

Theatre as *Techne*: How to Account for the Epistemic Work Across Arts and Science

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Abstract

This article explores how theatre can serve as a tool for self-reflection and co-creation of knowledge for healthcare professionals, particularly those who have faced the trauma of the COVID-19 pandemic. A case study is presented of doctors and nurses in Bergamo who used a theatre workshop to rework their experiences, culminating in the creation of a theatre play performed for the city. The article contributes to the fields of Art, Science, and Technology Studies (ASTS) and Medical Humanities, arguing that theatre, as *techne* (practical knowledge), not only disseminates research findings but can also provide epistemic work generating new narratives and fostering a deeper understanding of care practices, highlighting the importance of affective communication. The article illustrates how the project served as an epistemic laboratory where knowledge is co-generated among healthcare professionals, theatre professionals, and researchers, and then divulged to the public. The detailed analysis of the project's unfolding, from the theatre workshop to the performances, shows how art can engage critically with science, challenging traditional conceptions of knowledge production and communication.

Keywords

ASTS; theatre; epistemic laboratory; arts and science; dramaturgy; collaboration; COVID-19.

Introduction

In March 2020, Bergamo was the European epicentre of the COVID-19 pandemic. Within two months, the city and province of Bergamo lost approximately 6,000 people. Doctors and nurses in the Emergency departments (EDs) and intensive care units of hospitals had to manage a challenging situation, working in exceptional conditions for months. The ED of the city's main hospital was at the centre of the crisis. Papa Giovanni XXIII is a large, highly specialised hospital that serves an area with over 1,100,000 inhabitants and more than 98,000 annual accesses. In March 2020, the Emergency Department of Papa Giovanni XXIII was

overwhelmed by the COVID-19 health crisis and tried to cope with the tragic situation by mobilising all its resources. The acute crisis receded after about a year, but having faced such a desperate situation, it remained in the memory of healthcare professionals as something difficult to overcome (Paganini et al. 2020).

Therefore, two years after the pandemic outbreak, a small group of doctors and nurses believed it was essential to find a way to collectively process the traumatic experiences of the crisis. They decided to use the arts and chose theatre as a medium to work collectively on their experiences. This article presents a case study of the theatre project “Il Tempo della Cura” (*Time of Care* in English), created by doctors and nurses from the emergency department of Bergamo’s largest hospital, to rework their traumatic memories through a theatre workshop and the creation of a performance on COVID-19 to be shown to the city.

The case aims to enrich the emerging field of Arts, Science and Technology Studies (ASTS), which has recently emerged as a multidisciplinary and interdisciplinary field in which traditional STS methods merge with tools related to art history, aesthetics and media theory. Recognising the need for a new conceptual framework to analyse these hybrid practices (Rogers and Halpern 2021), ASTS aims to bridge the fragmentation of existing literature on art and science and establish itself as a canon with its own methods, institutions, cases and common topics.

This contribution aims to enrich ASTS literature by presenting a case in which theatre has functioned as a tool for self-reflection on medical practices and as an epistemic laboratory, where knowledge has not been transmitted but co-generated. The contribution highlights how theatre, as a performative practice, belongs to the ASTS field because it is capable of exploring, staging and troubling the relationships between scientific knowledge, imagination and technology. Through theatrical devices, theatre makes the social, emotional and political implications of science visible, encouraging forms of public reflection and critical participation.

The case focuses on how theatre allowed participants to engage in embodied self-reflection exercises and practices regarding their own direct experiences of caring for and treating patients in an emergency (the pandemic). The case also illustrates how, through this experience, theatre (with its tools) has produced embodied knowledge of care practices and a new narrative about the role of healthcare professionals during the pandemic, promoting the importance of affective communication as a crucial element of the healthcare profession (Bensing et al. 2000).

To explain the agentic role of theatre as a producer of self-reflection, embodied knowledge and new narratives, we draw on the concept of *techné* versus *epistémè* (Gavrilov 2021) as a repository of techniques that enable the processual unfolding of creative experiences. In ancient Greek tradition, *techné* embodies a type of practical, artisanal, situated, tacit knowledge linked to doing and production, as opposed to a universalist theoretical knowledge that aims to identify a corpus of abstract truths. With this contribution, we reiterate that the embodied knowledge produced through *techné* belongs to the realm of knowledge and that exploring it helps to unpack “artistic facts”¹, showing their narratives and how they are constructed.

The article aims to contribute to the interest of ASTS in examining the relationship between art and science by exploring the concrete processes involved in constructing that relationship. It supports Rogers’ proposal, which suggests the artwork acts as an agent that creates a space, an opening, in which different types of conversations on a scientific theme can take shape (Rogers 2021). Art in ASTS is not an embellishment of science, but a tool

that allows those outside a scientific field of study to engage in reflection on science in society. In the context of our work, when we discuss science, we refer more specifically to medical science and healthcare practices.

