Politecnico di Torino
UNIVERSITÀ DI TORINO
Dipartimento Interateneo di Scienze, Progetto e Politiche del Territorio
Eccellenza MIUR 2018-2022
ScuDo Scuola di Dottorato – Doctoral School
WHAT YOU ARE, TAKES YOU FAR
U R D PhD in Urban and Regional Development
IN VARIETATE CONCORDIA

Doctoral Dissertation
Doctoral Program in Urban and Regional Development (35th Cycle)

Analyzing cultural initiatives' effects on subjective wellbeing in urban areas.

Capitals of Culture compared through textual analysis and Machine Learning.

Cecilia MEREGHETTI
******

Supervisor(s):
Prof. Sara Bonini Baraldi, Supervisor
Prof. Carlo Salone, Co-Supervisor

Doctoral Examination Committee:
Prof. Maria Lusiani, Referee, Università Ca' Foscari
Prof. Leandro Valiati, Referee, University of Manchester
Prof. Giorgio Tavano Blessi, Member, Università IULM
Prof. Martin Piber, Member, University of Innsbruck
Prof. Sara Monaci, Member, Politecnico di Torino

Politecnico di Torino - Università degli Studi di Torino
October 20, 2023

I hereby declare that the contents and organisation of this dissertation constitute my own original work and does not compromise in any way the rights of third parties, including those relating to the security of personal data.

Cecilia Mereghetti

Turin, October 20, 2023

Summary

The purpose of this thesis is to present an analysis of the effects that urban cultural initiatives have on the subjective wellbeing of their users. The thesis opens with an introduction on the origins of the research, underlying motivations, theoretical premises, and positioning. The first chapter presents the theoretical context in which the thesis is set, namely the relationship that exists between culture and social impacts, understood as a fundamental and increasingly recognized part of development. After a brief summary of the most relevant literature — with a particular focus on the last 30 years — the chapter delves into both the principles and the main techniques of social impact assessment, concluding with an overview of the most common uses in culture. Zooming in from the contextual literature, Chapter 2 focuses on the concrete theoretical premise underlying the research, namely the concept of subjective wellbeing — a rather under-studied social impact, especially in the cultural sector. After a careful examination of the various definitions given in the literature, the chapter highlights the need to find a way to operationalize the concept of subjective wellbeing in order to study it in the specific context of an urban cultural initiative. Here I propose the acknowledgement of three dimensions to which the determinants of subjective wellbeing can be attributed, to delimit the studied concept and to link it to the characteristics of the studied initiative (urban, cultural). Chapter 3 connects this framework to the chosen case study, namely the Capitals of Culture. After introducing the program at its two considered levels (Italian and European), the narrative of the chapter focuses on the reasons for the choice, and in particular on the parallels between the program's objectives and the concept of subjective well-being. Although there is no apparent trace of this, on closer study a connection becomes clear instead. The chapter closes with an

introduction of the two cities selected for empirical analysis, Matera and Palermo. After introducing the main elements, Chapter 4 turns to methodology. In this thesis I propose a methodology based on automated textual analysis of textual content from different sources concerning CoCs: newspapers, institutional documents, and social media. The chapter briefly presents the Machine Learning techniques to be used in the analysis (topic modeling and sentiment analysis), but also the sources themselves and the data collection, cleaning, and analysis procedures. The limitations encountered in applying the method, and the solutions adopted to complete the research are also highlighted. Chapters 5 and 6 are devoted to the results of the analyses and their discussion. In sum, it appears that there is indeed an impact on the determinants of subjective wellbeing in both case studies, with some specific differences at the level of topics covered, but also in sentiment. Some such differences could be attributable to the different scales of the event (European or national). One output that emerges at this stage is the need to introduce a new dimension of wellbeing to those previously set out in the framework, including variables that can only be assessed in interaction with other people, and thus not with the instruments used in this research. In Chapter 7, among the conclusions I highlight the possibility to implement a second phase of research, field-based, in order to make up for these shortcomings. This chapter also presents the contributions of the thesis and possible future research directions.

Acknowledgment

I would like to use this space to first of all thank my supervisor, Prof. Bonini Baraldi, for overseeing my research work and for her guidance in my doctoral journey. I would also like to thank Prof. Carlo Salone, co-supervisor, for his very focused insights in dealing with topics related to geography — a subject I always found interesting, but never had the chance to study in depth.

Also crucial to the development of this thesis was Prof. Mirko Lai of the Department of Computer Science at the University of Turin, who strongly assisted the progression of the empirical part of the research work in the form of code and analysis support. In a less present but equally inspiring form were the reflections of Profs. Moreno Mancosu (University of Turin) and Luca Pareschi (University of Roma Tre) regarding usable software and actual textual analysis possibilities (especially on social media).

I am also especially grateful to my colleagues and friends Francesca and Carlotta for the continuous constructive exchange and their support in the doctoral journey. Thanks also to all the other colleagues who shared with me these strange years of distance and experimentation, which have marked our path in such a deep manner.

On a personal note, I would like to thank my partner, Matteo, for the unyielding support and patience, as well as my “sisters-in-life”, Serena and Annick, for the tenacious belief that this journey would come to a positive close.

To my grandfather

Contents

List of Figures

List of Tables

Introduction

The influence of cultural programs and policies on the development of urban systems goes well beyond the economic or tourism-related returns (Sacco et al., 2019; Nagy, 2018; Németh, 2016; Partal & Dunphy, 2016). Especially since the adoption of the sustainable development paradigm that promoted the acknowledgement and study of social and environmental impacts together with the economic ones (Brundtland Report, 1987), the centrality of social sphere has become more and more explicit (Esteves et al., 2012; Partal & Dunphy, 2016; Vanclay, 2003, 2020). An integral part of social development is represented by the wellbeing of people and communities (Vanclay, 2003). The concept of subjective wellbeing has been introduced primarily as a way of understanding how and why individuals thrive and self-actualize, what variables can influence their quality of life and their satisfaction with it, and how to determine this influence (Diener, 1984; Larsen & Eid, 2008; Seligman, 2010). A high perception of subjective wellbeing implies a healthy social environment, with the potential of being a catalyst for positive social impacts. Subjective wellbeing is, therefore, a vital social variable of sustainable development.

Culture is seen almost universally as a potential driver for development (Jagodzińska et al., 2015; UNESCO, 2019). Many authors have argued the necessity of culture and cultural activities for sustainable development (Jagodzińska et al., 2015; Throsby, 2017), at various scales (e.g., regional, urban, etc.). If we accept culture impacts in various ways on development, then we must consider it's impacts also on the social dimension (Belfiore, 2002; Stern & Seifert, 2009; Stevenson, 2004). In particular, in recent literature it has been hypothesized that culture can affect the level of wellbeing of people living in particularly relevant cultural areas (Blessi et al., 2016; Grossi et al., 2012).

The present PhD research aims at assessing the impact of a cultural initiative on the subjective wellbeing of people (hereby intended as users – including citizens and local stakeholders), as part of a strategic sustainable development.

In designing this study, the ground assumption is the existence of a relation between cultural initiatives and subjective wellbeing, measurable through the

analysis of selected determinants, deemed suitable in the definition of such a complex concept.

The main objective of the thesis is to investigate concept of subjective wellbeing related to a cultural initiative in urban context and measure it with respect to its participants and host communities. The initial research question of this study recited: “Does the cultural initiatives have impacts on the subjective wellbeing of people involved? What dimensions do they affect?”. Then, “How can such impacts be measured?”.

The first step was to identify a specific urban cultural initiative – to have a “trigger” for the impact assessment, a specific context (the city) and to make the research questions more specific. In particular, the research focuses on the “Capitals of Culture”, an initiative that allows cities to implement for one year a set of cultural initiatives and activities to promote development and improve its position in an international perspective through the enhancement of its cultural offer. The idea is to assess the impact of Capitals of Culture (CoCs) on the subjective wellbeing of various users and stakeholders involved in its preparation and implementation. For clarity, the term “stakeholders” used in this thesis refers to its literal definition, that is all the actors that are involved at various titles in the initiatives, those who have an interest in it (Parmar et al., 2010).

The initiative is analyzed at two scales, European (“European Capitals of Culture”, ECoC) and Italian (“Italian Capitals of Culture”, ICoC). In this case, the specific research questions read: “What (if any) are the impacts of the CoC initiative on subjective wellbeing?”. More specifically, I have selected two specific cities as case studies: Matera (European capital of Culture in 2019) and Palermo (Italian Capital of Culture in 2018)

Once the object of the research has been set, it’s time to introduce the methods of analysis. Considering the relative partiality of traditional methods in capturing all the facets of subjective wellbeing (the emotional perspective above everything else) (Pavot, 2008) and the current availability of various technological and digital resources, I have opted for the introduction of an experimental method of analysis.

The methodology presented in this research is based on analyzing written digital content – texts of different lengths, origin, purposes – with automated techniques. The purpose is to analyze language – syntax, use of words, topics, and sentiment – to intercept the ideas, the mood and the intent of the authors/users

involved at various capacity in the CoCs. The idea is to collect and analyze solicited and unsolicited written digital content produced by different stakeholders, which will be analyzed (mostly) with topic modelling and sentiment analysis, together with other Natural Language Processing (NLP) and Machine Learning (ML) techniques. The main sources identified for the research are social media posts and comments, newspaper articles and the official institutional documentation of the initiative. The aim is that of capturing and understanding the effects of the initiative on the subjective wellbeing of its users as it is perceived (and then expressed through the texts) by the different stakeholders - directly from their own "voice".

To simplify, topic modeling (and other linguistic analyses) returns a categorization of words (Di Maggio et al., 2013; Ferri et al., 2018) that can be used to identify the presence of determinants of subjective wellbeing as a target of the initiative, while sentiment analysis returns the emotional state of the author of the text and its perception and opinion on the topics expressed (Liu, 2012; Mencarini et al, 2019). It is a sort of "Discourse analysis 2.0", going in an innovative direction thanks to the use of sophisticated data analytics techniques – as also required by the EU guidelines for 2020-2033 (European Commission, 2018).

For the objective of the work, the analysis is most effective on social media data (as it is the direct, unfiltered expression of people's perceptions) but used also on the other sources allows to obtain a deeper knowledge of the local dynamics and information on the context.

Two outputs may come from the present research, one conceptual and one methodological. The first output of the research is, of course, to contribute to the literature on urban development, particularly with respect to the gap in the field of cultural impacts on subjective wellbeing. An analytical framework built to tie together the definitions and determinants of subjective wellbeing expressed across different disciplines can contribute to operationalize the concept of wellbeing in urban contexts and input to the discussion. The research also explicitly intends to add to the discourse on programs such as the Capitals of Culture by bringing innovation in the methods of analysis. The implementation of a new methodology combining advanced data analytics and context analysis may provide insight into the use of new technologies and innovative tools for this type of research.

A second output is the proposal of an alternative evaluation model for the social impact assessment of policies and programs in general – cultural, among others. The model relies heavily on the methodology proposed in this research, combining unorthodox data and techniques of analysis (textual analytics based on Machine Learning algorithms), but it will need to be integrated with traditional methods of social research (e.g., interviews, surveys, and focus groups) in a potential further development. The model, once validated, should be flexible enough to be modified and applied to any initiative implemented in a city, in a wide range of fields (culture, sports, urban revitalization, urban design, etc.) and assumed to produce impact on the life of citizens and foster development.

To conclude, a note on positioning. This research — and myself as a researcher — sits somewhat in the middle of two disciplinary areas: on the one hand, the intention to test a new methodology for the study of cultural initiatives, trying to combine knowledge and research in the cultural field with the use of data-driven innovation. On the other, the curiosity to apply Machine Learning techniques and in general, a data science approach to an as-of-yet unexplored field, that of culture and the effects of cultural activities on people. The (hopefully) innovative attempt to bring these two worlds together and reconcile them was the basis of this research project, with all its difficulties and limitations. Despite the obstacles faced while developing this project, I remain convinced that this is an extremely fertile field and one that can be explored more and with greater satisfaction by involving more and more practitioners and researchers in experimenting with new techniques applied to the cultural field. Lev Manovich (2016, 2020) coined the term cultural analytics precisely to name a space for the interweaving disciplines of culture and data-driven analysis and visualization. Although extremely specific in its beginnings, such definition has created a space for such potential interconnections between traditionally distant knowledge areas, making it visible and real at the academic level. Although Manovich states that the mere use of social media as a tool and source of data would not be enough to talk about cultural analytics (Manovich, 2020), I believe that this type of data, properly contextualized and integrated, can actually be used not only to assess the effect of specific cultural events and initiatives, but of cultural policies more in general. This is because the analysis of social media is not an end in and of itself but is instrumental to the needs of the cultural sector. The use of real-time, big data such as those extrapolated from social media is intended to integrate other data to study in detail all facets of an event or cultural policy, in their effect on users and people more generally.

Studying the impacts of cultural initiatives and policies from micro-data (users' perceptions via social media in the specific case of this thesis, but there may be many other applications of this concept) may be a new research frontier to be explored. In this case, a knowledge and application of data-driven tools and approaches may prove to be crucial in order to research and explore new variables and goals, and to be able to conceive as potential sources of data elements that so far would not even be considered.

Chapter 1

Culture, development, and social impacts

This chapter introduces the topic of the social impacts of culture, in which this thesis is positioned. The chapter opens with a brief introduction to concept of sustainable development and the role that culture has (and has had in the past) in shaping sustainable development strategies in various territories, especially in cities.

After an overview of the main bibliographical references on the relationship between culture and development, with a special focus on the ever-growing interest regarding the social dimension, the chapter outlines what social impacts have been highlighted in the literature over the decades.

A brief, but comprehensive discussion of the main techniques for evaluating social impacts returns the complexity of the definition and the problematic nature of finding a method that works in different contexts. This difficulty is then presented in the specific case of the cultural sector, with its critical issues and successful attempts.

The chapter ends with a conclusive overview of the state of the art of research and potential new developments, such as studying impacts from the perceptions of individuals, which serves as a backdoor introduction for the main theme of this work - subjective wellbeing, directly linked with perception - that will be presented in Chapter 2.

1.1 Culture and sustainable (urban) development

Development is one of the most researched and studied topics in urban studies (Partal & Dunphy, 2016). In recent years, the attention to sustainable forms of development has been at the center of programs at the local, national, and international level-by both scholars and practitioners. Sustainable development has been approached and defined in many ways and from different perspectives (Esteves et al., 2012). One view that has emerged over time is the necessity to not just look at the economic and monetary components of development – returns on investment, direct/indirect benefits, and repercussions – but also to consider the social aspects and variables involved (Esteves et al., 2012; Partal & Dunphy, 2016).

If historically economic convenience has been the first principle to be pursued in development (Edwards et al., 2012), over the years – and thanks to international efforts – attention has shifted to other types of resources other than monetary ones (Esteves et al., 2012). Just as there has been a gradual increase in collective awareness of these issues, the choices made by decision-makers have led to a shift in attention from the mere pursuit of profit and growth to a focus on the needs and issues of civil society (social, environmental) and a broader vision of development (Esteves et al., 2012; Partal & Dunphy, 2016).

The 1970s saw the debate on capitalism open and the status quo challenged. These were the years that marked the need for a change in perspective, and that have led to the major international conferences and conventions that set the course for the future of the planet (e g., the Brundtland Report, 1987). Even earlier, beginning in the 1960s, an initial attempt to shift the attention from the economy to society and the environment was in the air, and people began to talk about the effects of projects and policies also in terms of benefits or drawbacks for communities (Esteves et al., 2012; Partal & Dunphy, 2016; Vanclay, 2003).

Consequently, development strategies that aim to be sustainable should be harmonious (Chang-ming, 2002; Silvestri, 2015), that is all the components of the context (economy, environment, society) must be considered, and balance must be obtained among their needs and actors must play accordingly to their characteristics – as it happens in humans (Freud A., 1936; Lowen, 1965; Maslow, 1954).

