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Multidisciplinary Aspects of Design

Objects, Processes, Experiences and
Narratives

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Worldbuilding Practice as a Collaborative and Inclusive Design Process. The Case of ACTS-A Chance Through Sport

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Abstract. This paper aims to address the power of worldbuilding practice in promoting shared and collective imagination, activating a process of cultural and narrative change.

Specifically, the work presents a collaborative, social project entitled *ACTS—A Chance Through Sport*, whose main aim is to promote sports in prison as a tool for social reintegration, according to a multidisciplinary approach combining architecture, engineering, and design competencies. The focus is the work conducted by the Imagis Lab research group (Department of Design, Politecnico di Milano) regarding the role of narrative-based strategy in enhancing the transmission of values and messages through worldbuilding practice. Far from being a narrative gimmick for selling stories, it can allow people to participate in and interpret culturally situated narratives providing ownership.

As such, the first part of the paper will describe how the project *ACTS—A Chance Through Sport* has addressed the role of narrative-based processes in promoting inclusion. Then the second part is devoted to presenting the *narrative-based design framework*: practical strategies for rethinking stories in practice that we have developed in our research since 2013.

Keywords: worldbuilding · narrative change · narrative-based design framework

1 Introduction

Contemporary Western society is characterised by the spread of hegemonic narratives (so-called Western culture), promoting the univocal imagery of reference related to large-scale universal values. Nevertheless, multiple stories can and need to coexist, leveraging the ability of storyworlds to express the values and meanings of specific cultures, not just the hegemonic ones [1].

This contribution is the result of collective work. For academic purposes, we inform Mariana Ciancia, and Francesca Piredda are joint authors of paragraphs 1. Introduction, and 4. Final Reflections.

Mariana Ciancia is the author of the paragraph: 3. The Narrative-Based Design Framework; Francesca Piredda is the author of the paragraph: 2. Rethinking Stories in Practice.

Storytelling is an activity that has always characterised human beings, contributing to shaping reality [2]. Moreover, stories can transcend linguistic, cultural, and age barriers [3], building mutual trust among individuals within a community. Since stories give meaning to life experiences, they may be considered educational, entertainment, and a purely aesthetic form of escapism. However, they certainly have the power to influence the shared value system and impact the culture of which the stories are expressions.

Given such premises, as researchers in the communication design field, we decided to test storytelling practices in marginal contexts to foster social inclusion and dialogue among different stakeholders. Specifically, the reflections are related to storytelling and worldbuilding practice [4, 5] in giving voices to people whose rights are suspended, enhancing the transmission of values and messages through worldbuilding practice and narrative-based strategies.

2 Rethinking Stories in Practice

The focus of this paper is the work conducted by the Imagis Lab research group (Department of Design at Politecnico di Milano) within the project *ACTS—A Chance Through Sport* (herein after ACTS) regarding the role of narrative-based strategy in enhancing the transmission of values and messages through worldbuilding practice. According to a multidisciplinary approach combining architecture, engineering, and design competencies, ACTS aims to promote sports in prison as a tool for social reintegration. The main experimentation part was undertaken at the Bollate Prison in Milan, a recognised international example of an open-cell prison [6].

The main results derived during the pilot project are the following:

- interventions for the requalification of prison spaces;
- monitoring the motor activity of a sample of the prison population (inmates and prison police officers); and
- collaborative storytelling activities.

Our scientific contribution involves investigating and prototyping collaborative storytelling practices to support the construction and reconstruction processes of individual and collective identities, considering the educational purposes of prison facilities [7] and the power of imagination in shaping the function that sports can represent.

What emerged from our desk research and interviews with inmates, prison officers, and educators is that it is a common belief that sports activity in prison is merely a hobby. While with children, it is considered a natural and necessary pastime, with inmates, the emphasis on crime and punishment neutralises the potential of these activities.

In light of such a premise, we decided to design storytelling activities to experiment with the transformative power of narrative to experience a virtuous synergy between an innovative vision of educational treatment and a storytelling-based co-design approach. The aim was to stimulate the inmates to tell their stories and collect narrative elements (fictional and non-fictional) inspired by or adhering to their personal experience of sports in prison. The result is a system of storytelling activities based on an individual narrative exercise (Phase 1) and a collaborative storytelling workshop (Phase 2).

During **Phase 1** (October 2020), 55 inmates voluntarily participated in an individual storytelling activity that created 51 characters using a tool we developed in previous

research [8, 9]. As a bridge between the listening and creative phases, we conducted the first storytelling activity in person and then remotely in 2020 given the pandemic situation [10]. We wanted to allow each participant to express themselves directly by constructing an imaginary character from the elements of their own experience. In this way, we investigated the collective imagination of the prison population and their willingness to get involved in further storytelling activities.

