



Defining and assessing artistic co-creation: the TRACTION proposal¹

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Abstract. This article presents research developed within the framework of the European project TRACTION, which aims to co-create operas in three different environments incorporating technological elements and with the ultimate objective of generating a social transformation. Through 19 interviews carried out in three different countries (Spain, Ireland, Portugal), a map of indicators that can be used to evaluate artistic co-creation is proposed. The value of the proposal is that the indicators are validated through a focus group with representatives from three diverse co-creation processes—in the Raval neighborhood in Barcelona, in different areas of Ireland, in a prison in Leiria—and serve as a general framework for very diverse environments. Likewise, the work contributes to the debate on the concept of co-creation through a thematic analysis of the definitions provided by the different interviewees. Central topics in the thematic analysis of the definitions are: collaboration, participant profile and role, goal and value, origin and development, and ethical and social aspects.

Key Words: opera, co-creation, participation, methodology, evaluation.

[es] Definir y evaluar la cocreación artística: la propuesta TRACTION

Resumen. El artículo presenta una investigación desarrollada en el marco del proyecto europeo TRACTION, que tiene como objetivo cocrear óperas en tres entornos distintos incorporando elementos tecnológicos y con el objetivo final de generar una transformación social. Mediante 19 entrevistas realizadas en tres países distintos (España, Irlanda, Portugal), se propone un mapa de indicadores que pueden servir para evaluar la cocreación artística. El valor de la propuesta es que los indicadores se validan mediante un grupo focal con representantes de tres procesos de cocreación distintos –en el barrio del Raval en Barcelona, en distintas zonas de Irlanda, en una prisión de Leiria– y sirven de marco general para entornos muy variados. Asimismo, el trabajo contribuye al debate sobre el concepto de cocreación a través de un análisis temático de las definiciones aportadas por los distintos entrevistados. Los temas centrales identificados en las definiciones incluyen los conceptos de colaboración, el perfil y papel de los participantes, el objetivo, valor, origen y desarrollo de la cocreación, así como sus principios éticos y sociales.

Palabras clave: ópera; cocreación; participación; metodología; evaluación.

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1. Introduction

Co-creation is a term often used in very different areas as a way to add value to a process of creation (Ramaswamy and Gouillart, 2010; Rill and Hämäläinen, 2018). It is mentioned in both product and service design processes, but also in artistic environments. Its meaning, though, is yet to be fully established and it is not uncommon to see different interpretations emerge from different disciplines.

TRACTION is a European project funded under the H2020 programme that aims to research artistic co-creation in opera for a social transformation with a strong technological component (see <https://www.traction-project.eu/>). One of the main aims of TRACTION is to use new co-creation ideas to involve and empower citizens in the creative process of opera in three different trials: in Barcelona, the Liceu Opera House (Liceu) is developing a co-creation process with the Raval, a culturally diverse neighbourhood in Barcelona. In Leiria (Portugal), the Sociedade Artística Musical dos Pousos (SAMP) is co-creating an opera with young inmates from a prison in Leiria. In Ireland, the Irish National Opera (INO) is experimenting with new audiovisual formats in a co-creation process with diverse communities across Ireland.

Developing co-creation processes that generate co-created performances with the inclusion of innovative technologies is at the core of the project, but to prove its impact TRACTION also includes an assessment component. In this regard, the project aims to assess: a) the technology and user experience, b) the co-creation process, c) the co-creation output (i.e. the performances), and d) the impact on social transformation. All four elements are strongly interrelated, but this article will put the focus on the evaluation of the artistic co-creation process and its output.

The concept of co-creation is so wide that a necessary first step in the project was to define what elements are relevant for such an evaluation, especially taking into account how diverse the different trials are. And this is the ultimate aim of this paper: to define what indicators can be used to assess artistic co-creation across diverse environments.

In the research presented in this article, 19 relevant stakeholders were interviewed in three different countries (Ireland, Portugal, and Spain). A thematic analysis of their replies allowed us to produce a preliminary list of indicators. These indicators were then discussed within the framework of the different trials. Additionally, the interviews allow us to capture how different stakeholders understand a still ambiguous term such as co-creation. This research contributes to existing discussions in the field of artistic co-creation, quality, and evaluation (Walmsley, 2013; Davies, 2016; Antonnen et al., 2016; Matarasso, 2019).