1.1.1 What does culture have to do with development?

Many authors have studied the role of culture in the development of cities (Bertacchini & Santagata, 2012; Blessi et al., 2016; Evans, 2005; Florida, 2002; Pratt, 2010, 2014; Sacco et al., 2014, 2019; Throsby, 2017). The literature and the practice of the sector have seen a first major contribution since the mid-80s, with initiatives and studies focused on tourism and its economic potential, especially in urban contexts. Especially in European countries, the debate followed a major increase in public investments in cultural activities and justifying them to the public opinion and investors became one of the main concerns (Belfiore, 2002). It was for instance in this period that initiatives such as the ECoC program (1985) were born, which aimed at the growth and regeneration of selected cities based on large investments linked to cultural and tourist activities (Bolan et al., 2016; Langen & Garcia, 2009). Over the years, initiatives of this type have multiplied, saturating the scene (transformed in a "market" of sorts) and specializing to the extreme (e.g., cities of design, cinema, fashion, etc.).

The attention to culture as a driver for local economies continued well into the new millennium, also supported by the literature of the period. With the introduction of the concept of culture to the debate on sustainability (World Commission on Culture and Development, 1995), the perspective on the development of urban systems through cultural activities has broadened (Bandarin et al., 2011). For many years now, culture has been seen as a potential driver for the sustainable development of cities. Many authors over the years have focused on culture-based development, emphasizing the idea that culture, understood as a set of cultural activities, cultural vibrancy (Blessi et al., 2016), but also the presence of cultural and creative industries, is important for the all-round development of urban systems (Bertacchini & Santagata, 2012; Sacco et al., 2019; Throsby, 2010, 2017).

Throsby has focused much of his research on the relationship between economy and culture (1995), asserting that a framework integrating both areas – practically and conceptually – could be strategically significant for sustainable development (2017).

Scott (1997) has explained how cities are the ideal (and at times the only possible) place for the development of culture and creative activities, as a practical crossroads of places of production, clusters of expertise, potential for

distribution to global markets, and a privileged location for positive spillovers — up to the definition of the concept of "cognitive capitalism" (2008).

Florida (2002) underlines how places – cities, in particular – scarce in "creative capital" miss out on a considerable amount of income and opportunities necessary for the growth of the place itself. Artists, creative industries and workers in the sector, cultural liveliness can therefore be considered key elements for the development of a city.

Santagata also painted a similar scenario in his works (2009), theorizing that when a critical mass of cultural activities, industries and relationships between creative actors is reached (a so-called "creative critical mass"), the latent creative atmosphere of a city activates to become a development driver, generating positive economic, social and symbolic impacts (Bertacchini & Santagata, 2012).

Another well-researched topic is the conceptualization of culture as a transformative force (Blessi et al., 2016), elaborated in several other studies on the development of urban areas (Evans, 2005; Pratt, 2010, 2014; Throsby, 1995, 2010, 2017) – especially those related to the recovery of abandoned areas and urban regeneration (Bailey et al., 2004). In many cases, scholars of culture-based regeneration made the example of large-scale cultural initiatives (Langen & Garcia, 2009) – a festival (Arcodia & Whitford, 2006; Van Aalst & Van Melik, 2012), a European (Anderson & Holden, 2008; Connolly, 2013) or national (Cox & O'Brien, 2012) program – as instruments for a new form of development in the involved area (Boland et al., 2019) than it previously experienced. The regenerative potential of culture has been a constant topic in the international debate also outside of academic contexts, with a distinct positive outlook pushed forward by practitioners, planners and, particularly, politicians (Bianchini, 2013; Zhong, 2013; Grodach, 2013).

However, despite the recognition of culture as a potential key to development over the years (Rota & Salone, 2014), the actual effects of cultural projects' implementation for urban regeneration were met with growing skepticism (Grodach, 2013). After an initial phase of enthusiasm and consequent spread of success stories, many authors have started highlighting issues and failures of cultural projects and initiatives in determining lasting changes to the areas they involved (Grodach, 2013). The critiques to the role of culture in the sustainable development – and, mostly, their power of sparking urban regeneration (Zhong, 2013; Grodach, 2013; Rota & Salone, 2014; Salone et al., 2017) – are based on

three main weak points. The first is that, in general, the existence of actual positive (or negative) outcomes to be linked directly to culture-based regeneration projects is hard to detect, measure and debate (Grodach, 2013; Zhong, 2013). The issues presented by different authors, especially in the past decade, have mostly to do with a perceived "discrepancy" (Bonini Baraldi et al., 2019) between the objectives of a culture-based regeneration project and its effects. Physical changes, image enhancement, economic returns and social change can all be considered results of cultural projects for urban regeneration (Bianchini, 2013; Grodach, 2013; Rota & Salone, 2014). These results can sometimes be seen – for instance, improvements in the overall image of a city can be detected by analyzing tourist or visitor numbers, or the presence of new, culture-based activities opened can be a proxy for economic transformation. In other cases, intangible results (for example, the cultural liveliness of the city, or profound changes in the social fabric) are often deemed almost impossible to measure and link directly to a specific intervention or project (cit.). In the case of some empirical studies, no visible result can be traced back fully to the process (Zhong, 2013).

A second point is the skewedness in the distribution of benefits (if any) generated on the urban area (Grodach, 2013). In the case of economic activities, the point is to determine whether positive returns – for instance, the creation of new, culture-based activities – help support the productive tissue of the city and its inhabitants. (Grodach, 2013). As for social change, while many projects claim to be aimed at inclusion and more cultural participation by locals and marginalized communities, some authors argue that the changes to the urban tissue made by cultural projects actually led to the contrary, negative effects – exclusion, marginalization, gentrification (Bianchini, 2013; González & Guadiana, 2013; Grodach, 2013; Rota & Salone, 2014; Sacco et al., 2019). In a disenchanted manner, Pratt (2010; 2014) argues that neither policy makers nor residents should approach the use of culture and creativity for development without knowing and accepting risks and challenges.

Finally, some authors debate that the widespread idea that culture-based projects for urban regeneration are themselves enough for the development (economic, social, physical) of cities is just too simplistic (Grodach, 2013), and mostly disentangled from the real necessities of residents, visitors, and other users. The context and its characteristics are often not considered in planning and implementing cultural projects for development, without a real understanding of potential success or failure factors embedded in the area (Bianchini, 2013; Grodach, 2013). Culture is somehow made shallow, emptied of its link to the

urban system and merely used as a means to an end (Salone et al., 2017; Zhong, 2013) – which leads to the reuse of virtually the same models for urban regeneration repeatedly, instead of trying to understand the real necessities of each context and playing to is specific strengths (Grodach, 2013).

Despite the controversies, it is clear that the topic is still considered relevant, especially in a constantly evolving world that deals with crises – economic, social, environmental – at an alarming rate. It is argued that culture, the "4th pillar" of sustainable development (Grodach, 2013) should be harnessed in a deep, strategic way, considering the urban system as a whole – space, economy, people, buildings – and planning should be conceived accordingly, for the benefit of all (Bianchini, 2013; Bonini Baraldi et al., 2019).

1.1.2 Culture and the social dimension of development

The number of studies researching the effects of culture on different aspects of social life – participation, inclusion, cohesion (Sacco et al., 2019; Nagy, 2018; Németh, 2016), to name a few – has increased drastically especially in the past two decades (Partal & Dunphy, 2016). Engagement of the most disadvantaged communities and individuals through cultural participation is not a new concept (Belfiore & Bennet, 2010; Nakagawa, 2010; Stern & Seifert, 2009), but in time it has gained more attention as more virtuous examples appeared. International attention to cultural projects and programs and their social function (Blessi et al., 2016; Rayman-Bacchus & Radavoi, 2019; Saayman & Saayman, 2004) has grown over time as well.

In 2015, the Cultural Heritage Counts for Europe (from now on CHCfE) project[1] published its final report (Jagodzińska et al., 2015) highlighting the

[1] "Cultural Heritage Counts for Europe" is a two-year project, supported by the EU Culture Programme (2007-2013). It was launched in July 2013 by a consortium of six partners: Europa Nostra (acting as project coordinator), ENCATC (the European Network on Cultural Management and Cultural Policy Education), Heritage Europe (the European Association of Historic Towns and Regions), the International Cultural Centre (Krakow, Poland) and the Raymond Lemaire International Centre for Conservation at the University of Leuven (Belgium) – plus The Heritage Alliance (England, UK) as an associate partner. For details, see: https://www.europanostra.org/our-work/policy/cultural-heritage-counts-europe/

importance of finding holistic ways to study the different sides of sustainable development. While the study focuses mostly on the impacts of preserving and enhancing cultural heritage, great importance has been also given to the relationship between culture and social variables in a sustainable development perspective (Figure 1).

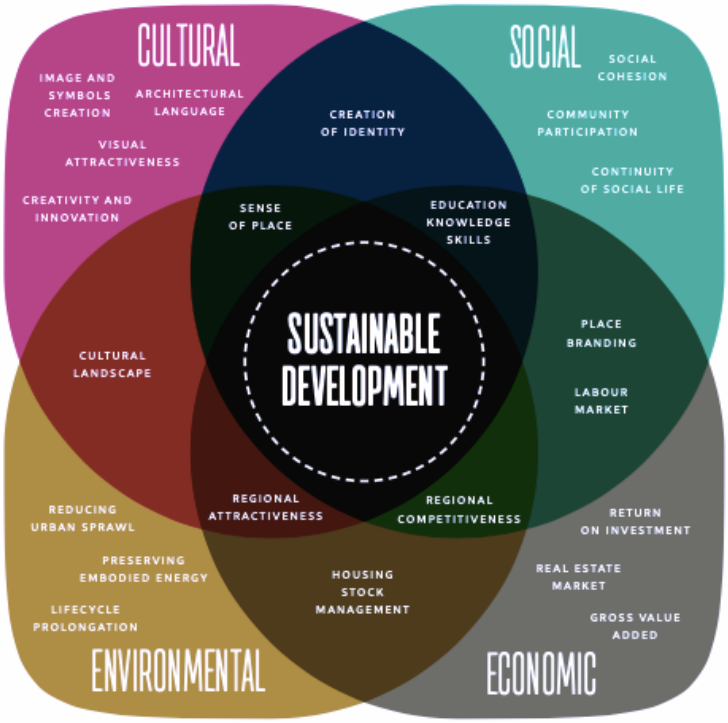

Figure 1. Subdomains of sustainable development (source: CHCfE – Jagodzińska et al., 2015).

Another example of international interest is the UNESCO 2030 Cultural Indicators Report (2019) which reiterates the importance of identifying, evaluating, and measuring the impacts of culture on society and communities for the future. The report groups the roles and potential contributions of culture and cultural activities to sustainable development in four main thematic spheres, based on the Sustainable Development Goals (SDGs) for 2030 (Figure 2). This explicit link between the impacts of culture and SDGs states unequivocally that culture is expected to have a relevant impact on sustainable development, and on the social dimension as well.

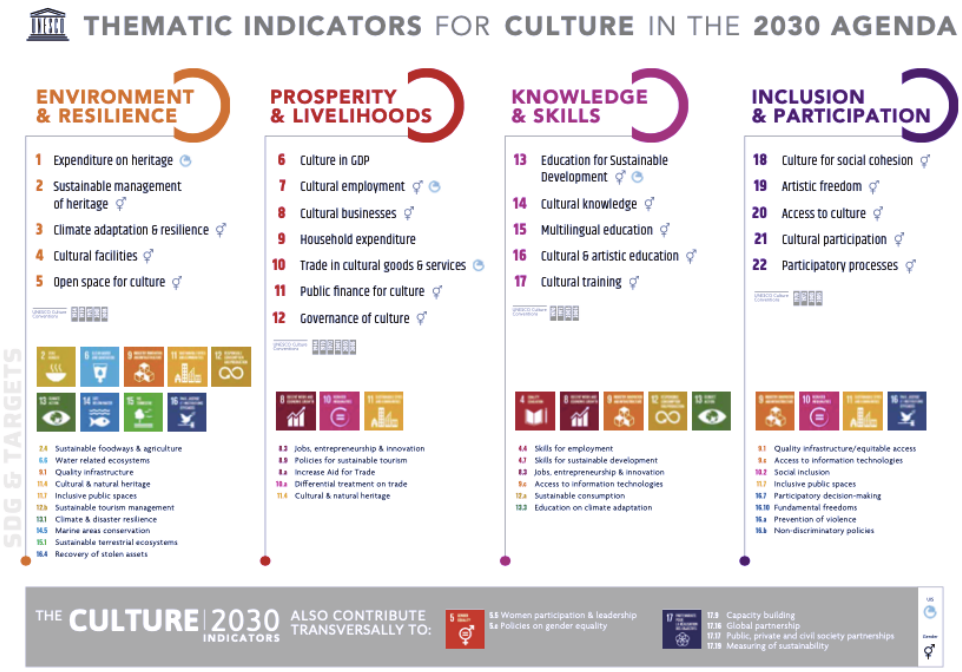

Figure 2. Representation of the thematic spheres and indicators impacted by culture linked to the Sustainable Development Goals (source: UNESCO, 2019).

In particular, Sphere 2, "Prosperity and Livelihood" is based on SDGs 8 ("Decent work and economic growth"), 10 ("Reduced inequalities") and 11 ("Sustainable cities and communities") and is expected to focus more on inclusive strategies for distribution of goods and services, participation, and creation of strong communities. Sphere 4, "Inclusion and Participation" is based on SDGs 9 ("Industry, innovation and infrastructure"), 10, 11 and 16 ("Peace, justice and strong institutions"), and it is expected to focus on giving people the opportunity to participate in the cultural life of their area, as well as studying the ways in which culture contributes to social inclusion. Particularly interesting the present research is SDG 11, focusing on sustainable cities and communities, and how culture can, in fact, become major actor not just in economic terms, but also in a socially sustainable perspective.

In the perspective so far presented, the long-term objective seems to be a culture-led development (Throsby, 2017) both sustainable and aware of the importance of the social impacts on citizens, leading to the harmonious development of communities and their urban contexts (Silvestri, 2015). However,

there is still need to learn how to determine, define and measure these impacts, and it is no simple task.

1.2 Social impacts

1.2.1 What are social impacts and why they matter

The term "social impact" concerns the consequences and effects of human activities on society and the community existing in the context of reference (Partal & Dunphy, 2016; Vanclay, 2003). These are effects linked to the individual and collective sphere, which refer to the conditions of life and interaction among individuals, visible (e.g., commuting conditions, availability of services) or invisible (e.g., the change of some habits or norms of behavior) of the community that is "touched" by the decision or action taken (Vanclay, 2020).

Since their first introduction in 1969 (NEPA), social impacts (SI) have been defined in different ways, as our understanding of them has developed over the decades. As it stands, the literature considers impacts on humans and communities at different levels. Social impacts include effects on the norms, beliefs and values of a community (Burdge & Vanclay, 1995), as well as, more broadly, all "the consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society" (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1994, p. 2).

As many scholars and practitioners tried to give a precise and complete definition of what SIs are, Vanclay's explanation (2003) is one of the most authoritative ones. In the "International Principles for Social Impact Assessment" (2003), the author lists the SIA principles and the dimensions to be investigated, as a set of up-to-date international guidelines and makes a point to steer the discussion to monitor the consequences (both wanted and unintended) of planned interventions – public and private – on society, namely the communities involved in said interventions (Partal & Dunphy, 2016; Vanclay, 2003). The list of dimensions included in the guidelines is represented in Figure 3.

Figure 3. Dimensions related to social impacts (source: author's own elaboration based on Vanclay, 2003).

Figure 3 shows the main dimensions that are affected by social impacts. In fact, Vanclay (2003) identifies social impacts with "changes" to one or more of the mentioned areas, defined as follows. People's "way of life" refers to the way in which people in a certain context live and interact, their habits, their daily dynamics. The "culture" dimension refers to a generic sphere that includes people's shared customs, beliefs, values, and linguistic peculiarities. In this case, the term does not overlap with the concept of "culture" linked to artistic expressions, heritage and cultural events. The "community" sphere refers to the social cohesion and stability including the presence of public services and availability of infrastructure. The "political system" refers to the level of democratization of the society, as well as the level of participation of people in the decisions that affect them – including the number of resources available and how they are used. "Environment" refers to the living context of the people, meaning the general quality of air, water, and food, as well as the general conditions in which people live – noise, risk hazard, sanitation levels, physical safety and so on. The sphere of "health and wellbeing" refers to the people's state of physical, mental, and spiritual soundness, but also wellbeing in terms of social ties and relationships with the context. "Personal and property rights" refers to the way people are economically affected (property), but also the way they experience advantages or disadvantages with respect to their civil rights (personal). Finally, the "fears and aspirations" sphere refers to the people's own perception about

their overall conditions, especially their health, safety, and their future and that of future generations.

