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ORIGINAL ARTICLE

A meaningful performative experience: using Forum Theatre as an ethical method in sustainability science

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Abstract

Sustainability scientists have engaged in extensive discussions on ethical ways of doing research and argued on the importance of co-production approaches to counter knowledge extractivism. The specific issue of research fatigue, often associated with knowledge extractivism, and the possible methods to counter it, have however received less attention. This paper seeks to contribute to discussions on ethical ways of doing research by focusing on our experience of using theatre, specifically, Forum Theatre, to investigate divergent perceptions of environmental change and related tensions among selected coastal communities in Kenya and Mozambique. We argue that Forum Theatre constitutes an ethical method for sustainability scientists for four reasons: (i) it allows to co-produce knowledge with participants; (ii) it facilitates horizontal exchange; (iii) it creates joyful moments; and (iv) it enables the transmission of skills that remain with participants beyond project durations. The paper engages with these four themes, first theoretically and then proposing a reflection based on our project experience. In the last section, we warn against some of the limitations of the approach.

Keywords Theatre · Knowledge co-production · Knowledge dissemination · Joy · Ethical research · Research fatigue

Introduction

The issue of knowledge extractivism has long been discussed (Baldauf and Palacios 2022; Demart 2024; Grosfoguel 2020; Brunger and Wall 2016) including among sustainability scholars (Backhouse 2021). Knowledge extractivism is an ethical and epistemological problem, where local realities are conceived as containers of data accessed by researchers who turn it into knowledge, a process that, in this view, is exclusive to academics. As an epistemological problem, the issue of knowledge extractivism has opened a discussion on

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methods. Extractive methodologies are seen as those that translate local practices and narratives into predetermined data categories, which serve only as inputs in the research process. At best, researchers engaging in such practices might provide feedback to communities on research results independent of them. At worst, these practices raise concerns about potential use of research to support harmful interventions (Brunger and Wall 2016). Besides its ethical and epistemological implications, extractivist research practices are also responsible for producing a general sentiment of mistrust towards researchers leading to research fatigue (Ashley 2021; Taylor et al. 2021). Mistrust hinders the possibility of any research—including ethical co-production practices (Jacquet et al. 2021).

Different approaches to knowledge co-production have been put forward to include participants in a meaningful and ethical way, arguing for the relevance of these perspectives for a fair and sustainable world (Caniglia et al. 2023; Norström et al. 2020; Schneider et al. 2021; Jankowski et al. 2020). These approaches challenge the hegemonic domination of an understanding of knowledge that entails a hierarchy of "epistemological worth" wherein local knowledge is at the bottom of the ladder (Walsh et al. 2023). They aim at having different voices heard and different knowledge systems included in the process of producing knowledge.

This paper contributes to these discussions by focusing on the experience of using theatre, and specifically, Forum Theatre (FT), to investigate divergent perceptions of environmental change and related tensions among selected coastal communities in Kenya and Mozambique. FT is a type of community theatre developed by Augusto Boal as part of his work on the Theatre of the Oppressed, an understanding of theatre as a tool for personal and collective emancipation (Boal 1974; Coudray 2016). The Theatre of the Oppressed is Boal's counterproposal to classic theatre, of which he was very critical. In his view, the tragedy system inherited from ancient Greece aimed at instigating fear in the spectators that were thus encouraged to purge their flaws. He saw the traditional conception of theatre as "restraining the individual, adapting them to what preexists" (Boal 1985), i.e. as a tool for order and resignation. Instead, inspired by Bretch's focus on marginalised people, he conceived of theatre as a tool to transform society, and his theatrical innovations aimed at rendering this possible. FT, one of such tools, consists of the performance of short plays presenting a dilemma, conflict or tension the audience is familiar with. After the first performance, a facilitator, called joker, invites the audience to take over different roles, substituting the characters to try and foster empathy, imagine different resolutions for the given problem—typically by replacing a character that could bring change into the situation—or provide further arguments for one of the represented positions. In Boal's first proposal, oppression comes from the well-defined figure of the oppressor. Yet, during his time working in Europe and North America, Boal developed a reflection on cases that did not fit well the oppressor-oppressed dichotomy (Sajnani et al. 2020). To address situations of internalised oppression he invented the concept of "Cops in the Head", which conveys psychological forms of oppression such as fear or guilt (Boal 1995). This process was an integral part of how Boal conceived of the Theatre of the Oppressed, as an approach evolving with time and through the experiences that it triggered.

Using theatre as a research method has been experimented with for some time (Euzen and Bordet 2008; Fourat and Jankowski 2023; Sappa and Barabasch 2020; Schechner 1985; McCammon 2007). It has been used as part of a desire to bring about change in the way researchers *do* research (Collins and Stockton 2022; Cahill 2006; Grandi 2022) and lessen communities' burden caused by repetitive research demands (Brunger and Wall 2016). There are different forms of popular theatre, such as community theatre, social theatre or applied theatre (Conrad 2004). These arts-based methodologies are mobilised in participatory research processes as participants (literally) represent and give sense to their own realities (Fourat and Jankowski 2023). In sustainability science, FT has been used mainly to create spaces for marginalised voices (Brown et al. 2017; Walsh et al. 2023; Olvera-Hernández et al. 2023; Heras et al. 2016), but also as part of a broader engagement with arts-based methods to study emotions and non-rational ways of knowing in human–nature relationships (Heras and Tàbara 2014; Heras et al. 2021; Galafassi et al. 2018; Morales and Harris 2014; Sullivan et al. 2008).

Berchon and Bousquet (2021) identify four types of FT, which aim at different purposes, echoing Boal's openness towards reinterpretation of his methods: the Theatre of the Oppressed, the theatre of relational development, awareness theatre and complexity Forum Theatre. The Theatre of the Oppressed, the closest to Boal's original idea, mainly aims at denouncing and addressing a situation of oppression; the theatre of relational development seeks to improve personal relationships by working on individual positions; awareness theatre transmits a given message and initiates dialogue over it; and the theatre of complexity questions the multiple roles individuals and systemic structures take in a given problem or issue while exploring possible ways forward. The rules in place for the performances might change from one approach to the other. For example, in the original Theatre of the Oppressed, Boal did not consider the possibility of replacing the oppressor, whereas in other approaches and applications, all—including the oppressor and even the joker—can be replaced.