The article is structured as follows. The first section outlines the theoretical context of ASTS, the role of theatre in ASTS, the relationship between ASTS and medical humanities, and the role of theatre in medical humanities research. The second section provides a brief overview of the challenges faced by healthcare professionals during the pandemic. The third presents the case and methods. The fourth section delves into the various stages of the project's development, from the workshop to the creation of the theatre show. The fifth discusses what emerged from the presentation and analysis of the case, and finally, the conclusions summarise the path outlined in the article.

1. ASTS and Theatre

Over the past twenty-five years, Art, Science and Technology Studies (ASTS) has developed, giving rise to new practices that challenge traditional disciplinary distinctions between art, science and technology. ASTS is emerging as a framework capable of reading, interpreting, and problematizing the forms of collaboration, contamination, and co-production that traverse the worlds of art and science (Rogers et al. 2023; Rogers 2024). Rogers and Halpern (2021) have worked on gathering and systematising this new field of study. The authors have clarified the terminology used in the field, its dominant topics and narratives, and the methods and approaches used in ASTS. One of the dominant narratives identified by Roger and Halpern regarding the relationship between art and science, which is helpful here, is the metaphor of the “two cultures”.

This metaphor identified a supposed divide between the arts and sciences, characterised by mutual incomprehension. This logic of the two cultures promoted art as the handmaiden of science. In contrast, Rogers and Halpern argue that the arts have the potential to problematise the position of science and promote collaborations between art and science through a more equal encounter between these categories of knowledge. ASTS is committed to decentralising the written word as the primary mode of expression, embracing various forms of knowledge and methods. It adopts a symmetrical approach to art and science, considers artistic practice as research, and brings new perspectives to STS, such as the sociology of art, philosophies of aesthetics, and literary analysis.

One of the central issues of ASTS is the definition of art and artistic practice. According to Horst (2025) in her recent review of the *Routledge Handbook of Art, Science and Technology Studies* (Rogers et al. 2021), while some traditions focus on the idea of art as the translation of the artist's impulses into an artefact or performance, others describe art as a form of knowledge or research. Even in the second tradition, however, according to Horst (2025), the practices of establishing artistic facts and the controversies surrounding the epistemic claims of artistic research are not made explicit. Although STS typically account for the processes that stabilise scientific “facts”, this practice is rarely applied to artistic and cultural products at the intersection of art and science. Horst claims:

I would have liked more discussion and reflection on how the knowledge production of artistic practice can be documented in ways that can engage with more classical epistemological practices of STS. (Horst 2025, 137)

Documenting creative and artistic processes at the intersection of art and science is, therefore, essential, as it supports the central claim of ASTS that art is not ancillary to science.

Theatre is a form of art that is well represented in the ASTS debate. Theatre is a place that allows hybridisation between art and science (Palmås 2024; Farnell 2021), conveying important social messages (Lioi 2014), exploring ethical dilemmas (Takala et al. 2014); promoting social sustainability (Pellegrinelli 2025a); showing the dimension of power and inequalities in the production of knowledge (Green 2020); and re-imagining academic communication as performance (Schneider 2011).

However, we argue that theatre (in this case, theatre in conjunction with science) can contribute further to the ASTS because it is a collective art in which both humans and nonhumans participate. The collective, processual, and participatory nature of theatre practices allows us to account for the processes of composition of artistic products, documenting the production of knowledge, as STS has done with science. By unpacking the processes that have occurred over time in the creation and production of art, it is possible to outline the path that led to the emergence of the artistic product and its capacity to generate knowledge. This does not mean that it is not possible to do the same with other art forms, but rather that theatre, due to its collective practices, has greater potential for unpacking. For example, Gluzman (2021) suggests looking at theatre practices to reflect on scientific practices. The author claims that the dramaturgical issue is illuminating for STS, because they take the performativity of science to be a concern and the reflexivity of STS scholars to their own practices to be essential. Pellegrinelli (2023) uses the process of creating a theatre show to analyse the framework of human and non-human relationships and the practices that lead to the collective creative process (see Pellegrinelli and Parolin 2025). Theatre, as a collective and sociomaterial art form, is a privileged space for giving an account of the construction process. In their 2022 publication, Rømgens and Benschop explore artistic research collaboration in practice. They reflect on the challenges of working and becoming together as a heterogeneous team comprising people from theatre, academia and research who embark on a collective project without a fixed method. “Getting out of the groove” is essential for navigating complexity and fostering connection.