The analysis of changes in one or more of these dimensions are central in the analysis of social impacts. The list of dimensions is constantly updated, as we continue to increase our understanding of social impacts and more scenarios develop throughout the world (Arce-Gomez et al., 2015; Vanclay, 2020).

1.2.2 Social impact assessment: definition and uses

Retaining the broad definition of social impacts, social impact assessment (SIA) has been defined as "the process of identifying the future consequences of a current or proposed action which are related to individuals, organizations and social macro-systems" (Becker, 2001, p. 312). A more specific definition of SIA is once again given by Vanclay (2003, p. 5):

> "Social Impact Assessment includes the processes of analysing, monitoring, and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment".

Social impact assessments were first developed in the US, with the introduction of the National Environmental Policy Act (NEPA) in 1969. With that statement, the government introduced a series of mandatory documents for companies involved in actions affecting the "quality of the human environment" (NEPA, 1969). The definition of SIAs emerged in that context, as a response to the imposed requirements, attempting to capture the effects of environmentally impactful activities on the lives and activities of people in the area involved (Esteves et al., 2012; Vanclay, 2003).

Over the years, as the practice of SIAs grew and was commonly adopted around the world, three main uses emerged. Firstly, SIAs can be used to predict the outcome of a decision (Partal & Dunphy, 2016). In this case, an a priori

investigation is performed to determine what the potential effects of a decision, or project, would be if it were undertaken (Becker, 2001; Vanclay, 2020). This use of SIAs is useful for support in decision-making processes at different levels (private, public) and at different scales (local, national, transnational) (Becker, 2001; Cashmore, et al., 2009).

A second use is, on the contrary, related to the monitoring of actions already taken (Partal & Dunphy, 2016). In this case it is a question of verifying what (and how many and of what type) effects have been produced by a decision carried out some time earlier (Becker, 2001). It is therefore an *ex-post* evaluation, but monitoring can also take place after the decision, but with the project/action still in progress (Vanclay, 2020).

A third use is to justify decisions and use of resources (Partal & Dunphy, 2016), though it is somehow subordinate to the other two. In this case, SIA outcomes are used to justify decisions made by the management or by the policymaker, particularly in the case of great investments. This use mainly tends to stress the presence of positive impacts of the actions and projects carried out and is commonly used to justify the existence or continuation of funding for that same type of action or policy (Belfiore, 2002, 2015).

Just as there are different uses of SIAs, there are also different measurement methodologies (Cashmore, et al., 2009). These, as anticipated, involve determining the impacts – potential or actual – in some way, with an evaluation that is quantitative in most cases (Edwards et al., 2012). The method of measurement and the variables to be considered for the calculation depend, however, on the type of impact being investigated.

According to the literature, most impact measurements pass through a numerical transformation (Miller et al., 2007). In quantitative social impact assessment studies, the key step is to find a way to quantify the impact of the decision and subsequent action (Cloquell-Ballester et al., 2006; Edwards et al., 2012). Qualitative social impact studies, on the other hand, rely on the information gathered through the response of specific interlocutors, that is through the analysis of the context, surveys, interviews, and observation (Rao & Woolcock, 2003). In this regard, it is important to specify that impact measurement can serve several purposes, which in turn determine how the impact is defined and measured, as well as the specific context of the investigation and its

motivations. Different objectives and contexts will determine the use of different measurement methods.

1.2.3 Quantitative methods for SIA

Quantitative methods are those that rely on precise measurements through monetary or discrete numbers and transformations. They are based on formulas and parameters, and are generally considered more objective, and their results more robust (Garbarino & Holland, 2009). In the context of SIAs some specific methods have emerged as more efficient and proficient than others, and the relative literature has grown over the decades. Below, a selection of the most frequently used techniques, their functioning, strengths, and weaknesses.

In general, these techniques established themselves for their potential to measure impacts, but also for some appreciated common features. In particular, the conciseness, interpretability, and adaptability of the tools are appreciated, but also the fact that each can be supplemented with more (qualitative) information where needed (Rao & Woolcock, 2003). It is also true, however, that in general these techniques have given rise to heated debates centered on their weaknesses.

One the main strengths of the techniques presented so far is the possibility of directly knowing the preferences and perceptions of the people involved with respect to the activity under analysis (Adamowicz et al., 1998), in a concise way. The ability to synthesize the value that people attribute to different alternatives of the same activity ideally makes the result immediate and linear (Carson & Hanemann, 2005).

The second main positive feature is that of interpretability. A well-designed and clearly formulated survey allows an easy and immediate the interpretation of responses, and consequently the results are clear (Kitchenham & Pfleeger, 2002). The more explicit the questionnaire is in its wording and phrasing, the less complex the measure will be (Yin, 2003).

A third crucial point is adaptability. These methods can be found in the literature of very different disciplinary fields, which means that they are tools that can be easily adapted to different contexts to identify the social impact of very different activities (Carson et al., 2001).

1.2.2.1 Contingent Valuation Method

The most widely used technique for conducting SIAs is Contingent Valuation (CV). This methodology consists of investigating the preferences of the target community through the administration of a survey. Based on the answers to the questions posed it is possible to understand the preferences and perceptions of those involved with respect to the activity or project being evaluated. The respondents in this way declare their point of view – for this reason this technique is based on the so-called "stated preferences method" (Adamowicz et al., 1998; Carson & Hanemann, 2005). To measure the impact of the activity, CV assigns a monetary value to the preferences of the subjects subjected to the survey, to obtain a finite value at the end. To monetize preferences, it is necessary to ask the survey questions in explicit terms, to determine the value a subject gives to an alternative A versus an alternative B (Portney, 1994).

A key concept for this type of analysis is that of "Willingness to pay" (WTP), that is the maximum price a user is willing to pay to have access to a product or service (Yang & Lam, 2020). In the case of CV, we can often use WTP to estimate how much a subject would be willing to spend to access an option A rather than an option B (Portney, 1994; Thompson et al., 2002), and from that, estimate the importance it has for the user and its potential impact. The concept of WTP is fundamental to CV, as it allows the analyst to attribute a value to the preferences of the subjects involved and to compare them (Thompson et al., 2002). Studies supporting the use of CV stress that monetization done in this way allows, at the end of the analysis, to obtain a number, that is quantify the impact and make an informed decision based on that impact (Portney, 1994; Carson & Hanemann, 2005). In general, CV allows the decision-maker to consider the overall value attributable to a good or service, and not just the economic value (Carson et al., 2001; Portney, 1994). In this way, it is also possible to measure passive-use value (or existence value), the intrinsic value of the good or service in question, that is the value we attribute to it simply because it exists (Carson & Hanemann, 2005). However, to retain and measure the passive-use value of something is complex, and not always the result is complete, truthful, and reliable (Carson & Hanemann, 2005; Throsby, 2003).

CV has been one of the most widely used tools in SIAs over the years. In particular, the literature on the topic experienced a golden period between the mid-1990s and early 2000s, with dozens of studies investigating the use of this method for SIAs – and in some cases, of their actual usefulness (Diamond & Hausman, 1994). Some authors appear to be fiercely critical of the method, highlighting some issues that still seem to have no solution (Diamond and Hausman, 1994; Hausman, 2012).

A first, fundamental criticality is the dependence on monetization. The evaluation of social impact as it has been presented up to now is based on the transformation of the preferences and perceptions of the subjects involved into monetary values, which, however, by their very nature cannot render the real and subjective value of the good in question (Diamond & Hausman, 1994; Throsby, 2003). This point is closely linked to the difficulty of identifying and analyzing the passive-use value, which is often the variable that retains the most information about the preferences and values of a society/community (Carson et al., 2001). Focusing on the monetary value of preferences loses the intangible component of impact (Diamond & Hausman, 1994), made up of perceptions, feelings, and the strictly personal sphere, which often cannot be fully communicated in a survey, much less with a number.

A second weakness of this type of evaluation is that surveys are subject to different types of bias. A first bias concerns the nature of the survey itself. When a survey is designed, the researcher already has in mind what information he or she wants to obtain, so the questions will be constructed to maximize the likelihood of obtaining an answer appropriate to their purposes (Kitchenham & Pfleeger, 2002; Martin, 2006). In this way, however, the analyst will inevitably influence the respondent, who will be directed in their response to follow a precise pattern and provide a precise piece of information. Doing so alters the spontaneity of the response, and the analyst loses the ability to notice emerging trends that might be relevant to the study.

A second type of bias specific to SIAs is specific to the Willingness to Pay estimation (Carson et al., 2001; Diamond & Hausman, 1994; Hausman, 2012). In the construction of the survey/interview, the researcher gives an a priori estimation of the costs of the event, to present the interviewee with options (Diamond and Hausman, 1994). By doing so, the researcher involuntarily influences the subject of the survey, who is not given the possibility to answer “freely” to the question of how much they would be willing to pay for that (maybe

hypothetical) event/action (Portney, 1994). It is to be noted that this practice is done to help the interviewee in answering the question, as they may not have an opinion on the matter at the moment of the data collection (Hausman, 2012). It is a trade-off; one the practitioner must be aware of, to obtain reliable and useable information.

1.2.2.2 Triple Bottom Line Approach

Another technique for SIA is the Triple Bottom Line Approach (TBL) (Miller et al., 2007). Born within the world of corporate performance measurement, the TBL is a well-established accounting methodology (Slaper & Hall, 2011) that takes into consideration the dimensions of sustainable development (Jamali, 2006). Partly embracing the new values, partly complying to international dictates and public opinion (Partal & Dunphy, 2016; Rawhouser et al., 2019), companies have developed a method of assessing the sustainability of their performance based on three pillars: Profit, People, Planet (Slaper & Hall, 2011). TBL takes these three areas and analyzes the company's operations based on the impacts generated in each area. The result is a balance sheet, for which the result between the company's total costs and revenues must consider the costs and revenues of each area, thus contingently measuring the impacts (positive and negative) for each activity on the different spheres of sustainability. The three pillars are strongly interconnected (Svensson et al., 2018), as is in the very definition of sustainability. This technique would allow to consider all three simultaneously, and to consider all areas as equally important, each one both for the others and for the result. In particular, the proponents of this technique are convinced that by monitoring social and environmental impacts and intervening where necessary to improve performance – i.e., maximizing positive impacts and minimizing negative ones – in those areas, will also lead to an improvement in financial and economic aspects and in the achievement of the organization's objectives (Norman & MacDonald, 2004).

Various studies underline the validity of this method, which mainly formalizes the principles hitherto held by Corporate Social Responsibility (CSR) (Miller et al., 2007; Rawhouser et al., 2019) and aligns a "utilitarian" corporate vision with the international trend that looks beyond economic growth towards a more sustainable and equitable future (Partal & Dunphy, 2016). This method has since been exported to other sectors beyond business. Both governments and supranational bodies have made it a very important tool for reporting on public

spending, as have some NGOs and non-profit organizations (Norman & MacDonald, 2004). The TBL method has also been adopted in the field of empirical research, particularly in the impact assessment of events and tourism (Wise, 2016). In this case, it has been used primarily for the measurement of social impacts, which are the most difficult to frame even from the point of view of standard indicators.

Despite the general approval that TBL has received since it was first enunciated, several issues have been raised over the years and in different contexts. A first criticism is related to the fact that, in truth, TBL is nothing new (Norman & MacDonald, 2004). Social and environmental impacts were already considered in the concept of CSR (Rawhouser et al., 2019), and that it was already clear and evident that companies cannot think only of profit without any other concern if they want to expand their market and their growth margins – they must somehow justify their actions to shareholders, but also to governments, consumers, and the external context (Norman & MacDonald, 2004).

A second criticism concerns the practical aspect of the technique, which is often considered too vague in its implementation. The main problem is the lack of a standardized measure or formula to calculate both social and environmental impacts, to make TBL fully operational and the results comparable across different companies and fields (Miller et al., 2007; Norman & MacDonald, 2004). As already mentioned, for social impacts there is a lack of clear and shared indicators and measures (Miller et al., 2007). Not only that, the very method of use and interpretation of those indicators is extremely fragmented and not shared, particularly regarding the terms and methods of assigning a monetary value to non-economic impacts (Throsby, 2003). For TBL this problem is fundamental, as the lack of a common vision of what social impacts are and how to measure them leads to a plurality of outcomes that cannot easily be reduced to monetary terms and are not comparable with other companies, even similar ones (Miller et al., 2007; Norman & MacDonald, 2004). This point has led to studies proposing methodologies and frameworks of analysis to overcome this impasse (Fredline et al., 2005; Rogers & Ryan, 2001), but there still seems to be no standard in this sense.

Lastly, at the theoretical level, the relationship between the three pillars of the framework is not clear - meaning how the different areas affect each other and what is the hierarchy that binds them (Svensson et al., 2018). On this point

various studies seem to differ in their reasoning, and consensus has not yet been reached.

1.2.2.3 Social Return On Investment

Developed in the same years as TBL (precisely in 1996), another widely used method for evaluating social impacts is the Social Return on Investment (SROI) (Nicholls, 2017). This tool stems from the need of social enterprises to evaluate in a rational and quantifiable way both the economic and social value produced (Lingane & Olsen, 2004; Rotheroe & Richards, 2007). In this case, we are talking about use by social enterprises or non-profit organizations (though not exclusively), for which the value generated is not intended only in terms of profits, but in a broader sense. For such organizations, a true balance sheet is generally not among the easiest reporting tools to obtain (Flockhart, 2005). We can speak of "performance sustainability measurement", but mainly in terms of social impact. Partly, this focus on social impacts aims to be a sort of justification of the role and existence of this type of organizations (Gibbon & Dey, 2011; Millar & Hall, 2013). In a broader vision, it also justifies the investment of funds (including public funds) in welfare services and activities that cannot be evaluated only in terms of monetary returns, but of positive repercussions on the community (Ali et al., 2019; Gibbon & Dey, 2011; Rotheroe & Richards, 2007).

The SROI is based on the concept that impacts have 3 main dimensions, one purely social, one purely economic and one socio-economic (Lingane & Olsen, 2004; Ali et al., 2019). To assess the performance of the enterprise, companies attribute a value in monetary terms to their non-economic results, against the investment made for the realization of their activities (Ali et al., 2019). The idea is the same as that of business ROI, that is to obtain a measure of the value generated in monetary terms for each unit of money invested by an activity and its sub-operations (Ali et al., 2019; Leck et al., 2016). This calculation, however, is based on all three dimensions listed earlier, and not just for the economic/financial area. In practice, the SROI allows companies to attribute a value in monetary terms to their non-economic results, against the investment made for the realization of their activities (Ali et al., 2019).

Also in the case of SROI, academics – but also practitioners – are divided between enthusiasts and critics, with an endless grey scale in between. On the one hand, the ability of the SROI to synthesize variables and complexity into a clear

final number makes it potentially a very valuable tool for overcoming the problem of readability of results (Lingane & Olsen, 2004). On the other hand, this synthesizing represents a risk, because one could omit relevant (non-monetizable) variables or put together values that are actually very different from each other (Ali et al., 2019) – it would be much like counting apples and pears together, obtaining a final number but losing the information of what we are counting. This happens because of the principle of monetization, which is one of the basic principles of SROl, whereby financial proxies (e.g., price) are used to calculate the value generated by the company, including extra-economic aspects (Nielsen et al., 2021). For some authors, in this way, part of the information would be lost, and the measure would move away from the real social objectives of the company (Ali et al., 2019). In part, this problem is curbed by the presence of a parallel narrative that accompanies both the drafting and reading of the SROI and explains the fundamental concepts behind the calculation (Gibbon & Dey, 2011).

