is divided into two factions, the good and the bad, metaphors of the multiple visions about this group of individuals. Both act in similar ways but with different purposes, some to conquer the city, the others fight them to maintain peace and justice in the city.

logos/ Language

The coded language used is inherent to the Sicilian tradition and the popular tradition, it is also very linked to the Catholic tradition and ecclesiastical figures.

ethos/ Value System

Despite their different goals, both factions of the Beati Paoli share the background of values. Anonymity is necessary for the preservation of identity, however, promiscuity is present because of anonymity, certainty or unambiguous truth is not conceived. Action is always choral and never individual. Decisions are taken by the group, however, a pyramidalty of the secret society defines more voice in some elements than others. Religiousness is present in their culture, despite this, violence is allowed in order to do justice, even to the extreme act of murder. The modern Beati Paoli are experts in technology, being the society always in step with time to maintain its dominion over the city.

genos/ System of Relations

The system of relations consists of a pyramidal arrangement. At the top is the Magister who is to all intents and purposes the leader of the sect. A step down, but of equal level, there are six Judges and six Rapporteurs, these are located in the six corresponding districts of the ancient city. The Judges decree the final sentences of the unfortunate, the relators administer the neighborhoods and the adepts by areas. Finally, the adepts are the primary action workers.

chronos/ Time

About the present:
The time of experience and narrative coincide, approximately two to three hours.

About the past:
The shared information and discoveries that take place about the sect over the past centuries. Particularly in the 15th century, a period from which historical sources have drawn more information about the mystery of this society and its foundation.

moodboard



01

The Game Plot

We are in the present. Two factions of the sect of Beati Paoli, the Reds and Blacks, oppose the power over the city.

Through the use of new technologies these groups manage to rule in the shadows, maintaining the city's balance. The ether is the actual place for their meetings and messages, augmented reality is the only tool to get in touch with them.

However, one of the two factions (the enemy faction) has decided to take possession of the data on organized crime and intends to eliminate them in order to overturn the equilibrium of the city justice and to infiltrate definitively the places of power, putting the city in check. The player, by joining the right faction, will have to find the enemy faction and infiltrate among their followers to foil the attack.

02

The Folk Tale Plot

The Beati Paoli are a sect of popular social extraction that historically acted in the shadows, using the underground passages of the city derived from the branches of the old torrents of Kemonia and Papireto. The meetings took place in crypts accessible by secret passages in specific churches and sites in the Capo district. The popular imagination paints them as a mysterious sect that speaks a popular language in code whose members themselves do not know the identity of the other companions. During the day, dressed as friars, pretending to pray, they roam the city to learn about the evils and injustices; at night, hooded men gather secretly to judge and carry out revenge to restore social order and avenge injustice.

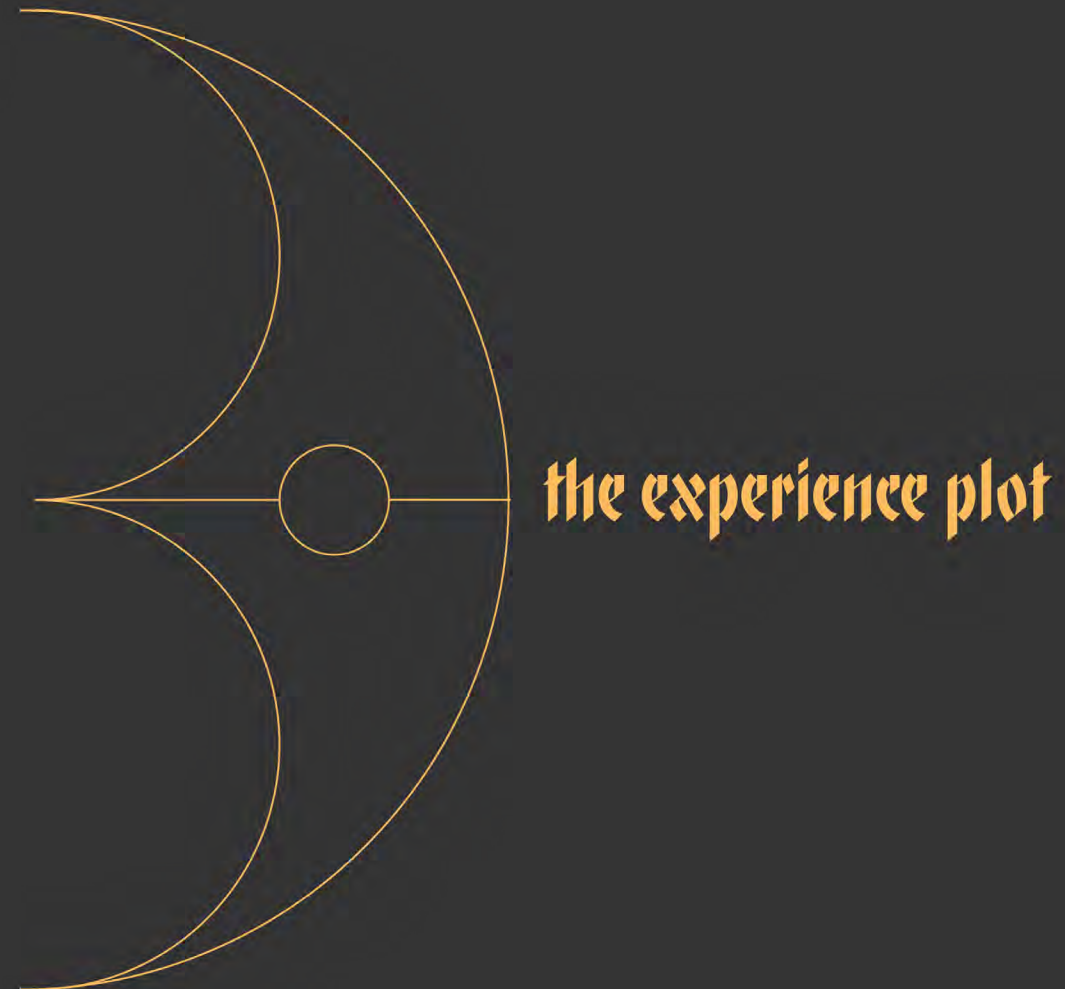
The novel *I beati paoli* by Luigi Natoli, historian and writer from Palermo, is today the most well-known story to the citizens. However, the novel remains an excellent source of clues about the sect, being the author himself a historian and scholar of this chapter of the city's culture.

03

The Historical Facts

It seems that the group of Beati Paoli is nothing more than the bloody labourers made up of citizens unaware of acting on behalf of a Bourgeoisie ascending to power. The main mystery revolves around the new power structures of the fifteenth century in which the families coming from Pisa, slowly manage to circumvent taxation through pious works and take out the old Sicilian aristocracy. These historical facts are summarized by the works of Francesco Paolo Castiglione and Francesco Renda, historians of the city who more than anyone have committed themselves to understanding the roots of the popular mystery of the Blessed Pauls.

The sources will later reveal how these families took possession of the city and still today hold a certain amount of important power within politics.



i beati paoli

- — The interactive experience — -

01

The story in brief

The story of the Beati Paoli concerns a folk tale belonging to the city of Palermo. It tells of a secret sect that acted, even cruelly, to restore justice in the city against the abuses of the aristocracy against the common people. However, historical investigations show a dark side between the intrigues of a new rising bourgeoisie and new political and economic power assets during the XVth Century.

03

Audience Participation

The public will be asked for active participation that will take place through an effective physical movement between the various spots in the city, and will also be required to play games similar to an adventure game.

02

Delivery Method

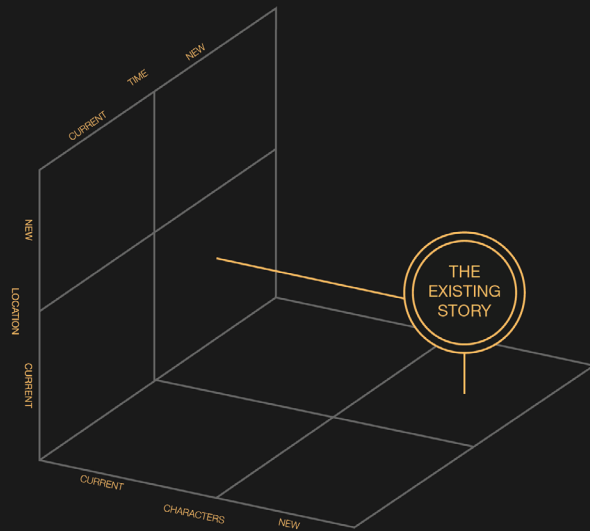
The story is delivered in the form of an interactive digital experience. Mainly based on an augmented reality route through stages related to the places of the sect and through a locative game experience.

04

Reality / Fictionality

The places where the story is told and lived are indeed linked to the events (fictitious and real). However, the narrative lines are multiple and blend together in a continuous interval between reality and fiction.

time & space



01

Space

The real space in which the story takes place, corresponds to places inherent in all three levels of the narrative, that of the novel, that of the historical sources and that of the game narrative.

We mean the Capo district in Palermo and seven main spots. 1.Chiesa di San Matteo, 2.Piazza Sette Angeli, 3.Giardino degli aranci, 4.Piazzetta Cuncuma, 5. Piazza Beati Paoli, 6.Piazza della Memoria, 7.Chiesa di San Francesco di Paola.

02

Time

The story is set into 2 different timelines:

1. The first is about the contemporary age, more into the game dimension, in which the Beati Paoli are still alive and use AR to get in touch with each other. However, there are two parties fighting each other to have control over the city. THE EXPERIENCE TIME SET

2. The second is about the XVth Century mystery from the historical sources. THE NARRATIVE TIME SET

7.7.1 The places of the experience

In the next pages are explained more in details the space in which the story take place in order to understand the distances and the path.



mandamenti / districts

- 1. capo / monte pietà
- 2. castellammare / la loggia
- 3. tribunali / kalsa
- 4. palazzo reale / albergheria



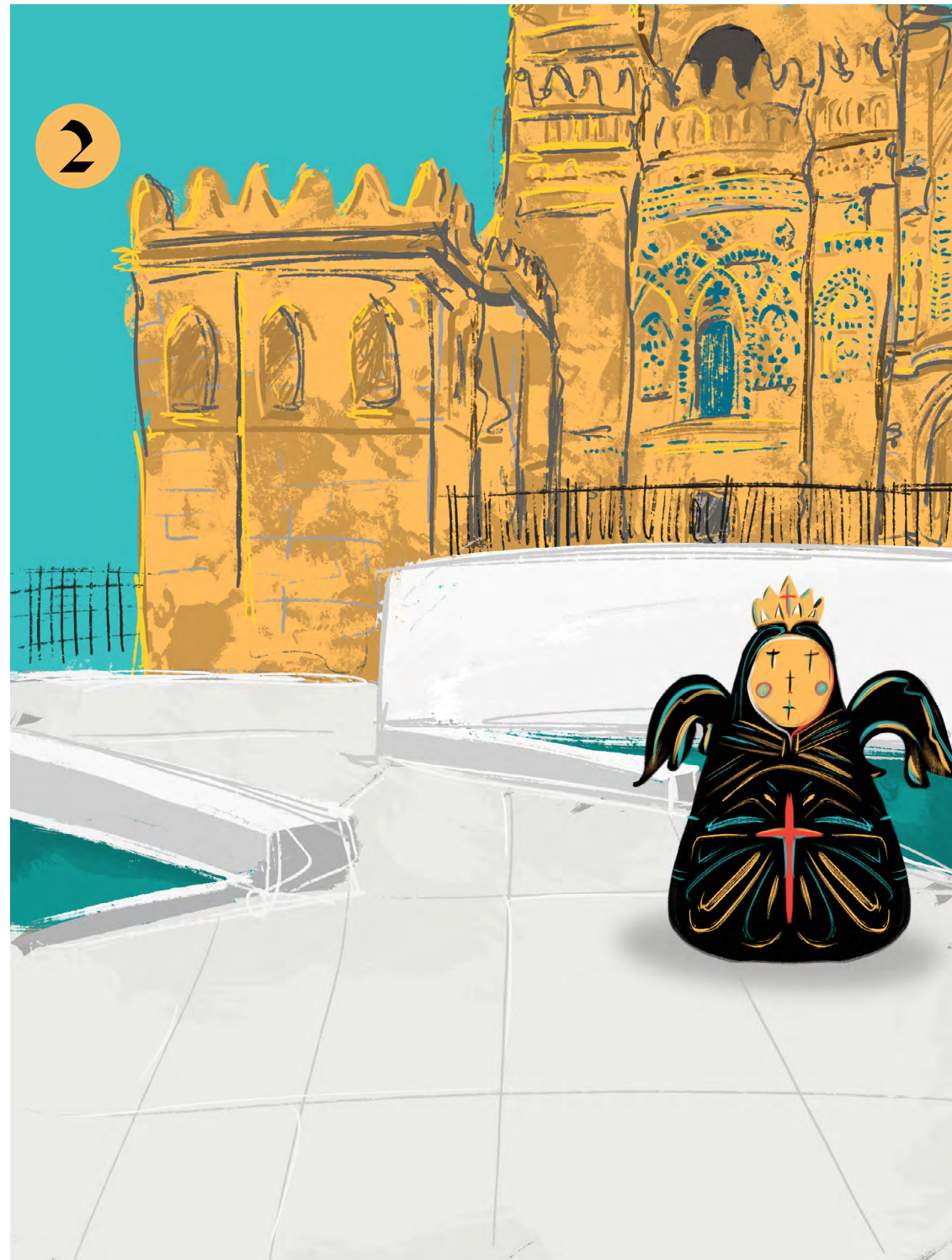
path map

- main path
- 1 san matteo al cassaro
 - 2 piazza sette angeli
 - 3 girardino degli aranei
 - 4 piazza eunemia
 - 5 piazza beati paoli
 - 6 piazza della memoria
 - 7 chiesa di san francesco di paola

- secondary path
- 1 chiesa ss. 40 martiri
 - 2 chiesa montervergini
 - 3 palazzo braceo in via del celso

1. S. Matteo al Cassaro in app filter



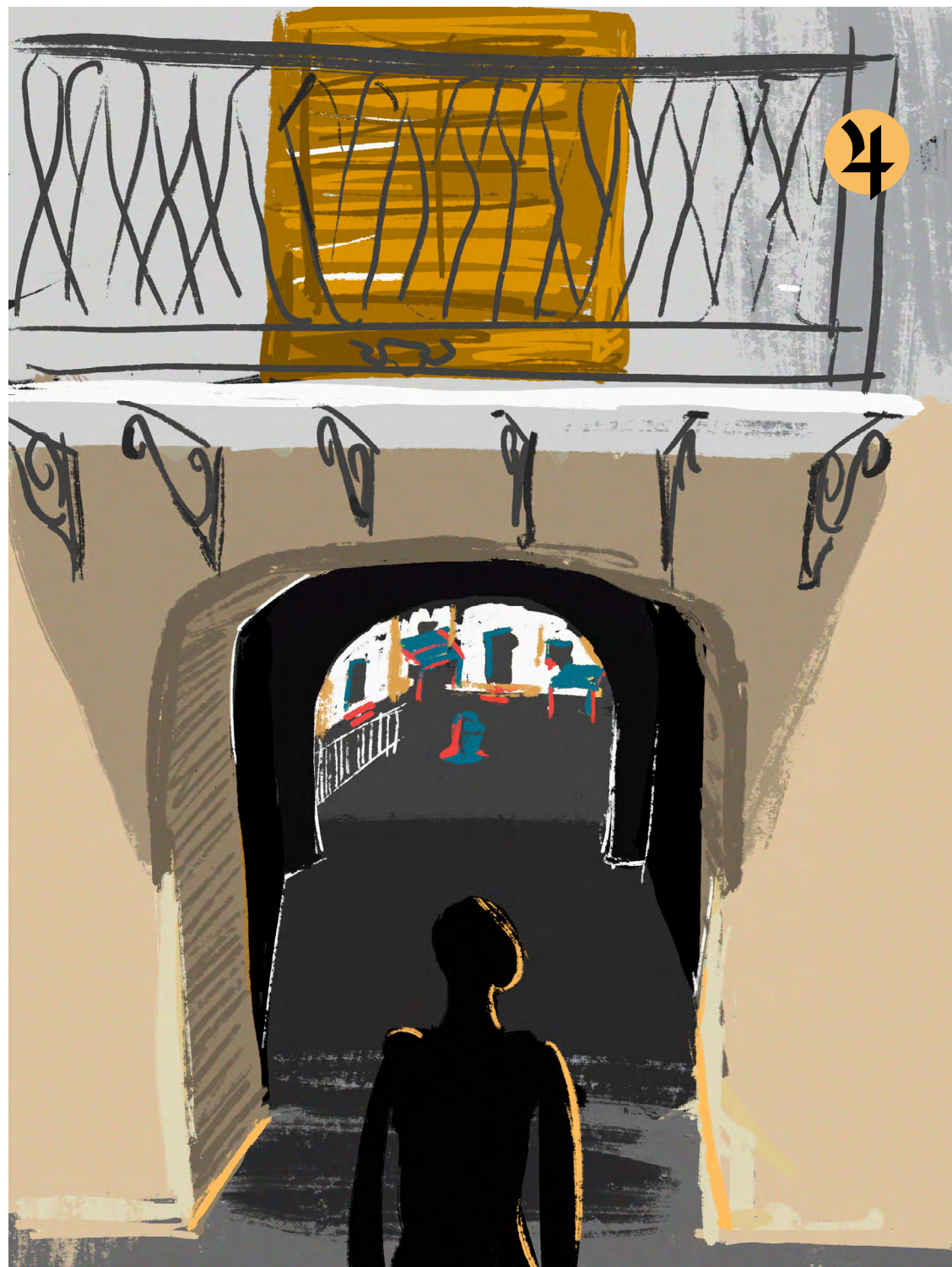


2. Piazza Sette Angeli scene in app filter

3



4.1 Entrance in Piazza Cuncuma in app filter





4.2 Piazza Cuncuma in app filter

4.3 Beati Paoli Tile in Piazza Cuncuma in app filter



5



257

5. Beati Paoli Square in app filter

6



7



7.8 User testing. Second test

A second test took place to understand the timing of the narrative, the path of the experience, and the acquisition of knowledge by users.

The insights of the first test have been taken into account. A distinct story was remodelled and proved to be effective and appreciated by the audience.

Participants

Six users took part in the test. They have not taken part in the first test—four are resident in Palermo, two are International Students. The age range of the users is between 19 and 34 years old.

Running the Test

The test consists of a walk around the city in the nine leading spots linked to the Beati Paoli.

The users are divided into two teams, the red and the black.

The narrator proclaims himself a former member of the Beati Paoli. He asks users to listen to his story so that they can understand the reality and secrets of the city and the mysterious association.