More recently, Miramonti et al. proposed an adapted version of FT, which they call Forum Theatre for Reconciliation, in a context of socio-environmental conflicts where

the involved actors held similar positions and power endowments (2024). Indeed, they worked with different communities in Bolivia affected by wildfires. These experiences exacerbate tensions between them and lead to polarisation and processes of dehumanising the other. Their approach seeks to foster (re)humanising empathy and craft complex and inclusive narratives on the conflicts, to devise collective responses.

Importantly, these different approaches should not be taken as boxes with thick boundaries, but as practices that influence each other.

Our use of FT reflects an understanding close to what Berchon and Bousquet (2021) call the theatre of complexity, while incorporating elements of other approaches, as we will see through the text, sometimes having to navigate tensions between these different conceptions.

We argue here that FT constitutes an ethical method per se and against research fatigue in particular by bringing together four elements: firstly, it effectively provides space for different voices to be heard as they express knowledge in diverse terms, including, through emotions, respecting the spirit of knowledge co-production practices. Secondly, and directly deriving from that, theatre is an effective tool for communication, facilitating dialogue between different participants and researchers. Thirdly, it creates a joyful moment making the research time worth it by itself. Lastly, it provides participants with skills that remain with them beyond project durations.

The core of the paper is divided into four sections that follow the above themes (see Fig. 1). In each section, we first present a discussion on the debates in the arts-based methods literature about the given theme, which we then complete with a subsection analysing our data and showing why and how the points raised are particularly relevant for sustainability science. We decide to structure the paper as a four-themed conversation between the literature and our experience hoping to create a dynamic structure, instead of following the traditional academic paper structure in which a theoretical framework precedes the results, which are followed by a discussion where the results confirm, refine or contradict what the literature has said. We choose to write our results in this form as an attempt to provide a lighter and fresher discussion of our experience, where the reader can engage with each of the themes discussed sequentially, as dialogue invitations. The last section of the paper cautions against the limitations of the method.

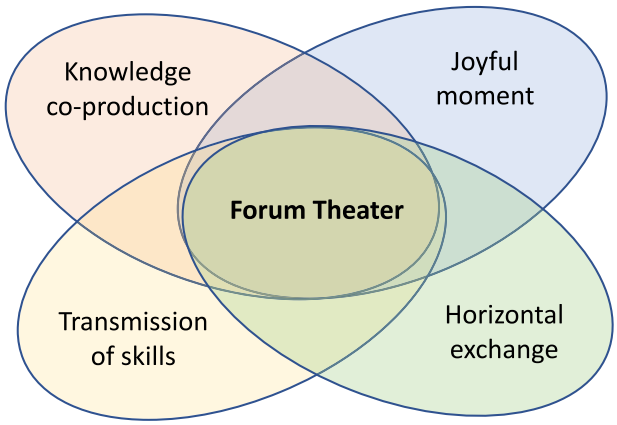

Fig. 1 The four components of Forum Theatre for addressing research fatigue and knowledge extractivism in scientific practices for sustainability

Methods

This paper draws on the experience of the FOREL project, an action–research project that sought to explore perceptions and understandings of environmental changes in KaNyaka Island in Mozambique (see Fig. 2) and in Msambweni in Kenya (see Fig. 3). As an action–research project, besides answering its research questions, the project sought to support collective action among communities to face the challenges associated with environmental change. The project was conducted by an interdisciplinary team including sustainability scientists, drama scholars, historians, sociologists and marine biologists. Our team members were also of diverse origins. Some scholars were based in Sweden and Belgium, being originally from yet other countries in Europe and one from Latin America. Others were Mozambican scholars based in Mozambique. The team also included Kenyan scholars based in Kenya. Because of these differences in where we were located, we assumed different roles—and even more so, during and after the COVID-19 pandemic which prevented us from travelling from 2020. Local teams contributed to ensuring that our methods were relevant for the communities we were working with and applied them. The scholars in Europe provided outsider perspectives and feedback and led the data analysis in consultation with the local teams.

Our fieldwork was structured through two main phases, which took place between 2019 and 2022. Data was collected in Portuguese and Ronga in Mozambique and in English and Kiswahili in Kenya. The first fieldwork phase consisted of 100 interviews and 17 focus groups investigating perceptions of environmental change and daily practices in the selected sites, conceptualising environmental change as entangled with other changes, such as political, social or economic changes. The selection of interview participants was done through a snowballing technique, with field researchers requesting interviews first to the communities' authorities and through contacts made with specific groups such as fishers, traders or farmers that were identified locally. The data collected during the first fieldwork phase