1.1 ASTS and the Medical Humanities

In both Arts, Science and Technology Studies (ASTS) and Medical Humanities, scholars have demonstrated how artistic practices highlight the relational and lived dimensions of health. Artistic interventions in healthcare not only support patients but also challenge institutional practices and rethink care (Jensen 2019; Thompson 2020). They create participatory spaces where knowledge is co-produced, not imposed. Such approaches broaden the epistemological frameworks of health, going beyond clinical logic. Recognising this growing body of work is essential to understanding care as a culturally and politically rooted practice. For example, Bates and colleagues (2014) explore the recent history of the relationship between

different art forms and medicine, emphasising the value of historical context and reciprocity in the relationship between medicine and visual art, literature, performance and music. Bleakley (2020) examines the role of the Medical Humanities, proposing that it can reintroduce an aesthetic, political, and therapeutic dimension to medicine, challenging patriarchal hierarchies, the objectification of patients, and the poor self-care of doctors. Bouchard and Mermikides (2024) analyse the intersection between performance and medicine, outlining how these disciplines intertwine through different theoretical lenses and emphasising their socially and culturally constructed nature, as well as the profound interconnectedness between individuals.

1.2 Theatre as a Tool for Creating Knowledge and Dissemination in the Medical Humanities

The relationship between the theatre and medicine unfolds not only in the context of artistic therapeutic interventions but also in research. Rossiter and colleagues (2008) provide a fascinating overview of how theatre can serve to interpret, translate and disseminate healthcare research. According to the authors, theatre can relate to knowledge and academic research as a means of dissemination and as a tool to co-produce new knowledge (Rossiter 2012).

Rossiter and colleagues (2008) identify four main theatre genres related to the production and diffusion of healthcare knowledge. The first is non-theatrical performances, consisting of dramatised readings of researchers' interview transcripts translated into monologues. The second genre is ethnodrama, which reproduces "real-life" situations emerging from data such as interviews, focus groups, or ethnographic notes. The third genre is theatrical research-based performance. The performance is based on research; however, it does not strictly follow the data as a script. Rather, it entails the writing of a play by a theatre professional in collaboration with academics as an output of a research project. Denzin (1997a) argues that these kinds of performances can challenge and deconstruct the idea of a single "truth" by presenting narratives from multiple perspectives and angles. These performances can help deconstruct the traditional textual research output's linear, naturalistic form to represent its complexity better, creating a space for interpretation and "cultural critique". The fourth and final genre is fictional, theatrical performance, which includes works performed for healthcare education that are not research-based.

Rossiter and colleagues (2008) note that each of these forms relates to the data and theatre tools in a specific way. There are cases in which these aspects are in balance generatively. For example, in theatrical research-based performance, the theatre's dramaturgical and performative potential is fully used to present research data and narratives from different perspectives, as we will see in the case we present.

2. The Front-Line Healthcare Professionals during the Pandemic

The COVID-19 pandemic stressed healthcare systems worldwide. Emergency Departments (EDs) had to introduce substantial changes to manage the pandemic emergency and its consequences (Schreyer et al. 2020; Cao et al. 2020). As Nadarajan and colleagues (2020) highlight, the exigency was to redesign the EDs to control the spread of the virus better and

manage the pandemic. As Paganini and colleagues (2020) noted, “The COVID-19 pandemic has presented the health-care system with challenges that have limited science to guide the staff and structure surge response” (p. 541). The authors highlighted how, during the pandemic, the sheer number of patients arriving unpredictably increased, and at the same time, there was a lack of inpatient discharges, causing congestion in the EDs. Paganini and colleagues (2020) refer to the adaptations introduced in the ED in Bergamo as exemplary. The authors use as a source a podcast by Simon Carley with Roberto Cosentini, the head of the ED at the Papa Giovanni hospital and one of the participants in the “Time of Care” project. On March 21, 2020, Cosentini explained on the Emergence Medicine St. Emlyn’s blog what the peak of the pandemic looked like. He described the pandemic as “like an earthquake every day” and, based on Bergamo’s early experience, offered some essential guidelines to better prepare the EDs worldwide for the pandemic.

Among other things, Bergamo’s experience suggested increasing supplies (Personal Protection Equipment – PPE, oxygen tanks, CPAP ventilation helmets), organising the ED space to separate respiratory and non-respiratory patients, and training clinicians who do not usually work in the ED to join during the emergency. Cosentini also warned about the importance of the flow of patients through the ED onto other wards and out of the leading hospitals to units that can provide rehabilitation. Finally, he highlighted how the pandemic in the ED was emotionally exhausting, suggesting that being prepared to support staff psychologically was crucial (Carley 2020).

Several authors have investigated the pandemic’s impact on frontline workers, revealing high levels of stress (Attili 2020; Barello et al. 2020). According to Shanafelt and colleagues (2022), the professionals’ stress and emotional exhaustion were due to a significant risk of exposure, extreme workloads, moral dilemmas, and rapid changes in their work practices. Moretti and colleagues (2021) highlight how the COVID-19 pandemic affected nursing care in Italy, emphasising the prioritisation of clinical practices and life-saving techniques over a holistic approach to patient care.