A second critique, similar to the case of TBL, is the non-standardized methodology of SROI calculation (Lingane & Olsen, 2004). The SROI maintains a high degree of subjectivity in deciding which parameters and proxies to use, as well as which calculations to make and how to make them (Ryan & Lyne, 2008). The complexity of the tool has made it very interesting in the eyes of the academic community, stimulating discussion on the topic of measuring social impacts and providing the basis for the development of new methodologies.

On the practical side, the SROI is often considered too complex (Moody et al., 2015) both for those who must compile it (e.g., lack of adequate internal staff, cost- and time-consuming calculations, etc.) and for those who have to read and interpret it obtaining operational information (i.e., stakeholders at all levels, in the broad sense of the term) (Ali et al., 2019; Yates & Marra, 2017). In addition, the SROI is an accounting framework (Leck et al., 2016), a static measure that does not consider how the definition of parameters (and sustainability itself) varies over time, bringing a complexity to the calculation that would make the drafting even more difficult – though much more corresponding to reality (Nielsen et al., 2021). In sum, despite having enormous potential and widespread use, the SROI has not yet fully convinced as a tool for SIA at the international level.

1.2.4 Mixed methods for SIA

In-between quantitative and qualitative methods, we find Factor Analysis, a statistical technique that allows to identify the number and the main characteristics of the relevant "forces" at work in a given context – i.e., the variables determining the impact of an action (Suhr, 2006). Based on the premises of the analysis we can distinguish between Exploratory and Confirmatory Factor Analysis (from now on, respectively, EFA and CFA). In the case of EFA, the researcher explores the factors and dynamics among the impact variables without preconceived notions, i.e., without having an idea of what they are looking for or what they will find (Suhr, 2006). CFA, on the other hand, assumes the existence of a theory underlying the research, so the analysis will tend to confirm the researcher's starting hypothesis (Stapleton, 1997).

In practice, statistical software is used to perform the analysis, identifying the number of factors and their characteristics. In EFA, there are no constraints imposed by the human hand based on pre-existing theory, so the software has a certain degree of "freedom" in the analysis. In CFA, on the other hand, the number of factors sought is given by the researcher, linked to theirs a priori idea of which factors to seek (Hurley et al., 1997). At the base, in both cases, there is the creation of a specific questionnaire for the object of the research (Kim et al., 2015), formulated to be then analyzed with the abovementioned software. The information contained in the questionnaire undergoes a psychometric analysis to determine the impact factors as they are highlighted by the respondents (Ribeiro & Correia, 2021). It is therefore a "mixed" technique, based on an integrated methodology – qualitative (survey) and quantitative (statistical analysis).

This type of technique can have several advantages. One of these is certainly the possibility of directly integrating a qualitative methodology of data collection with a quantitative analysis (Wassler et al., 2019). In this way, it is possible to arrive at summary measurements without having to give up the complexity and richness of information (Rao & Woolcock, 2003). A second strong point is the analysis of the point of view of the respondents (Ribeiro & Correia, 2021), even if filtered through the survey.

Conversely, the literature expresses some concerns. The first issue involves the choice between EFA and CFA, which comes even before the start of the research (Schmitt, 2011). There is not one method better than the other, both can be valid tools, but it is necessary to be clear about the context and the type of

research one wants to carry out (Hurley et al., 1997). Choosing becomes critical, and the process should be based on previous work (i.e., expertise) and future goals. A second problem with this type of analysis is the difficulty in successfully setting it up (Marsh et al., 1998). There are several options regarding both the tuning (e.g., parameters, number of variables, etc.) and the instrument itself (e.g., which software and type of formula to be used, etc.) (Marsh et al., 1998; Schmitt, 2011). The difficulties also concern the correct interpretation of the results. The expertise of the researcher is fundamental (Schmitt, 2011), with respect to both the technique and the research context. Finally, it is necessary to construct the initial survey in an adequate and consistent way (Kim et al., 2015; Ribeiro & Correia, 2021), to be able to obtain exactly the answers that are needed for the analysis.

These criticalities have been the focus of heated debate (Hurley et al., 1997), especially in the mid-1990s. To this day, there is no unanimity as to which method is best to carry out the analysis, but several viable options have been presented by the literature and empirical research. It is up to the researcher to know how to choose in each specific situation (Schmitt, 2011).

1.2.5 Qualitative methods for SIA

Qualitative methods for SIA are based on the quality and depth of information collected on the "object" we are measuring. This means that the data is not synthesized into indicators, variables, or numbers, but it takes on the form of answers to questions, perceptions, and in general more complex formats (Garbarino & Holland, 2009; Rao & Woolcock, 2003).

The most used tool for qualitative SIA is the questionnaire (Ballas, 2013; Van Winkle & Woosnam, 2014). Through a few brief but precise questions, the researcher inquires the opinion and experience of a subject who has been likely to be impacted by the initiative under investigation (Kitchenham & Pfleeger, 2002; Small, 2007; Van Winkle & Woosnam, 2014). The answers of the respondent are therefore the data that provide the information required for the SIA (Kitchenham & Pfleeger, 2002; Martin, 2006). The questionnaire is built *ad hoc* for the study (Kim et al., 2015; Ribeiro & Correia, 2021). This means that researcher designs the questions based on the objective of the study (e.g., investigate the social impact of an important art exhibition in a city) and on the specific variables they

are interested in (e.g., the perceived importance of the specific exhibition for the cultural life of the city it is organized in) (Kitchenham & Pfleeger, 2002; Martin, 2006). From the answers, the researcher extracts key concepts that are then combined to derive the SIA (Ballas, 2013). It's important to remember that using qualitative methods – and the questionnaire in particular – does not exempt the researcher from knowing and identifying some of the variables and indicators that are typically associated with social impacts (Ballas, 2013). The point is that the responses to the questionnaire are not always translated to numbers or turned into quantitative proxies, but they are analyzed in their entirety.

Another extremely used qualitative method are interviews (Nunkoosing, 2005). In interviews, the researcher engages his interlocutor directly by asking him some open-ended questions. Conversely, the interviewee responds to these questions in the way he or she sees fit, with an account of their own opinion and/or experience (Alsaawi, 2014; Nunkoosing, 2005). Interviews are thus used to investigate specifically-and in depth-facts, opinions, behaviors, and reactions of one's interlocutors (Nunkoosing, 2005). Several types of interviews are distinguished in the literature: structured, unstructured, and semi-structured. What distinguishes them is the different degree of rigidity in the questions' structure – as the name suggests – from the strictest to the almost unscripted (Alsaawi, 2014). This diversity however can sometimes be deceptive to the inexperienced researcher – while it is true that in some cases greater freedom is given to follow the "natural" course of the conversation, the interviewer still follows a written script to get the answers they need (Nunkoosing, 2005).

Then there is a subset of interviews that are related to the focus groups (Alsaawi, 2014). In this type of interaction, the dynamics are more complex, as the people involved are no longer two individuals conversing, but an interviewer relates with a more or less large group of people (Alsaawi, 2014). Focus groups generally are conducted by the researcher to analyze complex issues, with a semi-structured approach (Carey & Smith, 1994). However, the responses and insights obtained are mediated by the "group effect" and the interactions participants have with each other, as well as with the researcher (Carey & Smith, 1994).

Like questionnaires, interviews are widely used despite having several limitations. A first limitation is to be found in the relationship created between researcher and interviewee(s): power dynamics inevitably influence the relationship between the questioner and the respondent – whether it is an individual or a group (Alsaawi, 2014; Nunkoosing, 2005).

The second main issue found both in survey and in interviews is, as noted, their low efficiency in terms of both time and resources needed to obtain the data (Jaidka et al., 2020). It takes time to build a relationship with an interviewee, to build a survey or take part in field activities in general. In the case of surveys, large numbers of respondents are usually required to perform relevant analyses. While for direct interaction with people there may not be a solution (and there may really not be a need for it), procedural inefficiencies in survey distribution could be overcome. This issue has been highlighted by many authors in different disciplines, but it is only in extremely recent times that technology has supplied us with a potential solution (Jaidka et al., 2020). A fairly recent strand of literature has shown how information and communications technology can convey surveys to a wider audience (with faster response times and fewer resources needed) and collect novel data through online tools and resources (Schneider & Harknett, 2022; Felderer & Blom, 2022; Iacus et al., 2020; Neuert et al., 2021). For example, scraping data available online can replace or, even better, integrate information and insights from more "traditional" methodologies (Voukelatou et al., 2021). This is the case with data obtained from social media analysis, which have rapidly taken a central place in recent qualitative and quantitative research (Iacus et al., 2020; Jaidka et al., 2020). Accessing the data directly from online resources and using powerful, intelligent algorithms to analyze it is the new frontier in academia and may be the key to overcome traditional methods (Jaidka et al., 2020; Voukelatou et al., 2021).

1.3 Social impacts of culture

We have seen earlier on that recently the main interest in studies on culture and development was represented by the social dimension (Saayman & Saayman, 2004) and in particular how culture can impact social variables, especially in urban areas. Cultural policies and interventions aimed at specific urban areas have often been used as tools for the creation of networks and participative processes (Belfiore, 2002; Stevenson, 2004, Rayman-Bacchus & Radavoi, 2019), to stimulate the dialogue and interaction among local actors and stakeholders and to engage those who are at the farthest reaches of society.

Net of all the rhetoric about heritage and heritage management (ICOMOS, 2011; Patiwael et al., 2019), if we talk about initiatives with culture at their center, two are the main branches of research that have developed over the years. The first is the evaluation of the social impacts of cultural policy, which took off since the end of the 1990s and early 2000s. In the '90s, the biggest contribution to the definition of social impacts of the arts was given by Matarasso (1997), who provided multiple examples of SIs to be found in the cultural sector, giving depth and momentum to this strand of research (Merli, 2002; Viganò & Lombardo, 2019). Since then, one of the most prolific exponents of cultural policy studies is certainly Belfiore (2002, 2004, 2009, 2015), who both on her own and with Bennet (2007, 2009, 2010) has made great contributions to the academic literature. In general, a critical approach prevails, much related to the Anglo-Saxon case (which then had a kind of spillover effect in other Western countries) (Belfiore 2002, 2004). Huge public investments in culture are justified with coveted "social impacts" (Belfiore 2002, 2004). A first critical element is the assumption that these impacts exist and that they are always present (Merli, 2002; Radbourne et al., 2010), but at the same time they are never clearly and unambiguously identified (Belfiore & Bennet, 2007; Radbourne et al., 2010). Some examples given over the years relate to impacts on education, health, crime reduction, and social cohesion (Belfiore & Bennet, 2007), but evidence of these effects is lacking (Belfiore & Bennet, 2007; Merli, 2002). A second critical element concerns precisely the impact studies, which have become numerous over time, but in many cases have proven to be inconclusive, overly biased (Belfiore, 2009; Belfiore & Bennet, 2009) or even fallacious (Merli, 2002). In general, the concept of social impacts of cultural policies has become rather flat, leading to a mere justificatory function of SIAs (Belfiore 2002, 2004; Grodach, 2013; Partal & Dunphy, 2016) and increasingly seeking a "standard" approach that, however, by the very variegated nature of culture and art, cannot stand (Belfiore & Bennet, 2010).

In contrast, the second branch of research that has developed over the years, the evaluation of cultural activities and initiatives, is a different matter. In this case, the large number of practical studies (Colombo, 2016) assumes that individual case analysis (and the application of specific methodologies) could overcome the conceptual problems associated with public policy. Within this category scholars have studied especially the impacts of events and mega-events (Arfò & Salone, 2020; Németh, 2016), although mostly from a tourism perspective (Mair et al., 2021). This is generally a more recent strand of literature,

not least because cultural events (Mair et al., 2021), festivals (Robertson et al., 2009) and mega-events (Arfò & Salone, 2020; Németh, 2016) are increasingly becoming the norm (Colombo, 2016) and are often used to attract tourism and boost the image of the area. However, in tandem with institutions viewing these events as opportunities, there is also growing resistance from local communities to the implementation of such initiatives (Mair et al., 2021). The flurry of studies on social impacts to validate one side or the other — or simply to figure out each side's motivations — can be seen as a consequence of this heated debate. Different case studies and effects of cultural initiatives on social variables were analyzed with varying methods of analysis, and with subsequent approaches.

As far as qualitative methods are concerned, the most interesting studies have relied on field research, with interviews and sometimes surveys (Ribeiro & Correia, 2021) constructed specifically with particular scales for measurement in the context of a cultural initiative, but also collaborative methods and mid- and long-term participatory techniques (Aktinson & Hammersley, 1998; Stein & Seifert, 2009). However, many studies have also focused, entirely or partly (Robertson et al., 2009), on analyzing the literature already produced (Gordon-Nesbitt & Howarth, 2019).

Regarding quantitative methods, examples of the application of techniques such as SROI (King, 2014; Ariza-Montes et al., 2021), contingent valuation (Herrero et al., 2012; Noonan, 2004; Thompson et al., 2002), and TBL (Fredline et al., 2005; Mair et al., 2021) can be found in the literature, although their results often show the necessity of integrating with other methods. Some studies, for example, have integrated the use of external databases and more institutionalized indicators with specific questionnaires (Blessi et al., 2016).

The use of CV in the cultural sector is based on the idea that culture, as a public good (Noonan, 2002, 2004; Bàez & Herrero, 2011), has certain non-use values (i.e., intangible effects) for users (Bàetz & Herrero, 2011; Bàez-Montenegro et al., 2012) — residents and tourists, in the case of events, and participants and attendees in the case of heritage. These non-use values of culture, according to the literature, have a potential to be captured by CV through surveys and in many cases additional questions on the context. Noonan (2002, 2004) has systematized all the relevant studies using CV on cultural matters up until the early 2000s, with the result of a thorough classification of such attempts. From his 2002 study, it is recognizable that most literature from the '80s focused on application of CV to historical sites, followed by arts (as a general definition),

museums and marginally others (heritage, theatre, libraries, broadcasts). There were also examples of CV used in cultural policy design (Signorello & Santagata, 1998). In Noonan's review it becomes apparent that social impacts were not particularly focused on, despite the method — possibly due to the timing of the research and the substantial lack of definition of SIs at the time of the examined cases, although CV was one of the most used methods to justify government funding of the arts in many countries (Thompson et al., 2002), as was previously explained. CV as a tool for the cultural sector was nonetheless applied to many cases in the following years. To find trace of CV applied to capture specifically (and explicitly) social impacts we need to jump forward to the 2010s, particularly focusing on the studies that consider impacts of events and cultural festivals (Herrero et al., 2012). Cultural events (and festivals in particular) are capable of generating not only economic benefits but also social benefits (Bàez & Herrero, 2011), so in the past decade authors have applied CV to different cultural and sporting events (e.g., Olympics, Football World Cup) to capture intangible effects on society — i.e., cohesion (Bàez & Herrero, 2011; Bàez-Montenegro et al., 2012), pride (Walton et al., 2008), improvement of city image (Wicker et al., 2012), etc. However, as was mentioned in previous sections, CV was also argued to not be the best suited method for capturing non-use values of cultural activities (Throsby, 2003).

TBL applications in the cultural sector have been especially useful in highlighting negative impacts on the population (e.g., lower sense of security, issues in crowd and waste management, traffic) (Fredline et al., 2005), which were typically captured at a lower level (or downright ignored) with other methods. TBL, for its own procedural nature, is also useful in proposing some specific indicators (economic, social, and environmental) to keep track of events' impacts, giving it a guideline-like appeal.

The most recent application of SIA in the cultural sector is that of SROI. Used for the assessment of diverse socially impacting cultural instances - i.e., tourism activities in UNESCO sites (Ariza-Montes et al., 2021; Vàzques et al., 2021), museums (Allpress et al., 2014; Viganò & Lombardo, 2018, 2019) and sports (Davies et al., 2019) in particular — SROI has proven to be one of the most straightforward and adaptive methods to be applied in this field. Specifically, authors praise its direct focus on social value generated by the cultural activity (Ariza-Montes et al., 2021) and its capability to quantify the evidence of social impacts (Viganò & Lombardo, 2019), which they argue is essentially uncapturable by other methods. SROI, in its procedural stages, is demonstrated to

be an effective tool to determine and quantifying social impacts, such as satisfaction with work-life balance, hospitality, institutional trust (Viganò & Lombardo, 2018, 2019), but also inclusion, health and wellbeing (Davies et al., 2019), improved image, loyalty and sense of belonging (Ariza-Montes et al., 2021) — to name a few of the most prominent.