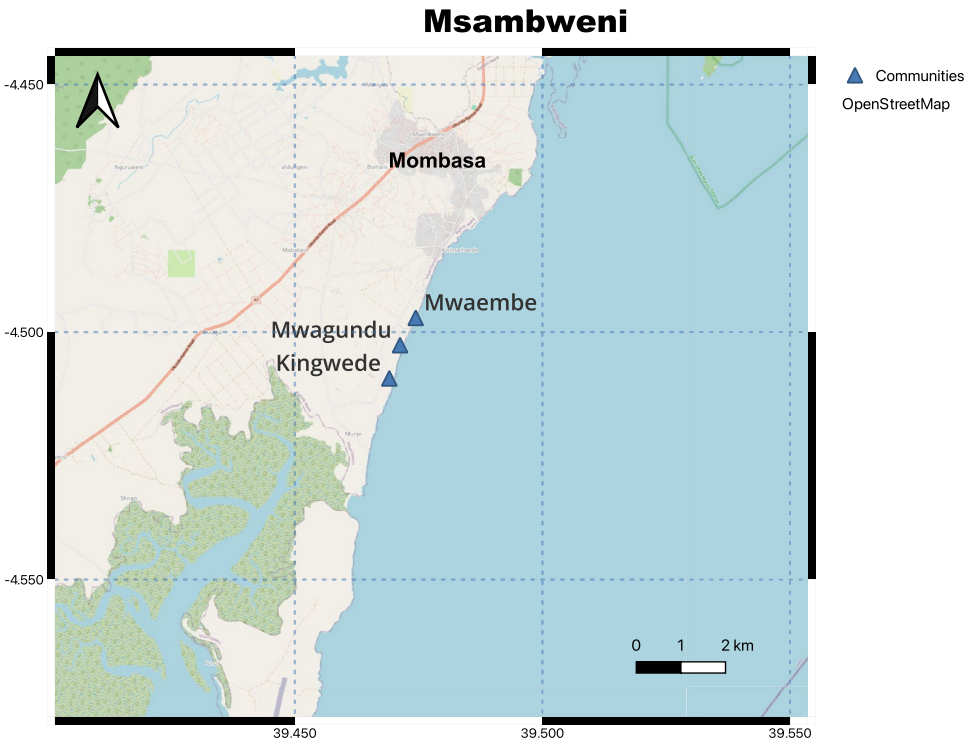

Fig. 2 Field sites in Kenya

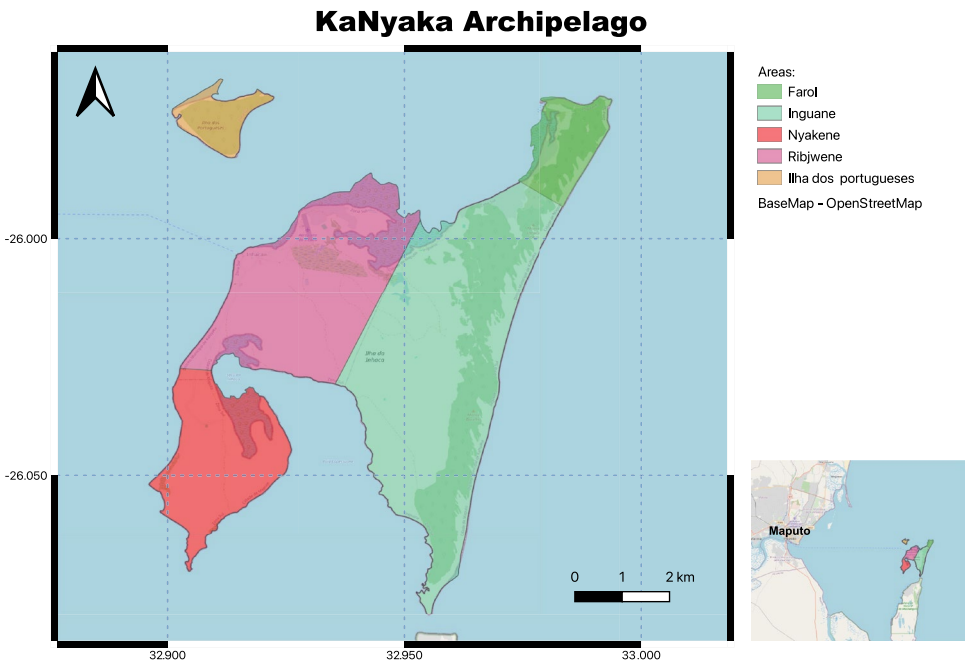

Fig. 3 Field sites in Mozambique

was summarised and analysed through a thematic analysis, which served as a basis to write the theatre plays. One of our conclusions when analysing that data was that perceptions of environmental change were tightly linked to diagnoses on communities' problems. Specifically, our interviewees often explained environmental change as a loss of the community's capacity to face changes collectively and they attributed responsibility for that loss to different factors, which sometimes were seemingly unrelated to social–ecological dynamics. As we argue elsewhere (Mubai et al. 2023), engaging with seemingly 'only' social problems, entails disentangling the root causes for communities' tensions and thus allows understanding (and potentially supporting) their collective action capacity in the face of environmental challenges,

uncovering how social and environmental issues are entangled. Thus, the local teams, in coordination with the rest of us, and in the case of Kenya, in collaboration with a local theatre company, decided to focus the plays on what the interviewers had identified as root causes for tensions in the community, which in turn prevented collective action. As a result, in Kenya, one of the plays (Jekejeke, see Table 1) focuses on social problems 'only', apparently leaving the environment aside. Yet, the generational tensions described in the play rested on the belief that the youth were not interested in working the land or at sea.

The second fieldwork phase started with the performances which were occasionally filmed and during which participating researchers took notes. Drama scholars and performers were part of our project team in Mozambique, while in Kenya we worked with a professional theatre troupe. Actors were members of the communities who were recruited as part of the first fieldwork phase, asking those interviewed whether they would be interested in receiving training and taking part in theatre workshops. In Kenya, 15 women and 7 men received training. In Mozambique, 17 people were trained, 8 women and 9 men. No special skills were required to participate, so that a message of accessibility was conveyed. In Mozambique, over 80 people showed up to the plays, which were performed in three communities, Nyakeni, Ribjweni and Inguane. In Kenya, over 200 people attended the performances, organised in four communities in Msambweni and in four schools in the area. We invited all to stay for debriefing focus groups and post-performance interviews. We ran 28 post-performance individual interviews and 2 focus groups in Mozambique and 20 individual interviews and 3 focus groups in Kenya with those who chose to stay.

During the focus groups, a facilitator asked participants whether they could relate to what was represented in the plays and whether they had experienced similar situations in their communities. The facilitators investigated how people felt about the explanations the plays suggested on environmental changes as well as how such changes affected the communities. As people shared, the facilitator asked them how they dealt with the identified problems in the communities and what they thought of the solutions represented in the plays. Finally, the last section of the debriefing sessions sought to unpack whether participants felt theatre was an appropriate way to discuss these issues and how seeing these issues performed made them feel. The interviews followed the same rationale, putting more emphasis on the personal experiences of those interviewed.