The article begins with a broad overview of how co-creation is defined in the literature, with a special emphasis on artistic co-creation, and proposals on how to assess it. Section 3 presents the methodology followed in the study, and Section 4 reports on the main results, highlighting how co-creation is defined by the interviewees (4.1.) and what indicators could be used to assess co-creation (4.2.). The article concludes with some ideas for future research.

2. Defining co-creation and how to assess it

Co-creation is a term that is often used in business environments to refer to the participation of customers in the creation of products and services. As expressed by Rill and Hämäläinen (2018, p. v), it is a “trendy term used across the disciplines of business, design and marketing to indicate new modes of engagement between people in order to either create shared value or unleash the creative potential of diverse groups”. Early articles on the topic do not use the term co-creation but often refer to customer participation (Bendapudi & Leone). A seminal work on co-creation was published in 2000 by Prahalad and Ramaswamy. The article starts with an interesting comparison:

Business competition used to be a lot like traditional theater: On stage, the actors had clearly defined roles, and the customers paid for their tickets, sat back, and watched passively. In business, companies, distributors and suppliers understood and adhered to their well-defined roles in a corporate relationship. Now the scene has changed, and business competition seems more like the experimental theater of the 1960s and 1970s; everyone and anyone can be part of the action (2003, s.p.).

In their article, Prahalad and Ramaswamy show the evolution of customers from passive audiences in the 20th century to active players in the 21st century. Customers become cocreators of value. In a later book, Ramaswamy and Gouillart expand this view and define co-creation as “the practice of developing systems, products, or services through collaboration with customers, managers, employees, and other company stakeholders” (2010, p. 4).

Similar to the evolution of customers in the business world, Brown et al. (2011) propose a spectrum of audience involvement in the arts which includes the term co-creation. At one side of the spectrum, one finds receptive audiences, which are defined as spectating—receiving a finished product—or with enhanced engagement—as in educational programs which activate the creative mind. At the other end of the spectrum, one finds participatory audiences, which are involved through crowd-sourcing—the audience chooses or contributes towards an artistic product—, co-creation—“audience members contribute something to an artistic experience curated by a professional artist” (Brown et al. 2011, p. 15)—and audience-as-artist experiences—audience members “substantially take control of the artistic experience”. Focusing explicitly on co-creation, Walmsley (2013) investigates through a literature review and qualitative methods (participant observation and interviews) how the term can be defined. His conclusion is that an “all-encompassing definition of co-creation remained elusive”, but common traits emerged: “collaboration, agency, interaction, invention, experience, value and exchange” (Walmsley, 2013, p. 116).

Moving beyond audiences, artistic co-creation is also being used to refer to community or participatory art. Matarasso (2019, p. 48) defines participatory art as “the creation of art by professional artists and non-professional artists”. Matarasso considers participatory art to be rooted in community art, which he defines as “the creation of art as a human right, by professional and non-professional artists, co-operating as equals, for purposes and to standards they set together, and whose processes, products and outcomes cannot be known in advance” (Matarasso 2019, p. 49). According to Matarasso (1997), participatory art is a source of benefits for both the individual and the community, generating personal growth, social cohesion, and social change, and constitutes an effective form of community development strategy.

Within the TRACTION project, co-creation was initially understood in two senses: as the “interaction of people with different perspectives or disciplines” and the interaction of “professionals and non-professionals, as in participatory art” (Matarasso, 2021, p. 32). After one year, the project has evolved and considers “it is better to describe cross-disciplinary work as such, and to reserve co-creation to the second use only because of the distinctive questions of power distribution and the process of empowerment it involves” (Matarasso 2021, p. 32). Within co-creation, Matarasso proposes a spectrum of co-creation, with less professional control at one end and more professional control at the other. In this regard, the SAMP trial is the co-creation process which is performed with less professional control, as proposed by Matarasso (2021). SAMP is an independent music school in Leiria, central Portugal, with a strong community programme. SAMP has been working in Leiria’s youth prison since 2004 and co-created Mozart productions in 2015 and 2017. Through the TRACTION project, they are co-creating an opera performance, which will be piloted in June 2021 and whose final production will be performed in June 2022. During the first year of the project, 32 co-creation sessions took place with a total of 8 professional artists, 1 project facilitator, 69 non-professional artists, and 4 other participants such as guards or psychologists. In the coming co-creation sessions, families will also be involved. A different approach is taken by the INO trial, which aims to develop a co-created community opera using virtual reality and would be positioned in the middle of the spectrum, leaning towards those experiences with a stronger professional control. The communities involved are Irish speakers from Inis Meáin, teenagers from rural districts, and adults from Dublin. The co-created performance will tour across the country in 2022 and will be supported by several live events. In the first year of the project, different co-creation activities took place: a writing workshop in Inis Meáin and a writing workshop at Music Generation with young participants, as well as an art workshop with adults and an art workshop at Inis Meáin. A total of 16 sessions took place until March 2021, with 51 participants involved, including 5 professional artists, 2 TRACTION-related participants and 44 non-professional artists. Finally, Liceu is viewed by Matarasso as the experience with the strongest professional control. TRACTION co-creation processes are part of a community opera developed within a long-standing historical institution. During the first year, the co-creation activities have involved Sínia, an occupational center for persons with cerebral palsy with a strong interest in technology, innovation, and creativity, and Massana, an art and design school, both located close to the opera house. Through 14 sessions, 26 participants co-created the opera poster and related materials such as the hand programme. There were 3 professional artists involved, together with 2 TRACTION-related professionals, 18 non-professional artists from