At the end of the route, users are asked to fill in a questionnaire and based on the right answers, a winning team is declared. It must be pointed out that the que-

stionnaire is personal.

Results

Overall the narration lasted 2 hours and 45 minutes. However, all users stated that the route was not considered too long in terms of timing. The same applies to the length of the route, which was considered feasible and not too complicated.

Two locations were eliminated from the experience as users found them unpleasant or impractical. The first, bastioni di porta d'ossuna, because in an area of high car traffic and impractical at the pedestrian level. The second, Palazzo Serenari, because it was considered devoid of connection with the context of history.

It turned out that the idea of having to fill out a history questionnaire at the end of the experience to make the team win increased the level of attention and competition among participants. The idea of the competition was appreciated by almost 100% of the participants.

Moreover, The acquisition of knowledge is evident from the percentage of exact answers from both groups. The idea of a guide who is a character in the story has registered almost 100% approval.

In the next pages there are the results of the questionnaire.

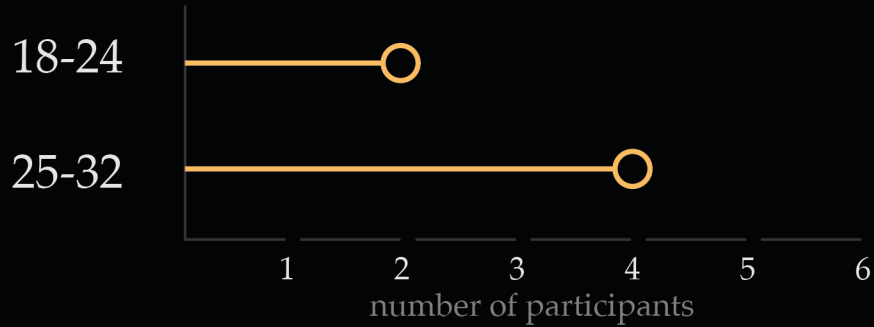
i beati paoli

Data. 2nd test

6 participants

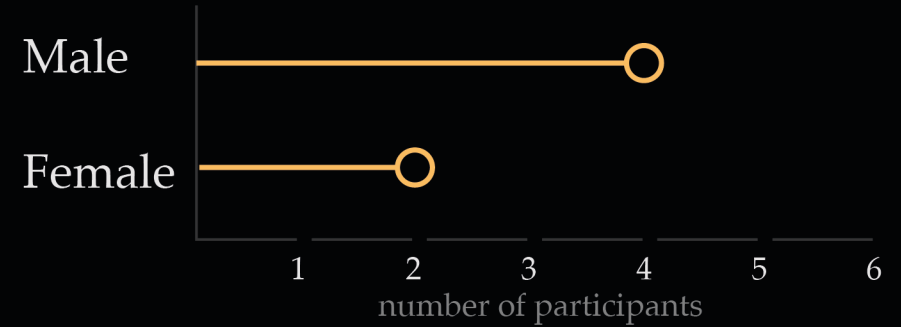
01

Age of participants



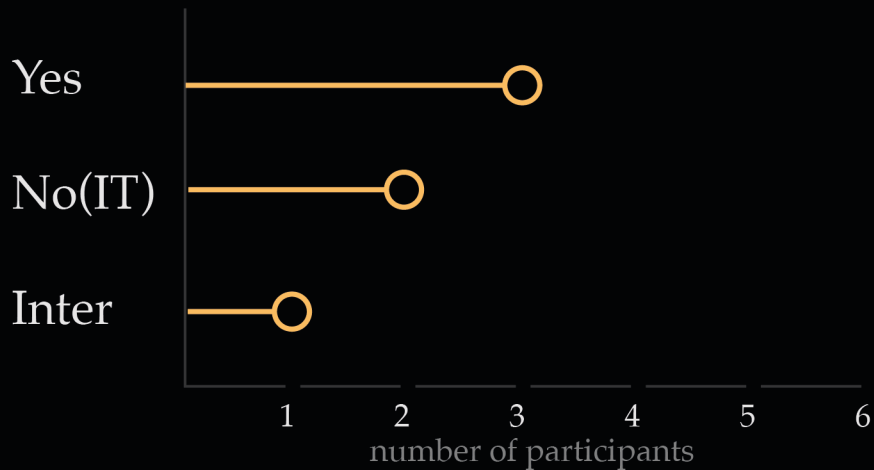
02

Gender



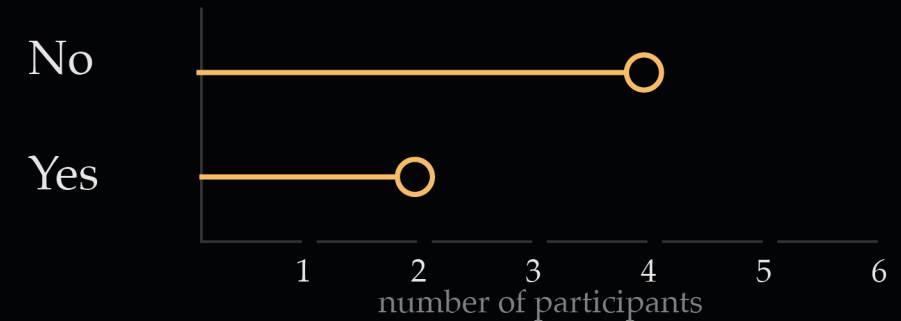
03

Are you from Palermo?



04

Did you know already something about Beati Paoli?



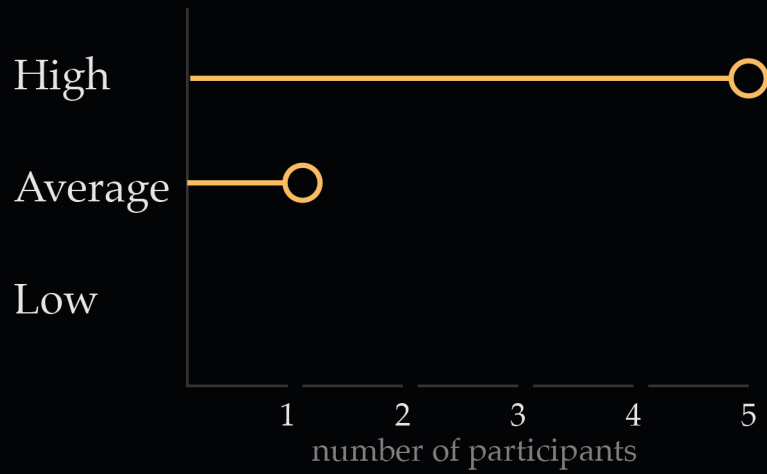
05

Do you think that you acquired useful information after the tour?

Yes **100%** No **0%**

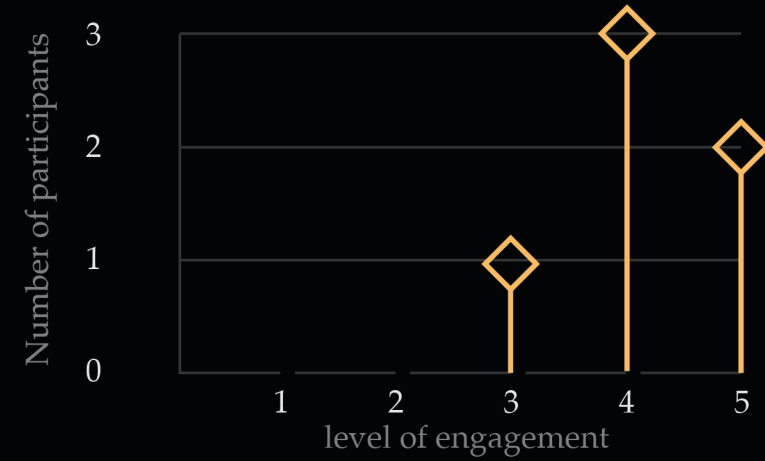
06

Which level of knowledge do you think you have about the topic of Beati Paoli now?



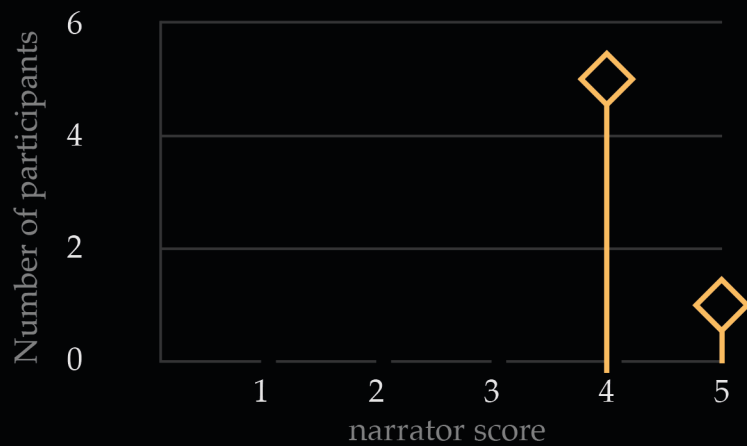
07

How much did you enjoy the tour?



08

How much do you think the story was influenced by the narrator?



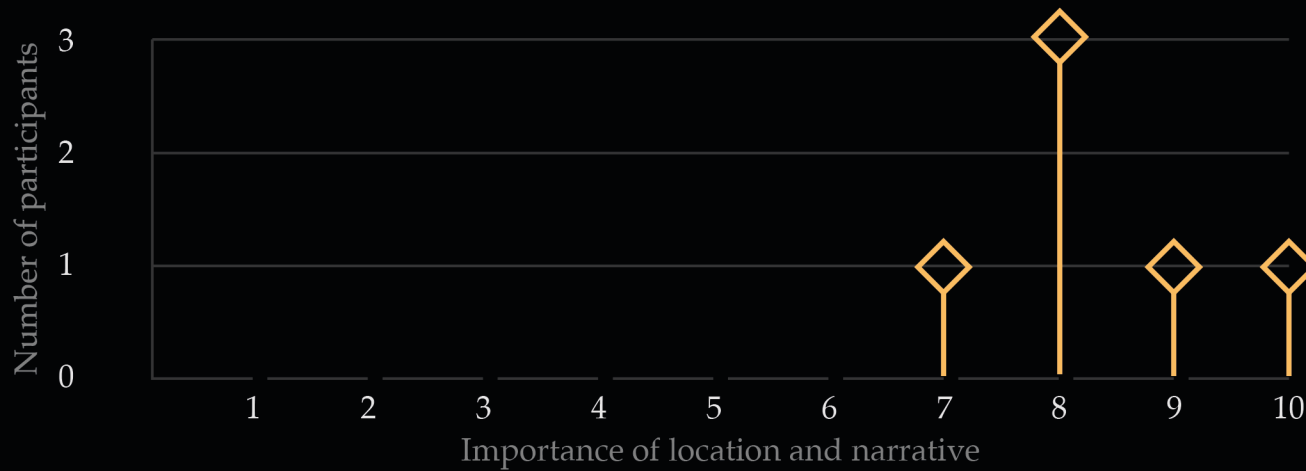
09

How much you think the competition has motivated you to stay focused?



10

How important do you think the relationship between places and storytelling was?



||

Which are the place you didn't like the most ?

Chiesa S.Matteo



Giardino degli Aranci



Palazzo Serenari



Bastioni di Porta d'Ossuna



Piazza della Memoria



Number of negative points evaluated from participants

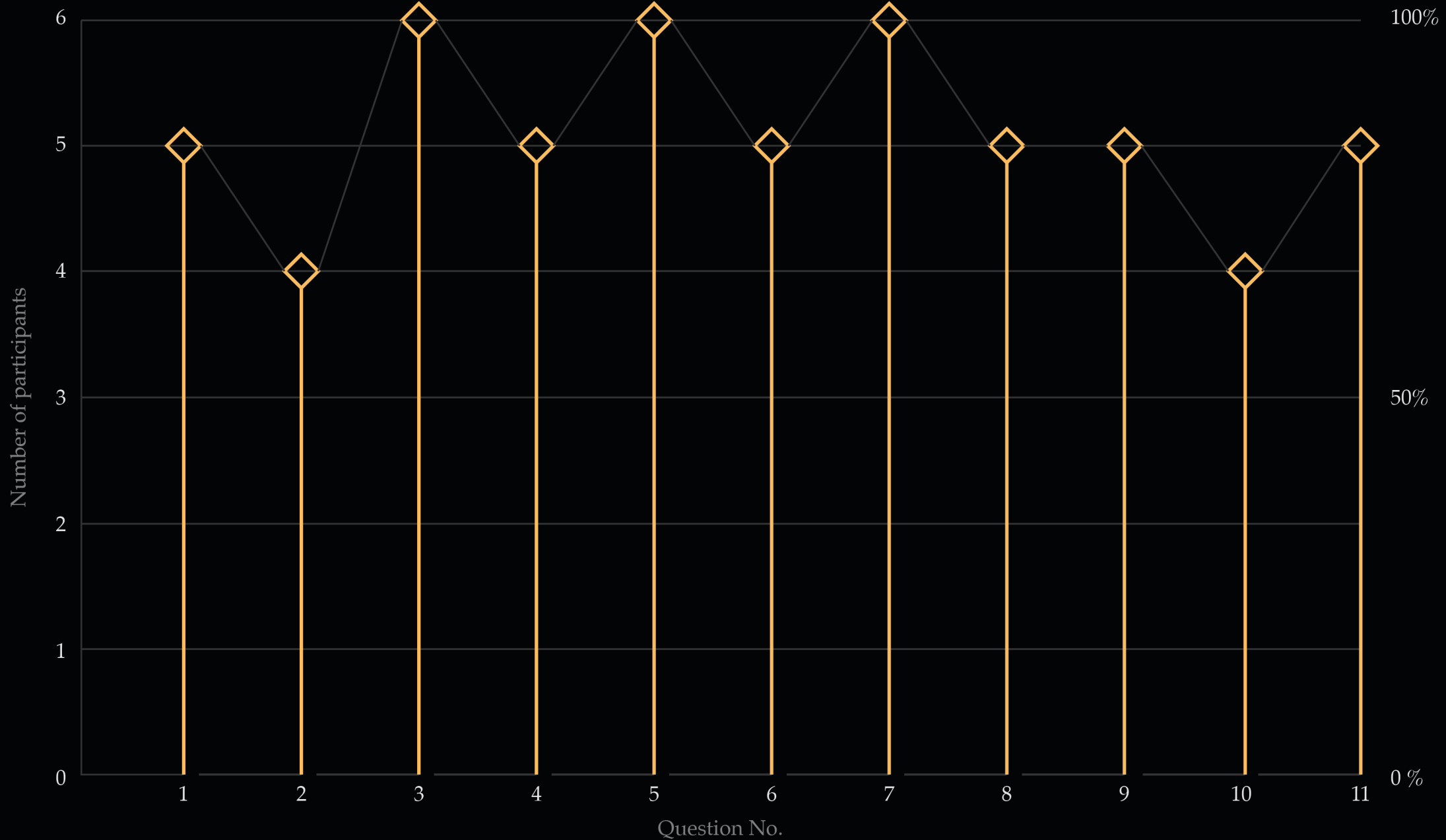
12

Overall, how would you evaluate the whole experience?

0 1 3 4 5 6 7 8 9 10



Evaluation of the experience by participants



7.9 The whole Experience

After the second test, the whole experience has been design in every single steps.

In the next pages, it is shown the complete journey in which the steps are extremely detailed.

The same steps are the ones that contain the story used during the second test.

Moreover, the game mechanics are broadly described and finally the scene of Piazza Sette Angeli is detailed in every single aspect and ready for the third test.

the journey

01. stages

discovery

experience

exploration

02. steps

Access point

Chiesa S.Matteo

Piazza Sette Angeli

Giardino degli aranci

Piazza Cuncuma

Piazza Beati Paoli

Piazza della Memoria

S. Francesco di Paola

Sponsor place

03. inter:steps

Introduction of who are the Beati Paoli and judging system

Introduction to the Seven Angels Association

Explanation of the ancient system of canals

Explanation of the Catholic culture in the Sept

Explanation of why the Beati Paoli have chose Capo district

Enlight on relationship between justice and mafia

Delivery of the whole real story

Toward rality to demonstrate belonging to the sect

04. time

0min

20min

40min

50min

80min

100min

120min

140min

150min

05. storyboard



06. game story

TINAG access
Discovery of graffiti with QR code in the city as portal to Beati Paoli dimension. This is not a Game approach

Easy access
- Ask at touristic info point
- Download from social media advertising
- Discovery through local advertising in touristic spots

You are introduced to the rivalry between the two groups of Beati Paoli. You receive the coin (key) stolen to have access to the position of their server in order to find the enemy group.

You play to unveil the server and the visibility of the rival group in order to get closer to them.

Triangularity choice
You discover their line fiber that brings you through different places.
- one direction is to Piazza Cuncuma
- the other three direction are linked through a nested lock and key mini game that gives you more points and information.

AR game
You are a step from the reunion but you need to know the key and place where the reunion is going to be

Tile
Find the costume to turn into one of your rivals

You take part undercover to the reunion, find out that even your Magister is evil and run for the final quest to avoid destruction of justice servers of the city

Solve the quest and call your partners for help in order to win. Once defeated your enemies, your group thank you for discovering betrayal of the Magister and ask you to go to S. Francesco di Paola

You find out how good you have been in your mission and based on points gained you set you self at a certain level in the chart. Based on the time you finish, you will receive a keyword and you will be send to a specific place to retire the passe-partout of Beati Paoli

Reach the sponsor and ask for something with keywords. You receive the passe-partout as an award for your mission

07. folk tale

You find that the church has always been the place where people have gone to accuse someone. It is also one of the main entrances to the underground passageways.

This is the place of diramation of the main underground passages. Additionally it seems to be the place where arms smuggling took place. You get access to the way the association is structured in pyramdic way

You get in touch with the language and the catholic culture that defined the Beati Paoli. Discover how they knew when a reunion took place

Designated as the headquarters of the association is the place where all judgements are thought to be made

A few steps from the walls that allowed members to escape from the city in case of danger

08. historical

You receive information that the Beati Paoli are thought to derive from a secret society founded in the 16th century. This society was founded by the Viceroy and bourgeoisie main exponents of the Pisan families.

You are introduced to the episode of Palazzo Bracco. Places where the bourgeoisie killed a huge part of the sicilian aristocracy

Historically this was the place where meetings were thought to take place and where members scattered their tracks. The origins of the Palermitan Mafia are also associated with this place.

Historically this was the place where Pisan families resided, strategic because it was perfectly at the center between the three main powers, the ecclesiastical, political and monetary. It is also the place where the pious work is located, a means of tax evasion of these families.