For the analysis of this data, on which the present paper focuses, we used an abductive thematic approach, i.e. an approach inspired both by theory (deductive) and our reading of the data (inductive) (Boyatzis 1998). We engaged in interpretative thematic analysis (Braun and Clarke 2022), in which we acknowledged our active role in shaping the themes identified in the data inductively and in selecting which theoretical aspects were relevant for the analysis. We worked as a team of coders, with three people reading the data and familiarising themselves with it through discussions. Then, based on the literature on theatre in the arts-based methods scholarship and particularly among sustainability scientists, we engaged in coding for references to knowledge co-production (theme 1) and communication and knowledge dissemination (theme 2), which were important themes in the literature and that we also found in our data. We also read our data and watched the videos of the performances to identify moments of enjoyment and fun (theme 3). Finally, the fourth theme of this paper, namely, the skills that the experience of theatre provided communities with, is something that inductively emerged from our interaction with the data. The details of our codes and sub-codes as well as their definitions are detailed in Table 2. Our aim was to provide an overview of the presence and spread of codes and sub-codes as well as to draw qualitative nuances and examples from the created codes to discuss each of the

Table 1 Short summary of the plays, which can be read on the project's website

Theatre play title and location	Summary
Jekejeke, Kenya	Jekejeke focuses on early pregnancies, drug use and alcoholism. This play highlights the ongoing social problems of Msambweni community members
Ulitima, Kenya	Ulitima focuses on climate change, degradation of marine and terrestrial ecosystems, declining fishing and farming activities. Illegal fishing techniques such as the use of ring nets and the arrival of foreigners (Pemba) are perceived as significantly contributing to the problems of Msambweni
Only with small net?, Mozambique	In this play, the main character contemplates using a mosquito net for fishing, despite his wife's concerns about the health risks associated with malaria, emphasising the multiplicity of challenges faced by the community
Let's talk to the ancestors, Mozambique	"Let's Talk to the Ancestors" discusses beliefs about climate change and the role of local traditions, including ancestral rituals. Different characters share differing views on responsibility for climate issues. With the guidance of community leaders and a traditional healer, the characters confront their struggles and seek solutions through rituals to reconnect with their ancestors, highlighting the interplay of culture and environmental challenges

Table 2 Coding scheme

Codes	Sub-codes and explanation	Examples
Theme 1: theatre as a tool for knowledge co-production		
Embodied knowledge	(1) Local experiences of environmental change Experiences of local impacts of environmental change	"My farms are prejudiced by salinization. Cyclones destroy houses." (Mozambique) "It is now too hot, something that is new here … It is difficult to differentiate between long and short rain seasons. Low fish and crop production dominates our daily life now, unlike in the past where fish and food crops were harvested in abundance." (Kenya)
	(2) Local beliefs Local beliefs about environmental change and communal organisation	"We must preserve our traditions." (Mozambique) "Children are expected to respect their parents and elders and conduct all the duties delegated to them." (Kenya)
Theme 2: knowledge dissemination and communication towards a horizontal exchange		
Knowledge dissemination	Dissemination of information or knowledge regardless of the origin (from researchers, other community members) and the direction (to researchers, to other community members)	"In my opinion, it (the play) educates about what is wrong in the community." (Mozambique) "The dialogue can help to create awareness on conservation and make people aware not to use bad fishing gear that is destructive to the marine environment, especially fish breeding grounds." (Kenya)
Theme 3: arts-based research methods and joy		
Forum Theatre as celebratory theatre	(1) Enjoyment of the theatre method Expressing joy in the theatre-viewing experience	"It is a good incentive to use theatre because it teaches through playing." (Mozambique) "I learn (while) laughing." (Mozambique)
	(2) Enjoyment of having their stories told out loud Expressing joy seeing stories that depict day-to-day realities played out	"It was very productive because all plays deal with issues that happen in the community." (Mozambique) "Very good, the scenes matched the challenges faced by the community on the ground." (Kenya)
	(3) Enjoyment of acting out change on stage Experience of community members changing the outcome of the plays and feeling positive emotions about it	"I enjoyed the interventions of all." (Mozambique) "They (interventions) felt good. It was a great opportunity to participate in the play so as to say what we have [to say] about the subject." (Mozambique)
Theme 4: theatre as developing skills for change		
Transformative collective changes	Community members having seen the plays and aiming to change the course of actions on environmental change and communal organisation	"What is important is to continue dialoguing with fishermen so that they use appropriate fishing nets." (Mozambique) "Through lobbying local leadership and advocacy efforts to partners and organisations working in environmental management and marine conservation." (Kenya)

themes. Since the data was coded in NVivo (a qualitative coding analysis software), we occasionally used some of the software features to illustrate or complement our analysis. Indeed, a Word Frequency Query, accounting for the 100 most listed words with a minimum length of 3 letters and taking all synonyms into account, was run within all sections coded as knowledge dissemination.

We provided all participants with a plain language statement on the project and asked them to sign a consent form that specified how data would be used and the fact that participants could withdraw their participation at any time. Participants were granted anonymity for the interviews, and we applied the Chatham House rule, i.e. that "participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed", for the focus groups and theatre performances. When theatre performances were recorded, specific consent was sought from participants.

Cases

We selected coastal sites in Kenya and Mozambique. Both sites lie in the WIO (Western Indian Ocean) region, home to large coastal societies, with cultures based on fishing, maritime trade and marine resources which go back hundreds of years (Maina et al. 2011; Ochieng et al. 2024). A huge fraction of the population, which is mainly low income, is dependent on coastal and marine resources, which currently experience (in)direct pressures from resource exploitation and habitat degradation as well as global climate changes (ibid).

Msambweni in Kenya

Msambweni is located in Kwale County in the coastal region of Kenya, approximately 55.4 km south of Mombasa (Fig. 2). Msambweni refers to an Indigenous tree called *"Msambwe", "Msambwe-ni's"* literary meaning 'where the Msambwe tree is', or 'the land of "Sambwe"'—hardy and wild fruits from the tree. Msambweni is mainly dominated by the Muslim Digo community (Save the Children 2010) and had 14,951 people in 2019 according to the census (Kenya National Bureau of Statistics 2019). Fishing is the primary source of income, coupled with small-scale commercial farming of mainly coconut, bixa (a fruit), mangoes and cashew nuts.

The community members also practise subsistence farming, mainly growing cassava, rice and maize, with a few growing peas and cowpeas for domestic use. Because of its serene beaches and coral reefs, the tourism industry is increasingly important with holiday cottages and hotels being built, as well as the nearby presence of facilities, e.g. shopping centres, banks, tour companies and restaurants (our observations). The area has one of the highest concentrations of tourist resorts in Kenya (Barasa 2010).