Focusing specifically on ED workers, Bahadirli and Sagaltici (2021) highlight how the high risk of being infected, the risk of transmission to relatives, often with the choice of being isolated from the family, and the continued exposure to a high rate of death created psychological pressure and stress during the pandemic. Gesi and colleagues (2023) show how experiencing a threat to one’s family and unusual exposure to suffering negatively impacted the psychological well-being of healthcare frontline professionals. Drawing on her professional experience in mental health support for humanitarian aid workers, Cherepanov (2022) examines the psychological needs of healthcare workers during the pandemic. As with other Complex Emergencies, the pandemic exposed healthcare professionals to an overwhelming rate of death, frustration with the shortage of resources, and fear of being contagious to loved ones, but it also mobilised their sense of purpose.

The pandemic reminded healthcare professionals, particularly ED staff, of their mission to rescue and care for needy people. It also prompted reflections on the purpose of the medical profession. The theatre project organised by doctors and nurses at the Bergamo Emergency Department provided a space to expand on these reflections and make them collective, as we will see in the case study described in the next section.

3. Materials and Methods

“Time of Care” was an organizational and fundraising initiative set up by a group of doctors and nurses from the Papa Giovanni XXIII Hospital Emergency Room in Bergamo, which involved a one-year theatre workshop, produced, and staged a drama play titled “Giorni Muti, Notti Bianche” (*Silent Days, Sleepless Nights* in English), a documentary film, a website and several project presentations in public libraries, schools and other community centres². The project offered a free-of-charge one-year-long theatre workshop for professionals at the Papa Giovanni XXIII hospital’s Emergency Department (ED). Approximately twenty doctors and nurses, around one-third of the entire ED staff, participated in the theatre workshop and took four performances of the theatre play to the stage.

We, as researchers, came into contact with the project because Pellegrinelli is not only a researcher but also a playwright and theatre director. She was involved in writing the script for the show by the group of doctors (Pellegrinelli 2024; 2025b). The engagement took place through the theatre director chosen by the group (to conduct the theatre workshop and create the play), who often collaborates with the second author in the creation of theatre plays. This opportunity therefore opened up collaboration between the doctors and researchers³, who had the chance to conduct collaborative affective ethnography throughout the theatre workshop and the preparation of the play. The aim of the academic research, shared with the doctors and all participants, was to follow the project and understand how this performative experience could help healthcare workers elaborate on the trauma of COVID-19 and reconfigure the concept of care and care practices (Pellegrinelli and Parolin 2024a; 2024b; 2025).

The research project was registered at the University of Southern Denmark and, according to the Danish regulations, did not require prior approval from the Ethical Committee, nevertheless the researchers structured a set of practices to ensure research ethics. An illustration of the project, outlining its characteristics and aims, was shared with all participants, who provided consent for the ethnography, interviews, audio, and video recordings to be used for research purposes during the workshop. The researchers were not supported for this research, neither from an internal grant nor from any external body. Instead, a grant from a local foundation supported the “Time of Care” project through the “Bergamo e Brescia Capitale della Cultura” grant program for cultural initiatives. Moreover, it collected several private sponsorships.

The researchers participated in coordination meetings, group chats, and mailing lists for the coordinator group, as well as several project activities. They kept two ethnographical diaries and shared audio research notes. They also conducted several interviews with participants, organised in two rounds. The first round involved only a few organisers and participants during the first weeks of the project (January-February 2022). The second, more participated round was conducted after March 2023, following the premiere of the drama play “Silent Days, Sleepless Nights”. The two researchers joined the coordination group, which included the director, gaining access to all internal communication and materials shared in the group chats, mailing lists, and the project’s shared documents. They collected written materials about the project (i.e., the grant proposals and the PowerPoint presentations used for fundraising), and on some occasions, they also participated in their development. Thanks to Pellegrinelli’s

dual role as researcher and playwright, the researchers also had access to the written materials produced by the participants during the pandemic, which were collected by the project, as well as those created during some workshop sessions. They recorded videos and took pictures during the workshops, collecting all photos and videos also recorded by the participants, the coordination team, a professional photographer, and the communication team for internal or external purposes. They participated in the preparation and assisted at three of the four performances included in the project, collected video recordings, and shared the experience with the group before and after their performances. They also participated in social moments (i.e., after-theatre dinners), tracing the affects and atmosphere of these moments.

Methodologically, the research was based on a collaborative affective ethnography (Gherardi 2019), a research style that focuses on the affects and atmospheres that occur during fieldwork. Its peculiarity lies in the use of the researchers' bodies to feel and resonate with the other participants (Pellegrinelli and Parolin 2023a), thereby grasping moods and how people interact and affect each other. The use of collaborative affective ethnography proved helpful in this context, as it enabled the authors to account for their differing positions during the research. While Parolin participated in theatre exercises alongside doctors and nurses, serving as an equal in the workshop, Pellegrinelli observed the workshop as a spectator to capture the affective highlights and write pieces for the dramaturgy.

The material produced by the research was substantial. To analyse the material, we conducted a thematic analysis of the interviews and of what emerged in general from the project (mainly based on diaries), but above all, we developed a processual narration of the experience, entering into the three practices of the project's production (workshop, dramaturgy, performance) to understand what each of them had produced and what the turning points in its development had been.