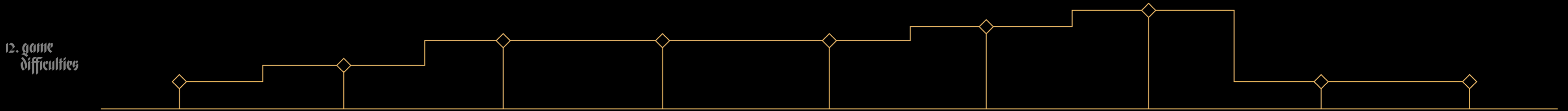
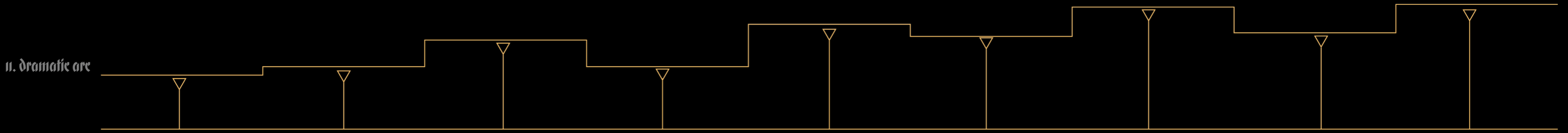
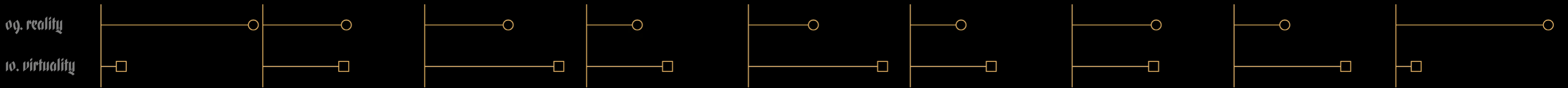
The place is a symbol of the fight against the Mafia. According to some scholars and anthropologists the Beati Paoli are nothing more than a mafia association ante litteram

This church previously dedicated to Saint Oliva was entrusted to the new order of minimums of Saint Francis of Paola, an order founded in sixteen century by the Viceroy. It is thought that the same minimums were the Blessed Pauls.

This church previously dedicated to Saint Oliva was entrusted to the new order of minimums of Saint Francis of Paola, an order founded in sixteen century by the Viceroy. It is thought that the same minimums were the Blessed Pauls.

Discovery experience exploration

Access point	Chiesa S.Matteo	Piazza Sette Angeli	Giardino degli aranci	Piazza Cuncuma	Piazza Beati Paoli	Piazza della Memoria	S. Francesco di Paola	Sponsor place
<i>Introduction of who are the Beati Paoli and judging system</i>	<i>Introduction to the Seven Angels Association</i>	<i>Explanation of the ancient system of canals</i>	<i>Explanation of the Catholic culture in the Sept</i>	<i>Explanation of why the Beati Paoli have chose Capo district</i>	<i>Enlight on relationship between justice and mafia</i>	<i>Delivery of the whole real story</i>	<i>Toward rality to demonstrate belonging to the sect</i>	



13. touchpoint/painpoint

<p>Touchpoint TINAG discovery thrill the user</p> <p>Painpoint Could be hard to acheive customers through collateral media and advertising. It's very hard that TINAG could work if not sponsored properly</p>	<p>Touchpoint The lateral entrance of the curch are always closed and possibly a great canvas for AR. This spot is a pedestrian area.</p> <p>Painpoint there may be little light at some hours of the day</p>	<p>Touchpoint It's an always empty big pedestrian area right behind the cathedral of the City.</p> <p>Painpoint The plants could be an obstacle to AR</p>	<p>Touchpoint Very explorative, great for big agency. Pedestrian Area</p> <p>Painpoint Multiple floor levels</p>	<p>Touchpoint Great for sound exploration, very calm and quiet spot Pedestrian Area</p> <p>Painpoint //</p>	<p>Touchpoint A lot of monumento as triggerers. Pedestrian Area</p> <p>Painpoint You can find many illegally parked cars. The free area for AR is not that big</p>	<p>Touchpoint Very few obstructions, quite clean and suggestive calm spot Pedestrian Area</p> <p>Painpoint At certain time could be full of teenagers skating</p>	<p>Touchpoint Place not too busy. Annunci Sacri are a great spot for AR</p> <p>Painpoint Narrow distance between church and visualization in AR</p>	<p>Touchpoint Great sense of reality and belonging in the experience</p> <p>Painpoint Should be considered the moment in which the user ends the experience, the time and the distance. Should be more variable spots</p>
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Game Canvas

platform

Mobile platform
Locative Based
AR (Augmented Reality)

number of players

From 1 to 8
Despite the journey is individual, the experience can be shared simultaneously in competition
It is allowed to play in couple

target audience

Young Travelers
Locals keen to know the city
Age range (16-40)

duration

Estimated time 150/180 minutes
Every task could influence differently the duration based on skills of the player

goals

Become one of the Beati Paoli by defeating the rebels of the association and be the fastest one in doing it

interactions

Every step see an interaction with objects and characters.
A character will be the guide that helps you through the pathway.
Microinteractions will require body movement, hearing in space, tap on screen

genres

Adventure Game
Puzzle Game

mechanics

As the experience is not strictly a game the easiest way to use mechanics is to support the lock and key process.
Every step has a puzzle or require a key to be unblocked and give access to the next one

story and theme

The mystery of Beati Paoli in Palermo
Defeat the rebels of the sept that want to conquer the city thanks to the help of criminal organization. Reach the rebel undercover and wreck their plan

aesthetics

Despite the use of AR technology and gateway through Beati Paoli virtual reality, the aesthetic is dark, popular, creepy but colorful, more artisan than technological, linked to the idea of Sicilian tradition in a gloomy mysterious way.

obstacles

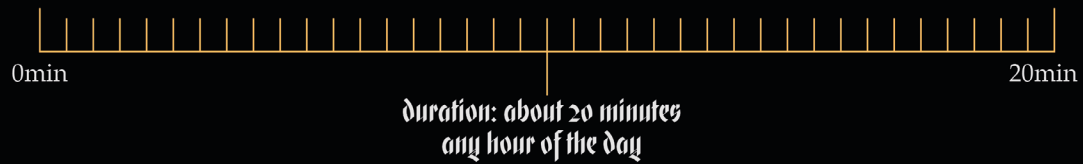
Every step is an obstacle as is a lock for access to the next level/step of the story

rules

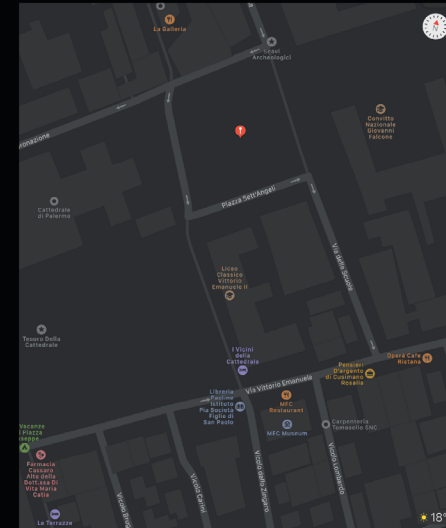
The fastest in solving puzzles, riddles and reaching the end of the game will reach the highest ranking.
Every Player should bring till the end the game/experience.
The amount of time in which the player ends up the experience is the counter, the less it is the better. However, some helps/hints and choice in the game are used as way to give or decrease time point by the end of the experience.

where / when?

scene 2: piazza sette angeli



discovery part



Access to the scene is from the south. The square is located behind the cathedral. The user will be forced to move and explore the square to understand the dynamics of the scene and acquire the necessary information and then continue north to the next stage.

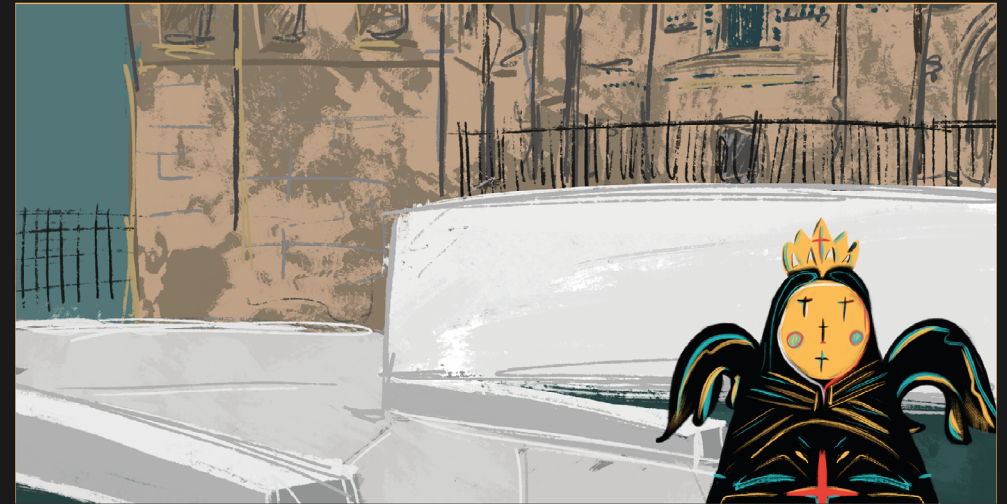
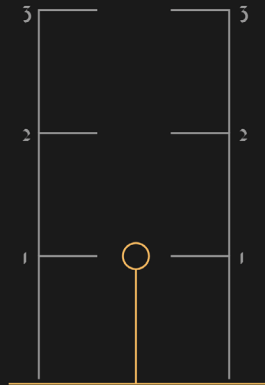
why? plot game / experience

game/experience story

The square is the place to which many people trace the foundation of the association of the seven angels, apparently linked to the foundation of the sect. Here have been placed treasures and riches in the past. Today there are the visibility servers of the sect, once unlocked you can access all the elements of virtual reality belonging to the opposite faction. The coin collected in San Matteo is the access key that gives the possibility to display the scene.

Once you solve the puzzle you will be able to enter the reality of the rebels and you will also be able to see them.

level of agency



Storyboard

game mechanics

step 1

Written in the back of the coin you received in S.Matteo there is a message, it says:
Reality is inside everyone of us, hidden in the back of our look through the world

step 2

For every Angels there is a correspondant Circle.
Move in the right sequence to activate the circles to solve the problem, every help costs 10 minutes

step 3

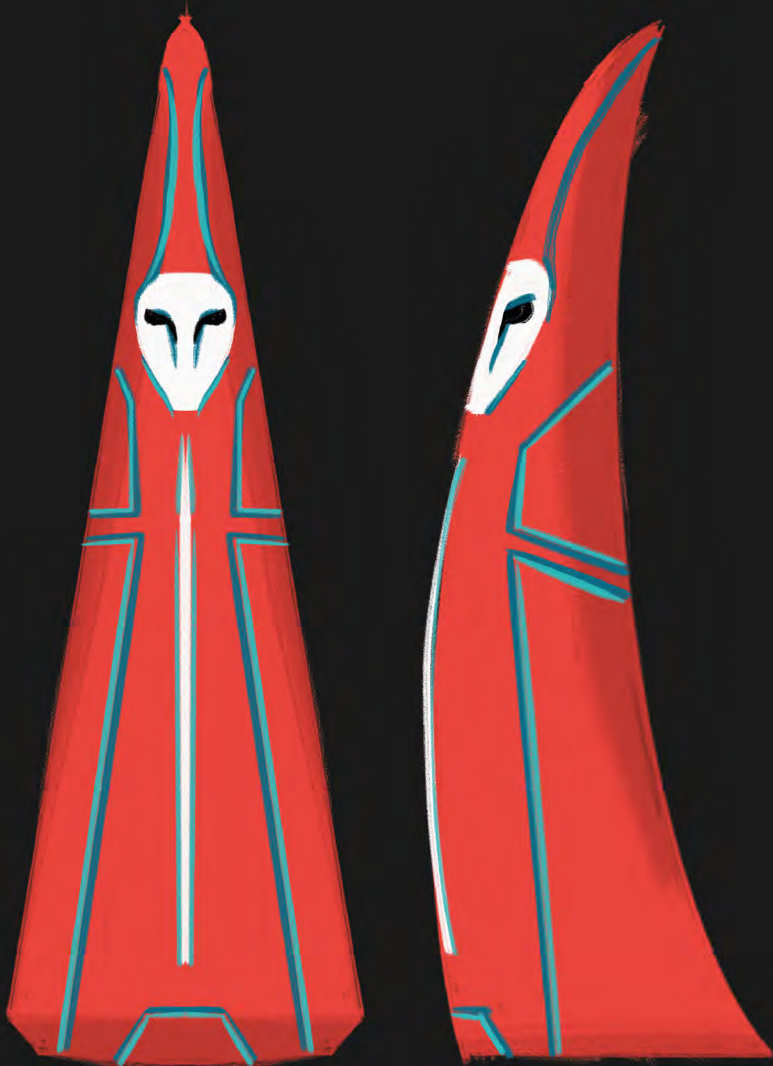
Tap on the angel's face reveals the number of the matching sequence to pass on the corresponding circle

step 4

Once the sequence has been resolved you unlock the way to the next stage, from now on you are able to see the rebels of the sect. You unlock a piece of glitched video

what? characters and objects

the red adept



scripts

1.0

approaching the scene

ADEPT: *Anciently here stood a church dedicated to the Seven Angels, built by the Viceroy in 1517. Here the secret imperial association of the Seven Angels was born, it has always been the place where many people think the identity of the Beati Paoli was hidden. To this day nothing remains of the old church or the convent of the Pauline Nuns. I think the coin can tell us something more than that.*

1.1

unveiling the scene with Angels and Circles

ADEPT: *Just as I imagined, there are still traces of our existence in this place...*

1.2

when player ask for help

ADEPT: *Are you sure you want my help? We could be wasting time on my research.*

- player chooses between yes or no -

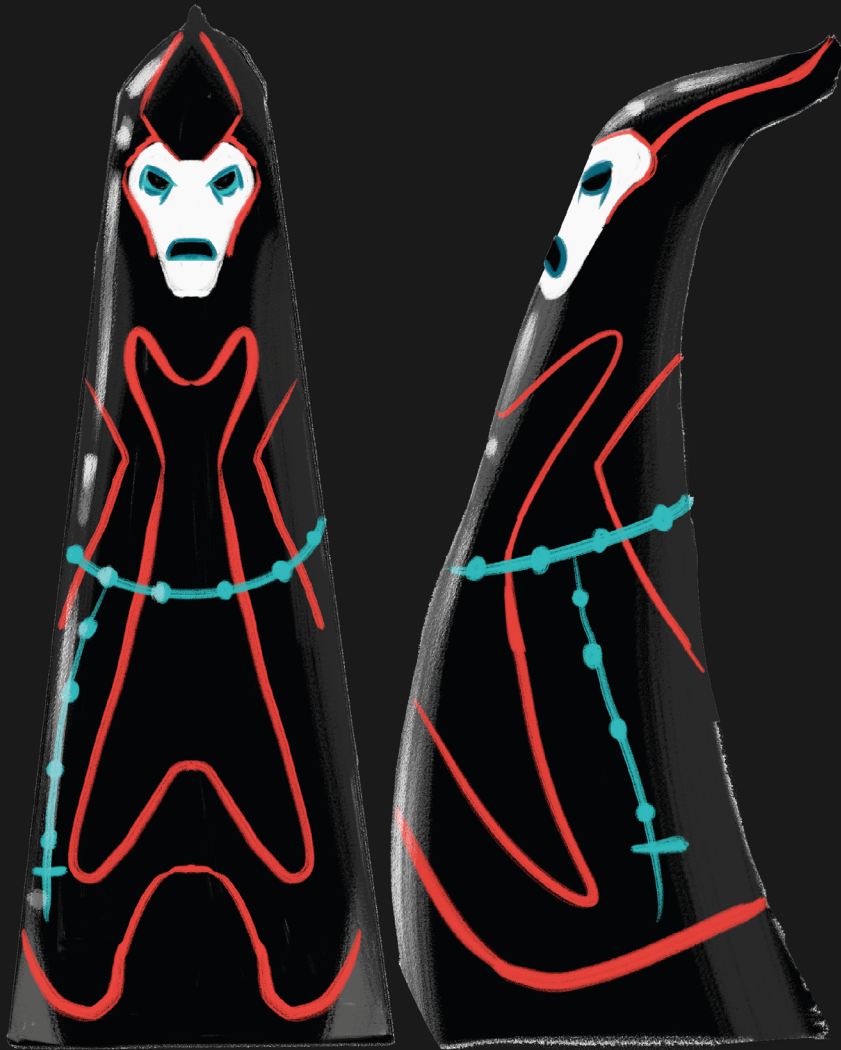
ADEPT: *I think the password is in the circle activation sequence. I'm guessing that angels are the guardians of this information*

1.3

when player ask for extra help

ADEPT: *I'm sorry, but I couldn't find any other useful information...*

what? characters and objects the black adept



scripts

1.0

approaching the scene

ADEPT: *Anciently here stood a church dedicated to the Seven Angels, built by the Viceroy in 1517. Here the secret imperial association of the Seven Angels was born, it has always been the place where many people think the identity of the Beati Paoli was hidden. To this day nothing remains of the old church or the convent of the Pauline Nuns. I think the coin can tell us something more than that.*

1.1

unveiling the scene with Angels and Circles

ADEPT: *Just as I imagined, there are still traces of our existence in this place...*

1.2

when player ask for help

ADEPT: *Are you sure you want my help? We could be wasting time on my research.*

- player chooses between yes or no -

ADEPT: *I think the password is in the circle activation sequence. I'm guessing that angels are the guardians of this information*

1.3

when player ask for extra help

ADEPT: *I'm sorry, but I couldn't find any other useful information...*

what? characters and objects

07 san michele

triggered

status

After the tap he lights up and declares his name and the founder who corresponds to him. Once the story has been told, the head rotates to reveal the number of the sequence to which its circle corresponds. Finally it returns to the inactive state

content/ historical fact

Once activated, he declares to be the Viceroy Pignatelli, famous for having founded the secret society of the Seven Angels together with the most powerful Pisan families, he also founded the Paoline's convent and the order of the Minimi di San Francesco di Paola, already blessed when he had the honor of making acquaintance during his years of imprisonment in France.

status

The inactive angel acts visually with colours and decorations to make it clear which circle corresponds to it.

content

The decorations correspond to the iconography derived from the stories of the meeting place of the painting of the 16th century.

inactive



scripts

Once Angel is triggered

ANGEL.: *St. Michael of the Golden Armour, I am the archangel who most of all stands out for his cult and popularity, almost like a king. In my figure is reflected Ettore Pignatelli, Viceroy of the kingdom of Sicily on behalf of Charles the Fifth in the sixteenth century, last among the first in the shadow, he is responsible for the birth of this brotherhood and many others.*