both Sínia and Massana, and 3 persons who gave support to the non-professional artists during the sessions.

Apart from defining co-creation, the second relevant aspect in the context of this article is how to assess artistic co-creation. Davies (2016) provides several evaluation examples from the Created People and Places programme, using both traditional and creative methods. Some of the examples provided use standardised scales to measure wellbeing, social return on investment evaluations, or metrics such as Culture Counts. Culture Counts—also referred to as Quality Metrics—is an evaluation tool, developed through extensive empirical research, which has been used by different countries: it triangulates assessments of self, peer, and public in a multidimensional evaluation system. The system includes 9 quality metrics for self, peer and public (concept, presentation, distinctiveness, challenge, captivation, enthusiasm, local impact, relevance, and rigour) and 3 quality metrics for self and peer only (originality, risk, and excellence), plus 31 participatory metrics (Shared Intelligence et al., 2017). In a previous publication, Knell and Whitaker (2016, p. 26) underline authenticity, enjoyment, experimenting, friendship, intensity, and new people as the metrics measuring the quality of the participant's experience. This evaluation framework has been the object of criticism, the main critique being that “it represents a time-consuming and reductive proxy for artistic value that is open to political abuse” (Walmsley 2019, p. 103).

From a wide project on co-creation of digital public services for and with older adults, Jarke, Kubicek, Gerhard, Introna, Hayes, Cass, Berker and Reins (2019) published online an extensive guide on co-creation projects that includes evaluation frameworks for both formative evaluation and summative evaluation. Formative evaluation, which refers to the process of the project, uses as indicators (1) mutual learning, (2) empowerment, (3) openness and diversity, (4) involvement and ownership, (5) transparency, and (6) effectiveness. The summative evaluation in their case is oriented towards the evaluation of the apps generated by the project and does not apply to our current project. Bossen, Dindler and Iversen point out the need to conduct the evaluation in ways that add to the aims of the participatory process, “such as mutual learning, empowerment and democracy by engaging participants and stakeholders in conducting evaluations” (2016, p. 159).

Matarasso proposes four core elements that show the “artistic quality of the process” from the participant's point of view. The first one is experience, in a positive sense: “[t]he extent to which people enjoy taking part. Is the process rewarding?” (2019, p. 51); the second one is authorship: the participants recognise themselves as authors of the artistic product. The third one is empowerment, meaning “the extent that people gain control, within and beyond the project. Are they strengthened by the experience?”, and the last one is humanity, i.e. “[t]he extent that it produces kindness, solidarity and trust. Does everyone feel valued?”. Matarasso also suggests five core elements in a model for quality evaluation of the artistic final product: craft: “the technical and artistic skill demonstrated by the work”; originality: “its relationship to the unique conditions of its creation”; ambition: “its aspiration, scale and openness”; resonance: “its relevance to what people are concerned about”; feeling: “its non-rational effect and ability to linger in the mind” (2019, p. 99).

A third aspect of co-creation to be assessed is the impact of the project on society. Antonnen et al. (2016, p. 7) reflect on how to assess the societal impact of arts projects and highlight that “identifying key measures -or indicators- is the most important and

also most difficult part of a cultural project evaluation". The analysis needs to be done in comparison to the expected goals and should combine both qualitative and quantitative data. They argue that, taking into account that the indicators depend on the project's goals and the evaluation objectives, "no common list of performance indicators exists that is suitable for every project. Each project needs to design its own system to measure outcomes, processes and structures" (Antonnen et al. 2016, p.7).