Finally, mixed methods are in general widely used solutions for SIAs in the cultural sector. One of the most common is the aforementioned ECA/EFA (Liu, 2016; Van Winkle & Woosnam, 2014), which performs quite well when applied to the study of festivals, for example, but also other cultural events. Two scale-based methods in particular have since been devised that have agreed with many researchers regarding their effectiveness (Robertson et al., 2009), Delamere's Festival Social Impact Attitude Scale (FSIAS) (2001; Colombo, 2016) and Fredline's contributions (Fredline et al., 2003, 2005; Robertson et al., 2009). Very briefly, these two evaluative methods are based on a scale of values referring to some specific indicators — over 40 in some cases (Robertson et al., 2009), designed ad hoc to capture the perceptions of residents and members of the host community at different levels toward the event (Robertson et al., 2009). Beyond the acknowledged empirical merits (Colombo, 2016), these studies are particularly relevant because they introduce into the impact evaluation the perceptions of residents (Ap, 1990), the host community (Liu, 2016; Van Winkle & Woosnam, 2014) , a long-standing research topic that has recently come to the forefront both in terms of new studies on the effects of cultural initiatives (Arfò & Salone, 2020; Bencivenga et al., 2016) and the possibility of using new tools and technologies to analyze the opinions of individuals (Jaidka et al., 2020).

Another mixed approach — leaning more on the qualitative side, this time — is participatory evaluation (Stein & Seifert, 2009). As Stein and Seifert (2009) synthesize, this method is based on fieldwork, directly involving the people participating in a certain initiative or the community as a whole in the control of the research. This method also combines a quantitative part through the construction of ad hoc databases (from administrative documents, in this case) to keep track of costs and duration over time of the research (provided continuous maintenance).

Other participatory methods can also be used as SIAs, although it is not a common practice. The choice of the best method to use for each case needs to consider specific variables, such as availability of time and resources, timeframe of the research, impact to be studied and more. In practice there cannot be a "one

size fits all", "toolkit" (Belfiore & Bennet, 2010), standard approach to SIAs in the cultural sector, as nuances among definitions and differences among cases and effects are too great.

1.4 What's there and what's missing? New directions to study social impacts of culture

We have seen in this chapter how culture is increasingly seen as a necessary tool and driver for development, especially in urban contexts (Bertacchini & Santagata, 2012; Blessi et al., 2016; Evans, 2005; Florida, 2002; Pratt, 2010, 2014; Sacco et al., 2019; Santagata 2009; Throsby, 1995, 2010, 2017). This awareness has matured since the 1990s, with an increasingly full and conscious adherence to the concept of sustainable development. The Brundtland Report (1987) and the World Commission on Culture and Development (1995) are the main international documents that have enshrined this relevance and an intention for the future.

The particular interest in social issues and impacts has been growing more and more over time, spanning very different sectors and disciplinary areas, including culture (Vanclay, 2003; Belfiore, 2002, 2004; Partal & Dunphy, 2016). Both at the level of practitioners and scholars (Rota & Salone, 2014), as well as at the level of international institutions (UNESCO, 2019; Jagodzińska et al., 2015), we have seen how the belief that culture produces impacts on society and individuals has become increasingly prevalent among major research topics, present and future. We have reached a point where understanding what the social impacts of culture (and before that, what social impacts in general) are and how to measure them is a key juncture for understanding and devising new directions for sustainable development.

As for methods of social impact assessment (SIA), the literature is wide and varied. Many techniques developed by enterprises to include the social dimension within the measurement of their performances – i.e., contingent valuation (Carson & Hanemann, 2005), social return on investment (SROI; Ali et al., 2019; Nicholls, 2017), triple bottom line (Miller et al., 2007), exploratory/confirmatory factor analysis (Suhr, 2006) – have also been applied to different case studies

within the cultural sector. Festivals (Bracalente et al., 2011; Van Winkle & Woosnam, 2014; Woosnam et al., 2013), sporting events (Balduck et al., 2011; Liu, 2016; Wicker et al., 2012) and cultural events in general (Andersson & Lundberg, 2013) are used as case studies, often to infer general insights or to explain broader phenomena – or even to test certain methodologies for analyzing social impacts (Bagiran & Kurgun, 2016; Van Winkle & Woosnam, 2014).

However, among scholars and practitioners there is a growing consensus that these approaches to measuring social impacts are too synthetic and arbitrary (Miller et al., 2007), unfit for comparisons (Norman & MacDonald, 2004), too linked to monetary concepts (Diamond & Hausman, 1994), too time consuming and expensive (Ali et al., 2019), and generally unreliable at capturing social impacts (Diamond and Hausman, 1994). These limitations are particularly evident in the case of cultural initiatives, where the main social impacts generated and studied are intangible characteristics (trust, cohesion) (Grossi et al., 2011, 2012), processes (inclusion, participation) (Nakagawa, 2010; Nagy, 2018) and emotions (pride, sense of belonging) (Collins, 2016; Fišer & Kožuh, 2019).

Many scholars have thus relied on qualitative methods (Garbarino & Holland, 2009; Rao & Woolcock, 2003) such as interviews, surveys and participatory and collaborative methods (Aktinson & Hammersley, 1998; Bogdewic, 1992; Hammersley, 2006; Stern & Seifert, 2009). Qualitative methods allow the researcher to use precise questions to garner the opinion and experience of someone affected by the initiative under investigation (Van Winkle & Woosnam, 2014), or to gain information from directly observing and/or participating in the activities themselves (Aktinson & Hammersley, 1998; Stern & Seifert, 2009). Both interviews and surveys are built *ad hoc* for the study (Kim et al., 2015; Ribeiro & Correia, 2021). Participative practices — e.g., ethnography (Hammersley, 2006; Hymes, 1977), participant observation (Bogdewic, 1992; Musante & DeWalt, 2010), participatory evaluation (Stern & Seifert, 2009) — are based on the researcher immersing themselves in the context and to interfere as little as possible, to observe patterns and understand interactions and effects (Aktinson & Hammersley, 1998; Stern & Seifert, 2009). Qualitative methods, while investigating the exact focus of the study, have the disadvantage of being resource intensive and time consuming (Jaidka et al., 2020). Additionally, in the case of surveys, they need large sample numbers (to ensure high response rates) to be relevant (Jaidka et al., 2020). We have briefly seen how new technologies can make up – at least partially – for these limitations (Felderer & Blom, 2022; Iacus et al., 2020; Jaidka et al., 2020; Neuert et al., 2021; Schneider & Harknett, 2022).

We have also seen how mixed methods — i.e. methods that combine both quantitative and qualitative characteristics — are a way to compensate the main difficulties of the two and are more and more becoming the "go-to" solution.

While for methods practice has evolved over time toward more effective tools, at the conceptual level of social impacts in the cultural sphere we identify a twofold underlying problem: on the one hand the a priori assumption that these impacts exist, and on the other hand not establishing once and for all what these impacts should be (as well as how to measure them, as seen).

A good deal of confusion has been seen over the years, with studies focusing on specific effects but with no attempt at systematization. Thus, there are also very different attempts in the literature, from studies of the effects of cultural participation, but also on how cultural events themselves promote participation (confusing the medium with the impact to be analyzed), to the use of cultural policies and events for inclusion (Belfiore, 2002; Nakagawa, 2010) or for networking and social cohesion (Belfiore & Bennet, 2007). Then there are studies on the effects of art (with different definitions from study to study) on people's health (Cicerchia & Bologna, 2017; Gordon-Nesbitt & Howarth, 2019), and the already mentioned studies on the impacts that cultural initiatives and events have on the hosting communities (Liu, 2016; Van Winkle & Woosnam, 2014) — although with the focus being mostly tourism-oriented, part of the effects may be overlooked.

The multiplicity of SI interpretations is actually congruent with the general definition given by Vanclay (2003). Comparing what emerged from the literature with Figure 3, however, we note that a whole range of impacts related to the personal sphere are missing. A highly recognized attempt in this direction was that of Delamere (2001) and some studies inspired by it (Small et al, 2005; Colombo, 2016; Woosnam et al., 2013), which marked a turning point in the interest in the perception of the effects of cultural initiatives by host communities and especially in its measurement. Some authors have even gone so far as to propose the use of an analysis called SIP (Social Impact Perception) (Small et al., 2005) within social impact evaluations (Colombo, 2016), which want to go to study the impact perceived by host communities according to a series of factors related to the social life of the place (Colombo, 2016).

Despite the growing interest and new technological possibilities for investigating these aspects (Jaidka et al., 2020), it is still a minoritarian branch of

studies that investigate the impacts perceived by the population with respect to their satisfaction and quality of life. The next consequential step in this sense should be a small step towards a more intimate level of social impacts — i.e., how social impacts are perceived on a subjective and individual level with respect to a certain cultural initiative implemented in a certain context.

Chapter 2

Framing subjective wellbeing

Following the introduction to social impacts (of culture) in Chapter 1, this chapter addresses the main object of the research, namely the concept of subjective wellbeing. In the course of the chapter, I will try to define the concept of wellbeing from its beginnings and how it has been declined in different disciplines over time. At the operational level I will highlight the difficulty in finding an unambiguous definition of wellbeing and how each discipline that has considered it a relevant research topic has framed it slightly differently, although it can be understood as wellbeing perceived at the individual level.

Given the difficulty in identifying subjective wellbeing to implement the analysis of the impact of an urban cultural initiative — the purpose of the present thesis — I found it necessary to try to reassemble the pieces and build a theoretical framework of reference in order to be able to clearly delimit what we are talking about in this specific context when we talk about subjective wellbeing, and how to empirically identify it. The second part of the chapter is devoted precisely to deconstructing the previous narratives on subjective wellbeing and building the framework, detailing its usefulness, and added value.

2.1 Subjective wellbeing

Within the social components of sustainable development, a concept that has found the interest of scholars from different disciplines is that of wellbeing. On a day-to-day basis, there are several connotations of this concept: we speak of physical wellbeing (e.g., being healthy and fit) (Cicerchia & Bologna, 2017; Gordon-Nesbitt, 2019), but also psychological (Chen et al., 2017; Diener, 1984; Seligman, 2010, 2018; Staricoff, 2004), economic (Dolan et al., 2008), and social wellbeing (Ballas, 2013; Kroll, 2014).

Ballas (2013) in his study on happiness in cities distinguishes two types of factors alluding to wellbeing and quality of life, objective, and subjective factors. The objective factors relate to those variables that are easily measurable through objective means – that is local economic indicators, availability of resources, presence of education facilities, employment, and other amenities. On the other hand, subjective factors are identified in a more "personal" way.

From the perspective of sustainable development both types of factors influencing wellbeing are extremely relevant. Whereas objective factors are more related to a "traditional" way of interpreting and studying development, subjective factors are, instead, more related to the personal and interpersonal sphere, and can be especially useful in tackling the issue of social development (Ballas, 2013; Seligman, 2010). For the present study, the main concept that will be used is that of "subjective wellbeing"[2].

Subjective wellbeing (SWB) is an important variable because it allows us to intercept and analyze people's living conditions from their own perception (Diener, 1984; Larsen & Eid, 2008). This definition is, admittedly, rather general. It can be interpreted in many ways, and indeed in different disciplines the study of the determinants of SWB (and how to measure it) has followed different paths and definitions, although some common features can be identified. A general trait, is the realization that country- or city-wise indicators (i.e., taken from institutions such as Istat, Eurobarometer, OECD, etc.) are not enough to explain the perceived quality of life of people (Larsen & Eid, 2008).

[2] Unless otherwise specified, it shall be assumed that whenever the concept of wellbeing is mentioned, the author refers to subjective wellbeing.

In the following paragraphs we will see the main theories on SWB, its definitions and determinants as seen from different disciplines and perspectives.

2.1.1 Subjective wellbeing in psychology

Psychology is one of the first disciplines to address subjective wellbeing. Beyond definition or terminology, the concept of personal wellbeing underlies psychological research and theories, as does self-actualization (Diener, 1984; Maslow, 1943). Below we will address three of the most relevant contributions on SWB in the psychological literature.

In the 1940s, Maslow (1943, 1954) proposed a motivational theory about the behavior of human beings that bring to a full realization of self and life. Maslow does not speak explicitly of SWB, but he points to a model according to which individuals, to realize themselves at multiple levels, must satisfy their *needs*, both primary and secondary. Needs, as Maslow understands them, are placed in a hierarchical order, often visualized as a pyramid (King-Hill, 2015; McLeod, 2007), as is shown in Figure 4.

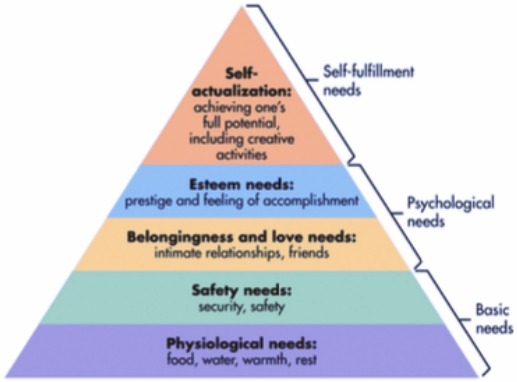

Figure 4. Maslow's hierarchy of needs – explained (source: McLeod, 2007).

At the base of the pyramid are the primary needs – the physiological ones – that must be met first to ensure survival: food, water, shelter, etc. Moving up the pyramid, we encounter needs that are less "material", but related to the intangible

personal sphere: *belonging, self-esteem*, safety, love, *relationships*, etc. These components (determinants) are compatible with the concept of subjective wellbeing that has evolved over time. Maslow's theory has over time been integrated and partly superseded (King-Hill, 2015), although it has also been adopted in other fields (e.g., marketing).

Jumping forward a few years, one of the most established and embraced theories on SWB is the one proposed by Diener (1984). During his career, Diener stressed the importance of subjective wellbeing at different levels, leading to a well-founded theory on its determinants (Diener, 1984, 1994; Larsen & Eid, 2008). According to this theory, there is not one single determinant of wellbeing, but many factors interact and integrate to influence an individual's life and their happiness (Larsen & Eid, 2008). Some of these factors may depend on the individual's age, personality, living context, environmental surroundings, etc. (Diener & Seligman, 2002; Wills-Herrera et al., 2009). Moreover, Diener and his colleagues advocated SWB to be made up of both an affective (positive or negative) and cognitive component, effectively describing both the emotional and intelligible nature of being satisfied with one's life (Diener et al., 1985). The concepts and measurements introduced by Diener – the "Satisfaction with Life" Scale (Diener et al., 1985), specifically – have become the golden standard in subjective wellbeing research and have remained so over many decades (Larsen & Eid, 2008).

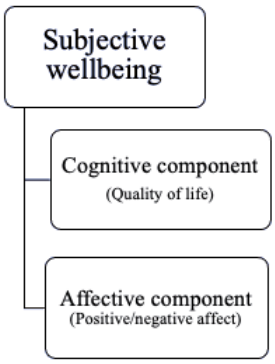

Figure 5. Schematization of Diener's theory of subjective wellbeing (source: author's own elaboration based on Diener, 1984).

Almost in response to this theory, Seligman (2011) proposes a new model to define subjective wellbeing, or rather, to explain how humans "flourish". The Flourish model is based on five spheres of "behavior", five determinants that affect the quality of life (perceived/lived) by individuals. The five variables are: *Positive Emotion, Engagement, Relationships, Meaning*, and *Accomplishment* (PERMA, as an acronym) (Seligman, 2010, 2018). The Flourish model is represented in Figure 6.

Figure 6. Representation of Seligman's Flourish model of subjective wellbeing (PERMA) (source: author's own elaboration based on Seligman, 2010).

While all five dimensions combined give us an indication of an individual's wellbeing, each of them can stand on its own as rewarding (Goodman et al., 2018), effectively distancing this theory from Diener's. Each determinant can be analyzed individually, for instance the density and quality of relationships of a person, or their level of engagement in the environment and community around them (Goodman et al., 2018; Seligman, 2010, 2018). But they can also be seen as parts of a broader concept, much like puzzle pieces of realizing one's full potential (Seligman, 2010).