Msambweni, like the wider Mombassa area, is endowed with important ecological habitats such as coral reefs, seagrass, mangroves and sacred Kaya forests (holy worship spaces for the 'Mijikenda', the nine Bantu speaking ethnic groups of the Kenyan coastal areas—including the Digo) (Barasa 2010; Park 2015). The marine ecosystems of Msambweni are major attractions for visitors: the area sports one of the world's largest unbroken fringing reefs (McClanahan and Young 1996). The Kwale area is home to multiple marine reserves and parks, i.e. Kisite Marine National Park, Mpunguti National Marine Reserve as well as various ecotourism projects dating back to the early 70s (Barasa 2010; Ochieng et al. 2024).

KaNyaka in Mozambique

KaNyaka—or Inahaca—is an island situated to the southeast of Maputo, in southern Mozambique (Fig. 3). KaNyaka residents—slightly over 5000 people—mainly practise fishing and rain-fed agriculture (Mubai et al. 2023). Both agricultural products and marine invertebrates are key to the local diets, except for sea cucumber which is sold for export (Macia and Hernorth 1995). Migrant remittances, either from elsewhere in Mozambique or from South Africa, also constitute an important source of income in KaNyaka. Finally, the tourism industry, informal trading and construction work employ people typically on a short-term basis. According to the last census 43.5% of residents identify themselves as Christians from the Zion church (Instituto Nacional de Estatística 2017).

KaNyaka Island hosts subtropical coastal and marine ecosystems, including terrestrial dune forests, creeks and marshes. Mangrove forests, seagrass meadows, coral reefs, sand dunes, rocky shores, sandy and muddy beaches are also characteristic of the island. The pelagic area includes the waters of Maputo Bay and the Indian Ocean. In 1951, the first Marine Biology Research Institute in the Southern Hemisphere was opened on the island. Since then, it has been at the centre of nature conservation policies in the country (Enebrand 2012). In 2000, KaNyaka was integrated into Maputo city municipality. This was followed by its integration into the Marine Partial Reserve of Ponta do Ouro in 2009.

Theatre as a tool for knowledge co-production

Boal follows the perspective on knowledge put forward by Paulo Freire, an educator and scholar who, like him, was Brazilian. Freire understood knowledge as a process of

co-production and linked education to liberation and social change, as he considered all people were knowledge producers (Souza et al. 2019; Freire 2000; Freire and Freire 1994). Boal calls his approach the Theatre of the Oppressed, in direct reference to Freire's approach to Education, the Pedagogy of the Oppressed (Freire 2000; Boal 1974). The Theatre of the Oppressed puts forward two intertwined dynamics of knowledge production: the first is individual, through which one gains critical awareness of one's own situation as oppressed; the second is collective and entails co-constructing techniques for liberation (Coudray 2016).

Knowledge, how we produce knowledge and how different forms of knowledge are perceived are all inherently political issues (Scott 1998; Latour 2001; Haraway 1988), where the political is understood as a process of recognition of power dynamics (Butler 2006): a first step in a potential process of liberation of the oppressed (Freire 2000; Freire and Freire 1994). Forum Theatre can provide a platform to discuss the "sophisticated tools used by "subalterns" [people in subordinate positions] to resist, challenge and survive dominant cultures" (Balfour 2009, 355; McDonnell 2005).

Following Freire, Boal insists on the epistemic value of local knowledge and narratives and literally gives them a voice by creating plays that are specific to local realities and allowing the audience to substitute any of the characters in a play and complete or change their voices (Boal 1974; Coudray 2016). For sustainability scientists and environmental scholars, this is particularly interesting because it opens up possibilities to give a voice to other-than-humans, by creating characters that represent ecosystem elements, as it has been done in role plays (Gutierrez et al. 2024), or more-than-human agencies, which resonates with a Latourian understanding of theatre (Wiame 2023).

Moreover, theatre has the ability to grasp and convey knowledge about social relationships using "emotions, gestures and sensory experiences (that) express the multifaceted nature of human experiences" (Bleuer et al. 2018, 397). This has been deemed fundamental for sustainability science, as many have argued that the type of knowledge that we need to face environmental challenges must go beyond rational knowledge; it builds on the literature explaining the importance of situated and embodied knowledge so that our ability to respond to environmental challenges is embedded in our experiences (Croog 2016; González-Hidalgo 2017; Vasileiadou and Botzen 2014; Pile 2010; Sappa and Barabasch 2020).

Relatedly, theatre opens up to diverse constituents and forms of experience that are not necessarily verbal or explicit and that sometimes get inadvertently omitted from sustainability science knowledge production processes and from environmental governance more generally (Olvera-Hernández et al. 2023). Non-verbal messages include bodily expression, laughter, clothing, the chosen setting, as well as the inclusion of specific musical forms and dances, fundamental to popular art forms (Coudray 2016).

The way of knowing that characterises this type of theatre is "spontaneous, intuitive, tacit, experiential, embodied or affective, rather than simply cognitive" (Conrad 2004, 11). Through all processes described above, theatre allows engaging in knowledge co-production, since it is not only participants who know, in a Freirian process of liberation, but also researchers who learn on different types of knowledge previously disregarded in scientific knowledge production.

The experience of our project

The themes of knowledge and learning were present in all the 48 debriefing interviews we ran after the theatre plays. In our coding, we specifically focused on acknowledging and valorising local knowledge, as well as understanding how communities made sense of the environmental changes they lived, as they experienced, narrated and framed them according to their knowledge and beliefs.

While participants were well aware of the global dynamics of climate change, the experience of theatre helps them explore how these dynamics' translation into their local realities was influenced by their ability to organise and face those changes. Moreover, appealing to their ontological beliefs about the importance of ancestors and community traditions, the lack of organisation to face environmental challenges was not only seen as a problem per se, but rather as a result of a more general erosion of the practices that maintained traditions in place. Our plays portrayed the links between environmental changes, experiences and knowledge, which then were further investigated by participants guided by the joker. During debriefing sessions, the plays served as a reference for participants to further discuss and exemplify their real-life experiences, on subjects such as economic scarcity, destruction and erosion of ecosystems through floods and drought, and intergenerational conflicts including respect for elders.

