The Calabozo: Virtual
Reconstruction of a Place
Based on Testimonies
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The objective the research reported here is to create a visualization of a place based on personal experiences. My research addresses this issue through a case study: the visualization of a women’s political prison during the Uruguayan military dictatorship (1973–85). The proposed visualization is based on these women’s personal experiences of the solitary confinement cell (*calabozo*). Compared with their male counterpart, women’s memories about prison have been traditionally relegated to a second level in Uruguay. The visualization aims to communicate these women’s experiences of the *calabozo* through a video installation. This article first reviews relevant precedents to the case study and to virtual reconstructions and later describes the video installation.
1. Introduction

In 2002, I conducted in-depth unstructured interviews with nine women. They were former political prisoners of the Uruguayan military dictatorship (1973–1985). Before the interview, I asked the women to think about a story that happened in the prison and then describe the space where the story took place. The interviews were video and audio recorded in order to review the interviews at a later time, and to use their image and voice in the visualization. Their testimonies contained vivid recollections of critical moments of their lives in prison. By telling me their stories, they relived what was like to be in prison twenty years before. The challenge presented by my research is to create a virtual reconstruction that can communicate these experiences of prison to a wider audience.

Virtual reconstructions, within the field of architecture visualization, traditionally focus on the modeling of physical architectural features – geometry, proportions, and measurements. However, visualizing experiences of a place required modeling other elements in order to express the subjectivity of the recollections. Films and art installations have used such elements to engage the audience in the story’s place and time. My research addresses architectural visualization from a cinematic approach that allows the integration of narrative, light modeling and sound into the visualization.

2. The Case Studied

2.1 Uruguayan context

In 1975, the Uruguayan dictatorship was the regime with the greatest number of political prisoners per capita in South America. Amnesty International had reported 1 political prisoner for every 500 Uruguayans [1]. The regime’s strategy, called “the big lock up” (el gran encierro), consisted of massive imprisonment of the opposition. Prisoners were sent to these prisons once they had a judicial process. Before entering the prison these men and women were held in military establishments and in clandestine centers of torture. Officers that tortured these people worked as prison guards. Therefore, even though torture was not part of the experience of the prison, it was used as a threat. The inmates knew they could be sent to be tortured again. On the same report, Amnesty International quotes General Arquímedes Maíl: “We did not dare kill them all when we could have done so, and one day we shall have to release them. We must take advantage of the available time in order to make sure they go mad”[1]. Prison has the same objective as torture: to destroy the individual but over a long period of time.

There were two main prisons during the dictatorship, the male prison located in Libertad and the female prison located near Punta de Rieles, a neighborhood in the outskirts of the capital Montevideo. Built in the 1950’s, the women’s prison was originally designed as a Jesuitical retreat and was
later acquired by the military in 1968. The inmates lived in collective cells with a population varying from 8 to 48 depending on the size of the cell and the moment in history.

The calabozos, built by the military in 1973, were located in another building. It was the place the inmates were sent to as punishment within the prison system. Different from the main building, the calabozo cell was designed for repression, to make the prisoner vulnerable by isolating her in a room. Besides being placed alone in a cell without the support of their fellow inmates, the calabozo implied the loss of the few things the prisoner had: handcrafts, any special food (fruit, sweets, and a typical tea called mate), cigarettes, outdoor breaks, and family visits. The calabozo also implied being under constant harassment from the guards, with intense control over the inmate’s daily activities. The space was simple; there were few elements and it was built using poor construction materials. The calabozo building contained nine cells (each approximately 1.8 × 1.8 × 2.4 meters) set along a central corridor [2]. Each cell had a small window – which was blocked by a wooden plank with punched holes –, a metal door with a peephole, and a wooden grill with a mat. In such conditions, the inmate had to overcome repression alone. Since each cell has a very simple geometry, its visualization provides the opportunity to explore the modeling of non-geometric elements of light, narrative, texture, and sound.