In the more recent literature, the debate on SWB remains lively, although we do not report new, groundbreaking theories on the subject.

2.1.2 Subjective wellbeing in cities

Aside from psychology, not many disciplines have expressed such an in-depth interest in subjective wellbeing. The concept of wellbeing has been acknowledged

as it has generated curiosity among researchers, but its study has not been as clinically precise as in medical and psychological contexts.

For example, sociology has not expressed much interest in analyzing SWB in the past (Kroll, 2014; Veenhoven, 2008), despite some authors argue about its potential to ground the uncertain aspects of SWB concept with sound sociological theories (Kroll, 2014).

On the contrary, an approach that has produced quite a bit of literature is to not look at specific discipline, but to address the context in which SWB can be studied. One of the most researched contexts is the urban space, that is what determines SWB in cities.

In many studies regarding quality of life and happiness in cities, individual wellbeing is seen as a utility function (Ballas, 2013; Dolan et al., 2008) based on the availability of certain geographic, economic and socio-demographic factors. Blessi et al. (2016) acknowledge the distinction between objective and subjective wellbeing, and further develop the understanding of the latter by addressing the "urban key factors known from the literature to affect subjective wellbeing" (p. 217). They refer to two dimensions, one purely "urban", related to the individual's perception of the physical features of life in cities (such as presence or lack of green spaces, density, commuting and housing), and another one linked to the socio-demographic characteristics of the city population (e.g., income, education, civil status, etc.).

Socio-demographic characteristics and, mostly, how they are perceived by individuals are in general deemed as determinants of happiness by many scholars (Portela, et al., 2012; Dolan et al., 2008; Ballas, 2013), together with other economic factors and, most importantly, social and institutional variables (Portela et al., 2012).

Portela, Neira & del Mar Salinas-Jimenez (2012) describe a mix of variables that can be used as proxies for SWB, all attributable to the broader concept of *social capital* (Bourdieu, 1986; Coleman, 1990; Putnam, 1993, 2000) – which is shown to have a positive association with wellbeing (Portela et al., 2012). Digressing, Bourdieu (1986) first defined social capital as based on networks of institutionalized relationships that are beneficial to its members. Coleman's definition (1990) focuses more on the functional and normative nature of social capital, defining it as made up of different features that outline social structure and determine the life of people within that structure. Finally, Putnam (1993) pictures

social capital as a set of characteristics of societal organization (i.e., *trust, norms, and networks*) whose role is to improve society in both efficiency and dynamics. In his later work, he also stresses the role of reciprocity and trustworthiness among actors involved in social relationships (Putnam, 2000). In short, part of the literature suggests that social capital and its components can be considered determinants of SWB.

The concepts of interaction, *relationships* and *trust* among individuals are also explored by other authors. Grossi et al. (2011) in a reflection on wellbeing indicate "quality of social relationships" as a direct determinant of health and quality of life, supporting the idea that better, more inclusive relationships and networks can affect the overall wellbeing of people.

The features presented so far can be analyzed to understand the relationships and dynamics of the city, and to capture the importance of certain features in the life of citizens. According to the literature, the presence, quality, and density of networks (both formal and informal), norms and – especially – trust, can determine the level of wellbeing and life satisfaction perceived in a city (Grossi et al., 2011; Portela et al, 2012).

Another perspective related to the concept of subjective wellbeing is the understanding of the emotional or affective dimension in relation to life in cities. Anderson & Holden (2008) address the issue by reflecting on the fact that cities are "made up of multiple, differentiated affects, feelings, and emotions" (p.145), and propose the analysis of a new, "affective urbanism – that is, an urbanism animated by a conceptual vocabulary specific to the logics of affect and emotion" (p. 142). Going back to the initial distinction reported by Ballas (2013), the emotional and individual perception of people living in a city is one of the main instruments for the measurement and evaluation of SWB, so this dimension is one of the most relevant to be considered. Thus, *emotions* of different kinds are to be considered determinants of SWB. Emotions can be positive or negative, and they can refer to different aspects of life: from *trusting* the people in one's environment to feeling part of a *community* (Portela et al., 2012), *sense of belonging* to a place or culture (Collins, 2016; UNESCO, 2019), happiness at living in a nice and safe context (Maslow, 1954) or at having a good job; or on the other hand, feeling unsafe and unwanted (Maslow, 1954), being cast out or unemployed, not having *access* to services and being alienated from the community.

An example of emotions shaping and impacting the city is the one proposed by Collins (2016). In particular, he analyzes civic *pride* from an emotional perspective, arguing the centrality of its role in the shaping of the local identity in an urban regeneration context – thus proving the point of how strong emotions can impact directly on urban life and SWB.

2.2 How to measure subjective wellbeing

So far, we have seen an overview of how SWB is defined and what are considered its main determinants. It is the level of wellbeing that is perceived by individuals with respect to different aspects of their life. What still needs to be addressed is the way it is measured. Also in this case, there are several options.

One method for measuring SWB consists in identifying specific indicators – at household, urban or national scale – that can provide insight in the level of subjective wellbeing people experience (Diener, 2000; Pavot, 2008). Some of the most used indicators include health measurements, marital status, access to financial resources (Hill & Buss, 2008), equality and employment (Larsen & Eid, 2008). Positive scores in these indicators are assumed to be reflective of a high life satisfaction. For instance, health and marital status have been studied as potential determinants of subjective wellbeing (Hill & Buss, 2008; Larsen & Eid, 2008). However, what indicators do not provide is the actual perception of wellbeing that people feel with respect to these instances of their lives (e.g., one may not perceive being married as an in improvement to their life conditions and overall happiness). In other words, these methods provide insights on aggregated data at country-level, but they lack information at the individual level (Larsen & Eid. 2008). This is why indicators are not the primary choice in SWB analysis.

The most frequent method used to determine an in individual's SWB is to make direct queries about their own perception of their lives. The evaluation in this case consists of asking individuals (typically through a survey or interview) about their emotional state and the overall satisfaction levels for their life, together with subjective perceptions of various elements of their environment (Ballas, 2013; Blessi et al., 2016; Dolan et al., 2008). Surveys were – and still are – at the basis of most of the assessment techniques of SWB.

In psychology, the main source of information on SWB are the so-called self-reporting methods (Ballas, 2013; Pavot, 2008), surveys compiled by the patient about their life, and their perception and experience of it. While extremely common, they present some critical points. The main one is related to the fact that the definitions of SWB are many and varied, and self-reporting measurement scales are not always objective (Pavot, 2008): one person might respond with a different level of happiness or satisfaction than another, given the same living conditions or values, simply because they understand the measurement scale differently or are momentarily affected by their context (Schimmack, 2008).

Some attempts, however, have succeeded and become established over time. One of these is the already mentioned Satisfaction with Life Scale (SWLS; Diener et al., 1985; Pavot & Diener, 1993; Pavot, 2008). It is a five-item scale that over time has proven to have good consistency and reliability (Pavot, 2008; Larsen & Eid, 2008). It has become, as mentioned, the gold standard in SWB measurement for a very long time, also because of its conciseness and adaptability (Larsen & Eid, 2008).

In some cases, some alternative methods were introduced to expand the pool of information available about the subjects being analyzed. Pavot (2008) does an extensive review of integrative methods of self-reporting measures, from Experience Sampling Methodology (ESM; Diener, 2000; Scollon et al., 2003) to the Day Reconstruction Method (DRM; Kahneman et al., 2004), to informant Reports and more.

Pavot (2008) also mentions holistic methods that try to combine both emotional experiences and satisfaction with life (cognitive and affective components, according to Diener's theory), such as the Oxford Happiness Inventory (OHI; Argyle, Martin, & Lu, 1995). Despite attempts to expand the information available on the subjects and uniform measurement scales, the results of these methods remain extremely subjective and not always capture all the facets and components of SWB – especially because of the plurality of definitions and theories adopted by different disciplines.

In many cases, statistical techniques (e.g., correlation, chi-squared, variance and covariance) are applied to these self-reporting methods (Schimmack, 2008). Statistics is hence used to analyze the responses of people asked about their satisfaction in different areas of their lives. These statistical methods often report much instability in people's perceptions (Schimmack, 2008) and, in general,

attempts to measure SWB through single variables have yielded only partial results (Larsen & Eid, 2008; Pavot, 2008).

Over time, however, the statistical methods and programs used to identify, analyze, and measure the components of SWB have evolved, and in many cases, they have been combined with surveys and other qualitative methods of research (thus creating mixed methods). This is true especially outside the field of psychology, in research contexts that are linked to studying the effect of certain external conditions on SWB (like in urban studies or sociology). Examples of mixed methods can come from the world of SIAs (see Sections 1.2.2.1 and 1.2.2.2), which has evolved over time in step with new technologies. While not explicitly mentioning SWB, in the literature there are several cases of application of Exploratory and Confirmatory Factor Analysis (ECA and FCA) to the analysis of the perception of impacts of tourism, cultural events, and festivals by host communities (Liu, 2016; Van Winkle & Woosnam, 2014) – which is relevant because it captures cognitive and emotional features from individual's point of view. This development was anticipated in Section 1.3. One example is the already mentioned Festival Social Impact Attitude Scale (FSIAS) (Delamere, 2001; Pavlukovic et al., 2017; Woosnam et al., 2013). This technique uses questionnaires based on the "attitude scale" to understand how the inhabitants of a place perceive the impacts that an event/festival can bring to the urban context and to their lives (Small, et al., 2005; Van Winkle & Woosnam, 2014). With a large enough sample, the responses can be analyzed, and the impact factors (Liu, 2016) identified automatically by the software, as well as the relationships between them (e.g., positive, negative, etc.) – relaying both a quantitative (cognitive) and qualitative (affective) result (Van Winkle & Woosnam, 2014).

Given the complexity of the classification, a summary of the main relevant methods for assessing impacts on subjective wellbeing is presented in Table 1.

Table 1. Synthesis of popular SWB assessment methods by type and field of application (source: author's own elaboration).

	Psychology	Urban Studies
Quantitative	- Statistical methods: correlation, Chi-squared, variance, covariance	- Local indicators (employment, health, etc.)
Qualitative	- Questionnaires/surveys - Satisfaction with Life Scale (and developments) - Informant Reports - Day Reconstruction Method - Experience Sampling Methodology	- Questionnaires/surveys - Satisfaction with Life Scale
Mixed	- Surveys + statistics	- ECA/FCA (e.g., Festival Social Impact Attitude Scale)

In general, despite attempts to improve, automate, and integrate the techniques (Jaidka et al., 2020; Voukelatou, 2021), there is still too much dependence on the use of questionnaires to identify SWB. As mentioned in Chapter 1, these methods can introduce different kinds of bias, both from the researcher's side (who "forces" the information out of the subject) and from the respondents, inevitably related to power dynamics (Alsaawi, 2014; Nunkoosing, 2005).

In the field of computer science, very promising studies have been presented in recent years that use predictive models to identify SWB, starting with data extrapolated from the Internet. These attempts to innovate the study of wellbeing, at least methodologically, have begun to proliferate in the past decade. Such studies aspire to predict the level of wellbeing of Internet users from their language and mode of expression, by analyzing their content on social media. Twitter is often the main source of data (Curini et al., 2015; Jaidka et al., 2020; Schwartz, 2016), given the ubiquity of the medium and the relative simplicity of obtaining the necessary content. Such attempts are often particularly technical and extremely complex, based on sentiment analysis and other opinion mining tools (Ceron et al., 2016; Curini et al., 2015)

The idea is not dissimilar to the one underlying this research. In many cases, solutions identified by computer scientists lead to extremely complex models, difficult to replicate outside specific research contexts and even more difficult to apply to the analysis of a particular case study — an urban-scale cultural initiative, in my case. In most cases specific capabilities are also needed— as was the case for psychology and clinical studies — that usually make it difficult to disseminate such a model of analysis in a field traditionally reliant on different methods and skills, such as urban studies.

It is clear, however, that in this context the literature and the practice have room for new types of assessment, provided some clarity is made over definitions, theories, and application of SWB to different contexts.

2.3 A two-fold literature gap: the effects of culture on subjective wellbeing

The literature so far analyzed suggests that initiatives or activities that interfere with and alter the level of interaction among citizens, or their emotional sphere – both in a positive or negative way – can directly affect the wellbeing of the inhabitants of a place (Grossi et al., 2011; Oishi, 2018). This is the case, for instance, of cultural initiatives, events, and activities. According to the mentioned UNESCO classification (2019), the key to social sustainability lies with the concepts of social inclusion and participation (Figure 2, Sphere 4). Creating cohesive and strong, resilient communities can be seen as one of the main urban goals for the near future, to ensure sustainable development (UNESCO, 2019; Silvestri, 2015). The idea is that culture – cultural policies, initiatives, heritage, etc. – fosters *participation, inclusion, trust, and strong relationships* (concepts found also in urban literature), that are considered determinants of SWB.

To date, many programs and calls for proposals – especially at the European level – explicitly require that bids for cultural initiatives, projects and policies contain a part of social impact that benefits local communities (Belfiore, 2002): *inclusion, cohesion, participation, belonging, improvement of living conditions*, in general increase of wellbeing and quality of life (Nagy, 2018).

Linked to this trend in practices, a recent branch of literature investigates what the impacts of cultural activities on the quality of life and wellbeing of the population might be (Blessi et al., 2016; Nagy, 2018). More specifically, we can distinguish two strands of literature, linked respectively to two different ideas of what subjective wellbeing and quality of life should refer to.

On the one hand, there is the study of the impacts of art and cultural activities on human health – linked to the physical wellbeing of users (Cicerchia & Bologna, 2017; Grossi et al, 2012). To this strand refer all those studies – not necessarily related to sociology or economy of culture – that bring as an example the impacts that participation (here understood as attendance and engagement) in cultural or artistic activities have on the health of individuals (Cicerchia & Bologna, 2017; Gordon-Nesbitt, 2019), in terms of physical parameters (e.g., lowering of cortisol levels, better oxygenation of blood and tissues, etc.), but also psychological (e.g., improved resistance to pain, decreased anxiety and depression, etc.) (Staricoff, 2004).

On the other hand, there is a strand of research related to the potential of cultural practices and activities to *strengthen communities* (Belfiore, 2002; Stern & Seifert, 2009; Stevenson, 2004). This context is for example the home of studies on the impact of cultural policies and programs (Belfiore & Bennet, 2010), as well as the impacts of cultural events (Yolal et al., 2016) – i.e., festivals, large exhibitions, medium-long term events – on users. Scholars in this branch have been trying to find a way to determine the social impacts of culture and arts (Belfiore & Bennet, 2010, Nakagawa, 2010), especially in terms of citizen *engagement* (Stern & Seifert, 2009) and *inclusion* (Belfiore, 2002; Stevenson, 2004). Particularly, a well-planned cultural policy is seen as an important tool for social change (Rayman-Bacchus & Radavoi, 2019), *inclusion* of disadvantaged communities (Nakagawa, 2010) and increased wellbeing, satisfaction, and *sense of belonging* (Blessi et al., 2016; Collins, 2016). This is the stream of literature that is most relevant for the present research, as strong communities and all that derives from them can be seen as determinants of SWB. In cohesive and supportive communities – made up of human beings, social animals by Aristotelian definition – where the quality of interpersonal relationships is high (Grossi et al., 2011), the implementation of activities and initiatives that allow access to art and culture can lead individuals to experience a higher quality of life and wellbeing (Grossi et al. 2012).

Blessi et al. (2016) have investigated the influence of cultural *participation* and *engagement* in the wellbeing of people in an urban context. In particular, the authors have investigated the role of culture in cities, defining it as a "transformational factor with important potential impacts on various dimensions of social and economic value including social cohesion, environmentally responsible behavior, orientation toward innovation, and individual and collective well-being" (p. 216). Reflecting also on these issues, Grossi et al. (2012) have researched the implications and impacts of cultural participation and cultural consumption on both psychological health and individual subjective wellbeing. In their study, they used univariate and multivariate statistics on the data from the "Culture and Wellbeing Italy" project (2010) to trace a correlation between the access to and consumption of culture and levels of perceived wellbeing.