The researcher-artist works *"in, for and with"* (Pasetto and Malini 2022, 6) communities, based on their needs, taking into account their symbolisms, beliefs and values, their internal power dynamics, struggles and conflicts. An example of this in our project was the use of metaphors, which, completed with body language, oriented the process of meaning production. Researchers' knowledge of local language and customs helped unpack some verbal and bodily expressions that would not be detected easily by someone unfamiliar with the local context. For example, in Ronga language in our case in Mozambique, *aku-famba masango* literally means walking on the mats, but figuratively means having sex. Beyond the importance of understanding implicit and explicit meanings in the words used, the playful use

of double meanings also opens pathways for metaphorical thinking. Also in the case of Mozambique, *Ma-kumba* refers to both ancestors and pigs, which was in the title of one of our plays and the topic of it. The use of metaphors and body language also blurs the frontiers between the social and the ecological in the sense that non-human and/or non-living elements can be represented, something very much called for in sustainability science. For our specific case, the emphasis on the aesthetic dimension through metaphors, dances and singing was key to situate the play in its local context, as in African cultures, performance, encompassing theatre, dance, song, storytelling, and games, has historically served as a vessel for communication (Igweonu 2024). This resonates with the emotional and aesthetic aspects of knowledge highlighted in the first part of this section. The artistic and aesthetic dimensions facilitate knowledge generation employing spoken words, symbols, rituals, social and historical references and more, all intricately linked to the specific contexts where the play is situated (Morrison 1991).

Knowledge dissemination and communication towards a horizontal exchange

Community-based theatre methods, such as FT, have a long history of being used to "present messages for social change in an entertaining manner to model behaviour and its consequences, positive or negative, to spark intrapersonal reflections and interpersonal and group conversations" (Yoshihama and Tolman 2015, 140). Berchon and Bousquet (2021) call this 'awareness theatre', as it seeks to convey a message of particular importance to a given group, accounting for how it translates in their socially and historically situated experiences. This approach to theatre has been used as a research dissemination tool for it can democratise access to knowledge as "theatre has the potential to enhance understanding of complex emotional, interpersonal, psychosocial, and transboundary dynamics that arise" (Strickert and Bradford 2015, 3). This point has also been made within sustainability science and ecology as social–ecological systems and ecosystems are understood as complex adaptive systems, i.e. systems characterised by non-linearity, absence of central control, multiple links and connections, etc. (Heras and Tàbara 2014; Curtis et al. 2012).

This approach to communication and dissemination redefines the relationship between researchers and participants for a more horizontal one. Strickert and Bradford (2015) describe the joint aspiration expressed by researchers and communities alike to move towards a renegotiation of science–society relations: communities seek to connect with researchers hoping that studies will shine light on their realities and researchers aspire to produce useful research that has real impacts on local communities (Strickert and Bradford 2015). For that purpose, it is key that the audience can recognise the dynamics at play in the theatre performances, and that these illustrate the multiple aspects of participants' experiences including contextualised, embedded and embodied aspects (Kaptani and Yuval-Davis 2008).

Focused on transmitting situated lived experiences to a greater number, a researcher and/or artist has to "implement an emancipatory agenda committed to equality, freedom, social justice and participatory democratic practices" and focus on group empowerment (Denzin 2000, 258). In that sense, communication of research results is entangled with communication on lived realities and, thus, theatre not only serves for researchers to communicate to participants, but for researchers and participants to exchange and communicate horizontally and potentially with others, if the plays are taken to different audiences.

The experience of our project

The theme of "communication" was a source of creative tension in our project. Some of us, who have a strong commitment to knowledge co-production, were very wary about the idea of "communicating" *to* communities, as if we were the holders of knowledge and communities the receivers. Yet, others among our team were more flexible in this regard and considered that communicating our research results was not imposing a narrative on communities, but rather engaging in a dialogue with them. This group had previous experience using theatre as an information dissemination tool, or awareness theatre, and while engaging with the specificities of our understanding of FT, they did not see it as incompatible with disseminating research results. As the content of the plays was created based on the interviews we had conducted, they were indeed a presentation of research results. Yet, especially because FT allows for clarifications, nuances and corrections, they were also moments in a dialogue in which we exchanged *with* communities on what we had understood from their responses to our questions. As the project moved forward, the plays were performed and the post-production discussions conducted, it became very clear that communication was a very important aspect in the exchange between researchers and communities, as some of us had claimed. The part of the team who was not involved in data collection recognised the importance of hearing the voices of those who were and became more open to redefining communication as horizontal, leaving aside preconceptions on practices of communicating research as imposing a unique narrative on local realities.

We coded 164 excerpts under "knowledge dissemination", present in all the interviews and focus groups, except for one interview in Mozambique and one Focus Group in Kenya. Participants spoke of knowledge dissemination on

environmental changes in relation to livelihood practices. Importantly, in these coded references, knowledge was not presented as following a linear course, it was not necessarily specific whether it was flowing between community members, from researchers to community members, or from community members to researchers. Indeed, some people talked about researchers conveying "information" on environmental changes, while others recalled what they had themselves shared in previous fieldwork phases. This suggests a perception of knowledge as flowing through multiple streams, which blurs the frontiers between categories (researchers/participants) and contributes to our reflection on how communication can be interpreted in terms of horizontal exchange.

Noteworthy is also the overwhelming positive sentiment attached by participants to knowledge dissemination. The words most frequently employed in the sections coded as "knowledge dissemination" were "educate", "good", "community" and "learning". A positive sentiment was explicitly expressed in 70% of all the excerpts coded under knowledge dissemination. For example, an interviewee from Kenya, reflecting on the play, shared that they thought it was: "Very good way of sharing critical information to the public, which is both entertaining and educational on serious matters on our environment". Another interviewee from Mozambique, more generally reflecting on the engagement of the project through different phases of fieldwork, including theatre, shared: "From 2019 on, we engaged in this conversation with Professor Marlino. It was a form of communication about climate change. We still need more but we are on the right path". All other occurrences on knowledge dissemination were expressed neutrally—no negative sentiments were correlated to discussions on knowledge.

In all our interviews in both Kenya and Mozambique, illustrative dynamics, i.e. representations of practices the audience could directly relate to or identify, were explicitly presented as a source of knowledge, through the empathy produced by the recognition of the dynamic depicted. In an interview after the theatre in KaNyaka, a participant shared: "the person watches, identifies himself with (what's being portrayed) and ends up learning".