2.2 Prison

There are two major literary references when studying prisons. The first reference is Foucault’s [3] study of the modern prison. His work...
sets the framework for understanding the historical changes in the way our society punishes the inmates, from inflicting exemplary marks (amputations, wounds) in the body of the condemned to the mortification and disciplining of their soul. Foucault also analyzed how prison architecture – by segregating bodies – promoted power inequality. Inside the prison building there is a small number of guards that can control a large number of inmates. Architecture layout made this situation possible by distributing the inmates into individual cells that isolated them from each other and at the same time and allowed the guards controlling gaze at all times.

The second important reference is Goffman’s study of the treatment of inmates in total institutions. Prisons, asylums, boarding schools, monasteries, and military barracks are considered total institutions. They all shared common features in the treatment to their inmates: their admission procedures, the privilege system and inmate’s adaptations. For example, the admission procedures described by Goffman are starkly similar to the procedures described by the women’s testimonies. Susana [5] remembered that upon arrival the guards took out her civilian clothes. While naked, she was subjected to a body search; they cut her hair very short, and removed all her jewelry (she had her wedding band with her). Susana was given a uniform (a “shapeless gray bag”), a number, and a classification. From then on she would be addressed by the guards by the number. The women felt these admission procedures as an attack to their identity as human beings and as women. Goffman states that these procedures are an abasement, degradation, humiliation and profanation of the self.

2.3 Testimonies of prison

The act of remembering is not like playing a recorded tape. When an individual remembers an event or a feeling from her past, she is recalling it from the perspective of the present moment. Memories, especially autobiographical memories, are constructed narratives of the self [6]. Such constructions are guided by “the person’s goals at the time of retrieval, as well as by the goals at the time of encoding” [7]. Titon [8] identifies personal stories as a genre of “self-contained fiction”. Through the narrative, the individual constructs an image of herself by making sense of events of her past. Therefore, the study of personal stories is not about facts but about the construction of its meaning. Titon also remarks the collaborative context where personal stories are told. It is a collaborative
effort between the storyteller and the listener. Furthermore, there is an
anticipatory audience in the mind of the storyteller, thus the communication
between the person that narrates her life story and the researcher is seen
as a “performance”.

In order to understand which themes are specific to the testimonies of
the women I interviewed and which are common to other testimonies, I
reviewed other testimonies of women in prison [9, 10, 11, 12], men in
prison [13, 14, 15], and victims of other forms of repression [16, 17, 18].
Although there were differences among them, all the testimonies addressed
a basic human right: the right to be free.

2.4 Women’s testimonies, source of multiple meanings

My research is based on recorded interviews conducted in 2002. I analyzed
these interviews to understand their meaning and to structure the
visualization by extracting common themes, stories, light settings, and other
features of the experience of the calabozo. The analysis of these interviews guided the creation of visual models of interpretation that could communicate the experiences of the calabozo to others. The process of creating these models could be compared with the work developed in ethnographic studies. Traditionally in ethnographic studies, the creation of models of interpretation results in multiple written descriptions of the case studied. Each model refines the working hypothesis, connecting salient concepts and patterns of the data in a meaningful way. In my research, the models of interpretation are images, storyboards, and flowcharts. I sketched any idea or mental images the testimonies would suggest by diagramming charts, drawing images inspired by the stories, video editing segments of the interviews, creating digital models, and storyboarding.

Each testimony is composed by a web of episodes. An episode is an event in the past expressed in a story or a group of experiences associated to the event. The difficulty in creating interpretative models was that one episode could convey multiple meanings. This is one story Marisa told me:

A soldier that we called “the Galician” took me [to the calabozo]. She was sinister.

This woman was present when I was tortured in the “300 Carlos” and her voice... Her voice... meant to me the torture itself... This woman was the one that took me to the solitary confinement. She was something disgusting... She tells me to take off my clothes, to take off my shoes [and] on the shoes there was nothing [hidden]. What it could be! Well... I took off my shoes, I took off my socks. She tells me to take off my pants, to take off my jacket. Then I said [to myself]: “She is going to get me naked” and with the speed of a flash I took off my panties and I gave it to her! ... And the woman tells me: “No, no, get dressed!”... If there is no humiliation there... My god! But at the same time I won. [19]

The episode above for example could be placed as part of Marisa’s personal narrative structure; emergent from her own experience. On the other hand, it could be placed as part of all the testimonies that talk about resistance and the humiliation of the admission procedures to the prison, a common theme among the testimonies. Alternatively, it could be placed as part of all the testimonies that happened inside the calabozo. Each episode therefore could be interpreted within multiple meanings.