Furthermore, the "emotional" impacts of culture on people have been studied as well. Anderson and Holden (2008) have investigated the already mentioned "affective urbanism" and the role of hope in cultural initiatives and events. According to the authors' analysis, the emotional sphere and related vocabulary cannot be shunned nor ignored when analyzing impact of an urban-scale cultural initiative, as it becomes a powerful driver in implementing the activities with positive results.

The effects of culture on people's lives found in the literature of the cultural field (external circle) are synthesized in Figure 7. They can visibly be compared with the ones presented throughout section 2.1, thus creating an explicit conceptual link with the concept of subjective wellbeing (visually represented in the inner part of the figure).

Figure 7. Representation of how culture appears to affect people's lives (and consequently SWB) in the literature (source: author's own elaboration).

According to Blessi et al. (2016), there exists a gap in the literature with respect to the study of impacts of culture specifically on individual subjective wellbeing in urban contexts. The studies presented in Chapter 1, referring to the perception of impacts of events and festivals do not quite fit into this strand of research, as they focus on tourism and tourism-related issues and implications (Liu, 2016; Van Winkle & Woosnam, 2014). Investigating the effects of (participation in and consumption of) culture on wellbeing and on the life satisfaction of individuals presents many challenges and aspects to be focused on and analyzed.

The present study fits in this research stream by analyzing the impact of a cultural initiative in an urban context (the selected case studies are the Capitals of Culture, as will be shown in Chapter 3) with respect to the determinants of subjective wellbeing encountered so far. What impacts does a cultural initiative have on the SWB in a specific city? How can we capture it? These are some of the questions the present research will try to answer to.

The definitions of SWB presented so far in this chapter become the central point. One of the aspects to be investigated is exactly how to delimit SWB in a way that is complete and operable for the analysis of a cultural initiative in urban contexts. For instance, culture can be thought of as a "vehicle" for the enhancement of social capital, it can influence the way people interact and cooperate, among themselves and with the institutions governing the development processes of the city (Blessi et al., 2016). It also impacts on the emotional sphere of urban inhabitants (Anderson & Holden, 2008), allowing to further expand the

analysis. All the determinants presented and highlighted in the chapter play a role in SWB. However, there is still the necessity to find a way to incorporate all these theories and definitions and operationalize them.

A second aspect of the research will be deciding how to measure these impacts. We have seen how measures of SWB tend to be based on mostly qualitative methods that, however, in turn tend to provide results that are not only partial, but also often biased. As the literature itself is not clear in how to measure impacts on SWB generated specifically by cultural initiatives (Oishi, 2018), and technology has rapidly progressed, I will try to contribute to the literature gap identified in this chapter also at the methodological level, with the proposal of an innovative methodology for studying the impact of a cultural initiative on SWB, in an urban context. The methodology itself will be explained and detailed in Chapter 4.

2.4 The need for a multidisciplinary perspective

Summing up the different definitions presented previously in the chapter, subjective wellbeing (SWB) is often represented as made up of a cognitive and an affective component (Diener, 1984), positive or negative. The cognitive component of SWB is often referred to in the literature as “quality of life”, or “satisfaction with life” (Chen et al., 2017; Diener, 1984). It relates to the characteristics and features that people know to be determinants of a better (or worse) quality of life, aspects of life that one can consciously choose or act on. The affective component (Chen et al., 2017; Diener, 1984) includes all the emotional determinants that make a subject “feel good” (or “bad”) and satisfied/dissatisfied by their life, condition, or context. This distinction works very well in psychology, where patients are studied singularly and all aspects of a person’s life are explored, and because of the practitioner’s expertise the cognitive and affective components are easily identified.

However, things become complicated when we try to analyze SWB in a non-clinical context. Precisely because of the psychological definition of SWB and the specific skills needed to fully understand and identify it on a practical level, it is difficult to think of applying that definition based on cognitive and affective components to a specific setting, for example, the urban context. Even more so,

when dealing with a certain initiative that impacts an urban context in multiple ways — economically, socially, even physically.

In a case like this, people's perceptions with respect to their subjective wellbeing — because this is what we are talking about, how wellbeing is perceived by individuals in relation to different variables and events happening around and to them — is related not only to their daily lives, but also to a specific, external event that impacts different spheres of their lives in the environment in which they move and exist. The multidimensionality of this impact affects the concept of wellbeing, and, especially without appropriate psychological expertise, studying SWB through the quality of life/affection dichotomy is not feasible at the operational level.

It is no coincidence that the studies that have been conducted so far on SWB in the urban context, which were seen in the previous chapter, analyze the phenomenon from a completely different angle. The variables – determinants or components – of SWB derive from the discipline that studies it in that moment and its specific approach. In the case of urban studies, authors usually investigate social dynamics and processes – such as cohesion, relationships, inclusion, and participation – and in this context it is difficult to apply a scheme such as that used in psychology. The distinction between quality of life and affect is too schematic to approach the dynamics and variables that the urban studies literature suggests. To researchers outside the discipline of psychology, the difference between cognitive and affective variables may seem clear in theory, but it not clearly applicable in practice.

A practical example of the partial incommunicability between psychological to urban literature is, for example, terminology. Much of the literature presented so far has, depending on its disciplinary field, different terminology regarding concepts such as wellbeing (individual, subjective), quality of life, life satisfaction (Diener, 1984), happiness (Ballas, 2013; Chen et al., 2017). Depending on the approach and discipline, these terms may be used as synonyms, as complementary terms, may be subordinate to each other, or may even possess alternative meanings that are completely different from one another – e.g., the concept of "happiness", which can stand to mean wellbeing, being satisfied in a utilitarian way, or even simply the feeling of being happy (Chen et al., 2009; Haybron, 2008). Heterogenous use of terminology is just one example of the complexity of SWB, and one of the main practical reasons I identified for the need to analyze it from a broader perspective.

An additional layer of complexity comes from studying a specific event or initiative. Not only urban variables, then, but also those specific to the initiative – cultural in this case – that is being analyzed. In such a case, to fully understand the problem and correctly identify the determinants of SWB, it is necessary to broaden the concept, and bring together SWB-specific literature from converging fields: that is, psychological components, as well as sociological, urban, and cultural ones.

However, as the researched object is the same, it would be sensible to find similarities between disciplines, rather than clashing and use complete opposite variables to study SWB, to study it in a holistic way. It would make more sense, therefore, to try to move beyond the classical dichotomy and to try to harmonize the definitions of SWB, especially with a view to making it a topic that can be analyzed in the practice of different disciplines and thus make it a less hostile and more usable and accessible concept.

Reviewing the literature with this idea in mind, I noticed rather sharply how, in practice, many authors from different disciplines – for example, sociological studies and psychology, but also sociology and studies on the effects of culture – use the same variables (e.g., cohesion, inclusion, participation, social capital, happiness) to explain impacts on people, though often without mentioning directly SWB. In other cases, the relationship between these concepts and the SWB is explicit and stated. These overlaps can elude a monodisciplinary reading, while they can be very useful and interesting in a multidisciplinary approach. Such an approach allows us to frame the definitions and concepts that pertain to SWB in a holistic manner and clarifies the complexity of the relationships between them.

From this need comes the decision made for the present research. In the second part of the Chapter I propose a theoretical framework for integrating knowledge from different disciplines so that literature from different fields can communicate and can be used operationally in an applied case study.

2.5 Building the framework

The starting point for the construction of the framework are the individual variables that have been analyzed in the literature as belonging to the SWB, what will be henceforth called the determinants of SWB. These determinants are derived from the literature reviewed so far in this chapter and cut across all the disciplines addressed. To schematize and operationalize the definitions, I have opted to list them in a schematic way and to analyze them singularly, to identify their main characteristics and features. From the analysis of these determinants, I identified three operational categories (dimensions) in which to group them, based on the characteristics that will be explained in detail below.

2.5.2 Contextual determinants

The first operational category I identified is context. It refers to structural elements, that is context conditions that can be modified by the cultural initiative and in turn affect the SWB of individuals.

For example, one determinant of SWB that is highlighted in the urban studies literature is that of the *presence and density of cultural amenities and events*. The concept of amenities is borrowed from Ballas (2013), while the idea of a certain density of cultural activities and events to trigger SWB is expressed very well by Grossi et al. (2012), who refer to "cultural vibrancy". This determinant does not refer to the finite and measurable number of cultural events present in each city (or neighborhood or region), but rather to the fact that firstly the existence, and then the high density and interconnection among cultural activities and amenities (and actors involved in said activities) impact on the people's perception of life (Grossi et al., 2012). It is the perfect example of a determinant that would not be easy to attribute to a cognitive or affective dimension. It is an exogenous characteristic, that is, one that derives from the context external to the individual but can nonetheless influence their wellbeing. We could ascribe it to a cognitive dimension, insofar as an individual is aware that the presence or absence of cultural amenities can be a positive or negative factor in their life, however I do not think the cognitive/affective distinction is the most correct one to characterize the determinant. This is a context-related variable. A similar reasoning is applicable to all the other determinants, as a way to overcome the dichotomy.

A second determinant that can be attributed to exogenous or contextual factors is the *institutional presence*. This determinant is mentioned by several authors in the field of urban studies (Portela et al., 2012; Helliwell & Putnam, 1995, 2004), but also by UNESCO (2019) in their report on cultural indicators, emphasizing its relevance. In this case we refer to both the presence and the level of activity and engagement of the institutions in the urban context. This means their relationship with the people (Portela et al., 2012), but also the presence of specific normative frameworks (Helliwell & Putnam, 1995, 2004) related to the cultural life of the city (UNESCO, 2019; Portela et al., 2012) and the willingness and readiness to engage in specific activities to benefit the community. To add to the complexity, this determinant includes the concept of "norms" as an instrument to regulate and protect the effects of culture on people. Norms, however, also represent a component of social capital, another determinant of SWB.

A third determinant that related to the context is the level of *equality* (or, in negative terms, inequality). This determinant can be regarded as exogenous, as it is not controllable by individuals, but it affects both the emotional level and the level of awareness of the individuals' perception of well-being. This is a rather straight forward concept, one that has its own literature compartment, and that can also be measured through national and urban indicators. In the case of this research, we refer to the fact that within the scope of a cultural initiative, the perceived level of equality or inequality can be affected (UNESCO, 2019) with positive or negative results on a person's SWB. The concept of equality as a determinant of SWB has first been introduced in psychology (Diener & Seligman, 2002), trying to explain how experiments conducted in different countries gave different results in terms of wellbeing when the investigation of several parameters should have brought similar responses (Larsen & Eid, 2008). The point in this case is that cultural policies and initiatives can affect equality/inequality in a similar manner (UNESCO, 2019), and thus influence SWB (and, consequently, development) both with a positive or negative impact (Bianchini et al., 2013; Sacco et al., 2019).

A more "problematic" element in its characterization is the already mentioned – and frequently studied – *social capital* (Helliwell & Putnam, 1995, 2004; Portela et al., 2012). Social capital, as previously defined, is a compound variable. It means that it is a single determinant of SWB (as a whole), but we need to remember that it is made up of three components: *norms, networks, and trust* (Helliwell & Putnam, 1995, 2004; Portela et al., 2012). *Norms and institutional presence* are context components, as previously seen, but the other two elements

are not exogenous. The other components of social capital are networks and trust, which can, in turn, be considered separately or as another compound variable – i.e., *cohesion*.

2.5.2 Relational determinants

The presence of endogenous factors among the determinants leads me to the identification of a second macro-category, which may be called "relational". If the first operational dimension relates to the characteristics of the context, the second one relates to the characteristics of the community that is affected by the initiative. This dimension is characterized by the presence of elements that can only be perceived by everyone in their own manner, that is intangible elements.

Trust (Portela et al., 2012, Putnam, 1993; Neméth, 2016; Helliwell & Putnam, 2004; Maslow, 1943, 1954), as well as the *presence and density of networks* (Putnam, 1993; Helliwell & Putnam, 1995; Portela et al., 2012) and *social cohesion* (composed of the interaction between trust and networks) (Nagy, 2018; Sacco et al., 2019), despite being related to social capital, are relational determinants. They are related to the "inner self" of individuals; they are not strictly emotions, but they are endogenous variables, nonetheless. Trust is both a component of compound determinants (social capital and cohesion) and a standalone determinant. It represents an emotional concept, hard to measure in traditional ways. It can be intended as interpersonal trust (trust in other people – which can lead to strong networks and communities) (Németh, 2016; Portela et. al, 2012), trust in the institutions (which can strengthen formal bonds and increase social capital) (Portela et al., 2012; Helliwell & Putnam, 2004), a sense of trust in the future (personal trust) but also as a reflection of a need for safety (e.g., "the higher the level of trust, the safer I'll feel") (Maslow, 1943, 1954).

Cohesion is also positioned among the relational determinants of SWB. It relates to the concept of cohesive, strong, and closely knitted societies, where the community is available to help each other and cooperate for the benefit of all (Nagy, 2018; Sacco et al., 2019). It has been argued in the literature that a strong, cohesive society is more likely to experience high levels of wellbeing (Sacco et. al., 2019). So, cohesion can be seen as a single determinant of SWB, but it can also be broken down into two other relational variables – presence and density of networks, and trust.

Networks are vital to people, and their presence and thickness (or absence and sparseness) can impact on SWB (Helliwell & Putnam, 1995; Portela et al., 2012; Putnam, 1993). They are made up of relations, exchanges and social ties that sustain life in cities (and in smaller scale environments, too) and help communities function and thrive (Portela et al., 2012). Networks' high reach and density can be determined by profound community ties – such as closeness and trust (in which case we could talk about cohesion). However, networks can also be built out of necessity or out of formality, unrelated to deeper bonds among people (v. cohesion), or between people and institutions (v. social capital). That is why it is to be considered also as a standalone, and not just as a component of other determinants.

The same relational category (or dimension) also includes feelings, such as a *sense of belonging and pride* (Maslow, 1943, 1954; Seligman, 2010; Collins, 2016), which have been studied from both psychological and urban studies perspectives. They relate to the positive (or negative) emotions that people feel towards their home (neighborhood, city, region) or a project/initiative they have partaken in.

Finally, the relational dimension includes the *quality of relationships*, which, in the literature of different fields, is one of the most relevant determinants of SWB (Grossi et al., 2012; Seligman, 2010). It relates to the fact that relationships of higher quality reflect a higher positive perception of one's life (Seligman, 2010), and in turn it impacts positively on that person's SWB and overall satisfaction (Grossi et al., 2012). This determinant related to both endogenous factors and temporal dynamics, that is both instinctive emotion (related to trust, belonging and safety) and the time and effort to improve a relationship - so it is not easily identified.

According to SWB psychological theory, the determinants in the "relational" dimension could be noted as part of the affective component (Diener, 1984; Chen et al., 2017). In my opinion, however this definition appears to be too narrow: emotions and relational, endogenous determinants do not necessarily overlap with positive or negative affect; they simply exist as distinct elements, and each individual may experience a positive or negative feeling (affect) towards each of these endogenous variables, just as they do with the determinants belonging to the other dimensions.

2.5.3 Processual determinants

I identified a set of determinants that do not pertain to endogenous or exogenous factors, but rather refer to dynamic processes that occur within the context of the event (the CoC in this case) and have an effect on the SWB of involved individuals. These are the determinants that fall into the dichotomy of cognitive/affective components the least. I grouped these determinants, then, into a category called "Process". It relates to dynamic actions that impact and change the relationship that people have with culture and the city itself. They are continuous processes – *engagement, participation, inclusion, accessibility* – that involve local stakeholders (i.e., community, tourists, visitors, institutions, minorities, etc.), engaging them and making them an integral part of the project/initiative. Ideally, once these processes are set in motion, they generate a self-fueled virtuous circle of positive interaction and impacts for the entire area. This dimension, as we can see, does not fit within the traditional SWB scheme (Affect v. quality of life), but it includes many phenomena that authors both in psychology (Seligman, 2010) and in other fields (Jagodzińska et al., 2015; Nagy, 2018; UNESCO, 2019; Wills-Herrera et al., 2009) have established as fundamental elements of development and wellbeing. Processual determinants are some of the most studied in the literature, although usually as single dynamics related to specific events.