4. The Case "Time of Care"

Following the initial meetings of the project's management group, which lasted approximately four months, the theatre workshop commenced in early 2022. The first months were spent on theatrical training and collecting stories and dramaturgical materials from the healthcare professionals' experience with the pandemic. The second part of the workshop was dedicated to composing a themed drama play. More precisely, the first part of the year was dedicated to creating the group, building awareness of the stage with some basic theatrical training exercises, and playing improvisations.

In the workshop's first weeks, written testimonies were collected from the professionals: letters, scattered memories, stories, and reflections. Then, the theatrical work used improvisations to share and gather experiences and stories about what the professionals experienced in March 2020. Sometimes these improvisations were prepared by working on a topic suggested by the workshop leader. At other times, improvisations emerged from physical exercises such as walking in the space, dancing, mimicking, and making choral and coordinated movements. One of the improvisations that emerged from the choral and coordinated movements was, for example, a scene in which the professionals performed donning PPE before starting a shift.



Figure 1.

The improvisation during the theatre workshop. Photo courtesy of Laura Lucia Parolin.

This improvisation was created by a small group of five healthcare workers, who, through very slow movements, mimed putting on the protective suits, gloves, masks, and shields. It focused on this moment of preparation for the shift, which for professionals was a decisive, dramatic moment, a daily entry into a battlefield.

Through the embodied performances (Myers 2005; Vertesi 2012) in the theatre workshop, professionals delved into their memories. These memories focused on the patients' suffering bodies distributed everywhere: in the rooms, in the corridors, and on improvised beds and stretchers. They evoked the noise of the patients' bodies breathing heavily, the continuous roar of the oxygen helmets, the requests for help, the laments, and the moans. A widespread memory was about the feeling of being physically and emotionally exhausted, sweating under PPE, and struggling to communicate with the patients. Furthermore, two themes that emerged most frequently were the emotional difficulty of dealing daily with so many deaths and the loneliness of dying patients due to the separation from their loved ones.

One of the improvisations, for example, about the painful separation between patients and their relatives, was the story of a dying father who repeatedly asked to see his son. The doctor who had told this story remembered that it was impossible to satisfy this request, given the restrictions in place during that period. However, the doctor had managed to organise a very brief, exceptional meeting between the dying father and his son in the corridor when the father was moved from the ER to another department.

Sharing this story evoked a range of emotions among the workshop's participants, triggering many similar memories about trying to help patients in every way possible. For example, some professionals mentioned the small things they gave to patients to try to make them feel

better, i.e., a lip balm to manage dryness of the lips due to the respiratory helmet, a brioche to try to convince a patient to eat who could not eat, a rosary taken by the Madonna statue in the hospital square brought to a dying patient who had requested it to pray⁴.

It is important to note how many of these memories came to the surface as the work of the theatre workshop progressed (Pellegrinelli and Parolin 2024b; 2025). Doctors and nurses had forgotten some of these episodes with patients because they were too painful, as one of the doctors reported:

Excerpt 1:

When I heard various stories of the father and son, or the other calling his wife home, something came back to my mind that I have never forgotten. [...] When I heard the story of the relationship of the family members, this memory came back to me that I had really hidden, I don't say erased. I had hidden it in my head. (E., female doctor, second-round interview)

The exercises, improvisations and performances embodied during the theatre workshop highlighted how the interaction with patients and their relatives had become of primary importance in managing the crisis. This was true not only for the relatives' need to receive news about the patients but also for the doctors' need to share the emotional burden of caring for them. Indeed, the pandemic was emotionally exhausting for frontline health professionals. Caring and helping people humanely had become the only way to support and give comfort and hope to many dying patients and their relatives, but it was also a way to not feel lost in a very distressing situation. Several doctors mentioned the frequent, long, painful phone calls with the patients' relatives. As access to the hospital was restricted to the relatives, the daily phone calls (or even every six hours) with them had become essential in the hospital's routine. Even if painful, this connection was also valuable for doctors, as evidenced by the following excerpt from the play script, which was written by the same doctor who acted in the drama play (see Benatti 2020).

Excerpt 2:

This daily round of phone calls to the relatives is a sad ritual for us doctors who have found ourselves performing it every single day.

Nonetheless, I realise that I do await this moment: I myself need to keep these unreal conversations with invisible strangers going, so together, we peer into the darkness of our fears. In that motionless moment, that is the *time of care*.