Another complicating aspect of the testimonies was that although there were common themes among the different testimonies, each woman expressed them within the context of each individual recollection. In other words, there was no average experience but individual instances of common themes.
2.5 Virtual reconstructions

The aim of the virtual reconstruction is to make the audience feel as if she/he is in the calabozo, transported to another place and time. The purpose of this section is to understand how previous works have addressed this issue.

There are two paradigms developed in computer graphics used in the visualization of three-dimensional architectural spaces. One approach uses models that are fast to render, models with low-count number of faces that allow real time interaction of the audience with the model. The other approach uses models that take more time to render, models with high-count number of faces, but that results in higher quality of visuals. Below is a brief discussion of each approach.

Virtual Reality Approach

The low-count approach to visualization is the one developed in Virtual Reality environments. One known example of virtual environment is the CAVE (Cave Automatic Virtual Environment). A CAVE is a room where the user is surrounded by projected images that are synchronized on three walls and on the floor [20]. This approach uses immersion to make the audience feel as if she/he is in another place and time. It facilitates immersion by: allowing the audience to interact in real time with what is projected on the screens (synchronizing actions with visuals and audio); surrounding the audience and therefore occupying their field of view completely; and providing a stereoscopic view. This approach to immersion through real-time interaction implies sacrificing visual quality. Due to limitations in computational speed, 3D virtual environments lack the ability to render film-quality sequences in real time.

The proposed visualization presents a similar CAVE layout since the installation surrounds the audience with the projected visuals. However, the visualization sacrifices real-time interaction in order to have high quality visuals. It conveys the experience of being in the calabozo cell by engaging the audience into the narrative.

Cinematic approach

The high-count approach to visualization is commonly developed in walkthrough and fly-through animations. Since the visualization is a pre-rendered image sequence, the model can have high-quality visuals. The most common examples of these models are the ones developed in films. Films “transport” the audience to another time and place by drawing the audience into the narrative.

Films in the documentary and fiction genre have provided references of how to create a narrative based on testimonies. Through the exploration of elements of lighting, camera settings, movement, narrative development, and
sound, films have provided sources of imagery of prisons and torture [21, 22, 23, 24]. Video art installations and video art performances provide alternative approaches to film. Particularly inspiring is the work developed by Shirin Neshat [25], where film is projected on multiple large screens, synchronizing audio and video.

Visualizations of prison might bring anxiety into the audience, thus it is important to allow closure in the visualization, so the audience will not leave the visualization feeling sad and depressed. The work of Gabriela Alonso [26] addressed this problem by allowing audience participation. Her video installation on the issue of the people kidnapped by the dictatorship in Argentina (desaparecidos) included a video projection, her performance, and audience participation. Differently to the VR approach to interaction, in Alonso’s installation the audience is invited to release their anxiety by acting. In this case audience interaction does not affect what is been projected on the screen, however interaction remains crucial in understanding the meaning of the visualization.

2.6 Lighting

Archaeological inquiry has dealt with issues in lighting from the perspective of scientific and artistic illustration [27, 28, 29]. Scientific and artistic illustrations are selective ways of representing reality. Both are visualizations of salient characteristics of the object represented. Scientific illustration focuses on the characteristics that can be generalized; it represents an average of the objects of its kind. Artistic illustration focuses on the uniqueness of the object, characteristics that are not transferable to all the objects of its kind. For example, when rendering light in an architectural space, scientific illustration uses lights that are neutral, and sharp; lights are used to clarify and display the geometry. On the contrary, its artistic counterpart presents lighting that is representative of the context and communicates the time of day, the atmospheric conditions, as well as the observer’s point of view. In this case, light is used to set the mood and immerse the viewer into the space. Both representations of light are useful and answer different needs of visualization. In my study, I intend to use artistic lighting to convey the context and meaning of the story.