07 san michele circle

triggered

status

If the sequence is wrong it zooms in and lights up but returns to the initial state again.
Once activated it magnifies and illuminates and remains in this state if the sequence is correct.

status

When you step on it, it throbs but doesn't turn on. At least you need to have found the first angel to begin the activation process.

inactive



what? characters and objects

01 San uriele

triggered

status

After the tap he lights up and declares his name and the founder who corresponds to him. Once the story has been told, the head rotates to reveal the number of the sequence to which its circle corresponds. Finally it returns to the inactive state

content/ historical fact

Once activated, it vaguely introduces to Squarcialupo's revolt which will then be treated among the videos collected at the end of the experience.

status

The inactive angel acts visually with colours and decorations to make it clear which circle corresponds to it.

content

The decorations correspond to the iconography derived from the stories of the meeting place of the painting of the 16th century.

inactive



scripts

Once Angel is triggered

ANGEL: *St. Barachiel of the Roses, I am the second archangel. In my figure is reflected Gianluca Squarcialupo. My rebellion is still remembered by the Sicilians today like Vespers. Sadly, my end came in a church by a band of hooded friars who dared to unleash their daggers during the holy service.*

01 san uriele circle

triggered

status

If the sequence is wrong it zooms in and lights up but returns to the initial state again.
Once activated it magnifies and illuminates and remains in this state if the sequence is correct.

status

When you step on it, it throbs but doesn't turn on. At least you need to have found the first angel to begin the activation process.

inactive



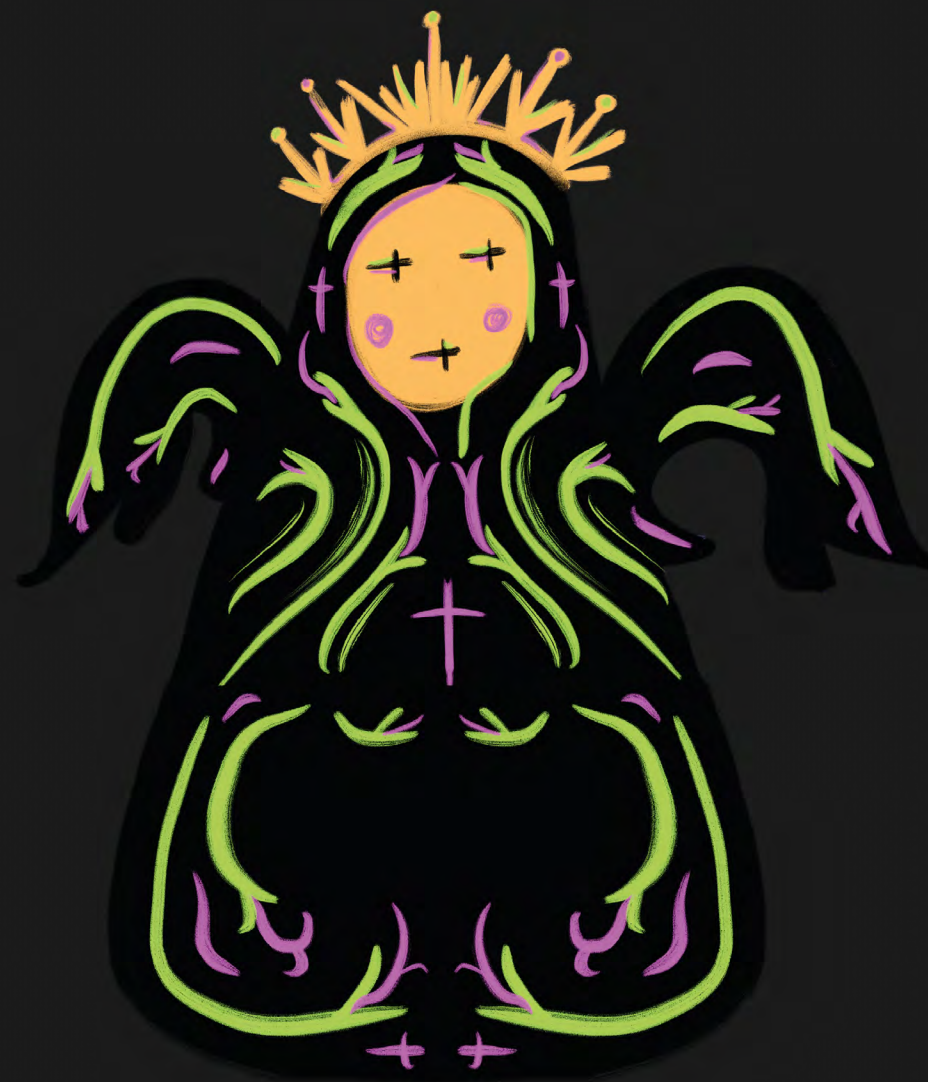
02 san barachiele



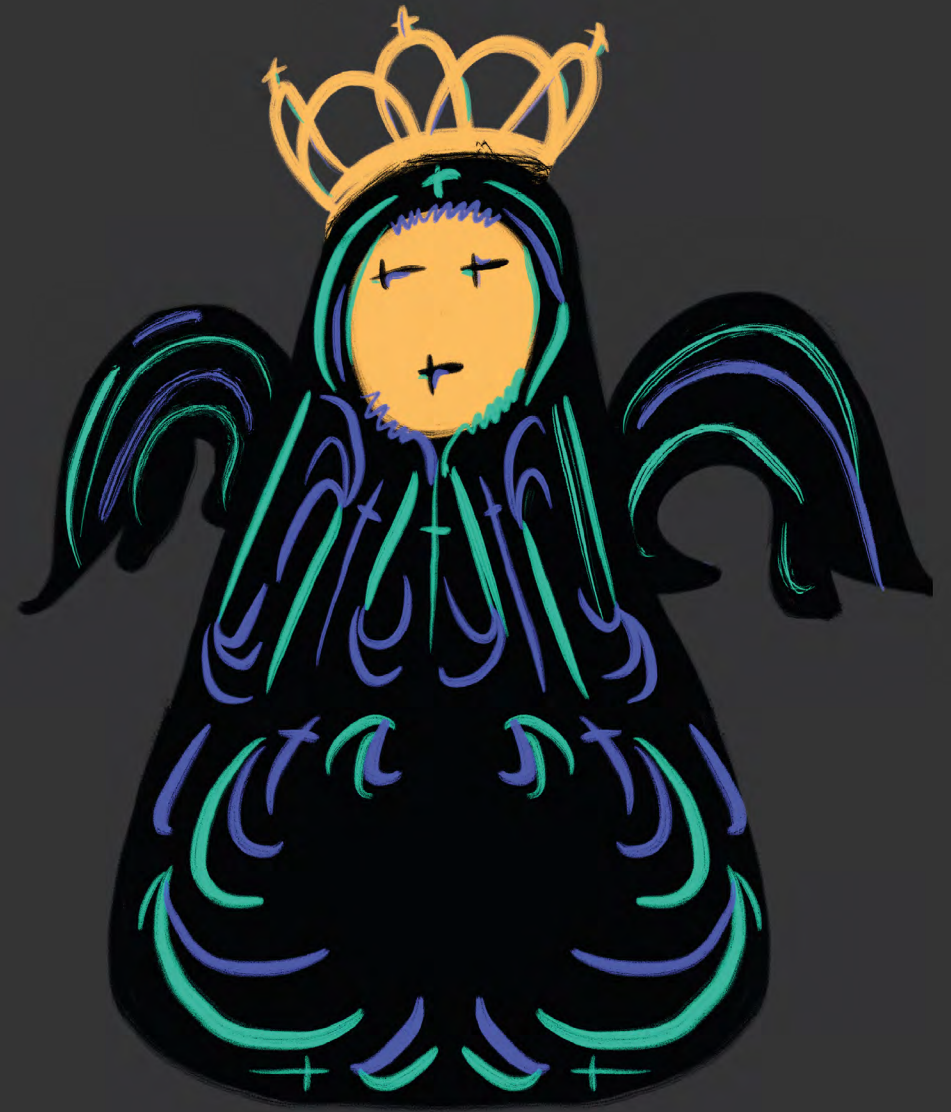
03 san gabriele



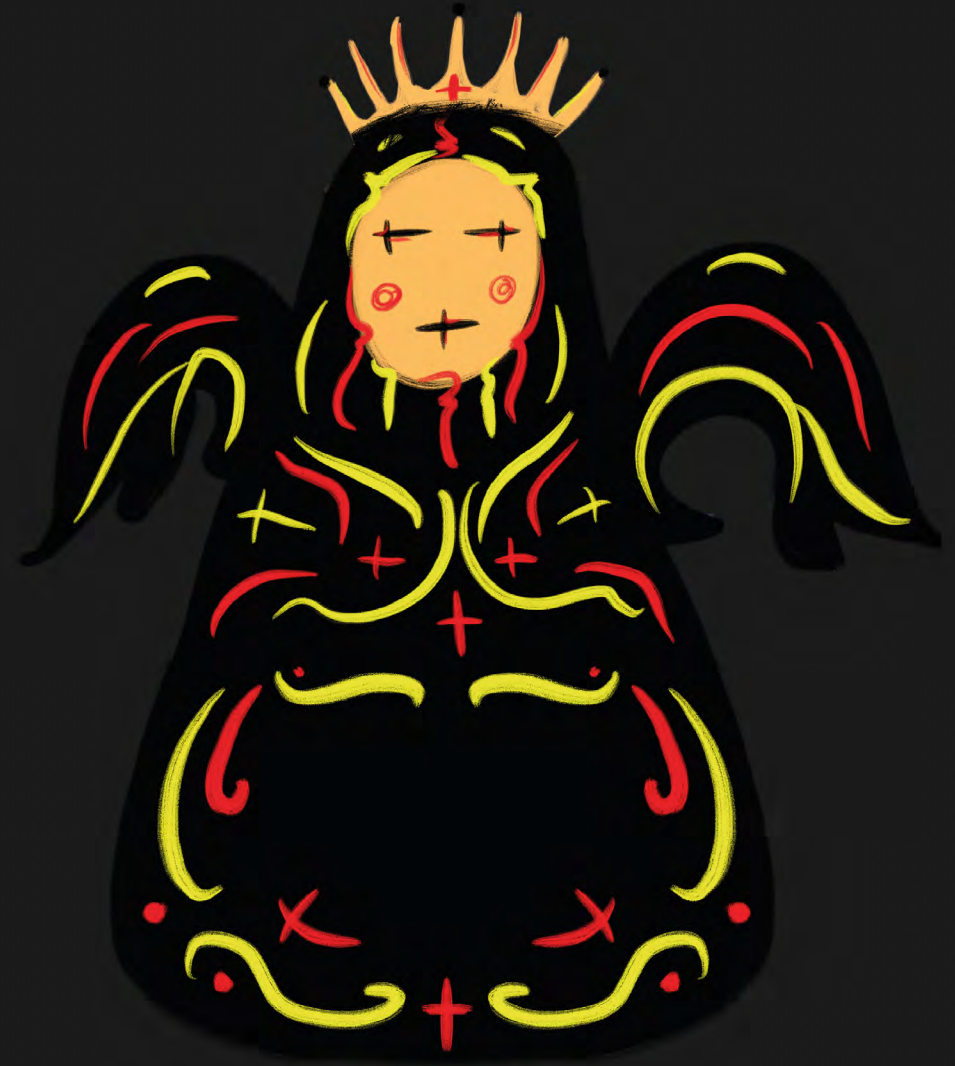
04 san raffaele



05 san geudiele

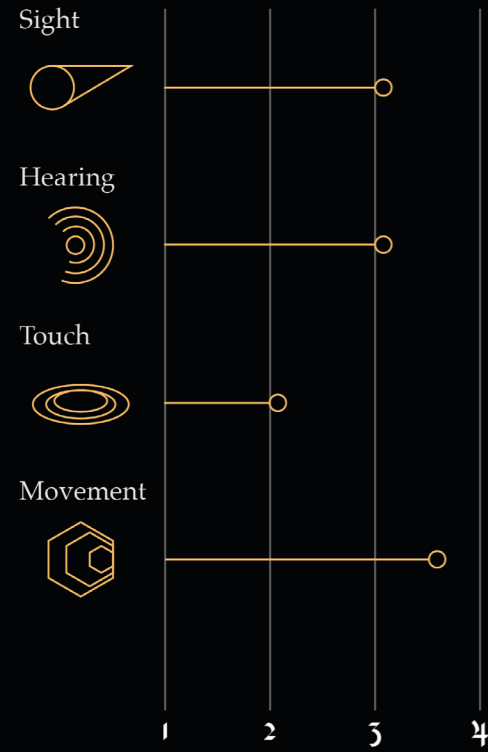


ob san sealtiele



how?

senses

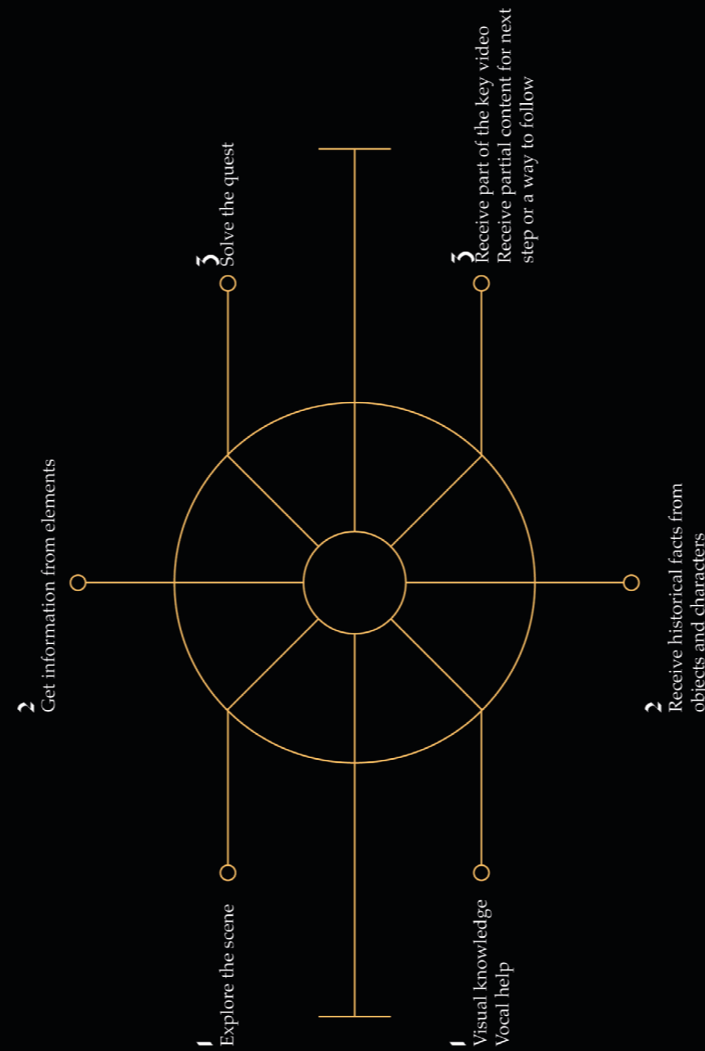


screen action

MAIN ACTION
Tap on objects and characters

SECONDARY ACTION
Explore Profile, Diary, Inventory, Map

game experience



content

sound and vfx

MUSIC / ENVIRONMENT

- Background music, slightly gloomy and mysterious

VOICE

- Guide Master on tips and help and description (see Scripts)

- Angels on revealing their identity

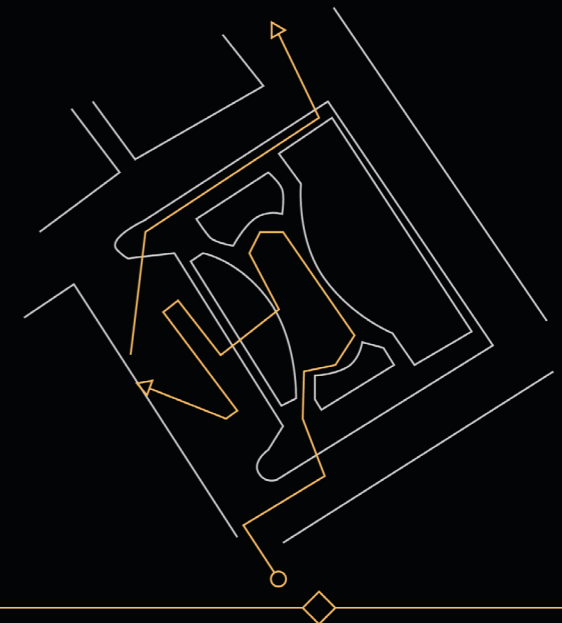
VFX

- Triggering Angel and Rotation face

- Triggering Circle

- End of the task and reward of Video

movement





San Matteo al Cassaro app scene



AR scene in Piazza Sette Angeli

7.10 The third and fourth test. AR scene and the whole experience

THE THIRD TEST (AR SCENE)

The aesthetics of the characters and the atmosphere of the rooms have been defined. The game dynamics were designed. The user test should have been conducted as follows:

The narrator pretends to be a character in the story to guide the user throughout the journey. He behaves, moves and talks like an adept that want to save the city.

A complete prototype of the second scene in Piazza seven angels has been developed. The prototype would have given the possibility to evaluate the game mechanics of the scene, the microinteractions in AR, the relationship between user and space. Moreover, it would also have been useful to evaluate the sense of presence for objects in AR, and the relationship between the real and virtual environment.

THE FOURTH TEST (THE VALIDATION)

The fourth and final test would have been the definitive and validating one. However, the production of such a long experience would have required the intervention of a team with several skills which are impossible to master by one person alone, that is how it would have been executed:

The narrator pretends to be a character in the story to guide the user throughout the journey. He behaves, moves and talks like an adept that want to save the city.

The user is introduced to the story of the experience by the narrator through the flashback story. General game mechanics are introduced given the main goal to complete the experience in the shortest possible time.

A paper notebook containing the puzzles not produced in AR is given to the user to solve them.

The two scenes in AR are tested.

The scene in square seven angels is tested again. The Cuncuma scene, still to be produced, would have allowed testing not only the multisensory interaction between audio and spatial exploration but also the sense of visual presence.

After this last test, more aspects of augmented reality could have been evaluated, especially of auditory AR. The picture would have been more explicit about the multisensory experience, the interaction between leading character and user, and of course of the total experience.

7.6 Short Conclusion about the project

As Miller (2014) says, creating works for a new medium is thus a process of discovery.

When this project began, the idea of tackling a titanic production had undoubtedly not been considered. Though within the limits of one's ability, there was no idea of tackling previously unknown areas of design, such as game design or character design, disciplines that were first addressed and studied during both the research and production phases. Without a doubt, such a project could be easily tackled by a team of at least five people with specific skills. It indeed emerges the need for multidisciplinary and the ability to achieve a good result in practice for a realized product. At the same time, everything should be orchestrated by a director who knows a bit of everything, as happens with Hollywood film directors.