Thus, creating a character was the starting point for the participant to express themselves by telling their story or inventing a fictional character from familiar elements. The result was writing and sharing with others their own experience, their point of view, or an opportunity to put themselves in someone else's shoes or even reimagine themselves. We then analysed the resulting 51 characters from a qualitative point of view to understand the imagery of reference and gather narrative elements useful for an outward narrative.

During **Phase 2** (21 June 2021–8 July 2021), storytelling activities focused on creating individual stories and defining a storyworld able to contain them, experimenting with the integrated use of co-design processes and the co-creation of narratives. The primary objective, to identify and gather elements to build multimedia content to be spread externally, was then complemented by sub-objectives related to the narrative experience of the participants:

- investigating the imagery of sports practice within prisons;
- experimenting collaborative writing processes with non-experts;
- experimenting with storytelling as a transformative process;
- testing the use of storytelling as a tool to facilitate the process of self-representation; and
- identifying new expressive tools to support/unlock creative processes.

Because of COVID-19 restrictions, the collaborative storytelling activities were conducted with two small groups of inmates: 5 from the Men's Ward and 7 from the Woman's Ward. As a result, we obtained several narrative outputs created by the detained people using *ad hoc* designed tools to fuel the narrative, according to an iterative co-design process: 12 characters and sports stories, 1 shared storyworld, 1 documentary, and 1 podcast (ongoing).

From the systemisation of the tools used during the collaborative storytelling activities and reflection on the process, the scientific result derives the *narrative-based design framework*.

3 The Narrative-Based Design Framework

Since 2013, our research has focused on defining narrative processes and storytelling tools to empower the design activity. As a result, we developed a methodology based on the idea that collaboration in constructing story-based content is central to fostering social inclusion and disseminating results to the public, exploiting the dialogue among different stakeholders.

The three-step process for designing story-based content, developed in previous research and teaching experiences, was maintained. The narrative-based tools were then adapted to support the collaborative storytelling activities (Phase 2). In this iteration of

the narrative design process, we decided to activate the imagination of the inmates using analogue stimuli given the restriction that works in prison carry with it. Specifically, we complement our narrative tools with a kit consisting of three decks of cards composed of images, keywords, and questions that trigger memories, emotions, and ideas to support the building of characters and the world of reference.

3.1 Process, Methods, and Narrative Tools

The process adopted was developed as part of previous research and teaching experiences [9–11] and consists of three phases: *collecting*, *crafting*, and *reframing* [12]. Each phase is briefly described below as applied to the Bollate pilot, describing its activities, participants, methods, and associated narrative tools (see Table 1).

Table 1. The Narrative-Based Design Framework

Phase	COLLECTING	CRAFTING	REFRAMING
Activities	Collection of information: words, sounds, and images depicting situations, actions, and quotes from the imaginary references	Co-creation of stories and storyworld: construction of narrative elements (fictional or non-fictional), inspired by or adherent to their personal experiences	Dissemination and exploitation: design, production, and multichannel distribution of content
Performed by	Researchers	Participant (non-expert)	Researchers and participant (non-expert)
Method	Desk research, brainstorming	Co-design narrative session	Co-design narrative session
Narrative-based tool	//	3 decks of cards: Character Wheel, Storyworld Canvas, Role Map	//

The *collecting phase* took place between May and June 2021. This phase was meant to be an activity of research and preparation of content and working tools by the researchers from their visual references and *repertoire*. Moreover, it was fuelled by the insights gathered during the listening phase and emerged during the individual storytelling activity carried out in Phase 1. Operationally, this involved selecting and preparing narrative stimuli to be used during the following phases: written material (notes, memories, quotes), visual material (images, photos, sketches, illustrations), audio recordings, and video clips. We paid particular attention to selecting, preparing, and printing the iconographic repertoire. Indeed, it was impossible to have an internet connection and the tools we usually bring to support image research (such as analogue and digital magazines and

scissors) for security and control reasons inside the prison. Moreover, the COVID-19 emergency significantly reduced interaction possibilities with the prison population. As a result, we were forced to reduce the size of the group participants, with a subsequent duplication of meetings and a consequent reduction of time allocated for activities.

The *crafting phase* took place between June and July 2021 and consisted of five meetings lasting about three hours per ward. Each session was devoted to defining a specific narrative element to accompany the inmates on their story construction journey. At this iteration of the **narrative-based design framework**, we felt the need to support the narrative tools we developed with an additional tool. Given the constraints of conducting these workshops in prison, we designed a kit consisting of three decks of cards composed of images, keywords, and questions for triggering the participant's imagination that will be discussed later.