3. The visualization

The objective of the visualization proposed is to convey a sense of being a prisoner inside the calabozo. The calabozo was a very small place, there was hardly enough room to walk or move inside. It was a place to be experienced alone in isolation.

While there are multiple ways of presenting such visualization, the one I am proposing is a video installation that encloses the viewer in a space similar to the calabozo cell, and to be experienced by only one person at a time. The video is set in a documentary key.
3.1 Content

The visualization is based on the themes that emerged from the analysis of the interviews. The installation centers around the variation in the experiences recounted during the testimonies, and are expressed through three groups of experiences.

The first group of stories (marked with blue on the flowchart of Figure 6) recalled dark memories where repression is predominant in the experience. The prisoner was alone, vulnerable, afraid, and cold. The experience was of being constantly harassed by the guards. Everyday activities appeared external and imposed; the inmate had no control of time and space. Lighting consisted of two situations: artificial light at night and natural but very dim light during the day. Light was an element of torture: they were deprived of sleep at night and were forced to be awake in the dark during the day.

After spending some time in the calabozo there are stories (marked with orange on the flowchart of Figure 6) that showed a change in the mood from a repressive alienating experience to one where the inmate felt less vulnerable and starts to control her space/time. The main element was the struggle for communication. Lighting consisted of directional natural light coming from the window. The light was warm and it has body. There was some contrast between areas of shadow and brightness allowing an object to be illuminated. The inmate was able to control her time because she was aware of the guard’s routine.

Finally, there are two testimonies that remembered moments of detachment from the physical space by daydreaming (marked with green on the flowchart of Figure 6). The calabozo was an opportunity to be alone and such moments of solitude allowed the inmate to free her mind. In these testimonies, daydreaming was a way of preserving mental sanity.

3.2 Setting

The proposed video installation is structured with three screens hanged from the ceiling and supported by metallic tubes. The screens, made of translucent cloth, will be rear projected, facing each other completing three
vertical faces of a virtual cube – of side 2.2 meters (Figure 5). The audience will stand inside the virtual cube, surrounded by the screens. The installation intends to be transportable allowing audiences from multiple sites to see the exhibition.

The equipment necessary for the installation includes three LCD projectors connected to three DVD players. The DVD synchronization can be made either by a computer running a Max/MSP graphical environment or by a programmed DVD synchronizer.

3.3 Narrative structure

One of the main features of the calabozo experience is the arbitrary nature of the rules and punishment the women received. To recreate this effect, the visualization proposes a nonlinear narrative, with random interruptions and events. The story sequences are randomly selected allowing for varied viewing time.

The video starts with a sequence that sets the mood for the day (marked with dark gray on the flowchart of Figure 6). The women recalled that every day started with the same routine. First, it was the call, which was the banging of the guard stick against the metal doors of the calabozos cells and yelling to “Hurry up!” Each inmate had to roll her mat and wait to be allowed to go to the bathroom. Following the bathroom came breakfast and then a long day.

Following the initial routine sequence, the video presents a story told from anyone woman’s perspective. This individual story is selected randomly.
and can be interrupted by events also selected randomly. The purpose of
the interruptions is to portray the vulnerability these women were set
upon. When the individual sequence is interrupted, an alternative video
sequence is inserted in the story flow.

After an individual story is presented there is a transition sequence
(marked with light gray on the flowchart of Figure 6) selected randomly.
Transitions sequences work as a pause or reflection, linking the individual
stories and the starting of a new day cycle. Following the transition
sequence, the video starts again with a routine sequence.

The video narrative structure allows two important features of the
experience of the *calabozo* to be presented. On one hand, the video
features the individuality of stories by presenting the stories from each
woman’s perspective. On the other hand, it shows the routine of life inside
the *calabozo*, common to all the testimonies.

3.4 Visualizing one story

In this section, I am selecting one story of the *calabozo* from Marisa’s
interview; describing how this story relates to Marisa’s narrative, to other
similar stories, and to the themes I found in other narratives; and finally how
the story is presented into video.