Putting the question aside, from an interaction design point of view. Any designer dealing with digital and interactive storytelling is facing the world of macro problems of a complex system, digging down into the micro-detail of each small interaction. A way of designing that Rogers in 1952 defined from the spoon to the city. An almost infinite loop that granularly deals with problems of more or less large size. Every time we believe we are nearing the end, a new unexplored world

sets before us.

Undoubtedly, the outcome of the various tests satisfies part of the research undertaken. Though, the failure to complete all the steps due to superior forces, leads the issue to investigate further in the future.

It emerges that the discipline of digital and interactive storytelling is a complex subject to deal with.

The biggest issue in such a project is the Agency. Despite the interactive path, the balance between a treasure hunt and free exploration is very hard to achieve. From a side, factors such as meaningful relation between story and place give the opportunity of sense-making, meanwhile, the free exploration of the environment is hampered. As a result, there are very few relevant moments of choice, mostly cul-de-sac in a relatively linear experience. Moreover, the necessity of introducing a higher level of ludology has brought to adapt the narration to the linear story path typical of an adventure game.

Such a project demonstrates the possibility to reach what Thomas Pavel (1986) calls "*salient ontologies.*" These ontologies can oppose the world of everyday life to a world of magic, dreams to reality, images to existents, or, in narratives with embedded stories, higher to lower levels of fictionality. Same could be said for perspectivism, which is a highly immersive representation of space that "encourages the audience's illusion

of being directly and vividly presented with fictional reality”, additionally this is accomplished by the sense of presence through AR and the sense of Aura.

Looking at the designer as director, the whole time he has to think about the balance between tension and calmness, game experience and narrative experience, time and space, system and interaction, reality and fiction, character and user, object and place etc... The whole project results to be a constant balance between opposite and attractive forces to turn space into place, to capture the unique spirit of the place and to deliver the best experience, possibly an experience that happens to be more real than reality and capable to produce a memory for the user/audience

Conclusions

Thesis work is never done. Despite the number of researches and results, it is necessary to execute an iterative process of granular sharpening to lead to broader feasible conclusions.

A digital and interactive storytelling project based on locative AR narrative is extremely influenced by many exogenous factors, all of which could become problems or opportunity.

From one side, the free creativity that belongs to the world of fantasy, and the world of narrative.

On the other side, the world of design that requires technical pragmaticism and concrete results.

Already Bruno Munari identified the duality of artist and designer when it comes to fantasy and creativity. In the case of interactive narrative, not only the designer is an artist, but is also film director, or better augmented film director.

Likewise, the designer faces the creation of every shot as the director. He collaborates with people from multiple disciplines more or less belonging to the film industry. For example, the designer set up a team with character designers, game designers, photography directors, scriptwriters, VFX artists, music composers but also with developers, UI designers, UX designer, marketers etc...

Why do we say augmented director so?

Because, when it comes to locative AR stories, the dimensionality is no longer flat.

We are in the world tridimensionality, and in the world of the active user as an alive explorer of the scene. There is no more 2D audio and Video, we have 3D objects that can be manipulated, not to consider that not only two senses are involved but the whole five take part in the experience.

The Audience Agency is the unexpected and unpredictable design elements that could be shaped but not totally managed. Sometimes it could lead to new problems, sometimes could leave a void for new opportunities.

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Sadly, exogenous factors aren't ended.

Like the project of this study, the locative narrative could belong to public spaces. Of course, public spaces constantly change in the short and in the long terms, they are liquid context subject to change.

For that reason, a project dealing with public spaces should always take into consideration adaptability as a key factor.

The adaptability that concerns also the sphere of time. It is important to take in mind that we are not anymore in the time of the experience, but we are in the inner time of the user, which is always variable, mathematically and psychologically. The designer/director should

be prepared to tackle this huge problem and possible collateral effects.

On the contrary, poetically, the locative AR interactive narrative experience is standardized and repeatable for every user and at the same time unique.

The uniqueness is given by the action of the user that, as being an active part of the story, makes it personal. In a few words, the invisible interaction is what really makes the experience product unique and repeatable.

Furthermore, the concept of unique and repeatable emerges for the process of design and making of every story. As long as the designer could follow a path or a series of guidelines, every story is a world apart that requires design adaptability, and a shapeshifter approach that adheres to context, cultures, zeitgeist, and many other factors. That's why isn't impossible to detach the idea of serendipity and experimentation from locative AR interactive narratives.

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Having said that, a good approach to the discipline of interactive digital narrative in AR locative context could be synthesized into few words; adaptability, holistic, multidisciplinary and parallel thinking.

Appendix / Plots

1. La vecchia dell'aceto

Nel XVIII secolo visse a Palermo Giovanna Bonanno, una vecchia povera e mendicante, considerata da tutti una “magara” cioè una strega.

Viveva girovagando qua e là nel quartiere della Zisa e l'occasione per dare una svolta alla sua vita le fu data da un fatto del tutto casuale.

Si trovava, infatti un giorno in via Papireto dall'aromatario, quando all'improvviso vide una madre portare la sua bambina sofferente fra le braccia, poiché per sbaglio aveva bevuto un sorso di “aceto per pidocchi”, una mistura a base di aceto e arsenico che l'aromatario stesso vendeva. Subito questi le fece ingoiare dell'olio fino a che la povera bambina non vomitò avendo così salva la vita. Giovanna, che era una donna molto intelligente intuì subito che questo intruglio era qualcosa da cui poterne trarre benefici economici, e poter cambiare così il suo tenore di vita. Comprò, allora una pozione di “aceto per pidocchi” e fece un esperimento, vi inzuppò un pezzo di pane e lo diede da mangiare a un cane randagio che aveva catturato, lo legò al bastione di Porta d'Ossuna e se ne andò. Dopo qualche tempo tornò per vedere come aveva reagito il cane, e lo trovò morto. Provò allora a tirare il pelo dell'animale e ne esaminò la mucosa delle labbra, perché se fosse stata nera e il pelo fosse venuto via facilmente, tutti avrebbero potuto ca-

pire che era morto avvelenato. Ma questo non avvenne e Giovanna si ritrovò fra le mani un veleno che poteva essere somministrato senza lasciare alcuna traccia.

Cominciò così a far sapere in giro che lei deteneva un liquore arcano che poteva riportare la pace nelle famiglie, per una modica somma infatti poteva aiutare quelle povere ed infelici mogli desiderose di sbarazzarsi del marito per occuparsi completamente dell'amante.

In quegli anni, siamo intorno al 1786, la medicina non aveva molte competenze e quindi quando i medici venivano chiamati al capezzale dello sfortunato marito di turno, che si contorceva fra dolori addominali atroci, agonizzante, non riuscivano ad accertarne le cause della morte. Puntualmente ogni volta che il toccasana andava a buon fine, la vecchia dell'aceto si presentava in casa della novella vedova a riscuotere la parcella, si faceva il segno della croce ed esclamava: "U Signuri ci pozza arrifrisca l'armicedda" (Il Signore possa rinfrescargli l'anima) e se ne andava.

Dell'aceto per pidocchi, la Bonanno fece un vero e proprio business della morte.

All'improvviso nel quartiere palermitano della Zisa, cominciarono a verificarsi casi di morte molto misteriosi, e fu così per molto tempo, fino a che il sospetto di una madre per la morte improvvisa del figlio, e le affrettate nuove nozze della nuora, non innescarono un

meccanismo di vendetta. Fingendo di volere acquistare anche lei una dose d'aceto, al momento della consegna, si presentò con quattro testimoni, cogliendo in flagrante la Bonanno.

A questo punto ebbe fine la carriera della "vecchia dell'aceto" che fu presa e rinchiusa in quello che a quei tempi era stato un luogo di detenzione per streghe, fattucchiere e eretiche, il carcere dello Steri. Qui fu processata e condannata per veneficio e stregoneria.

Era il 30 luglio 1789, quando già di prima mattina i nobili mandavano le carrozze per riservarsi un posto in prima fila, per godersi il macabro spettacolo dell'impiccagione di una strega.

Lo scenario era quello di Piazza degli Ottangoli (oggi i Quattro Canti) punto d'incrocio perfetto ed elegante, fra via Toledo (un tempo Cassaro oggi corso Vittorio Emanuele) e la via Maqueda, dove venivano appese le forche più alte della città e dove finì impiccata la "vecchia dell'aceto".

Chi si intende in genere di esoterismo, afferma che l'anima di chi muore in seguito ad una morte non naturale è restia a lasciare questo mondo e così va di luogo in luogo in cerca di pace. Così anche il fantasma della "vecchia dell'aceto", si dice, continua a errare in certe notti per quei quartieri e vicoli di Palermo a cui sembra sia rimasta affezionata.

2. Il Conte Cagliostro

Il Conte Cagliostro è stato un personaggio singolare e misterioso, dotato di una intelligenza straordinaria, una delle personalità più affascinanti degli ultimi secoli. Truffatore, mago, esoterista, ma anche alchimista, veggente e guaritore, Cagliostro percorre tutta l'Europa, affiliandosi alla massoneria e fondandone lui stesso una di rito egizio.

Una vita avventurosa in cui alterna gesti caritatevoli ad azioni di dubbia morale, ed è per questo, forse, che la sua figura resta tra le più controverse e discusse ma anche meno conosciute della storia.

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Palermo 1743

In uno dei vicoli più chiassosi e poveri della città, nel quartiere dell'Albergheria, in quello che un tempo si chiamava via della Perciata, il 2 giugno 1743, nasce Giuseppe Balsamo, secondogenito di Felicia Braccognieri e Pietro Balsamo, mercante di stoffe.

Sei giorni dopo la nascita è battezzato nella cattedrale di Palermo con una sfilza di nomi: Giuseppe, Giovanni Battista, Vincenzo, Pietro, Antonio e Matteo. A tenerlo a battesimo è Vincenza Cagliostro moglie del prozio Giuseppe Cagliostro, uomo potente discendente dai Braccognieri di Piscopo e di Castoreale.

Il padre di Giuseppe infatti era appartenuto ad una ri-

spettabile famiglia palermitana imparentata con i Balsamo da Messina, signori di Taormina e adepti per tradizione all'ordine dei Cavalieri di Malta, anche se al momento della nascita del piccolo Giuseppe, la famiglia è ampiamente declassata.

Morto il padre poco tempo dopo la sua nascita, la madre vedova con due bambini, decide di affidarlo ad una parente sposata ad un farmacista. Qui il piccolo Giuseppe comincia a familiarizzare con polveri e unguenti, che lo portano ad interessarsi della medicina, una passione questa, che continua a coltivare anche negli anni di scuola trascorsi al Seminario di San Rocco, dove, intrattenendosi con i frati speciali, apprende le prime nozioni di medicina e botanica. Ma la sua natura irrequieta e ribelle, lo portano all'espulsione dalla scuola, e pur di tenerlo impegnato la madre lo avvia nella bottega di un pittore, dove aguzza la sua genialità apprendendo l'arte del copiare. L'ambiente della strada è però congeniale con la sua natura sfrontata, e incomincia così a vivere di truffe e raggiri. Quello che gli costa l'esilio da Palermo, è l'imbroglio a danno dell'orafo Vincenzo Marano che convinto dal Balsamo che con la magia avrebbe potuto dissotterrare i tesori lasciati dagli arabi, si lascia condurre in un antro buio, dove lo attendono, travestiti da demoni, alcuni delinquenti che lo picchiano e lo privano dei suoi beni.

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Mandato a Messina trova la protezione e la guida del prozio Giuseppe Cagliostro che riesce a mettere ordine nella sua vita, iniziandolo al mondo esoterico.

Malta 1766

Come egli stesso affermerà poi, la sua vita inizia a 23 anni, a Malta.

E' il 1766 infatti, quando sbarca nell'isola, e alla sequela del Gran Maestro Manuel Pinto de Fonseca, impara molto sulla contemplazione filosofica e sull'alchimia, ottenendo dopo due anni di studi, l'ammissione ufficiale all'Ordine dei Cavalieri di Malta, che gli impone l'obbligo di scegliere un nome nuovo, come "nuova" sarebbe dovuta essere la sua vita da quel momento in poi.

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Ha 25 anni quando, nella chiesa di San Giovanni, Balsamo diventa il Conte Alessandro Cagliostro, nome scelto in onore dello zio, e gli viene conferito il triplice cavalierato: templare, maltese e rosacrociano, Passeranno però 10 anni prima che si sentirà pronto ad usare questo nome, non sentendosi degno e interamente spoglio dal male prima di allora.

Non potendo ritornare a Palermo, poiché ricercato, si stabilisce a Roma, in un quartiere povero, dove intraprende l'attività di scrivano e copista. Qui conosce Lorenza Feliciani, figlia di un fonditore di bronzo, una

ragazza di quindici anni, bella, dai lineamenti delicati, con gli occhi azzurri e i capelli biondi, bellissima e ignorante, non sa infatti né leggere né scrivere, in compenso eccelle nella scaltrezza e nella malizia. Vederla e innamorarsene è un tutt'uno, tanto che si sposano il 20 aprile 1768 nella chiesa di San Salvatore in Campo, andando a vivere, per i primi tempi, con i genitori di lei. Da subito il rapporto tra i due è ambiguo, Lorenza continua a farsi corteggiare con il consenso del marito, che anzi le insegna nuovi modi per sedurre gli uomini, traendo da tutto ciò vantaggi e guai.

Raggirati da un sedicente Marchese di Alliata e da un suo amico, a cui il Balsamo aveva concesso di corteggiare la moglie sperando di ottenere favori e protezione, è costretto ad emigrare da Roma a Loreto senza un soldo, e successivamente a girovagare per l'Europa, lasciando sempre che la moglie trovi un amante da circuire. Comincia a questo punto a pensare di stabilirsi a Londra, ma anche qui, la coppia per mantenere il tenore di vita, alto per le loro tasche, deve adoperarsi con i soliti espedienti: le commesse dei quadri, le stampe di lui e gli amanti di lei.

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Francia 1772

E' il 1772 quando la coppia decide di tornare in Francia, qui però accade qualcosa di inaspettato, Lorenza

alle prese con l'ennesimo uomo, questa volta viene travolta dai sentimenti, lui è l'avvocato Duplessis, conosciuto durante il viaggio, e che li fa ospitare da una sua amica marchesa. All'inizio tutto sembra svolgersi come di consueto, Balsamo lavora con le committenze che l'amante della moglie gli favorisce, mentre la moglie "favorisce" il giovane amante, fino a che i due uomini arrivano al punto di mal sopportarsi. Il Duplessis chiede allora a Lorenza di lasciare il marito per lui, lei accetta, ma il Balsamo che non sopporta l'affronto subito, denuncia la moglie per adulterio, riuscendo a farla arrestare. Quando la donna esce, dopo quattro mesi di carcere, la coppia si riconcilia, e riprende a viaggiare, a volte anche sotto falso nome. E' un periodo tranquillo, quello che segue, Giuseppe inizia a dare lezioni di chimica, presiede sedute di magia, e vende porzioni magiche e acque miracolose.

Inghilterra 1776

Nel 1776 fanno ritorno in Inghilterra al loro seguito una dama di compagnia per lei, e un segretario traduttore-interprete per lui, Domenico Aurelio Vitellini, a cui fa credere, per giustificare il lusso in cui vive, di essere in possesso di vari segreti, fra cui quello per fabbricare l'oro. In verità, poteva permettersi quel tenore di vita, grazie all'Ordine di Malta, che in cambio gli chiedeva

di diffondere le idee rosacrociate.

Ad aumentare la sua fama, quale mago dotato di poteri straordinari, è lo sfoggio dei suoi poteri predittivi, quando riesce a prevedere l'uscita di alcuni numeri della Lotteria d'Inghilterra, neanche a dirlo la sua casa diventa un porto di mare, piena sempre di instancabili postulanti che interrogano il grande Mago. Fra questi una coppia di falsi coniugi, William Scott e Mary Fray, che lo fanno cadere vittima di un raggio.

L'equivoca coppia pensa di potere sfruttare i poteri del Mago di Malta a loro piacimento, e dopo alcune vincite andate a segno, avidi e insaziabili di denaro, chiedono sempre di più, ma al rifiuto del Balsamo, i due si vendicano architettando un tranello: regalano a Lorenza un cofanetto contenente dei diamanti, poi denunciano i coniugi Balsamo dichiarando di essersi appropriati dei gioielli.

Nella perquisizione che la polizia effettua a casa del Balsamo, oltre al cofanetto con i diamanti, viene sequestrato anche il "libro dei segreti". Il lungo processo, che lo vede assolto, ma che lo obbliga a pagare le spese processuali, però non soddisfa gli Scott che denunciano una seconda volta il Balsamo, che nel frattempo è entrato a far parte della massoneria, stavolta per magia e stregoneria.

Arrestato passa così un mese in carcere, e quando ne

esce, lascia l'Inghilterra.

Quello che più gli costa è l'aver perso la dignità di mago, l'infamia insopportabile che lo ha sottratto all'alone di mistero che da sempre ha circondato la sua vita, che ora è stata messa alla mercé di tutti.

Per questo Balsamo ha un odio profondo verso tutti coloro che hanno contribuito a screditare la sua fama e lancia su di loro una maledizione, maledizione che porterà alla morte dei coniugi Scott e del giudice che lo aveva condannato.

Questo fatto, che lo aiuta a recuperare prestigio e autorità, per Balsamo è una grande rivalse, che lo fa sentire finalmente un "puro", ed è da questo momento in poi che adotterà finalmente il suo nuovo nome, Cagliostro, cambiando anche quello della moglie Lorenza in Serafina.

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Russia 1780

Dopo l'Inghilterra l'Europa non ha più confini per Cagliostro, nei vari paesi in cui si ritrova da prova dei suoi poteri soprannaturali, fino al 1780 quando arriva in Russia dove rimane deluso dall'atteggiamento della zarina Caterina II che non lo vuole a corte, e dai nobili che lo snobbano.

Malgrado tutto però non gli mancano i seguaci fra cui il principe Potemkin, con cui partecipa a esperimenti di

alchimia e sedute spiritiche.

Si dedica a guarire i malati, incurante se nobili o straccioni, spesso senza pretendere alcuna ricompensa, quello che vuole il Grande Cofto è la riconoscenza della gente, ma il suo operato non è condiviso dai medici che lo vedono come un intruso nell'ambito della loro scienza.

Amareggiato lascia allora la Russia per recarsi in Polonia, ma anche qui viene prima acclamato e poi deriso. Convinto delle sue capacità, decide di ricominciare da capo e si reca in Francia, a Strasburgo, certo che, essendo la città aperta alle idee innovative poiché centro di cultura, è il posto giusto per propagandare le sue idee. Qui incontra e diventa amico del capo spirituale della città, il principe – cardinale Louis Renè Edouard de Rohan, personaggio molto singolare, a cui piace vivere nel lusso e che trova molte affinità con il Cagliostro divenendone il protettore.