The first meeting was devoted to character construction using the *Character Wheel* [8, 9]. On this occasion, the narrative activity was guided by us, stimulating the building of the character through the choice of visual and textual cards contained in the kit. The results were several moodboards: a spatial organisation of the cards to represent the imagined characters visually. The second meeting shifted the focus to narrative world building using the *Storyworld Canvas* [9, 11]. The definition of the narrative world was guided by the joint use of the narrative tool with the visual and textual card kit. Again, the result in the moodboards was discussed collaboratively, becoming the starting point for the third meeting.

The third session focused on the collaborative construction, through storytelling and dialogue, of a shared narrative world capable of accommodating all the characters developed. Then the fourth meeting was devoted to reviewing a specific aspect of the co-created narrative world. We focused the discussion on sports to investigate the role and space devoted to physical activity in this narrative world and the emotions associated with sports activity. Finally, the fifth and last meeting was devoted to telling a sports story according to the typical three-act structure [13]. On this occasion, the *Role Map* tool was used, which allows each character to be assigned a role within the story concerning his or her aims, conflicts, and relationships with other characters, supplementing it with a series of new cards developed from the *Six Antenarrative World Questions* [14].

The *reframing phase* started in September 2021. It involves the design, production, and multi-channel distribution of audio-visual and multimedia content led by researchers. The outputs are twofold: a documentary on the activity of the research project in its entirety to disseminate the results and the co-design activity of a podcast series whose episodes are written by the inmates. The podcast was designed starting from the characters and the stories written by the participants in the workshop with the following aims: giving a voice to people whose rights are suspended and offering those living outside prison a direct, honest, hard-hitting, sometimes ironic telling of experiences coming from the margins of society but that each of us can recognise as familiar and universal. These results were disseminated at the *Padiglione d'Arte Contemporanea* (PAC) in Milan from 9 October 2022 to 6 November 2022. In the project room, on the occasion of the *Laboratorio Carcere* exhibition dedicated to the research that the Politecnico di Milano has been conducting in Milan's penitentiary institutions since 2014, the documentary and the pilot episode of the podcast are put on display.

3.2 A New Narrative Aid: Deck of Cards for Sparking Imagination

Imagery becomes a resource we can draw on as human beings if we understand it as a repertoire for understanding ourselves and the world. Italo Calvino [15] describes the imagination as ‘a repertory of what is potential, what is hypothetical, of what does not exist and has never existed and perhaps will never exist but might have existed’ – that is, ‘a world or a gulf, never saturable, of forms and images’. In other words, a circular exchange between humans and the imaginary fosters knowledge production.

Considering these premises, we developed our storytelling-based co-design approach and narrative tools to activate processes of imagination and self-representation. Indeed, Lee Sheldon, an expert in storytelling and character development, states, ‘Imagination and talent cannot be taught, but they can be encouraged. Give a craftsman the tools he needs to create, and both imagination and talent can blossom’ [16].

To create a shared imaginary and narrative world, we made the inmates authors of their stories, providing them with tools and narrative elements, which were subject to improvement, according to an iterative co-design process. As aforementioned, we needed to complement our narrative tools with a kit consisting of three decks of cards using analogue stimuli (images, words, quotes, and questions) to activate the imagination and narrative building.

To design them, we started by analysing existing systems to understand their mechanics and operation to support applied creativity. On the market, it is possible to find storytelling card games, examples of which are given below. *Once Upon a Time* (Lambert, Rilstone, & Wallis, 1994) uses a deck of cards to stimulate the collaborative development of storylines, encouraging players’ creativity. *Story Cubes* (O’Connor, 2005) can be intended both as a game for one or more players (party game) and as a tool for enhancing imagination and overcoming writer’s block. Analogously, *Fabula* (Di Pascale & Binasco, 2016) is a tool made up of 40 cards to drive story construction and deconstruction, funded through a crowdfunding campaign on Kickstarter.

From the analysis, we realised that we covered the aspects of building narratives according to aspects of narratology in our storytelling tools, such as the *Character Wheel*, the *Storyworld Canvas*, and the *Role Map* [8, 9, 11, 12]. What was missing was something that could unlock the imagination process by arousing it through visual stimuli. Therefore, we referred to the tarot, a deck of cards used in various parts of Europe since the mid-15th century, to unveil the hidden story and investigate the inner self or as an illustration system for story development. Not by chance, in *The Castle of Crossed Destinies*, Calvino [17, 18] used tarot as a narrative experiment where characters use illustrations as visual aids to build and communicate their storylines.