In the context of TRACTION, a series of aims and objectives have been set, but our goal was to find out if a group of basic indicators could be identified across different trials by talking to diverse stakeholders. Each of the trials, as described above, has its own specificities and challenges, but our ultimate aim was to find commonalities across artistic co-creation process that can be expanded beyond the field of operatic co-creation. The result of our research is described in the rest of the article. Our analysis is limited to the empirical evidence obtained through the interviews, contextualised against existing literature, but further analysis considering interdisciplinary approaches and other co-creation practices across artistic disciplines (Roig Telo and Cornelio Esquerdo, 2014; Cuenca-Amigo and Zabala-Inchaurraga, 2018; Barbosa Ramos and Prado, 2019) may shed some more light onto this topic in future investigations.

3. Methodology

This section reports on the participants and procedures followed in the study, which complies with ethical protocols approved by the Universitat Autònoma de Barcelona's (UAB) ethical committee.

3.1 Participants

Each trial in Ireland, Portugal, and Spain selected the interviewees. They were free to select the most relevant profiles taking into account their environment. The only instruction given was that the goal of the interviews was to define what is understood by 'co-creation' and, most importantly, identify indicators to assess the co-creation process. The targeted interviewees were defined as government representatives, cultural stakeholders, community representatives and trial leaders to be chosen by each of the trials.

A total of 19 interviews took place. All participants signed consent forms in which their anonymous participation was guaranteed, following the protocol approved by the UAB's ethical committee. Demographic data for 2 interviewees could not be gathered. The remaining demographics are as follows: there were 9 males (53%) and 8 females (47%), with ages ranging from 28 to 70 (mean age= 46). There was an equal distribution in participants who were experts, knowledgeable and novices in opera. More specifically, there were:

- 6 interviewees from Ireland, with experience in co-creation in artistic productions. They were artists and cultural venues managers with experience in artistic co-creation, experts from participatory arts organisations, and persons involved in community work.

- 6 interviewees from Barcelona, including professionals linked to cultural venues offering and producing co-creation performances, and authors and directors with an active involvement in co-creation.
- 7 interviewees from Leiria, including a former inmate and an inmate's mother, with previous experience in co-creation, a funding agency representative, a government representative, an artist, and a psychologist.

3.2 Procedure

The interviews were oral, individual, semi-structured, and took place in autumn 2020 online, with audio being recorded for further analysis. The interview protocol was designed collaboratively with TRACTION project partners. A pilot interview was performed and assessed to guarantee consistency in the development of interviews across trials.

The languages involved were Portuguese (SAMP), English (INO) and Catalan and Spanish (Liceu). Prior to the interview, interviewees were informed of the TRACTION project and why their contribution was needed. They were also sent the list of questions.

After being thanked for taking part and being given a short introduction to the project, the interview developed following the questions that are listed below:

- Can you describe your association/cultural venue/organisation and its purpose, very briefly?
- What is the social responsibility policy of your association/cultural venue/organisation? Please provide a short answer.
- One of TRACTION's main objectives is to co-create an opera with artists and participants. Do you have any experience in participatory approaches to art, in co-creation in your association/cultural venue/organisation? Please explain.
- In your work, what is co-creation?
- (*Only if you don't use the term co-creation*) Do you use an alternative term? If so, please say which and what you understand by this other term.
- What indicators help you decide that the process of co-creation is going well? For example, an indicator could be attendance to the co-creation sessions or active participation of all participants.
- What indicators help you decide that the result of a co-creation process is successful? For example, one indicator could be audience attendance.

Adapted questions were created for some participants, in order to make them easier to understand and more suitable to their profile:

- One of TRACTION's main objectives is to co-create an opera with artists and participants. Do you have any experiences in co-creation? Please explain.
- What is co-creation for you?
- When would you say that a co-creation process is going well? What are the most important things?
- When would you say that the result of a co-creation process is good? What are the most important things?

The interviews were carried out by the evaluation coordinators in each of the trials. They then transferred the results into a structured report in English, which is the basis of our analysis. The report included the following sections: a) general information, b) interviewee profile and previous experience in co-creation, c) definition of co-creation, d) indicators to assess co-creation, divided into those assessing the process and those assessing the result, and e) researcher's observations.

3.3. Data coding and analysis

The definitions of co-creation and the indicators of a successful co-creation process provided in the interview reports were coded using Taguette (Rampin, Rampin and DeMott, 2021), an online collaborative tool for thematic analysis. Two researchers carried out a collaborative process which involved iterative individual analyses followed by four collaborative working sessions. The final result was summarised in two Excel files: one with a categorisation of the definitions of co-creation and another one with a list of indicators, together with the actual phrasing included in the report. These data were complemented with written interviews with art students, but this is beyond the scope of this article and will be reported in Matamala and Sánchez Vizcaíno (in progress).