(Excerpt from the dramaturgical text, Pellegrinelli 2025b, p. 56, *emphasis added*)

All the written materials produced by professionals during the workshop were given out during the summer break (2022) to the researcher-playwright Pellegrinelli, for writing the dramaturgy. She used all the materials produced, including the dramatizations from the improvisation exercises, and chose and re-elaborated some of them. The dramaturgy included materials produced in the workshop's improvisations, written texts, and choral exercises. To frame the story, Pellegrinelli drew on classical Greek traditions that referenced epidemics, providing a more comprehensive narrative of the pandemic as a plague. She rewrote excerpts from Homer, Sophocles, Ovid, and Virgil to design a frame where stories and scenes

from ED staff experiences could be interpreted. Finally, she added some tragicomic choruses about what ordinary people were saying before the pandemic outbreak in Western countries, the catchphrases during the lockdown, and the standard arguments of denialists⁵. The researcher-playwright composed a dramaturgical text as an organised collage of these elements, bounded together by the director's expressive modulation of the bodies on stage.

At the end of August 2022, Pellegrinelli presented the script to the participants, who sat in a circle at the table and read it. At the first reading, some doctors and nurses found the story of the drama play unclear. They expected the script not to be a collage, but rather a drama with Aristotelian units – a story set in specific locations with a clear beginning, progression, and end. This initial misunderstanding opened an interesting discussion on the meaning of the story and its narration among all participants. The director and Pellegrinelli agreed and explained how this dramaturgical collage, written according to the conventions of a contemporary type of theatre, moved towards an emotional climax unfolded by the story of the doctor's phone call above. Here, the other small stories of care for the patients flowed into the tale of direct interaction with a dying patient's relative. The telephone calls to the relatives aimed to provide information, but also to represent sharing moments. The phone call, as performed, brought a moment of intensity and meaning not only to the patient's relative but also to the doctor (Excerpt 2).

In the discussion about the play script, it emerged that empathetic sharing of the suffering thus represented a change in the vertical doctor-patient (and relatives) relationship, promoting a more human approach to communication. During the discussion, most participants agreed with the message in the text, recognising how these moments of affective intensity, empathy, and horizontality in the relationship with the patient had punctuated the entire experience of living in that period.

Since the script's presentation, the workshop's weekly meeting was dedicated to staging the dramaturgical text. On the 16th of March 2023, the drama play "Silent Days, Sleepless Nights" premiered and sold out in the main theatre in Bergamo. Three other dates were planned at some places more affected by the pandemic's peak. The period chosen for premiering the play coincided with the anniversary of the first wave of the COVID-19 pandemic.

The audience of the performances included the mayor of the city, municipal and provincial councillors, the management of the Papa Giovanni XXIII hospital, the local and national press, the colleagues and relatives of the doctors and nurses on stage, and relatives of the victims and survivors of the pandemic, and public. The premiere performance was video recorded and broadcast on local television a few weeks later. These events impacted the local community, whose media devoted much attention to the drama play and the "Time of Care" project. National television (RAI) journalists were at the premiere, and interviews with the doctors and nurses were conducted after the performance and broadcast on the main national TV news.

The event was covered by the most relevant national TV news and featured in several newspapers and magazines, including a six-page spread in the "Sette" insert of "Corriere della Sera", one of Italy's most prominent newspapers (see Figure 2).

In addition, several events were organised, including presentations and projections of the broadcast performance in public libraries, schools, and citizen centres in the Bergamo and Brescia provinces. One year after the performances, on National Commemoration Day, March 18, 2024, several teams of "Time of Care" participants spread across the city and the province to



Figure 2.

The first two pages of the article in the *Corriere della Sera*'s insert *Sette*.

Photo courtesy of Laura Lucia Parolin.

present the project, the recorded performance and answer the public's questions. Four different schools in the Bergamo province were involved, and other presentations took place during the evening of the same day in public spaces of some of the villages more affected by the pandemic.

The dissemination of the "Time of Care" is still ongoing, with several invitations from schools and municipalities to participants to share the story of healthcare professionals with COVID-19 from their perspective. In a group chat used by the participants for practical issues of the project and the theatre workshops, but also to share thoughts, reflections, and impressions of what has been experienced, a participant recently shared an episode that testifies to the meaning of their path:

Excerpt 3:

Interview room. I informed the wife of a patient that he would be hospitalized and that he was still in serious condition. The lady, heartbroken, maintained a natural composure that comes from her innate class. When I said goodbye, I chose to take off my protective mask because I felt as naked as her: we are only wrapped up in our deep emotions. I removed the mask slowly, giving solemnity to the gesture. I thought: "Will she hug me?" The lady gets up and gently brings me closer to hug me. I went out with the resident, who witnessed the whole scene. We commented that we had our beauty bath today. Thank you forever for what you have taught us in these long months. (A group chat message from one of the participants)

The group chat was still active when this article was revised (June 2025) and was used to share thoughts, comments, and professional experiences, as well as coordinate presentations and other social events.



Figure 3 and 4.

Photos from “Silent Days, Sleepless Nights”, courtesy of Andrea Frazzetta.