A Strasburgo Cagliostro e la moglie vanno ad abitare nella casa di un massone membro di una loggia di ispirazione egiziana, l'Iside, che lo presenta subito agli altri affiliati. Fra di essi, che accorrono numerosi per ascoltarlo, il mago riscuote finalmente la fama che cercava. A loro spiega la sua dottrina, dimostra le sue conoscenze sull'alchimia, sulla medicina, sulla divinazione, dandone prova tangibile compiendo prodigi.

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Guarisce moltissime persone ritenute dalla medicina senza speranza, somministrando loro le sue misteriose pozioni a base di erbe, e instaurando con i suoi pazienti un rapporto basato sulla fiducia, colloquiando con loro e interessandosi ai loro problemi, convinto com'era infatti che la maggior parte delle malattie iniziano nella nostra mente, e che se questa soffre, le conseguenze si manifestano nel corpo.

Preferisce inoltre rivolgere le sue cure ai poveri e ai diseredati, avendo per tutti una parola buona e rinunciando alla ricompensa, ed è per questo che la gente affolla la sua casa tanto da fargli decidere di cambiare abitazione per una più grande.

334 Oltre ad essere un grande guaritore è anche un grande indovino, è ospite nel castello di Saverne, del suo amico de Rohan, quando annuncia la morte dell'imperatrice d'Austria, Maria Teresa, che avverrà otto giorni dopo, inoltre predice gli avvenimenti politici che sconvolgeranno la Francia: la rivoluzione del 1789, la morte dei regnanti, la nascita della repubblica.

Al pari dei successi, però, aumentano anche le calunnie contro di lui, lo accusano di intrighi e complotti contro la Francia, arrivando persino ad additarlo come ebreo per via della sua conoscenza della cabala e della sua ricchezza.

A complicare tutto è un nipote del cardinale de Rohan

che fa scoppiare uno scandalo che si ripercuote sulla sua famiglia e che coinvolge anche la figura del cardinale stesso, con conseguenze negative anche per Cagliostro che decide di partire e approfittando dell'assenza dell'amico, lascia Strasburgo per recarsi a Napoli dove è stato chiamato al capezzale di un altro suo caro amico, il cavaliere d'Aquino, cercando invano di strapparla alla morte.

Trovandosi all'improvviso senza la protezione di alcuno, e non sentendosi al sicuro nel regno borbonico anche per l'avversione della regina Maria Carolina alle idee liberali, lascia intendere di recarsi a Parigi, e si trasferisce invece a Bordeaux.

Bordeaux 1783

Cagliostro arriva nella città di Bordeaux nel novembre del 1783 con l'idea di diffondere il suo rito egiziano come rito unico della Massoneria; del resto Bordeaux, Strasburgo e Lione, sono sotto l'influenza della Stretta Osservanza Templare.

Si stabilisce in una casa bella e sontuosa, affollata come sempre da tanta gente, dove non riesce a sottrarsi al suo ruolo di guaritore, malgrado il suo scopo sia quello di richiamare gli affiliati massoni.

Ancora una volta però, questo suo operato gli crea nemici fra i medici, che chiedono di proibire l'abuso

dell'esercizio di questa scienza da lui praticata, ma le autorità bordolesi fanno orecchie da mercante, ormai Cagliostro è un uomo potente e per di più un massone. In questa città, il Grande Cofto, fa amicizia con un ex affiliato della Massoneria, Martinez Pasqualis, dedito alla pratica spiritica, pratica che egli stesso sperimenta, sognando di arrivare con ogni mezzo a diventare il capo universale di tutte le logge massoniche esistenti nel mondo.

A mettere un freno alle sue attività, è, nella primavera del 1784 una malattia grave che gli procura febbri altissime, ed è durante questa febbre, che, come lui stesso racconterà, ebbe una visione soprannaturale che lo spinse a proseguire la costruzione della "vera" Massoneria.

Lione

Guarito dalla sua malattia, Cagliostro si reca a Lione per conoscere e sottomettere al suo volere un potentissimo discepolo di Pasqualis, Jean Baptiste Willermoz. Giunge così nella città francese e, con il nome di conte di Fenice, convoca l'uomo in questione, gli confida il suo desiderio di diventare capo di tutta la Massoneria, di voler istruire massoni scelti che gli prestino giuramento di fedeltà.

Ma il Willermoz non è d'accordo perchè ciò significhe-

rebbe per lui, cedergli la rete lionese che faticosamente ha costruito, quindi rompe ogni rapporto anche se con timore, conoscendo i poteri del conte.

Cagliostro non si perde d'animo, tramite altri sostenitori illustri massonici, raccoglie i fondi per costruire un tempio, che dovrà essere il centro del Rito egiziano, e intanto continua a esercitare la medicina e a prevedere il futuro e come sempre non sbaglia una previsione.

Nei mesi seguenti si dedica a far conoscere il suo Rito e tutto ciò che di buono da esso ne viene, finchè come sempre, decide di andare via, direzione Parigi, mentre i lavori per la costruzione del tempio continuano, "La Saggazza Trionfante" verrà ultimata il 25 luglio 1786. Arrivato a Parigi, Cagliostro non sospetta neanche lontanamente che verrà suo malgrado coinvolto in eventi di cui era assolutamente estraneo, anche perché i fatti si erano svolti nel periodo in cui egli era assente da Parigi, ma procediamo con ordine...

Tutto ha inizio quando i gioiellieri parigini Bohemer e Bassange, non riescono a vendere una favolosa collana di diamanti commissionata da Luigi XV per la contessa di Barry, e che era rimasta a loro dopo la morte del re. Nei vari tentativi di "piazzarla", i gioiellieri si imbattono nei coniugi de La Motte che fanno credere loro di poter vendere il gioiello nientemeno che alla regina Maria Antonietta in persona!

La persona che doveva fare da esca in questo losco affare, fu immediatamente individuata nel cardinale de Rohan, di cui la contessa Jeanne de La Motte ne è la protetta, e a cui fa credere che la regina è pronta a dimenticare l'astio che prova nei suoi confronti, in cambio di qualche favore.

Ingenuo e credulone, de Rohan, che moriva dalla voglia di essere ammesso ai favori della regina di Francia, cade nel tranello tesogli.

E così i coniugi de La Motte convincono il cardinale che presto sarà ammesso a corte presso la regina, poiché ha cambiato parere nei suoi confronti, e anzi fanno di più, fanno pervenire al cardinale lettere che firmavano “Maria Antonietta di Francia”, in cui tali sentimenti vengono confermati.

Sicuri ormai di avere partita vinta, al colmo dell'audacia, gli fanno recapitare una lettera in cui la regina chiede un incontro segreto con il cardinale, incontro che dovrà avvenire a mezzanotte nel parco di Versailles vicino il boschetto di Venere.

Per l'incontro i coniugi de La Motte ingaggiano una prostituta Nicole Leguay, che starà al gioco in cambio di un titolo nobiliare, baronessa d'Oliva, e di una somma di denaro.

Emozionato per l'incontro con l'amata regina, il cardinale si reca all'appuntamento, e, complice il buio della

notte, quando vede quella figura di donna, si butta ai suoi piedi, dichiarandole assoluta devozione.

Per i de La Motte non ci sono più dubbi, de Rohan è pronto a fare il loro gioco, e infatti, convinto di essere entrato nelle grazie di Sua Maestà, accetta l'incarico che le ha fatto pervenire la regina (ossia i de La Motte) di acquistare per suo conto la collana di diamanti, con pagamento rateizzato e di nascosto dal re. Il cardinale, lusingato e al settimo cielo, acquista la collana. L'accordo viene concluso, 1.600.000 franchi da pagare in quattro rate da 400.000 franchi ciascuna. Il cardinale fa mettere per iscritto le condizioni, e chiede alla contessa di sottoporle alla regina e farle firmare da lei.

Il giorno dopo la de La Motte gli riconsegna il contratto, in margine ad ogni articolo si legge il termine “approvato” e sotto la firma “Maria Antonietta di Francia”. Appropriatisi della collana i due truffaldini ne rivendono i pezzi, ricavandone una fortuna, felici di aver spenato per bene il loro pollo.

Ma come tutti i polli che si rispettano, il cardinale, che gongolava esaltato per aver riconquistato la fiducia della sua regina, commette l'imperdonabile errore che porterà alla scoperta dell'imbroglio. Fa recapitare a Maria Antonietta, tramite i gioiellieri, un biglietto in cui si felicita per la buona riuscita dell'acquisto della collana. La regina, all'oscuro di tutto, pensa ad uno scherzo di

cattivo gusto, e brucia il biglietto. Quando però non vengono pagate le rate, i gioiellieri si insospettiscono e indagano rivolgendosi ad una dama di corte della regina che conferma loro che la regina non ha mai acquistato la collana, e che il cardinale non è ricevuto a corte da molti anni.

Convinti ormai della truffa si recano da Jeanne de La Motte, la quale temporeggia sulla verità, tirando in ballo a sua difesa la garanzia della “sigla” della regina, cede solo davanti all’ovvia falsità della firma; il titolo esatto della regina era infatti Maria Antonietta d’Austria e non di Francia.

340 Vedendosi scoperta per disculparsi, dichiara allora che la firma falsa è stata creata da Cagliostro, chi meglio di lui ciarlatano, imbrogliatore, esperto in truffe?

Credeva così d’indurre il cardinale a pagare per la vergogna di uno scandalo, la collana, ma aveva fatto male i suoi calcoli, perchè venuta a conoscenza di tutta la storia, indignata, la regina racconta tutto al re e lo convince ad istruire un processo contro i colpevoli, chiede che venga fatta luce sulla faccenda e che soprattutto il suo nome ne esca pulito davanti al popolo.

Il 15 agosto 1785 viene arrestato de Rohan, e di lì a poco anche i coniugi de La Motte, la d’Oliva, e naturalmente Cagliostro, che come abbiamo detto, era giunto da non molto a Parigi e che cercava di prendere contatti

con alcuni rappresentanti del clero per ottenere l’approvazione del suo rito egiziano, mentre a questo scopo, aveva già dato vita a una nuova loggia femminile, mettendo a capo sua moglie Serafina.

L’affare della collana segna l’inizio della fine per la nobiltà francese e per l’ancien régime, perché conferma nell’opinione pubblica francese l’avversione e l’odio verso la nobiltà, ma è anche l’inizio della fine del conte di Cagliostro che è accusato di voler sovvertire la Monarchia francese.

Rinchiusi nelle segrete della Bastiglia, vi rimangono fino all’apertura del processo che vede assegnare pene severe ai coniugi de La Motte e alla d’Oliva, mentre vengono assolti de Rohan e Cagliostro, l’uno costretto a ritirarsi nell’abbazia di La Chaise-Dieu, l’altro con l’obbligo di lasciare Parigi.

Ricongiuntosi alla moglie parte alla volta di Dover, ma appena giunto in Inghilterra, viene sottoposto ad una severa perquisizione ancora sospettato per il “fattaccio”. Cagliostro, allora, anziché lasciare che gli eventi vengano dimenticati, incapace lui stesso di dimenticare, comincia a scrivere sulle vicissitudini avvenute in Francia, sull’assoluto potere della corona, e sulla Bastiglia, simbolo della tirannia regale, le sue denunce contro il re e i suoi ministri, lo fanno apparire come un agitatore politico.

La corte di Francia, che non può rimanere indifferente di fronte le denunce del Cagliostro, manda delle spie a controllare l'attività del Maestro, e paga giornalisti compiacenti, fra cui Thevenau de Morande, per divulgare il passato di Giuseppe Balsamo.

Scoperte sensazionali, critiche, e tutto ciò che può fare notizia, vengono pubblicate dalla stampa inglese, questo è sufficiente per rovinare definitivamente la reputazione del mago che a poco a poco viene abbandonato da tutti, anche dai suoi amici più fedeli.

Svizzera 1787

E' il 30 marzo 1787 quando Cagliostro lascia l'Inghilterra per non farvi più ritorno.

342 Si trasferisce in Svizzera, per la prima volta senza la moglie, lasciata a Londra con l'incarico di vendere la casa e sistemare gli affari di famiglia.

Dalla vicenda con il Duplessis, la coppia non si era mai separata, questa separazione però gli costerà il tradimento della moglie.

E infatti i nemici del mago che vogliono definitivamente la sua annientazione, fanno leva su Lorenza affinché “venda” il marito.

I giornali che avevano propagandato così bene la campagna anti-Cagliostro condotta dal de Morande, cominciano allora ad avere parole di compassione per la povera signora Cagliostro che ha dovuto subire dal

marito troppe cose per garantirgli sicurezza materiale e psicologica atta a condurre una vita stravagante e megalomane come la sua. Presa dalla paura di un futuro incerto, sapendo ormai che la campagna d'infamia ha già segnato il declino del marito, e pensando di essere finalmente compresa proprio da questo Morande, Lorenza si lascia andare a pesanti rivelazioni, con lui, il nemico giurato del marito.

Quando sa del tradimento della moglie, il Gran Cofto piange e si dispera, saranno gli amici che lo ospitano in quel momento a dargli conforto, suggerendogli di far sottoscrivere a Lorenza una dichiarazione davanti al notaio, in cui smentisce le dichiarazioni che le vengono attribuite. Ed è così che i due coniugi ritornano insieme, tutto sembra ricominciare, l'Italia li attende... ma si accorgono che niente è più lo stesso, c'è sempre meno gente ad appoggiarli, e sempre più nemici, approfittatori, calunniatori... Dopo Torino, dal quale Vittorio Amedeo lo caccia, il loro viaggio continua, Alessandria, Genova, Parma, Trento, in cerca di approvazioni per la sua scienza, ma la cosa che vuole più di ogni altra, è l'approvazione della chiesa al suo “rito egiziano”.

Cagliostro a Roma

L'aiuto a presentarsi in Vaticano gli viene dato dal vescovo di Trento, interessato di alchimia, questi infatti

invia una lettera in suo favore e avendone risposta positiva Cagliostro, si stabilisce a Roma.

Esaudisce all'occasione il desiderio della moglie che stanca, provata da mesi di insicurezza e precarietà, aveva chiesto al marito di tornare a Roma, dalla sua famiglia, anche perché non si fida più di lui, né degli ambienti e amici che frequenta. Ed è così che sostenuta dai familiari Lorenza prende sempre di più le distanze dal marito che sembra non accorgersene preso com'è dall'idea di farsi ricevere dal Vaticano per far riconoscere ufficialmente dal papa, la sua Massoneria.

Ma ormai la sua persona ha perso credito agli occhi di tutti, e l'udienza gli viene negata. Cagliostro però non si arrende e anzi, spinto dalla sua presunzione, intensifica le sue attività, facendosi propaganda distribuendo copie del suo rituale e ostentando i suoi poteri occulti, coinvolgendo la nobiltà romana.

Lo scoppio della Rivoluzione Francese, peggiora la posizione del Grande Cofto che viene accusato, quale Capo della Massoneria, di avere istigato una cospirazione contro la Monarchia Francese, fra le altre accuse, anche le predizioni a Maria Antonietta della caduta della Monarchia per mano rivoluzionaria e violenta.

Il colpo di grazia però, gli viene inflitto da Lorenza, il 26 settembre 1789, quando, consigliata dai parenti, lo accusa alle autorità ecclesiastiche di eresia, e di appar-

tenere alla massoneria.

Il Sant'Uffizio allora, fa avere a Pio VI un rapporto particolareggiato sulle attività del Cagliostro, che consultati alcuni cardinali inquisitori, ne ordina l'arresto, suo e della moglie Lorenza.

L'arresto

La sera del 27 dicembre Alessandro Cagliostro viene arrestato e condotto alla fortezza di Castel Sant'Angelo. Qui rimane abbandonato da tutti per cinque lunghi mesi, fino al maggio del 1790, quando cominciano gli estenuanti interrogatori che lo annientano nel corpo e nello spirito fino alla fine del processo che avviene il 7 aprile 1791

La Santa Inquisizione lo accusa, oltre che di eresia, anche di praticare la negromanzia, di aver formato sette e soprattutto lo condanna a morte per la sua attività massonica.

Stanco per le torture e i maltrattamenti subiti, da quel sistema cinico e spietato qual'era l'Inquisizione, il grande mago annientato, in ginocchio e col capo coperto, chiede perdono per i suoi misfatti e pronuncia l'abiura d'eretico.

Il pontefice Pio VI per grazia speciale, gli commuta la pena in ergastolo, da scontare in un carcere di massima sicurezza. Questa concessione però gli costerà l'umi-

liazione davanti al popolo, a cui chiede pubblicamente perdono, mentre è costretto a percorrere un tratto di strada a piedi nudi e con indosso un saio e in mano un cero, alla mercé di un popolo crudele che lo deride e lo insulta, mentre un grande fuoco brucia i suoi scritti e le insegne massoniche.

Da Castel Sant'Angelo Cagliostro viene trasferito nelle carceri di San Leo, è il 20 aprile 1791, quando per la prima volta, dal finestrino della carrozza che lo trasporta vede la fortezza che si erge, imprendibile, su una roccia a picco su un precipizio.

I pesanti cancelli che si chiudono dietro lui, lo inghiottono per sempre. In un primo momento viene alloggiato nella cella del Tesoro, successivamente, per paura di una evasione, viene trasferito nella cella del Pozzetto, dove è calato attraverso una botola dal soffitto. Qui vi trascorre gli ultimi quattro anni della sua vita, in una cella, larga solamente tre metri per tre, soltanto una piccola finestrella che guarda verso il paese, Cagliostro affronta una durissima prigionia che lo porta prima alla follia e poi alla morte, che avviene nella notte fra il 25 e il 26 agosto 1795.

“...io non sono di nessuna epoca e di nessun luogo; al di fuori del tempo e dello spazio, il mio essere spirituale vive la sua eterna esistenza...”

Così scriveva lui, e su di lui si è scritto tantissimo, ma

vere o false che siano le vicissitudini narrate, la cosa che certamente non si può negare, è che nessuno piegò mai al suo volere uno spirito libero come quello di Alessandro Cagliostro, o, se volete, di Giuseppe Balsamo.