Arts-based research methods and joy

Within the arts-based methods literature, researchers coordinating creative projects discern a feeling of joy when employing nontraditional methods such as theatre. For Borba et al. (2018), participatory community theatre has to be accessible for all, community-based and above all, celebratory: "A community theatre group provides a space and time for human connection instead of cultural exclusion and marginalisation. (…) The idea is to generate passion because it can generate fuel for the theatrical production. In this sense, theatre practice in community theatre is designed to be fun and creative, with friends and far from the stereotypical ideas of work" (p. 35). Similarly, Fourat and Jankowski point out theatre's ability to mobilise participants as the method which involves a "shared pleasure of 'doing things together'" (2023, 192).

Kandil and Bokkel (2019) also dub Forum Theatre's celebratory dimension a "response to neoliberalism in the arts"—going against donor agendas. These authors argue that community-based participative and arts-based research methods that fully embrace a decolonised approach generate empowerment, collective identity and joy. The pursuit of celebration was at the core of the workshops done by Kandil and Bokkel working with immigrants and refugees' experiences in Canada. They "ensured that each story was instilled with hope" (2019, 379) and the positive feedback they received for their FT performances stems back to the focus on celebrating the lives of those who are represented on stage, as previous performances were deemed "too sad" by the public.

The element of fun experienced by participants (community members, researchers, facilitators) of FT groups serves as a common thread throughout several case studies (Morrison 1991; Kaptani and Yuval-Davis 2008; Kandil and Bokkel 2019; Foster 2012; Clisby et al. 2020). Using arts, culture and the creative realm when building local agency dynamics with communities being affected by long-lasting oppressions is indeed presented as a process of decolonial joy. This is "the (active) manner by which people become aware of, reason with, and connect the emotion of joy to a desire for decolonial justice" (Clisby et al. 2020, 188).

In sustainability science, while positive emotions such as hope and attachment are present in the literature investigating the role of the arts, to the extent of the authors' knowledge, the importance of joy, specifically, has been under investigated, with the exception of a few works within the subdiscipline of education for sustainability (Gurholt 2014; Ruokonen et al. 2014).

The experience of our project

In regard to joy, we differentiated between *enjoyment of the theatre method,* where we focus on the process of investing time in the activity of performing and debriefing, *enjoyment of having stories told out loud,* which resonates with some of what we discussed through our first theme, namely, valorising participants' knowledge, experience and stories, and *enjoyment of acting out change on stage*, where the accent is on experimenting with the performance of change.

The first aspect focused on *enjoying the theatre method* which we found in seven interviews in Mozambique and nine in Kenya. It was also discussed in one Focus Group

in Mozambique and three in Kenya. Participants in a focus group in Kenya for example reported that they "have enjoyed watching it", and in Mozambique they considered it "a good way of learning without thinking a lot of negative things and in a happy way".

The second aspect we focused on was the sense of corroboration and validation of their daily struggles and realities being portrayed on stage. This was stated by 18 individuals and in one focus group procuring participants a sense of *enjoyment of having their stories told out loud*, as this quote exemplifies: "It was very productive because all plays deal with issues that happen in the community". This finding is to be linked to the discussion above on the importance of theatre as a method of knowledge co-creation and dissemination as it shows that Forum Theatre operates as a tool to validate the importance of people's experiences so that they feel heard, and their knowledge is acknowledged as important.

Only 4 (1 in Kenya and 3 in Mozambique) references were made to *enjoyment of acting out change on stage*. Those who did, stated feeling "good, creative and confident" after having changed the course of action of the play. This aspect resonates with FT's understanding of knowledge as a tool to trigger change and perhaps even transformative change, as people identify ways forward in situations of conflict or oppression.

Interestingly, we noticed that when informally talking about the plays with participants, they were more inclined to share how the play contributed to their acquisition of knowledge or to create a role for them to participate in knowledge production, rather than dwelling on the enjoyable time they just spent. Yet, although the plays were on conflicts, we observed people laughing when characters acted out, exaggerated certain traits, made fun of another character, or used sentences with double meanings. Indeed, despite the serious and heavy aspects linked to the conflicts depicted, the plays thoroughly used humour. For example, in the case of Mozambique's play 'Only with Small Net' the character at the centre of the conflict was the most humorous one. This is also to be understood in a context in which laughter serves to create a distance between what is being told and how one engages with it, especially as sometimes what is being told shows the difficulties and very limited livelihood choices participants face (Mubai et al. 2023). Thus, in our experience, theatre created fun moments, therefore situating it as a method that leads to enjoying the moment shared with researchers, opposing it to other methods that could constitute a burden. We speculate that participants might have chosen not to insist on these aspects as they might have believed researchers to be more interested in knowledge production than enjoyment. That said, separating knowledge production and enjoyment is a difficult task, since, as we discussed above, having one's experiences represented on stage as worthy is part of contributing to enjoyment and creating spaces for well-being. Moreover, as argued above, emotions, including joy, are entangled with knowledge, for participants as much as for researchers (Mancilla García et al. 2024).

Theatre as developing skills for change

Boal argues that FT works by conceiving of the play as a rehearsal of what could be done in reality. It is the frustration and oppression felt on stage that encourages actual action (1974), which, as we saw above, can come from an oppressor, from internalised oppression or from being entangled in dynamics of horizontal conflicts (Miramonti et al. 2024).

In any case, the performance serves as a platform to facilitate an understanding of how individuals can transform their world (Fourat and Jankowski 2023; Maciel et al. 2021). Collier further develops this point and argues that the value of FT "resides in how the complexities inherent in any situation are revealed and how theatre is able to demonstrate the many ways of approaching or thinking about them" (2015, 39), going beyond linear dynamics of oppression.

This aspect strongly resonates with Freire's perspective on transformative knowledge as understood by Morrison: "Provided with the proper tools (…), (the participants) can gradually perceive (their) personal and social reality as well as the contradictions in it, become conscious of (their) own perception of that reality, and deal critically with it" (Morrison 1991, 38).

Among those tools, we insist here on the role of laughter and humour, which we mentioned above, as indicators of the successful creation of a distance between what is being told—which might be dramatic—and the way it is told. Such distance is also built by presenting scenes that feel familiar to the audience but that do not represent their own realities in such a way that they do not play themselves but fictional characters. Creating a distance allows detachment from one's own reality which encourages critical, reflective learning (Collier 2015, 40). This has been deemed particularly important in contexts where it is dangerous to express the reasons of one's oppression which might be due to political repression. In these cases, "forum theatre space is a 'safe' way for the oppressed people to both critically reflect upon, and envision alternatives to the social conditions creating their marginalisation" (Rossiter et al. 2008, 134).