4. Results

This section reports on the results of the thematic analysis of the interviews, followed by the focus group, both in terms of how co-creation is defined and how it can be assessed.

4.1 Defining co-creation

The following themes emerged from the interviews with stakeholders: collaboration, participant profiles and roles, goal and value, ethical and social aspects, and terminology.

Collaboration

One Irish interviewee, experienced in co-creation, stated that the "main aspect of the 'co-creation' is the 'co', meaning that it involves people working together". "Working together", "making stuff together", or simply "together" are some of the definitions provided by the respondents, who sometimes add concepts such as "debate and collaboration" (as phrased by a Barcelona-based cultural stakeholder involved in community actions), "transfer on one side and another" (as expressed by a representative from a Barcelona arts festival) or "establishing a partnership based on collaborative processes" (as indicated by a governmental representative from Portugal). The process of co-creation is viewed as "dynamic" and "the challenge is to know how to generate a creative space in which non-professionals actively participate". The coordinator of a funding programme in Portugal considers co-creation "the result of a positive negotiation", whereas professional artists put the emphasis on a "shared

dialogue”, on the need to “generate listening spaces for all participants and about all contributions”, and on the need to follow “a common path”.

Participant profile and roles

Some of the replies provide different views on who the participants in the co-creation process are: a non-professional artist indicates that “several individuals or associations” are involved, a government representative thinks that “different visions” are needed, whereas an opera composer refers to “more than one creator” without including non-professionals in the definitions. This explicit reference to “both professionals and non-professionals” or to “professional and non-professional artists” is found in the words of a representative from a funding agency in Portugal that supports co-creation projects, and of a non-professional artist experienced in co-creation.

An experienced Irish professional artist also mentions the fact that a co-creation process brings “together professional artists and members of the local community that would not necessarily be involved in any kind of arts practice”. A Barcelona-based professional points out that s/he knows “of some experiences like this, with 3 or 4 people, who have succeeded, but with a larger group it is not possible”.

A central aspect in artistic co-creation is the power relationships established between professionals and non-professionals, and this is highlighted by some of the interviewees: “the participants are at the same level as the artist”, states one Barcelona theatre representative; “the artist and the participant have an equal status and stake in the project”, suggests the representative of an Irish participatory arts organisation; “no one stands above the rest of the people who participate”, suggests a Catalan director and author, and “the definition of the project doesn’t come from above”, expresses the representative of a Barcelona public arts venue with a community program.

Nevertheless, some leadership is acknowledged by an Irish artist: “it is an experience that people will go through predetermined by the producers”, an issue also considered by the representative from a Barcelona arts festival: “someone must take responsibility for the process and the result”. One experienced professional artist seems to have changed his or her views: “It has changed a lot. It has been demystified, it has been de-romanticized. I started from the basis, years ago, that it was possible to create collectively without hierarchies, that it was like an anarchist society and that it regulated itself. That there would be no leader to lead. I have realized that this is impossible”.

This idea can be easily linked to the issue of ownership: a representative from a Portuguese funding agency thinks that in co-creation “people feel ownership of the process as well”, and a Barcelona-based professional artist indicates that “the sense of creation has to do with each person who is a part of it being able to say ‘I feel a part of it and I feel it’s mine’. Not from an authorship point of view, but from satisfaction”. The idea of authorship is explicitly mentioned by an author and director from Barcelona: “the materials of the stage productions are of multiple authorship”. And still, an experienced Irish artist also seems in favour of the term co-authorship. An interviewee from Portugal merges both concepts and indicates that co-creation happens when “both see and feel each other as co-authors of the results achieved. It is the appropriation, the ownership of the result”.

Goal and value

Interviewees consider that in a co-creation process participants share “the same goal”, which is “to create a piece of art at the end”, “a creation”, “a spectacle”, “some work”, “a show”. One interviewee from an arts festival in Barcelona stresses that you are “always looking for a quality artistic result”, whereas one non-professional artist thinks that the value of working together is “to bring new ideas” and “making a better result”. This change can happen at an institutional level, as indicated by one interviewee who has participated in community actions: “the role of the institution is redefined and adjusted” and the project has an impact on the cultural institution itself.