3. I Beati Paoli

Prologo

Palermo, 1698. Si festeggia la stipula della pace di Ryswick tra Luigi XIV di Francia e Carlo II d'Asburgo, re di Spagna e di Sicilia. Il giovane nobile don Raimondo Albamonte della Motta viene a sapere che suo fratello maggiore, il duca don Emanuele, partito per la guerra al servizio del suo sovrano, è stato ucciso dai Turchi sulla via del ritorno. La notizia gli viene riferita da Andrea Lo Bianco, un fedele servitore del defunto duca, che lo accompagnava ed è riuscito a fuggire. Proprio in quei giorni la moglie di don Emanuele, donna Aloisia, ancora ignara della sorte toccata al marito, dà alla luce un figlio maschio, chiamato Emanuele come il padre, ormai nuovo duca della Motta. Informata dal cognato della dolorosa notizia, la donna, ancora debole, si ammala gravemente. Don Raimondo, desideroso di ottenere per sé il titolo di duca, decide di eliminare i due ostacoli che gli si frappongono, la cognata e il piccolo nipote. Con l'aiuto di un servo, Giuseppico, e della fattucchiera Peppa la Sarda, cerca di avvelenare donna Aloisia, ma il suo piano delittuoso viene scoperto da Maddalena, fedele cameriera della duchessa, che, con l'aiuto di Andrea, riesce a sventarlo. Maddalena però viene uccisa, e donna Aloisia è costretta a fuggire nella notte con il figlio, per non cadere nelle mani del

cognato. Stremata dalla fatica, sviene, e viene raccolta assieme al piccolo da due uomini e una donna, che li portano nella loro casa. Aloisia muore senza essere stata in grado di rivelare il suo nome e la sua storia, e il bambino resta da allora affidato alle cure dei suoi salvatori. Nel frattempo, don Raimondo ha accusato Andrea, da lui licenziato qualche giorno innanzi, dell'omicidio di Maddalena e del rapimento della cognata e del nipote: l'uomo viene quindi arrestato e condannato ai remi.

Parte prima

Settembre 1713.

Quindici anni dopo gli eventi del Prologo, il regno di Sicilia sta per essere ceduto dalla Spagna a Vittorio Amedeo II di Savoia, in seguito alla pace di Utrecht che pone fine alla guerra di successione spagnola. Don Raimondo della Motta, nel frattempo, in mancanza di eredi del fratello, ha ottenuto il titolo di duca ed è divenuto un magistrato potente e rispettato nella Deputazione del regno. Si è sposato due volte: dal primo matrimonio ha avuto una figlia, Violante, ora educanda in un convento, poi, rimasto vedovo, si è risposato con donna Gabriella La Grua, di venti anni più giovane, da cui non ha avuto figli. Da qualche tempo il duca è perseguitato da minacciose lettere anonime, che gli ricordano i delitti commessi e che potrebbero essere opera della misteriosa

setta segreta dei Beati Paoli, una congrega potentissima i cui affiliati non sono mai stati scoperti, e che ha come obiettivo fare giustizia dei torti perpetrati e tollerati dalla giustizia corrotta dello Stato.

Nel frattempo, arriva in città il giovane cavaliere Blasco da Castiglione, venuto a scoprire qualcosa sulle sue origini e sulla sua famiglia, di cui non sa nulla. Fin da quando era bambino, infatti, era stato affidato alle cure del frate cappuccino Giovanni, ora defunto; quando, anni prima, il frate aveva dovuto lasciarlo, gli aveva affidato una lettera per il suo amico, fra Bonaventura, contenente la storia del suo passato: finalmente, dopo quindici anni di peripezie e avventure, fra cui un periodo di prigionia presso il bey di Tunisi, Blasco faceva ritorno a Palermo per consegnarla. Fra Bonaventura gli racconta la sua storia: lui e sua madre erano stati soccorsi dai due frati nel tremendo terremoto che aveva distrutto Catania nel 1693. Prima di morire per le ferite, la donna aveva fatto in tempo a raccontare ai due frati che Blasco era il figlio illegittimo di un nobile che l'aveva sedotta, e a pregarli di avere cura di lui. Il padre di Blasco è proprio don Emanuele della Motta, fratello di don Raimondo, ma fra Bonaventura non rivela per il momento quel particolare al giovane. Lo accompagna però proprio dallo zio, sperando di ottenere da lui protezione e magari un impiego per il suo pupillo, la

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cui origine non viene taciuta al duca. Don Raimondo, in ansia per le frequenti minacce che riceve, decide di accogliere in casa il giovane, prestante e abile spadacino, perché protegga lui e la sua famiglia. Così Blasco incontra Gabriella, e riconosce in lei la bellissima donna che aveva notato sulla via per Palermo, e per la quale aveva avuto uno screzio col suo corteggiatore, il principe di Iraci. Avendo avuto l'incarico di scortarla ovunque, Blasco passa molto tempo assieme a lei; da parte sua, Gabriella (che ha sposato il duca Raimondo solo perché obbligata dalla famiglia e che non prova alcun sentimento per il marito), abituata, per la sua avvenenza, a essere da tutti corteggiata, finisce per cedere al fascino del suo accompagnatore: un giorno, di ritorno in carrozza dalla cerimonia di incoronazione del nuovo re Vittorio Amedeo, i due si baciano appassionatamente.

Nel frattempo, nella storia fanno il loro ingresso nuovi personaggi: don Girolamo Ammirata, modesto funzionario, amico del pittore Vincenzo Bongiovanni, e suo nipote Emanuele, di 15 anni. Dietro la sua apparenza modesta, don Girolamo è un importante membro della setta segreta dei Beati Paoli, che si riunisce spesso in una sala sotterranea cui si accede dalla sacrestia della chiesa di S. Matteo (anche il sacrestano fa parte della società).

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Un giorno, mentre don Girolamo si trova a colloquio in chiesa con un altro affiliato, entra un uomo, sfuggito all'arresto dopo aver tentato di sparare per strada al duca della Motta: è Andrea, evaso dalle galere e tornato a Palermo per vendicarsi dell'uomo che l'ha accusato falsamente per coprire i suoi delitti. Don Girolamo, con l'aiuto del sacrestano e di un altro membro della setta, zi' Rosario, aiuta Andrea a nascondersi. Grazie al suo racconto don Girolamo capisce che il ragazzo che passa per suo nipote è l'erede legittimo dei della Motta: furono lui e sua moglie Francesca, infatti, a soccorrere, anni prima, Aloisia fuggita dalle mani di Raimondo. Insieme con Andrea decide che, per incastrare don Raimondo, devono rintracciare gli altri testimoni dei delitti, Giuseppe e Peppa la Sarda.

Nel frattempo, il duca, sempre più spaventato, si è rivolto allo sbirro Matteo Lo Vecchio, perché indaghi sui misteriosi Beati Paoli: costui, abilissimo, astuto e privo di qualsiasi scrupolo, riesce ben presto a scoprire il coinvolgimento di don Girolamo e lo fa arrestare, ma i Beati Paoli ottengono dal duca, dopo averlo rapito, condotto bendato nel loro covo e minacciato, la sua immediata liberazione.

Blasco, intanto, pur amando intensamente Gabriella, è preso dal rimorso per aver tradito la fiducia di don

Raimondo e le comunica che deve lasciarla: la donna, affranta e offesa, muta in odio l'attrazione fortissima che ancora prova per lui, e si convince che egli abbia in realtà un'altra amante. Visto che rimanere in quella casa gli è ormai impossibile, Blasco lascia il servizio presso don Raimondo e si trasferisce presso il nobile Coriolano della Floresta, con cui nel frattempo ha stretto una solida amicizia.

Parte Seconda

Indagando, Matteo Lo Vecchio ha scoperto che i Beati Paoli hanno messo le mani su Peppa la Sarda e ora vogliono rintracciare Giuseppico, che si trova a Messina come galeotto: spaventato, don Raimondo, senza rivelargli nulla, gli ordina di trovarlo per primo, e di consegnarglielo vivo o morto. Andrea parte per Messina, riesce a liberare Giuseppico e a convincerlo a collaborare, ma sulla via del ritorno i due si imbattono in Matteo travestito, che con l'inganno ottiene altre informazioni sulla setta e prova ad arrestarli: nello scontro che ne segue, Giuseppico resta ucciso, ma Andrea riesce a fuggire e a raggiungere don Girolamo, insieme al quale si nasconde. Matteo può comunque, grazie alle informazioni ottenute, far arrestare il sacrestano di S. Matteo, zi' Rosario e Peppa la Sarda: i primi due vengono interrogati, ma, anche sotto tortura, rivelano ben poco (lo sbirro deve fingersi un confessore per ricavare qualcosa

di più), e quindi giustiziati, Peppa la Sarda viene fatta uccidere in carcere dal duca. Ma egli, pur avendo eliminato quelli che crede gli unici due testimoni dei suoi delitti, non smette di ricevere minacce.

Nel frattempo, Blasco sta gradualmente superando la sua infatuazione per Gabriella. Un giorno, mentre passeggia, viene salutato da una giovane educanda, che egli non riconosce ma che lo colpisce subito: si tratta di Violante, figlia di don Raimondo, che l'aveva veduto quando egli, tempo prima, aveva accompagnato la sua matrigna Gabriella venuta a farle visita al monastero. Quella stessa sera, dopo aver accompagnato Coriolano a uno spettacolo teatrale cui avevano assistito anche Gabriella e il principe di Iraci, Blasco viene aggredito mentre torna a casa da sconosciuti, che riescono a ferirlo, ma prima che possano finirlo intervengono degli uomini misteriosi, che lo portano al sicuro. Qui viene raggiunto dall'amico Coriolano: il giovane è turbato da quell'aggressione e dal fatto che gli uomini che l'avevano soccorso sembrassero sapere chi era, ma Coriolano taglia corto dicendo che sicuramente il responsabile era il principe di Iraci, geloso di lui e infuriato per essere stato da lui battuto in duello qualche tempo prima.

Don Raimondo, per sferrare un colpo definitivo a don Girolamo e ai Beati Paoli, cerca di ottenere dal re

maggiori poteri, e allo scopo non esita a incoraggiare la moglie a diventare l'amante del sovrano: la donna, inizialmente incline ad accettare per vanità, saputo dell'aggressione subita da Blasco, che ora sembra scomparso, rifiuta, per poi però pentirsene. Infatti, al re, in viaggio con la corte verso Messina, viene consegnata, tramite Pellegra, la giovane figlia del pittore Bongiovanni, innamorata di Emanuele, una denuncia in cui sono esposti tutti i crimini del duca della Motta: anche se incerto se prestarvi fede, il sovrano ordina che si indaghi su don Raimondo. Questi avverte che la fiducia del re verso di lui è stata turbata per qualche motivo, e confida alla moglie quello che sta succedendo, le accuse dei Beati Paoli, le minacce, senza però, naturalmente, confessare che le accuse dicono il vero. Sarebbe essenziale, ora, riconquistare il favore di Vittorio Amedeo, e Gabriella, più per mantenere il suo status in società che per aiutare il marito, accetta di divenirne la favorita e parte anche lei per Messina.

Nel frattempo, il duca ha fatto arrestare la moglie e il nipote di don Girolamo, per avere in pugno il suo nemico, ma non può interrogarli. Matteo Lo Vecchio riesce con astuzia a venire in possesso di carte conservate in casa di don Girolamo contenenti i verbali delle sedute del tribunale dei Beati Paoli: scopre così tutte le accuse contro don Raimondo e le prove che Emanuele è

il figlio legittimo del defunto duca. Soddisfatto, decide di tenere per sé i documenti, per avere, all'occorrenza, un'arma con cui ricattare lo stesso don Raimondo.

Il responsabile dell'agguato a Blasco è effettivamente il suo rivale, il principe di Iraci, che una notte viene aggredito e preso a bastonate dai Beati Paoli, per vendicare Blasco: infuriato per l'affronto subito, il principe denuncia il tutto a don Raimondo, nuovo vicario generale del regno, comunicandogli anche che l'odiato Blasco ha a che fare con i misteriosi Beati Paoli. Il duca ne è sorpreso, ma crede allora di capire che dietro a tutte le minacce ricevute c'è appunto suo nipote, bastardo di suo fratello, che vuole rubargli il titolo. Desideroso di stringere i tempi e mettere le mani sui capi, assieme a Matteo Lo Vecchio elabora un piano per arrestare finalmente don Girolamo e Andrea.

Blasco intanto è guarito ed è tornato a casa di Coriolano e, una notte, il suo intervento quasi fortuito fa fallire il piano di Matteo di arrestare don Girolamo e Andrea: i due fuggono, riconoscenti verso Blasco, che infatti il giorno dopo riceve una lettera di ringraziamento da parte dei Beati Paoli, che d'ora in avanti lo considerano un amico.

Don Girolamo scopre quindi che le carte preziosissime

che conservava in casa sono state rubate durante la sua assenza e, indagando, capisce che chi gli sta dando la caccia, ha fatto imprigionare i suoi cari e gli sta facendo terra bruciata attorno non è un traditore interno alla setta, ma Matteo Lo Vecchio. Quest'ultimo, nel frattempo, viene inviato da don Raimondo a Messina, presso la corte, dove si trova anche Gabriella, per cercare di convincere il sovrano e i suoi consiglieri a continuare a riporre fiducia in lui. Anche Blasco ha deciso di lasciare Palermo per un po', per andare a trovare fra Bonaventura, trasferitosi a Caccamo e gravemente malato, e la sua strada si incrocia casualmente con quella di Matteo, che viaggia in incognito, travestito da abate. Saputo da un altro compagno di viaggio della vera identità dell'uomo, decide di unirsi a lui, per studiarlo: Matteo, che non si è accorto che Blasco ha capito perfettamente chi è, ha portato con sé i documenti presi in casa di don Girolamo, perché non si fida a lasciarli incustoditi. Lungo il tragitto, però, è vittima di una rapina, Blasco insegue i ladri e recupera le carte, ma, prima di restituirle a Matteo, le legge, venendo così a sapere tutti i segreti di don Raimondo: sconvolto, tiene per sé le carte, facendo credere a Matteo che i ladri gli siano sfuggiti. A Messina, Matteo incontra Gabriella, che intanto sta facendo di tutto per recuperare i favori del re per sé e per suo marito. La donna si imbatte anche in Blasco, rimanendo turbata da quell'incontro perché ancora incerta sui suoi

sentimenti verso di lui. Blasco finisce in carcere per aver sfidato a duello delle guardie del re: Matteo, sempre convinto che egli non l'abbia riconosciuto, cerca di avvelenarlo, ma Blasco, avvisato da Gabriella, si salva: il carceriere, divenuto suo amico, fa credere a Matteo che il suo piano sia giunto a buon fine: Matteo, tornato a Palermo, lo riferisce a don Raimondo, che quindi si sente ormai al sicuro. Di lì a poco Blasco, mentre viene trasferito in un'altra fortezza, riesce a fuggire aiutato dalla folla di popolani, schierati dalla sua parte perché ha sconfitto le guardie, invase in città.

358 Con Blasco morto (o almeno così crede), la moglie e il nipote di don Girolamo in carcere, don Raimondo crede di essere a un passo dalla vittoria sui Beati Paoli, da cui infatti non riceve più minacce da qualche tempo. L'unica preoccupazione residua è che don Girolamo e Andrea sono ancora introvabili. La moglie, tornata a Palermo, gli ha comunicato che il re Vittorio Amedeo ha ripreso a stimarlo e vorrebbe condurlo con sé a Torino: don Raimondo dunque lascia la Sicilia col resto della corte alla fine dell'estate 1714, ma Gabriella non lo segue. L'ha aiutato innanzi tutto per sé stessa, ma quell'uomo le ripugna, anche perché non è totalmente sicura della sua innocenza.

Parte Terza

Per rappresaglia contro l'arresto di Francesca, moglie dell'Ammirata, ed Emanuele, i Beati Paoli tentano nottetempo di rapire Violante, la figlia di don Raimondo, ma la fanciulla viene salvata dall'intervento provvidenziale e fortuito di Blasco. I due passano il resto della notte ospiti di un curato di campagna: subito entrambi rimangono incantati l'uno dell'altra, e Blasco si rende conto di essere innamorato della ragazza, ma non osa prendere l'iniziativa, vedendola così innocente e pura. La mattina seguente fa avvisare Gabriella che la figliastra è al sicuro e le dice dove può venire a riprenderla. Ma Gabriella, la cui gelosia nei confronti della fanciulla si era già destata quando Violante le aveva parlato del suo fugace incontro con Blasco qualche tempo prima, ora si convince che Blasco e Violante siano divenuti amanti: furiosa, invece di ringraziarlo, tornata a Palermo lo accusa di fronte al viceré Annibale Maffei di aver rapito lui la figliastra, e di far parte della setta dei Beati Paoli: quindi, decide di partire portando con sé Violante, che odia con tutto il cuore, perché, dopo quanto accaduto, non si sente più al sicuro a Palermo. Ma durante il viaggio le due donne vengono rapite e trasportate a Selinunte, e tenute segregate in un castello isolato.

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Nel frattempo, Matteo Lo Vecchio ha appreso che Blasco non è affatto morto, e anzi è fuggito di prigione e

ora è ricercato, e che molto probabilmente le carte che gli aveva detto di non essere riuscito a recuperare le ha invece lui. Nel tentativo di saperne di più, cerca di trarre dalla sua parte un membro della setta dei Beati Paoli, Antonino Bucolaro, dicendogli che insieme, se avessero quelle carte, potrebbero ricattare il duca della Motta e diventare ricchi.

Sventando il primo tentativo di rapimento di Violante, Blasco ha intralciato i piani dei Beati Paoli; una notte, costoro lo invitano nel loro tribunale, e gli chiedono di non impedire la loro opera di giustizia: Violante, anche se innocente, doveva pagare per i delitti compiuti dal padre. Blasco si oppone: secondo la sua coscienza, un'ingiustizia, anche se compiuta col pretesto di un buon fine, è pur sempre un'ingiustizia. Ma il capo della setta lo informa che comunque non può fare nulla: Gabriella e Violante sono già state fatte prigioniere. La giustizia amministrata dai Beati Paoli, gli spiega, è inflessibile e incorruttibile, e ha lo scopo di vendicare gli innumerevoli soprusi subiti dalla povera gente da parte dei ricchi e potenti, protetti dall'iniqua "giustizia" dello Stato e delle leggi. Il capo, che fino a quel momento ha sempre celato il suo volto, accetta di svelare la sua identità, che solo don Girolamo Ammirata conosce, a Blasco: si tratta del suo amico, Coriolano della Floresta.

Nel frattempo, fra Bonaventura, sul letto di morte, aveva detto a Blasco di recarsi, dopo che lui fosse spirato, dal superiore del suo convento a Palermo, che gli avrebbe consegnato qualcosa da parte sua. Si tratta del suo atto di battesimo, il segreto che fra Giovanni e fra Bonaventura avevano custodito per tutto quel tempo: Blasco apprende di essere il bastardo del duca Emanuele della Motta, e quindi nipote di don Raimondo e fratellastro del giovane Emanuele.