5. Discussion

The case presents an original example of self-reflection in medical practices, serving as an epistemic laboratory where knowledge is co-generated among healthcare professionals, theatre professionals, and researchers, and then shared with the general public. As highlighted in the first part of the article, COVID-19 represented a moment of rupture from usual medical practices, straining the world's health systems. The crisis created by the pandemic thus offered an opportunity for reflection and rethinking of care practices and medical knowledge. In this context, "Time of Care" created a space, an opening, an area of negotiation and meaning-making that unfolds through the artistic tools of theatre. The contamination of medical practices and knowledge with theatrical knowledge enabled health professionals to reinterpret their own experiences, discover new ways to interpret them, and communicate these insights to the city.

In the discussion, we underline two essential aspects. The first is related to how to account for creative and artistic processes at the intersection of art and science. As we have seen, the processes and practices that allow the construction of artistic facts and the controversies surrounding the epistemic claims of artistic research must be made explicit (Horst 2025). With the creation of the theatre play "Silent Days, Sleepless Nights", which emerged from collective work in the workshop, the ED professionals in Bergamo, together with their theatre coaches, created a new narrative around the events of COVID-19 and what happened in the emergency room during the pandemic (Pellegrinelli and Parolin 2025). This article provides a detailed account of how this new narrative was constructed and emerged.

We have shown how theatre and its professional knowledge functioned as a *techne*, an art of practical knowledge capable of eliciting a group's reflective and creative process on a given topic. As underlined by Gavrilov, "techne is a collection of knowledge that describes methods about how to do something theoretically or practically" (Gavrilov 2021, 114). According to Gavrilov (2021), we cannot develop or construct theoretical knowledge without understanding the processes that make it possible – such as writing, thinking, or observing – just as we cannot carry out practical actions without the theoretical understanding and methodological guidance that support them.

As can be seen from the case in question, theatrical technique functioned as a set of artistic tools that allowed emotional, affective and mnemonic content to emerge, thus building a repertoire capable of fostering a more nuanced understanding of care practice. The set of artistic tools fostered a collaborative environment where narratives and emotions, often sidelined in clinical settings, became central to the knowing process and to building a different narration (Pellegrinelli and Parolin 2025). The theatrical tools operating according to different mechanisms of representation and acting on various levels relate to the processes of self-reflection and medical knowledge production in different ways. Analysing the case, we highlight three main mechanisms: the workshop, the dramaturgical text and the performance.

The first mechanism is the theatre workshop, which can be understood as a moment (and a space) of collectively producing affectively dense, embodied knowledge related to medical practices during the pandemic. Rossiter and colleagues (2008) have not highlighted this form of artistic action. Still, it is essential to co-create knowledge through theatre in various fields. In the observed case, the theatre workshop provided professionals with a safe environment to

share personal stories and feelings about their experiences with COVID-19. It allowed the professionals to express themselves physically and affectively, immersing their bodies in memories of the pandemic. It provided a safe environment where small stories of resistance and personal episodes could finally be told and shared. It highlighted the importance of their “suffering with”, empathising with patients, and family and friends, to alleviate healthcare professionals’ sense of helplessness and bereavement (Excerpt 2). It provided a grid of improvisations, physical exercises, peer discussions, and embodied performances that elicited the participants’ previously repressed or confused painful memories (Excerpt 1) by allowing them to revisit them. It led practitioners to recognise how their individual pain and despair were, in fact, collective and shared. Thus, the workshop constituted a moment of rethinking, negotiation, emergence and elaboration of medical knowledge and care practices during COVID-19, recognising the importance of affective and relational knowledge as an essential part of care practice.

The material emerging from the workshop formed the basis of the second mechanism: the dramaturgical text. Thanks to dramaturgical work, the text stabilized the materials emerging from the workshop within a form with specific meanings. The text connected and grouped the testimonies and improvisations thematically in a common dramaturgical narrative thread. This thread was outlined in a broad perspective, juxtaposing the emerging stories with pieces from the classical tradition and testimonies from the world outside the hospital. Furthermore, before its definition (stabilisation), the text and its meanings were negotiated with the workshop participants. During the negotiation, the playwright explained and justified her choices to the group of informants by clarifying the logic behind the juxtaposition of the different pieces and the story’s focus. As Denzin (1997b) famously affirmed, any good ethnographic research account is not limited to a description of data but is always an interpretative account.

Finally, the third mechanism concerns performance as a means of knowledge communication and science dissemination (Weitkamp and Almeida 2022; Vanin et al. 2024). As shown in the case illustration section, the theatrical performance constituted a moment of sharing, communicating and disseminating the workshop’s contents, which were stabilised in the theatrical text. The performance, featuring embodied stories and figurative choreography supplemented by theatrical tools (acting, music, etc.), highlighted the importance of affective knowledge and empathic communication in medical practice. The theatrical form of text-mediated restitution of the workshop content had a significant impact on the audience, as evidenced by the media coverage and numerous invitations to present the project. As a dissemination tool, the performance “Silent Days, Sleepless Nights” functioned as a research-based theatrical performance (Denzin 1997a), capitalising on the dissemination potential of theatre art and its ability to convey content through emotionally and affectively engaging the audience. Therefore, the three theatrical mechanisms (workshop, dramaturgical text and performance) were the areas to be analysed to unpack how the creation of a new narrative on COVID-19 emerged. To understand how artistic facts are constructed, it is necessary, as in science, to enter the laboratories and studios where the products are created and understand the process by which the artistic facts emerged.