Origin and development

Two Barcelona respondents with experience in co-creation indicate that any co-creation “may be born with the DNA of being a shared project”, that there should be “*co* in the very conception of the project”, although another one acknowledges that the process often starts “not knowing where you will end up”. Co-creation is viewed as a “long process in time” or a “long-term project”, and even as a “cyclic process”. One professional artist from the interview thinks that co-creation is developed at two different speeds, including collective and individual work.

Ethical and social aspects

An expert from Barcelona who coordinates co-creation projects links co-creation to “more social projects”, and an interviewee from Ireland states: “it’s an ethical and socio-cultural contract fostered or made explicit throughout the process of the work”. Co-creation opens the “possibility of connecting with your territory in a more extensive way” and “responds to a demand for participation from a group or groups of citizens not included in the institution”, as expressed by the interviewees.

Two respondents stress the need for an ethical approach to co-creation: “We have great respect for the material that is generated, since it is very sensitive and has been produced in an atmosphere of trust and intimacy. The contents are treated with delicacy, with respect for the material generated, not manipulating it, protecting the privacy of the participants”, an idea also expressed by another interviewee: “I find that co-creation processes work best when people trust that there is someone who with the utmost respect and ethics will take those materials and shape them. In this sense, I appeal to the responsibility of professionals who are involved in this type of process. It is necessary to assume the dignity of the material, of the bodies, of the stories through a beautiful and excellent form”.

Terminology

Not all stakeholders being interviewed use or like the term co-creation, which is in line with the literature review above. One interviewee from Barcelona says that “in theater we use collective creation”, and an Irish respondent prefers “collaboration” or “participatory”, because “although co-creation gives a clear indication of what the

creative act is, the term is quite ‘arts-speaky’ and does not work in all situations”. This view is shared by another Irish interviewee who refers to terms such as “participation” or “community”, which have oscillated over the last few years. In fact, this professional artist states that s/he “would never use co-creation when approaching artists to work in a participatory way. It implies a lessening of their professional skills”. Another professional Irish artist considers that “participatory and community art is often confused with one another”, and s/he believes that participatory art “is more about receiving information and [community art] is more about finding opportunities for them to be creative, however it doesn’t mean that participatory art participants cannot be creative”. Another Irish interviewee prefers the term co-authorship and another one, from a theater venue, sees this term as “extremely corporate”, one that participants would not really understand, which would imply a danger of “widening the gap that is already there to start with”. Translating this concept into Irish also posed some challenges because no direct translation exists, according to the interviewees. Further discussions in the artistic world need to take place before the term is established or disregarded in favour of other more established terms, such as participatory art or community art.

4.2 Defining the indicators to assess co-creation

The interviews generated an initial list of indicators that were improved through a focus group discussion in the TRACTION project.

4.2.1 Co-operative work on the indicators

The preliminary list of indicators obtained was further elaborated by a focus group with four participants: an expert in co-creation and one representative from each of the trials were involved. One facilitator led the focus group and another one took notes. The focus group took place online, on January 8, 2021, and lasted 2 hours. It was developed in English and, prior to the discussion, focus group members were sent the list of indicators obtained through the interviews described above.

After some welcoming words and general instructions, a discussion followed which was structured into two parts. The aim, as explained by the facilitator, was to discuss what indicators could be used to assess co-creation and what tools were to be used. This article only reports on the results of the first part. To facilitate the discussion on what indicators would be used, the following prompt questions were prepared: Is this indicator applicable to the TRACTION trials? If so, is this indicator measurable within the life of the project?

During the discussions, it was agreed that indicators should be classified according to two main axes: on the one hand, a distinction should be made between a) indicators related to the process of co-creation, b) indicators related to the artistic product that emerges from this process, and c) indicators related to both the process and the artistic product, with a direct link to the impact on social transformation. As put by Matarasso, “[c]oncern with process is a defining characteristic of participatory art and for many people it is as important as the art it produces” (2019, p. 95).

On the other hand, it was decided to differentiate between output and outcome indicators. In this regard, as defined by Matamala et al. (2021), output indicators help

assess the work and activities generated by the project and gather factual aspects, whereas outcome indicators help assess the changes that take place as a result of the TRACTION co-creation. Both types of indicators are listed next.