In light of such premises, we designed a kit consisting of three decks of cards using analogue stimuli (images, words, quotes, and questions). It aims to support the tools dedicated to creating characters and the narrative world to bring out the participants’ imagery: a visual deck, a textual deck, and a white deck that allows them to express themselves freely.

The visual deck has been used for character creation (in combination with the *Character Wheel*) and storyworld building (with the *Storyworld Canvas*). The categories of the visual deck are environments, food, emotions, jobs, lifestyles, sports, and history. In the first instance, we selected images by identifying a mix of sources and styles ranging

from universally recognised images from art and photography to iconographic representations from personal archives or the web. To these were added other images that enriched the deck, and we searched them by following their stimuli.

The textual deck consists of three subgroups associated with specific activities:

- Character creation: consisting of a set of guiding questions for filling out the *Character Wheel* and a set of quotes. The quotes were not only chosen from movies/books and recognised authors but also collected during the listening phase of the project (September 2020–January 2021).
- Storyworld building: a series of questions to guide and stimulate the use of the *Storyworld Canvas*.
- Story writing: a set of questions inspired by the *Six Antenarrative World Questions* [14] to be used with the *Role Map* to support inmates in writing the sports story. We used different questions, such as the following:
 - What has happened before?
 - What is keeping the pot boiling?
 - What motivation made you decide to play sports at that time?
 - How does playing sports make you feel?
 - How do you feel while playing sports?
 - What has sports enabled you to do?
 - What result has it enabled you to achieve?

The aim was to help the inmate express the motivations that lead to playing sports, positioning them with respect to the character's physical and emotional well-being.

4 Final Reflections

The discourse so far highlights how the practice of storytelling, holding reality and imagination together according to a virtuous synergy, can stimulate intention, action, and imagination.

Our main scientific contribution to this topic is twofold: an operative framework for collaborative storytelling activities, namely the narrative-based design framework, and theoretical reflections about the role of imagination and worldbuilding practice within the collaborative storytelling processes.

If we understand storytelling not only as a tool capable of unlocking the potential of people but also as a fundamental practice capable of shaping reality, we can construct collaborative storytelling activities by following the narrative structure of the 'hero's journey' [19, 20], in which the participants become situated heroes who embody a system of shared values that develops a dramatic relationship with the narrative world.

In the project ACTS, inmates and the process of constructing stories (of sports and otherwise) become tools for interpreting life and reality (inside and outside prison). Our heroes (the inmates of the Bollate Prison) were invited to participate in the ACTS project (Part 1: The Ordinary World). The beginning of change started from a preliminary storytelling individual activity (Part 2: The Call to Adventure). While 12 participants continued to work with us, others withdrew from the project because they feared the

unknown (Part 3: Refusal of the Call). We provided those involved with training, equipment, and advice during the five meetings to help them construct stories (Part 4: Meeting with the Mentor). However, the activities got them into an unfamiliar situation (Part 5: Crossing the Threshold) in which they tested themselves and sorted out allegiances with their mates. Finally, the journey's conclusion saw them collaboratively construct a shared narrative world that stems from the values that sport conveys and transforms past experiences into images of the participants in society outside of prison (Part 12: Return with the Elixir).

The result is an inclusive design process in which worldbuilding practice and narrative-based strategies demonstrate the ability to empower people, including marginalised groups – that is, a narrative context in which reality and fiction intertwine, offering people unprecedented points of view and the possibility of exploring alternative opportunities, roles, and identities to those usual and already given.

Roberto Bezzi, head of the Education Area of the Bollate prison, was our mentor. He states that being an adult must not mean the impossibility of continuing to grow, change, improve [7]. Practicing narrative-based design in such a marginal context elicited change also for us adult and researchers. We had our heroes' journey in parallel, facing specific logistical barriers (no internet connection; repeating the same activity twice a day with two small different groups due to covid issues; lack of time to develop ad hoc activities with prison police officers) and relational barriers (in particular, the resistance of police officers, who do not want to be placed on the same level as detained persons and therefore refuse to be involved in the same type of activities; the abandonment of activities by some detained persons, who did not participate when the psychological conditions and the daily harassments imposed by the detention system did not give them the necessary strength to get out of bed, for example: not being accompanied by the officers, for reasons that are never explained; not receiving an answer or a permission they're waiting for; not being able to communicate with their family). We researchers had to carry out the activities each time in different conditions with respect to how the experimentation had been defined, from time to time in the absence of one or more variable conditions, forcing ourselves to give up considering processes and results superimposable and therefore comparable, adapting from time to time ourselves and research practice.

To conclude, we (adult and researchers) learned that design practice is a relational practice based on listening to people and gaining trust. Narratives can support design in setting the relational basic conditions for making people assume the right attitude and encourage dialogue.

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