This is the story Marisa told me:
Once I found in the bathroom, hidden by the soap, a tiny flower made with bread crumbs, a present from another prisoner for me to find. I brought it to the cell very well hidden and when I had a chance, I raised it to the light, to be illuminated by the sun beams that were filtered through the little window. I imagined it like a movie scene (these where the times of the socialist realism): the prisoner raises the tiny flower, it grows and becomes bigger and the penumbra light sparks. Grand finale, I laughed at myself.

Marisa is about 70 years old, the oldest of the women I interviewed, and a friend of my family. She came well prepared to the interview with her stories written in a paper and she started the interview reading them. The story above was one of them. Her insight into these stories is that each person lived the prison from her own perspective, in her case she sees herself as an irreverent old woman. Later in the interview, she narrates darker stories of the calabozo (see section 2.4 of this article) that reminded her of the time she was tortured. The worst experience she recalled from prison was how she felt humiliated.

The “bread flower” story belongs to its own category since it is present in many written and oral testimonies of other women [10, 30]. Inside the calabozo the women had nothing besides their clothes and some personal hygiene items. Sometimes even the mattress was removed. The bread that came with the food mixed with saliva and toothpaste became modeling dough. Making a flower with the breadcrumbs was not only a way of occupying their time, but also of breaking isolation by giving it to another inmate. In the book “La Espera” of María Condenanza [10] the “bread flower” story is told from the point of view of the woman that made the flower: María tells how she saved small pieces of bread from her meal, made the dough with saliva and pink toothpaste, modeled the flower and waited for it to dry. In her story, she enjoyed imagining the surprise and wonder it would bring about for the other prisoner to see a pink rose. She planned to place the flower in the bathroom as a gift for the woman that was in the next cell.

The “bread flower” story also relates to other testimonies of the calabozo expressing the struggle for breaking isolation and showing emotional support.

Finally, the bread flower is introduced to the video installation in two instances [31, 32]. The first instance [31] is the story told from Marisa’s point of view, in voice over. The story starts in the bathroom where Marisa finds the flower (shots 1–2) continues in the corridor (shots 3) and ends in her calabozo (shots 4–8). In her interview, Marisa recalls the shower time was a good moment in the day. She enjoyed it even though it was of cold water. Inside the calabozo I presented the light coming from the window in light beams.
(“I raised it to the light, to be illuminated by the sun beams that were filtered through the little window”). When she says “I imagined it like a movie scene” she is no longer in the calabozo but in a movie set performing in a socialist realist movie. This “other” heroic woman sees the flower grow and the light spark. A red flower invades the adjacent screens. Red was a color forbidden to the prisoners because of the allusions to the communist and anarchist flag. And the scene flashes. At the end she is back to her cell, she no longer raises the flower towards the light, she imagined it all.

The second instance [32] is told from a fictional woman making the bread flower. It shows stills of the sequence of “necessary steps” to make a bread flower. Showing her hands in an extreme close up it withdraws the attention from where the story is happening towards a more intimate reflexive narrative. The story is presented as a sort of commentary that helps the transition from one story to another.

The bread flower stories portray some of the most relevant features of experiencing the calabozo. On one hand it is part of the everyday routine of small non-heroic acts of resistance that kept these women alive. On the
other hand, it refers to the heroic image of a woman, portrayed as a movie scene, imagining the wonderful flower to grow and spark.

4. Conclusion

My research shows how virtual reconstructions in architecture can be approached through the implementation of a video installation. The setting of the installation surrounding the audience, the projection of pre-rendered high quality image sequences, and the careful study of lighting inside the cell, combined with a nonlinear narrative structure allows the visualization to convey the experience of being inside the calabozo. Since my research is based on a case study, there are limitations when generalizing the process towards other virtual reconstructions. However, what this approach lacks of breath it compensates on depth and understanding of how these women lived in prison. Through their particular stories, the proposed visualization sets guidelines in how to approach virtual reconstructions that portray how people experience place.

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30. Interview with Mariana, Interview Number 5, Video recording, Montevideo, June 2002.

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