4.2.2 List of indicators of a successful co-creation

The focus group that worked on the list of indicators reached a final consensus on the categories reported here.

a) Indicators related to the co-creation process

There are indicators related to the non-professional participants:

- Profile (output): different profiles contribute to the co-creation process.
- Participation (output): non-professionals attend the co-creation process and numbers are retained.
- Engagement (outcome): non-professionals actively participate, are motivated, and show interest and enthusiasm.
- Balanced contributions (outcome): the project is balanced between the different participant profiles.
- Mutual understanding (outcome): participants find shared elements among themselves, there is good communication and a connection between professionals and non-professionals.
- Relationships (outcome): bonds of trust and friendship are being developed.
- Satisfaction (outcome): non-professionals are satisfied with the co-creation process.

And there is one indicator related to the project:

- Evolution (outcome): the project takes its own journey and is able to adapt.

b) Indicators related to the co-creation artistic product

The list of indicators is as follows:

- Artistic product (output): the fact that an artistic product has been created at the end.
- Artistic quality (outcome): questions of quality should be considered separately from the fact that an artistic product is achieved.
- Media impact (outcome): positive media reviews and social media presence.
- Audience attendance (output): people attending the performances.
- Audience profile (output): diversity of the audience.
- Audience response (outcome):
 - Feeling represented: the audience feel represented in the artistic output.
 - Personal change: the artistic product produces a change in the audience (reaction and change, audience thinking about new topics, change of belief, etc.)
 - Satisfaction: audience expressing appreciation and giving feedback.

- Non-professionals' response (outcome):
 - Feeling represented: participants feel represented in the artistic output.
 - Satisfaction: participants feeling satisfied.

c) Indicators related to both the co-creation process and the artistic product

These indicators impact on the community, on the non-professionals, on the professionals, and on the institution.

- Community impact (outcome): the community talks about the project and incorporates it. The impact adds value to the project.
- Personal change (outcome):
 - For non-professionals: they increase their self-esteem, their view of the world changes, and art becomes a part of their life. This includes empowerment: non-professionals feel themselves owners of the process and show more confidence in revealing their own ideas.
 - For professionals: artists change their perspective on audiences and society (attitudes).
 - For both, this includes relationships: friendship, social networking among participants.
- Institutional change. The institution has changed in terms of attitudes, programme, and practice (values, governance, working methods, etc.).

Additionally, it was considered that informal learning would occur during the co-creation process: this informal learning would translate into the acquisition of new capabilities or skills and should also be included as a relevant indicator in the co-creation evaluation.

4.2.3 Discussion: Final map of indicators

The final map of co-creation indicators is represented in Table 1, where output indicators are marked with an asterisk. These indicators are seen as broad areas that may indicate the quality of a co-creation. Matarasso (2013, p. 1) rightly expresses that “it is impossible to define fixed standards of quality in performance or outcome”, but, at the same time “assessments of quality cannot be made independently of specific criteria”.

Process	Artistic product	Process and product
<p>Non-professionals:</p> <ul style="list-style-type: none"> Profile* Participation* Engagement Balanced contributions Mutual understanding Relationships Satisfaction <p>Project evolution</p>	<p>Artistic product*</p> <ul style="list-style-type: none"> Quality Media impact <p>Audience</p> <ul style="list-style-type: none"> attendance* profile * response: <ul style="list-style-type: none"> feeling represented personal change satisfaction <p>Non-professionals' response:</p> <ul style="list-style-type: none"> feeling represented satisfaction 	<p>Community impact</p> <p>Non-professionals:</p> <ul style="list-style-type: none"> personal change (empowerment, relationships) learning <p>Professionals:</p> <ul style="list-style-type: none"> personal change (relationships, attitudes) learning <p>Institution:</p> <ul style="list-style-type: none"> institutional change (attitudes, programme, practice)

Table 1. Map of indicators classified according to categories. Source: Matamala et al. (2021, p 24).

The indicators selected to assess the success of the co-creation process are closely related to those found in the literature.

For example, the participation of different profiles of people identified by our stakeholders is also mentioned by Antonnen et al. (2016) who, adopting Woolf's (1999) suggestions, indicate that participants of the project experience working with professional artists. Balanced contributions are related to what Matarasso defines as authorship. In the same sense, Antonnen et al. (2016) mention that participants feel ownership of the project. Indicators related to emotional experience, such as mutual understanding among participants of different backgrounds, the birth or consolidation of friendships, and the satisfaction of those involved are akin to empowerment and humanity mentioned by Matarasso (2013). Antonnen et al. (2016) underline that participants show enthusiasm and commitment, and, at the end of the project, an increase in understanding of issues and ideas that are important to those taking part. In the same line, Knell and Whitaker (2016) mentioned enjoyment, intensity, and new people that are strongly associated to the indicators in our data.