The second aspect, in line with the first, is that this detailed analysis of the mechanisms of processing and constructing new content (self-reflection, knowledge construction and public narration) with theatre troubles the linear conception of science/knowledge as produced within academic venues and then communicated. The case illustrates how art (in this case,

theatre) can engage in dialogue with science, questioning its assumptions and results. According to Rogers and Halpern (2021), art in the ASTS conversation should not assume a secondary role, such as that of dissemination, but should utilise its tools to acquire a critical perspective and challenge what emerges as fact from science.

Our story illustrates how theatre can serve as an element of reflection and rethinking of practices in a ward, a scientific laboratory, or any other setting where science and its discourses are conducted. The case illustrated how a new awareness emerged among health professionals, prompting them to reflect on a more holistic model of care. The experience of doctors has highlighted the importance of attention to communication, empathy and understanding the pain of others (patients and relatives). Moreover, it gained social strength through empathic sharing with the audience who attended the performances and with all the people who participated in sharing the project. The story shared in the project group chat by one of the doctors (Excerpt 3), exemplifies the project's impact on the participants. The story tells how the doctor recognised the importance of empathising with the relative and showing his humanity when communicating bad news. The message explains the connection between theatrical and medical knowledge by describing how, in the art of theatre, beauty is not an aesthetic category linked to the harmonies of forms, but something connected to being authentic. It implies being with (and becoming with) patients or relatives without wearing the mask of scientific medical knowledge, but with compassion and humanity. As the excerpt shows, bodies, voices, gestures, and physical interactions are orchestrated in a new way to interpret the medical role differently, as a professional who is both influenced by and influences everyday encounters with suffering.

Conclusions

The article presents a case study of doctors and nurses in Bergamo who used a theatre workshop to rework their experiences, culminating in the creation of a theatre play and its performances. We describe the project as an original example of self-reflection in medical practices, functioning as an epistemic laboratory where knowledge was co-generated among healthcare professionals, theatre professionals, and researchers, and then shared with the public.

Our contribution falls within the field of Art, Science and Technology Studies (ASTS) and Medical Humanities, arguing that theatre, as *techné* (practical knowledge), not only disseminates research results but also generates self-reflection, a deeper understanding of care practices and a new narrative on the role of healthcare professionals during the pandemic.

The detailed analysis of the process, from the workshop to the performance, contributed to the ASTS by highlighting two main aspects. The first is that to account for artistic facts in the dialogue between art and science, it is necessary to enter the studios or artistic workshops where these facts are created, just as one enters scientific laboratories to understand how science is constructed. Arts, and in this case, theatre, are not the brilliant intuitions of artists, but rather processes of aesthetic construction of artistic products (Parolin and Pellegrinelli 2020a; 2020b; 2025; Pellegrinelli and Parolin 2023b). To illustrate the unpacking of an artistic fact, the article examines the primary mechanisms through which the Bergamo doctors' project developed: the workshop, dramaturgy, and performance.

The second aspect highlighted in the article concerns the relationship between art and science. In particular, we emphasise how a detailed analysis of the mechanisms involved in the development and construction of new content (self-reflection, knowledge construction and public narration) through theatre challenges the linear conception of science/knowledge as produced within academic institutions and then communicated. The case illustrates how art (in this case, theatre) can engage with science, questioning its assumptions and results, acquiring a critical perspective, and challenging what emerges as “fact” from science. The experience has brought about a new awareness among healthcare professionals, prompting them to reflect on a more holistic model of care that emphasises communication, empathy and understanding of the pain of others (patients and relatives). This awareness has gained social strength through empathetic sharing with the audience who attended the performance and with all those who participated in disseminating the project.

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Notes

¹ We use the term “artistic facts” to explicitly draw a parallel with “scientific facts”. Similar to the way STS focuses on the social construction of scientific facts (Latour and Woolgar 1979), we suggest that ASTS should study the social construction of artistic facts.

² See www.iltertempodellacura.it.

³ The two authors of this article have been collaborating for years on topics related to theatre, organisation and STS (Parolin and Pellegrinelli 2020a; 2020b; 2025; Pellegrinelli and Parolin 2023b; 2025).

⁴ See details of the playscript in Pellegrinelli 2025 (or Pellegrinelli 2024 for the original in Italian).

⁵ During the lockdown social media were full of people that thought COVID-19 was a fraud. The script (Pellegrinelli 2025) includes choral scene composed of short dialogues and series of sentences on this kind: “It’s one bit of fake news after another. They show these Chinese people all dressed up... but really: they were already wearing facemasks because of pollution” (p. 40); “You know, you can easily kill this virus with hot soup” (p. 41).

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