More generally, it is the task of the facilitator to create a safe space regardless of the context where Forum Theatre occurs to include those groups in the audience that might feel uncomfortable speaking up. By creating safe spaces, FT increases empowerment, inclusion and fosters understanding (Massa et al. 2020) which can be extended beyond mere top-down dynamics of oppression, to include internal oppression and the disempowering dynamics of horizontal conflicts and rivalries, emphasising empathy and reciprocal understanding

as a form of liberation. In contexts where conflicts are deeply ingrained, Forum Theatre aims at providing a safe space wherein to explore emotions, such as empathy, that the conflicts do not leave space for (Miramonti et al. 2024). For these reasons, the experience of theatre is not only valuable within the time of a research project, but is a source of skills that remains with participants.

The experience of our project

While in our cases the reasons for tensions or conflicts were not due to a lack of freedom of expression, they were tensions difficult to express openly. Indeed, some of the conflicts that we identified and worked on for the plays were intergenerational conflicts, sometimes involving issues that are taboo or difficult to speak of such as teenage sex, as it was the case in Kenya. To maintain the safety of the space we wanted to create with the plays, we performed first in schools and then with the communities more broadly, so that the younger generation, which we identified as having less power since they were still dependent on their parents, could freely express their views on the issues represented.

During informal discussions sometime after the performances, our interviewees shared that when wanting to discuss something that had previously been taboo between them and their teenage children, or conversely, them and their parents, they could refer to the play and what happened in it, thus finding a way to indirectly discuss the issue and enhance inter-generational communication.

Besides improving communication among the involved actors, the ability of FT to bring about concrete change, to *rehearse for the revolution*, was put forth by Boal as what differentiated FT from traditional forms of theatre. 45% of our respondents attached a positive sentiment to agency triggering both individual and collective changes, with all other references having been expressed in a neutral manner (with no negative sentiment references having been associated with agency to trigger changes). From an explicit sustainability perspective, participants to our focus groups discussed adjustments in everyday routines such as banning small fishing nets that are harmful to the maritime ecosystem (KaNyaka), repurposing mosquito nets for their intended use (KaNyaka), engaging in reforesting efforts (Msambweni) and initiating dialogues with external communities and local authorities to implement these changes (Msambweni and KaNyaka).

Almost all our sources (27 out of 28 interviews and 1 out of 2 focus groups in KaNyaka and all our Kenyan interviews and 2 out of 3 focus groups) were coded both for knowledge dissemination and for agency and transformative change. In 38 of those 50 sources, those codes appear in close proximity, i.e. at a distance of a maximum of eight words, suggesting that exposure to these discussions instilled group dynamics towards a collective search for change (Wrentschur 2008).

Limits of the approach

In this last section, we recognise some of the limitations of our study. Engaging with situations of oppression and with horizontal conflicts where there is no clear oppressor, where multiple sources of tension are entangled, runs the risk of increasing feelings of injustice or unfairness, and it is crucial that researchers are fully aware of the effects that theatrical techniques might have on participants (Fourat and Jankowski 2023). Indeed, FT is no panacea and must be carefully thought of when used, as any other method, for it might end up reinforcing the same power relations it wishes to break down, or fuelling the long-lasting rivalries it tries to replace with empathy. Researchers must be mindful of the power differentials among community members and that some might try to control the process and outcome (Turnhout et al. 2020). As we have argued through the paper, it is key that Forum Theatre be adapted to the specificities of the context where it is applied. For example, applying the initial versions of FT, which insist on the oppressor–oppressed dynamic in contexts where horizontal conflicts dominate, might convey a dichotomic or falsely binary understanding of a situation that it is actually more complex and nuanced (Miramonti et al. 2024).

Relatedly, FT provides the audience with the possibilities for rich engagement with a given issue by leaving freedom to interpret the issue as they wish (Kamlongera 2005). This can be a double-edged sword, as we experienced in our own project. Indeed, during one of our performances in Kenya, the discussions at one point converged towards participants agreeing on enforcing discipline on the younger generations, including through corporal punishment. This shows that arts-based methods require the acquisition of specific skills, in this case, facilitation skills, that might not be easy or timely to transmit within research projects. Indeed, these endeavours are time-consuming, which means that it is dangerous to use them if time does not allow for a thorough engagement. This example was an important source of reflection for us, that made us fully realise how crucial it was that professionals were part of our project and responsible for training community members, so that theatre methods can be applied, and the necessary skills disseminated, with responsibility to avoid producing new or reproducing old oppressions.

On another note, while some of us would have liked to explore further the possibilities of theatre by representing non-humans, the process of creating the plays was jointly done by a team of diverse researchers and theatre professionals, based on the results of the interviews' analysis. The

research team decided to privilege what emerged from the interviews and did not want to impose choices based on theoretical interest. Yet, we believe that representing non-humans is a research venue that needs to be paid more attention to in sustainability science. It would allow to observe what happens when—literally—giving voice to non-human others, including exploring the emotions created in participants when speaking up for those non-human characters.

Conclusion

Through this paper, we have brought the literature on arts-based methods into dialogue with the literature on sustainability science to take forward the debates on the promises such methods constitute for sustainability scientists. We have illustrated what exactly they brought and how, through our own project using Forum Theatre among coastal communities in Kenya and Mozambique. We have argued that FT constitutes an ethical alternative to avoid research fatigue by providing a space in which local knowledge is heard and appreciated and put into dialogue with other types of knowledge or among different knowledge holders. Further, we have argued that theatre creates a moment of enjoyment that is in itself ethical by bringing positive feelings to participants in the moment. Finally, we showed how providing participants with theatrical skills can serve to spread the methodology beyond the arts and academia so that it is used as a tool to speak on difficult issues and potentially engage in processes of change in the sense decided by people in the field. In both Kenya and Mozambique, local theatre troupes were constituted to use the method beyond the project duration and engage with issues they would identify in the future. In Mozambique, the trained group has been receiving invitations to perform other plays in the communities since the project ended.

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Declarations

Conflict of interest The authors declare no conflict of interest.

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