The indicators for the artistic product (artistic product, quality and media impact) fall within the core elements pointed by Matarasso (2019): craft (technical and artistic skill demonstrated by the work) and resonance (its relevance to what people are concerned about). Three indicators are linked to the final performance, namely audience attendance, audience profile, and audience response. A successful product should attract different profiles within the community to attend the final performance, and, referring again to Matarasso's core elements (2019), a feeling that lingers in the mind is a positive outcome for a co-creation project.

Finally, some indicators are related to both process and product, such as community impact (in the sense that the community talks about the project and values it); the personal change in both non-professionals (empowerment, enhanced confidence) and professionals (change on their perspective on audiences and society); and the continuity of personal relationships developed among participants during the pro-

ject. The informal learning of new skills was pointed out in three different metrics in the Culture Counts project (Kneel and Whitaker, 2016; Shared Intelligence et al., 2017): skills (I gained new skills), artistic skills (I improved my artistic skills) and creativity (I feel more able to express myself creatively). As a clear impact of the project on society, a change in the institution that hosts the co-creation project in terms of attitudes, programme, and practices is valued as positive.

5. Conclusions

As said in the introduction, defining co-creation is not an easy task. Co-creation encompasses a wide range of activities that imply collaboration, agency, interaction, invention, experience, value, and exchange (Walmsley, 2013). Similar traits were also chosen by our interviewed stakeholders within the three trials of the TRACTION project. They mentioned collaboration as the main characteristic, but also mentioned the participation of different people, especially pointing out the interaction between professionals and non-professionals. It is important that all participants feel they are equal owners of the project and the results obtained. Sharing the same goal is an important aspect of the co-creation experience, and in our data the terms of respect and trust are a relevant part of the description. Another trait of the co-creation process is its liveliness, the fact that it starts with a common goal but evolves over time during the participatory experience.

How can we assess the quality of the co-creation process? Anttonen et al. (2016) claim that each project needs to design its own system to measure its process and results. With this purpose, the indicators to assess co-creation processes were gathered in the interviews with stakeholders within the framework of TRACTION, as seen in the last section. In our data we find that the indicators can relate to the process, the product, and both the process and product, the latter linked to the impact that the project has on society, either on the community or the participants individually. The same division of indicators is found in the literature referred to in section 2 (Jarke et al., 2019; Bossen et al., 2016; Matarasso, 2013, 2019).

TRACTION's innovation lies in the bottom-up approach taken, which has allowed us to produce a map of co-creation indicators which are relevant across diverse co-creation situations. Our contribution has been to identify a limited number of broad indicators (17 in total) and classify them across three wide categories (process/product/both) suitable for a broad diversity of contexts.

The next steps within the TRACTION project will be to define the assessment methods that will be used in each of the trials. Methods that have been formerly used for evaluation include surveys, interviews, and qualitative methods described as "continuous reflection" (Molina León & Breiter, 2020). For TRACTION, it is very important to tailor the assessment procedure to the specific features in each trial. Moreover, each trial is a composition of different processes. For example, the final performance in Barcelona's trial will be a representation at the Gran Teatre del Liceu, thus it will be necessary to design a method to collect the attendees' impressions and satisfaction. But, before reaching the final performance, several workshops to build up a whole opera and a preliminary showcase will take place, and these will be evaluated. In Leiria, the focus has to be especially set on the inmates to evaluate how they have experienced the co-creation project and their

engagement, empowerment, and satisfaction, which can probably be best attained through group interviews and more creative research methods (Kara 2015). At the same time, the effect of their performances on the audience cannot be ignored. The project carried out in Ireland takes the form of small workshops developed during different time frames, so the chosen method of assessment will have to be adapted to the different participants (professional and non-professional artists) and the different types of workshops for a better account of its success. These developments will be reported in future work.

Beyond the TRACTION project, the map of indicators presented in this article can set the groundwork for future research in artistic co-creation, not only in the field of opera, but also in other artistic fields. In this regard, it would be interesting to test if the map of indicators is valid across artistic disciplines by applying the list to different settings and making the necessary adaptations where relevant. A collaborative effort building on this initial map could result in systematic evaluations across artistic disciplines where both commonalities and divergences are considered. Moreover, the differing views on the concept of co-creation across countries and disciplines can feed current terminological debates and contribute to a shared understanding of collaborative practices in which professional artists and non-professional artists are involved. Finally, the research presented in this article can be used as inspiration for curriculum creation processes when designing the training of future professional artists.

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