Matteo Lo Vecchio, intanto, non ha mollato la presa su Antonino Bucolaro, ma questi, anche se il pensiero di diventare ricco comincia a stuzzicarlo, non sa davvero dove siano le carte che lo sbirro vuole, né cosa vi sia scritto. I Beati Paoli hanno notato che lui e lo sbirro si frequentano, e iniziano a sospettare di lui.

A Torino, don Raimondo viene avvisato del rapimento della moglie e della figlia, e naturalmente capisce subito che sono stati i Beati Paoli. Per la prima volta mostra di temere non solo per sé stesso, ma anche per qualcun altro, non tanto la moglie, quanto Violante, cui vuole davvero bene. Torna precipitosamente a Palermo, disperato, e qui riceve la visita di Blasco, venuto a offrirgli il suo aiuto, non certo per fare un piacere a lui, ma per amore di Violante: il giovane gli comunica che i

Beati Paoli sanno tutto del suo passato e che Gabriella e Violante sono trattate con ogni riguardo: appena il duca avrà liberato Francesca ed Emanuele, saranno lasciate andare. Don Raimondo è disposto a tutto pur di riabbracciare la figlia, e accetta: Blasco vuole però che prometta anche di trovare un accordo con Emanuele per restituirgli ciò che è suo, in questo modo giustizia sarà fatta, ma senza che Raimondo sia disonorato e Violante debba soffrire nello scoprire la terribile verità su suo padre. Don Raimondo fa quanto gli è stato chiesto e Francesca ed Emanuele sono liberi; ricevuta la visita di Matteo Lo Vecchio, si rende conto che anche lo sbirro sa tutto dei suoi delitti e sarebbe sicuramente pronto a ricattarlo se mettesse mano a quelle carte, quindi conclude che potrebbe essere necessario eliminare anche lui.

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Come pattuito, Blasco viene mandato dai Beati Paoli a liberare le due donne, prigioniere ormai da circa tre mesi: Antonino Bucolaro ne informa Matteo. In tutto quel tempo la matrigna ha continuato a sfogare sulla figliastra la sua angoscia per quella situazione, la sua gelosia, il suo odio verso di lei, verso il marito, verso Blasco. Quando proprio Blasco giunge a liberarle, la donna non riesce a trattenersi e ha una crisi di nervi: aggredisce l'uomo chiedendogli perché l'abbia illusa dicendole di amarla e poi l'abbia abbandonata spezzandole il

cuore, si scaglia contro la figliastra cercando di ucciderla e poi tenta di gettarsi da una finestra, ma viene trattenuta da Blasco. Fallito il tentativo di suicidio, cade in una specie di stato catatonico, non parla e non reagisce più, e così, in un'atmosfera non certo festosa come ci si sarebbe potuto aspettare, Blasco, Violante, Gabriella e alcune guardie messe a disposizione dal duca intraprendono il viaggio di ritorno verso Palermo. Ma lungo la strada li attende Matteo Lo Vecchio con degli uomini armati, venuti ad arrestare Blasco. Quest'ultimo però uccide Matteo e riesce a fuggire, mentre le due donne finalmente tornano a casa, e don Raimondo riabbraccia teneramente la figlia.

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Nel frattempo, anche Francesca ed Emanuele hanno potuto far ritorno a casa, ed Emanuele e Pellegra, la figlia del pittore Bongiovanni, si sono finalmente rivisti. Il giovane è sempre più innamorato di lei, e vorrebbe sposarla, ma lo zio, don Girolamo, si oppone; Emanuele non capisce perché, e comincia a risultargli sgradita l'autorità di quell'uomo, che in fondo suo zio non è: egli infatti non sa chi fossero i suoi genitori, ma sa che Girolamo e Francesca lo hanno raccolto e preso in casa quando era neonato. Tra i due nasce qualche tensione, e Francesca, sperando di calmare il ragazzo, gli rivela che don Girolamo non vuol fargli sposare l'umile Pellegra perché egli è di nobili natali e, quando avrà recu-

perato il titolo e la fortuna che gli sono stati sottratti, sposerà una sua pari grado. Emanuele è sconvolto da quella rivelazione, ma per il momento Francesca non vuole svelargli il nome del suo vero padre.

La stessa notte in cui hanno fatto ritorno a casa, Gabriella, accecata dalla gelosia, accusa falsamente Violante di essere divenuta l'amante di Blasco di fronte a don Raimondo e, inveendo contro il marito, lascia il palazzo per tornare dai suoi parenti. Sconvolto, don Raimondo, credendo che Violante, che pure si dichiara innocente da ogni colpa, abbia perso l'onore, si reca al monastero e ve la lascia, con l'intenzione di farle prendere il velo.

364 Tornato a casa incontra Antonino Bucolaro, ormai convintosi a tradire la setta, che gli dà un appuntamento notturno per tendere un agguato ai Beati Paoli.

Anche Blasco è tornato a casa di Coriolano, di nascosto perché ricercato e triste e turbato. L'amico gli comunica che è invitato a una riunione dei Beati Paoli per quella notte, ma poi, improvvisamente, gli rivela di sapere da tempo che le carte scomparse sono in suo possesso, e pretende di riaverle. Blasco rifiuta, i due lottano e alla fine Coriolano ha la meglio: impotente, Blasco deve seguirlo alla riunione dei Beati Paoli.

Nel frattempo, infatti, il duca della Motta, recatosi all'appuntamento, è stato rapito e condotto nella stessa cripta sotterranea in cui era stato portato tempo addietro, di fronte al tribunale della setta. Qui, Coriolano, mascherato, formula le accuse raccolte contro di lui e lo costringe dietro le minacce a scrivere una dichiarazione in cui Raimondo riconosce suo nipote Emanuele e rinuncia al titolo di duca in suo favore. Coriolano vorrebbe anche obbligarlo a fargli accettare le nozze fra Violante e Blasco, ma è lo stesso Blasco a rinunciare, con dolore, a quella soluzione: non volendo che Violante si ritrovi, senza colpa, spogliata di tutto, propone invece che la fanciulla sposi il cugino Emanuele, così da conservare il titolo.

In quel momento fanno irruzione le guardie che hanno teso l'agguato ai Beati Paoli, che però, servendosi di un passaggio segreto sotterraneo, riescono a fuggire, trascinando con sé anche don Raimondo. Costui, colpevole di aver tentato di ingannarli, viene pugnaloato senza pietà da Andrea, nonostante Blasco tenti fino all'ultimo di impedire quell'atto di crudeltà su un uomo inerme e terrorizzato, arrivando a scagliarsi contro l'ex amico Coriolano. Ritornati in superficie, Coriolano si separa da Blasco, che però ormai è divenuto nemico suo e della setta. Blasco, visto che non ha saputo difenderlo, vorrebbe almeno riportare il cadavere del padre

a Violante e, calatosi di nuovo in quei cunicoli sotterranei, trova il duca ancora vivo, ma gravemente ferito. Dopo averlo riportato a casa, si allontana di nuovo e, non potendo più tornare da Coriolano, si rifugia presso un convento di frati.

La notizia del tentato omicidio di don Raimondo, che ora lotta fra la vita e la morte, semina sconcerto in città, facendo capire il tremendo potere dei Beati Paoli, di fronte ai quali nessuno può dirsi al sicuro. Accorrono al capezzale del duca anche Gabriella e Violante; anche Blasco si reca a Palazzo Albamonte la notte seguente per sincerarsi delle condizioni del ferito, lì vi incontra Coriolano, che si finge preoccupato e in ansia come gli altri amici di don Raimondo: Blasco capisce che il duca e la sua famiglia non sono affatto al sicuro e chiede a Gabriella il permesso di rimanere per la notte, non prima di aver rimproverato indignato Coriolano per la sua impudenza e averlo sfidato a duello per l'indomani (naturalmente senza farsi sentire da nessuno, poiché nessuno a parte lui e don Girolamo sa che Coriolano è il capo dei Beati Paoli).

Egli e Gabriella vegliano così nella stanza accanto alla camera di don Raimondo, e Violante li scopre la mattina dopo addormentati: nel sonno, Gabriella si è abbandonata col capo sul petto di Blasco, e la ragazza si lascia prendere dalla gelosia anch'ella: quando Bla-

sco si sveglia, lo tratta molto freddamente, senza che il giovane possa capirne il motivo. Comunque, egli aveva deciso in ogni modo di partire dopo essersi battuto con Coriolano, per lasciarsi alle spalle quel mondo pieno di delitti, tradimenti e violenze e per tentare di dimenticare il suo amore impossibile per Violante: infatti, anche se effettivamente nelle sue vene scorre sangue nobile, del titolo e del nome degli Albamonte, su cui pure forse avrebbe qualche diritto, non gli importa nulla, vorrebbe riprendere al più presto la vita incosciente ed errabonda di una volta, anche se dopo quello che ha passato non è più lo stesso uomo di prima. Per non abbandonare totalmente Violante senza protezione, però, comunica al marchese di Geraci, padre di Aloisia e nonno di Emanuele, e al principe di Butera, nonno di Violante, tutto ciò che sa, la sua nascita, il fatto che l'erede legittimo degli Albamonte è ancora vivo, il documento con cui don Raimondo lo riconosce, e infine ripete anche a loro il suo suggerimento di far sposare Violante ed Emanuele. Chiede loro anche di trovargli un posto nell'esercito spagnolo perché vuole al più presto lasciare l'isola. Don Girolamo e Andrea, intanto, dopo la notte del processo e della fuga dalle guardie, sono tornati a casa, dopo aver ascoltato per strada i commenti della gente, che esalta i Beati Paoli per essere riusciti ancora una volta a beffare le autorità. Don Girolamo ha di nuovo

una violenta lite con Emanuele, insuperbitosi dopo aver saputo di essere nobile, e Andrea rivela infine al ragazzo che lui è il vero duca della Motta.

Coriolano, che ha saputo che Matteo Lo Vecchio è ancora vivo, convoca una nuova riunione dei Beati Paoli: il tribunale decide di punire il traditore Antonino Bucolaro e Blasco, e lo stesso Coriolano si impegna a eseguire la sentenza. Infatti, lui e Blasco si ritrovano per il duello come convenuto, ma Blasco non si batte seriamente, la sua vita non gli è più cara e desidera solo che Coriolano lo finisca, se questo è ciò che deve fare. Ma sul più bello il duello deve essere interrotto perché arrivano le guardie, Blasco si nasconde.

368 Nel frattempo, Emanuele viene condotto da suo nonno al Palazzo Albamonte: la vista del ragazzo sconvolge don Raimondo, ormai allo stremo e delirante, e, dopo un'agonia terribile di alcuni giorni in cui ripercorre tutti i suoi delitti, l'uomo muore.

Parte Quarta

Sono passati quattro anni: è il 1718. A Palermo sbarca l'esercito spagnolo, Filippo V intende riprendersi il regno di Sicilia dai Savoia, che si sono alleati con l'imperatore Carlo VI. Con l'esercito torna nell'isola natale anche Blasco, arruolatosi nei dragoni, che ritrova Coriolano: fra i due uomini sono ormai spariti i vecchi

rancori, e si ravviva l'antica amicizia. Altre vecchie conoscenze sono Matteo Lo Vecchio, che appena rivede Blasco inizia a preparare un piano per vendicarsi, e soprattutto il suo fratellastro, Emanuele. Costui, divenuto duca della Motta, è ormai un uomo totalmente diverso da Blasco: arrogante, prepotente, superbo e licenzioso, è fidanzato con Violante, che sposerà al compimento del ventunesimo anno, ma non prova alcun sentimento per la cugina, anzi è fortemente attratto dalla giovane e bella zia rimasta vedova, Gabriella. Tra i due fratellastri nascono subito tensioni, anche perché, appena Gabriella rivede Blasco, in lei si riaccende la passione mai sopita. Sapendo di aver perso definitivamente Violante, anche per sua scelta, Blasco alla fine cede al desiderio e lui e Gabriella diventano amanti: per evitare che la reputazione della donna sia macchiata, si offre inoltre di sposarla. La donna è al colmo della felicità, anche se non riesce a liberarsi del tutto del sospetto che la tormenta, e cioè che l'uomo non abbia mai smesso di pensare a Violante, l'unica che ami davvero.

Le operazioni militari costringono Blasco a partire per qualche tempo: approfittando della sua assenza, Emanuele, furioso perché gli è stato preferito il fratellastro, per giunta un bastardo, aiutato da Matteo fa rapire Gabriella e cerca di violentarla, ma la donna viene salvata dall'intervento dei Beati Paoli, che la proteggono

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in quanto amante di Blasco e che danno una lezione a Emanuele. Mentre viene ricondotta a casa, Gabriella capisce che uno degli uomini che l'hanno soccorsa è Coriolano, ma questi le chiede di non dire nulla di quanto è accaduto a Blasco.

Il nonno e tutore di Emanuele, spazientito per le intemperanze dell'irrequieto nipote, decide di accelerare le sue nozze con Violante (che in tutto quel tempo è rimasta chiusa in un monastero).

Rimasto ferito nella battaglia per riconquistare Milazzo, Blasco viene congedato dall'esercito e deve tornare in Spagna per alcuni mesi per curarsi: Gabriella lo accompagna. Tornati a Palermo nel febbraio 1719, Blasco apprende da Coriolano che il matrimonio tra Violante ed Emanuele, rimandato ancora perché il giovane era tornato da un viaggio a Roma malato di sifilide, è finalmente fissato per l'ultima domenica di Carnevale: Blasco non può fare a meno di dolersi con l'amico di avere, a suo tempo, aiutato la causa di Emanuele, ma Coriolano replica che non ha importanza che il giovane non si sia dimostrato degno del titolo, la giustizia deve essere applicata, solo quello conta.

Quelle nozze combinate sono invisibili sia a Violante sia ad Emanuele, che si detestano: la fanciulla, che non ha mai dimenticato Blasco ma che lo crede lontano e perduto per sempre, vorrebbe ormai farsi monaca, ma

le sue preghiere non sono ascoltate. L'unica contenta è Gabriella, che spera che, una volta saputo che è sposata, Blasco smetta di pensare a Violante, anche se una parte di lei continua a dirle che l'uomo non sarà mai totalmente suo. Si reca mascherata alla festa di nozze e lì instilla malignamente in Violante l'idea che il matrimonio sia stata un'idea proprio di Blasco e in Emanuele il sospetto su chi abbia ucciso sua madre tanti anni fa (infatti, a parte lei, i Beati Paoli, Blasco e Matteo, nessuno è ancora mai venuto a conoscenza delle colpe di don Raimondo). Durante la prima notte di nozze, Violante si chiude a chiave nella stanza da letto, facendo infuriare Emanuele per l'affronto: le famiglie degli sposi, constatato che tra i due le divergenze sono inconciliabili, non possono che rassegnarsi ad avviare il processo per l'annullamento del matrimonio: sia Violante sia Emanuele non chiedono di meglio. Ma ormai il ragazzo ha dei sospetti su don Raimondo, che Matteo Lo Vecchio gli conferma: è stato suo zio a cercare di uccidere lui e sua madre, nel 1698, come è scritto nelle carte del processo istituito contro di lui dai Beati Paoli. Emanuele vuole avere quelle carte, e allo scopo ottiene la grazia per don Girolamo, che in tutti quegli anni, ricercato in quanto membro della setta, si era rifugiato a Napoli e lì aveva vissuto. Quando torna, però, don Girolamo constata con amarezza che il giovane che per sedici anni ha

cresciuto come un figlio è divenuto altezzoso, arrogante e crudele, e non ha per lui la minima riconoscenza. Anche Andrea, nel frattempo, che Emanuele ha accettato di riassumere al suo servizio, è deluso dal padrone, e non può che riconoscere che molto più simile a don Emanuele senior, che aveva servito con fedeltà e devozione, è piuttosto Blasco. Matteo avvicina Andrea, fingendosi suo amico, per scoprire chi abbia le carte del processo di don Raimondo, ma don Girolamo consiglia ad Andrea di guardarsi dallo sbirro.

Nel frattempo, Blasco è naturalmente sollevato alla notizia che le nozze tra Violante ed Emanuele sono andate a monte; egli stesso non ha ancora sposato Gabriella perché la donna desidera che lui non lo faccia per dovere, ma perché lo desidera: Blasco, però, è legato a lei da una forte attrazione fisica e da un profondo affetto, ma la sola donna che ama è Violante, anche se è convinto di non avere alcuna speranza. Gabriella, invece, desiderava ardentemente che Violante si sposasse, e ora è sempre più gelosa e sospettosa, e Matteo fa leva su questo per le sue indagini: prima le fa recapitare lettere anonime in cui l'avvisa che Blasco la tradisce, poi le fa credere che le carte che cerca siano una fattura di Violante per legare Blasco a sé. Gabriella si rivolge allora all'amico di Blasco, Coriolano, che capisce subito che si tratta di un inganno di Matteo e la rassicura, trovando

anche il modo di beffare lo sbirro, che quindi, scornato, deve nuovamente cambiare tutti i suoi piani. Blasco, nel tentativo di tranquillizzare Gabriella, spiega all'amante cosa dicono quelle carte, di chi erano, come ne era venuto in possesso: visto che si riferivano ad azioni compiute da un uomo ormai defunto, e che se fossero venute alla luce avrebbe inutilmente fatto soffrire un'innocente, le brucia di fronte a lei. Ma la donna non riesce a liberarsi dall'impressione che lui le nasconda qualcosa, che abbia un'altra, e finisce di nuovo vittima dei tranelli di Matteo, che però a sua volta è tenuto d'occhio da don Girolamo e Andrea.

Attirate Violante e Gabriella nello stesso luogo con un inganno, Emanuele cerca di prendere la sua vendetta sulla figlia del suo maggior nemico e sulla donna che l'ha respinto violentandole entrambe, ma Gabriella lo uccide e fugge con la figliastra. Violante, grata alla matrigna per averla salvata, le promette, in un estremo sacrificio, che non vedrà mai più Blasco e che si farà monaca.

I Beati Paoli compiono finalmente la loro vendetta su Matteo Lo Vecchio: l'uomo viene ucciso per strada, e ai funerali la folla copre di insulti il corteo funebre dell'odiato sbirro, nessun cimitero vuole accoglierne le spoglie e il cadavere finisce per essere gettato in un pozzo. Ora che anche Emanuele è morto, il titolo di duca spetta

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a Blasco, che però non è felice come ci si aspetterebbe. Triste e disperata è anche Gabriella, resasi conto che, per quanti sforzi faccia, non potrà mai sperare di essere amata completamente dal suo uomo, ma è anche, suo malgrado, rimasta ammirata dal sacrificio supremo fatto da Violante. Alla fine, riuniti nella sua casa Blasco, Violante e Coriolano, di fronte a loro la donna si uccide avvelenandosi, volendo che Blasco sia felice. Blasco e Violante si sposano, Coriolano lascia la Sicilia e don Girolamo Ammirata diviene il nuovo capo dei Beati Paoli.

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