Inclusion can be defined as a process through which people in marginalized communities (be that for geographic, demographic, physical or economic reasons) are considered when planning a policy, event, or the use (or redistribution) of resources (Armstrong et al., 2011; Wilson, 2000). It is a process that reinforces communities and empowers people (UNESCO, 2019), thus influencing SWB in cities where the initiatives are planned (Wills-Herrera et al., 2009). This concept is strongly related to social capital and cohesion (and their components), but also to participation and the other processual determinants of SWB. It is hard to define one, without somehow including the others.

Participation, in most of the modern literature on development, means to actively take part in the discussion and governance of events (Conge, 1988; Gaventa & Valderrama, 1999). However, in some broader discourse, and even some international reports (European Commission, 2018), it has also come to mean the simple act of engaging in an activity or event, or even social life (Levasseur et al., 2010; UNESCO, 2019). In the literature, it is argued that high levels of participation (i.e., high interaction among different actors and

stakeholders, informal dialogue, close bonds, creation of ad hoc forums for discussion, etc.) are correlated to high levels of wellbeing (Nagy, 2018; UNESCO, 2019). In the logic of explicating the complex relationship among determinants, participation as is linked to both inclusion (Armstrong et al., 2011; Wilson, 2000) and social capital (Portela et al., 2012). A working participatory process implies the inclusion of different groups of actors and stakeholders – including also marginalized ones and minorities – as well as solid relationships with the institutions, strong networks, and trust among individuals and towards the process itself (Nagy, 2018). This interconnection remarks how these determinants of SWB have complex relationships among each other, and in the analytical phase it will need to be remembered.

Engagement is a determinant that is similar to participation, but it only alludes to the addressing and involving different groups of local actors and stakeholders – local community, minorities, institutions, tourists, enterprises, schools, etc. – during an initiative or activity, with no co-creation or co-planning involved. According to the literature, high engagement in the life of the city generates positive feelings, thus in turn positive influencing SWB (Seligman, 2010). High levels of engagement in a cultural initiative can thus impact people's SWB (Blessi et al., 2016; UNESCO, 2019), and create a virtuous process with the other determinants.

Finally, another related determinant is *access* (to cultural events and activities). To impact SWB it is not enough that cultural events and amenities exist and are implemented, they also need to be accessible, both from a conceptual and physical point of view (Ballas, 2013). Access to culture needs to be granted to as many people as possible, regardless of individual characteristics (e.g., physical, or mental disabilities, level of education, social class, etc.), space constraints or other potentially excluding features (Grossi et al., 2012; UNESCO, 2019). Access influences positively (or negatively, if hindered) the emotional state of individuals, their perception of themselves, their life, and the world around them – which in turn impacts on their SWB (Ballas, 2013).

2.5.4 The framework

To better explain and illustrate the distinction of the determinants and their attribution to the dimensions, I have attempted a synthesis in Table 2.

Table 2. Correspondence between subjective wellbeing determinants, dimensions, and references (source: author's own elaboration).

Determinant	Dimension	Reference(s)
Presence/density of cultural amenities	Context	- Ballas, 2013 - Grossi et al., 2012
Equality/Inequality	Context	- UNESCO, 2019 - Diener & Seligman, 2002
Institutional presence	Context	- UNESCO, 2019 - Portela et al., 2012
Social capital	Context/ Relations	- Helliwell & Putnam, 1995, 2004 - Portela et al., 2012
Cohesion	Relations	- Nagy, 2018 - Sacco et al., 2019
Trust	Relations	- Portela et al., 2012 - Putnam, 1993 - Neméth, 2016 - Helliwell & Putnam, 2004 - Maslow, 1943, 1954
Presence/density of networks	Relations	- Putnam, 1993 - Helliwell & Putnam, 1995 - Portela et al., 2012
Sense of belonging	Relations	- Maslow, 1943, 1954 - Seligman, 2010 - Collins, 2016
Pride/self-esteem	Relations	- Maslow, 1943, 1954 - Seligman, 2010 - Collins, 2016
Quality of relationships	Relations	- Seligman, 2010 - Grossi et al., 2011
Participation	Process	- UNESCO, 2019 - Nagy, 2018
Engagement	Process	- UNESCO, 2019 - Blessi et al., 2016 - Seligman, 2010
Inclusion	Process	- UNESCO, 2019 - Wills-Herrera et al., 2009
Access (to cultural events)	Process	- Ballas, 2013 - Grossi et al., 2012 - UNESCO, 2019

Building the framework is a crucial step, as it marks the boundaries of SWB that will be used in the rest of the work in a precise way, for the specific context of analyzing a cultural initiative and how it impacts the determinants defined below. It combines the relevant literature from all relevant disciplines and allows for a quick identification of the determinants to be considered.

The operative distinction of the three dimensions – context, relations, and process – that group the determinants according to their characteristics is a sensible choice also in designing the empirical part of the research. As will be shown in Chapter 4, the analysis will use texts, written content of different forms, that contains the information needed to identify the impact of the initiative on SWB. Without a framework to delimit what SWB is, it would be impossible to detect it in the content analyzed. This framework – and this operative distinction – is the benchmark from which to start understanding what is written (i.e., the identification of the determinants of SWB in the texts) and how it is written (i.e., the positive or negative perception).

It is important to stress that the framework needs not only to be theoretically sound and complete – including all the determinants identified in the literature – but also applicable to a specific case study. This last point will be addressed in Chapter 3.

2.6 Conclusions

In the previous chapter it was shown how in the literature on the impacts of culture there is an increasing recognition of the importance of knowing and studying the perceptions of communities that host cultural events, though primarily as a tool for tourism-related research and implications. What is missing, however, is a further step, to understand how these initiatives impact the quality of life and wellbeing of people who in various ways use them or are affected by them — the users — and this necessarily comes from analyzing their perceptions. This chapter has highlighted a lack of studies on this, both from a methodological and conceptual perspective. One of the research subjects that has mostly to do with perception is subjective wellbeing. This concept has been studied from different perspectives and disciplines — primarily by psychology, but interest has

grown (though with a different lexicon) over time also in other areas, including the aforementioned tourism studies and urban studies as well.

However, definition and measurement of SWB have traditionally remained separated between the different disciplines. This, reviewing the literature, results in a plethora of studies that do not quite connect with each other in an operative way, although they all refer to the broader concept of "studies on wellbeing". Specifically, I registered a gap both in methodologies able to identify SWB in a clear manner, and in studies regarding SWB in the context of urban cultural initiatives (Blessi et al., 2016).

As a way to de-complexify and operationalize the existing theories, the second part of the chapter has shown and explained the construction of a theoretical framework to be used as a baseline in the empirical part of this research. It is an attempt to organize and structure the definitions and determinants of subjective wellbeing found in the literature of different disciplines, in a logic of operationalizing this knowledge for the analysis of a cultural initiative's impacts on SWB. As complexity increases (i.e., when the definition of SWB involves a higher number of determinants, due to studying specific event in a specific context and definitions come from different disciplines), we need to look for ways to make the different literatures communicate with each other. This step is useful to at least to give a basic theoretical structure.

In sum, the determinants of SWB (which can be either cognitive or affective in nature) are assigned to three dimensions according to their characteristics (synthesized in Table 3).

Table 3. Determinants of subjective wellbeing, distributed by dimension - synthesis (source: author's own elaboration).

Dimension	Determinants
Context	- Presence/density of cultural amenities/events - Equality/inequality - Institutional presence - Social capital
Relations	- Cohesion - Presence/density of networks - Trust - Sense of belonging - Pride/self-esteem - Quality of relationships
Process	- Participation - Inclusion - Engagement - Access

I identified three types of determinants, each translating to an operative dimension:

- Context (exogenous) determinants: indicating how one stands toward external elements and how one perceives them.
- Relations (endogenous) determinants: indicating how one deals with emotions and intangible elements within oneself (e.g., trust, cohesion, relationships, etc.) and how one perceives them.
- Process determinants: indicating how one relates to the processes put in place by the initiative and how one perceives them.

These are all determinants that have to do with the subjective perception of individuals, grouped into the three dimensions based on the characteristics of the determinants themselves. The nature of the determinants remains the same – i.e., they remain related to the emotional sphere (e.g., trust) or to the more tangible and cognitive aspects (e.g., presence of amenities), but the new distribution makes them more understandable and usable in the analysis.

The proposition of a three-dimensional approach (Context, Relations and Process) and the according distribution of the determinants of SWB to each of them aims to overcome the operative issues that previous schematizations provided (Diener, 1984; Chen et al., 2017; Seligman, 2010). In other words, we can overcome the difficulty of requiring psychological expertise when handling the determinants.

The step-by-step explanation of each part of the framework proposed in the chapter highlighted the complexity of the effort and showed how the determinants of SWB and the dimensions identified are very tightly interconnected – some more explicitly than others.

Finally, key to this work is the explication of the link between subjective wellbeing (and its determinants) and the goals of the Capitals of Culture, which ties together the discourse on SWB and cultural initiatives, introduces the case study of this research (which will be formally introduced in Chapter 3) and provides a theoretical systematization of existing knowledge for analytical purposes.

The framework proposed in this chapter is functional to the rest of the work as it marks the boundaries of the SWB in a quite precise and straightforward manner, essential for the type of analysis proposed in this research. The determinants (and dimensions) are to be used to provide a benchmark for the analysis of texts that will be explained in Chapter 4. The definitions provided here are the baseline to identify the impacts on SWB (e.g., impacts on trust, on cohesion, on participation, on the relationship with the institutions, etc.). The theoretical explanation and in-depth analysis presented in this chapter are necessary for the future identification of information in the texts that will be analyzed. The practical use of the framework will be further explained in Chapter 4, together with the techniques of analysis and expected results.

Chapter 3

Introducing the case study: the "Capitals of Culture"

Momentarily stepping away from the purely theoretical context and literary perimeter of the research, this chapter introduces the empirical focus of the thesis, namely the urban cultural initiative of reference. Given the objective — to analyze the impact of the cultural initiative on subjective wellbeing — I decided to opt for a well-known, studied event, decidedly "urban" in terms of characteristics and identity, with a clearly delineated beginning and end, and that had among its more or less explicit goals a positive impact on the social sphere of the reference city.

The initiative I have chosen as a case study is, therefore, that of the "Capitals of Culture". This is a program with a dual connotation, European and national (Italian, specifically). The reasons for this choice are explained in the course of the chapter, as are the characteristics of the program (at the two levels) and the connection with the research objective, to study the SWB. Finally, the chapter closes with an introduction and contextualization of the two cities I selected for empirical analysis. These are two Italian cities: Matera, ECoC in 2019, and Palermo, initially an ECoC candidate for 2019 but named ICoC for the year 2018.

The motivations behind the choice of these two cities, as well as the specific characteristics of the two contexts, are expressed in the last part of the chapter.

3.1 Case study selection

The case study methodology is particularly apt for the research because it is intended to practically address the research question concerning the way in which a cultural program affects the subjective wellbeing of people – the "how" (Yin, 2003) — and focuses on an initiative with a clear beginning and end. As for the actual cultural initiative to analyze, I selected the Capitals of Culture (CoCs). The initiative was born as a European program — i.e., the European Capitals of Culture (ECoC)— but over the years it became so popular that regional or national spinoffs were created, to replicate its benefits on different scales (Green, 2017). In particular, the Italian spin-off – i.e., the Italian Capital of Culture (ICoC) – inherits most of the objectives and key guidelines.

Capitals of Culture are interesting on different levels, both theoretical and empirical. Arfò & Salone (2020), summarizing, have grouped cultural policies into four categories: art-based urban regeneration policies; urban policies for cultural and creative industries; urban branding policies; and policies for social and cultural integration in cities. Initiatives such as the Capitals of Culture can fall into almost all of these categories (Arfò & Salone, 2020), and this is probably one of the reasons why they are such a studied phenomenon at the academic level, but also so coveted at the practical level and in local policy decisions, sometimes at the expense of people's opinions (Németh, 2016) or studies that bring forward a critical view related to the negative effects of the event — gentrification, marginalization, to name the most glaring (Arfò & Salone, 2020; Bianchini, 2013). Specifically, ECoCs can fall into three of the abovementioned categories: art-based urban regeneration policies; urban branding policies; and social and cultural integration policies in cities (Arfò & Salone, 2020). ICoCs, on the other hand, seem to belong only to the category of branding policies — at least according to the stated objectives in the official Call (Ministero della Cultura, 2019), as will be shown later. This divergence could be explained by the different scale of the two programs (national vs. European), which implies different scope, prestige, involvement of local and non-local actors, budget and funding, and in general different underlying objectives. The point is that CoCs are used and intended as transforming force (be that a program, a policy or an event) not only for the urban system and city image, but also for social regeneration and integration.

A literature review of studies concerning the program, although mostly lacking specific references to wellbeing, highlights how a great many social variables have been studied over the years — including some of the determinants of SWB that were shown in Chapter 2. More specifically, one of the Program's implicit aims is to strengthen the relationships and networks among citizens and between citizens and institutions, creating stronger ties and a sense of cohesion needed for the implementation phase to succeed (European Commission, 2018). Following in the main Program's footsteps, the Italian "spinoff" pursues the same goals, although with a lesser level of complexity. The participative nature of the initiative (Piber et al., 2017; Biondi et al., 2018, 2020) and its processes (Bencivenga et al., 2016) also fit well in the analysis, as it validates the idea that the event is supposed to have a practical impact on the population. The idea is that by participating, representatives of citizens will highlight and support the needs of the locals, regardless of the citizens' own actual participation and/or attendance to the events (Nagy, 2018). What is argued in most of the literature is that citizen participation in the preparation and implementation phases of the Program allows for a high level of interaction, which in turn helps create stronger ties and a sense of common purpose. It was shown in Chapter 2 how these factors are relatable with the elements of social capital and can be used in the analysis of the impacts on subjective wellbeing. In particular, the creation of networks and interpersonal relationships based on trust and a common goal are at the base of the Capitals of Culture's participative process (Piber et al., 2017; Neméth, 2009, 2016; O'Brien, 2011). Elements of social capital, namely "social relationships", "interpersonal trust", and "associative and volunteering membership" (Portela et al., 2012) are also identifiable in the goals of the ECoC Program (and by proxy, the ICoC) as we will see, and they all can be related to the main objective of increasing participation and access to the cultural life of the city (European Commission, 2018; Demartini et al., 2018). Participation as a tool for social change has also been extensively studied in relation to the ECoC Program. Nagy (2018) specifically tried to frame the use of the term "participation" in the context of ECoC, questioning whether it can really be considered a tool for inclusion and social change – and social development. Considering the relationship so far illustrated between the concept of participation and the main elements of social capital, further analysis on the topic may include investigating whether (reported) high levels of participation – as in the case in the ECoC Program – somehow have an influence on the local perceived subjective wellbeing. The emotional perspective is also present in the literature. A few studies have tackled this issue with respect to the ECoC Program, in terms of "hope" for lasting benefits

(Anderson & Holden, 2008) and the development of civic cohesion and pride (Collins, 2016). The emotional dimension, however, is complex and needs to be handled carefully, to avoid accidental – or voluntary, in some cases (Collins, 2016) – manipulation. Finally, the topic of subjective wellbeing and life satisfaction in relation to Capitals of Culture has only been briefly touched (Steiner, et al., 2015), so there is still room for research and for other approaches to the issue.

In sum, policy-like quality and status (Arfò & Salone, 2020), urban context and scope, specific references in both literature and objectives to both the social sphere and the determinants, but thematic literature gap: these are the elements that led me to choose this specific cultural initiative and its impacts on SWB as the case study for the empirical part of the research. Additionally, as the academic interest sparked by the European Program has not yet reached its Italian counterpart, there is a substantial lack of in-depth studies on the ICoCs in the literature, also due of its relative novelty (it was founded only in 2014). Comparing the two Programs (same objectives, different scales) is an ulterior interesting part of the research. As the goals, motivations and intrinsic values of the parent project can be researched in the spin-off, the same analysis, the same methodology, the same research questions, applied to the program at different levels can uncover differences that may not be apparent or, on the contrary, reinforce the relationship between the two.

3.2 History, motivation, and evolution

3.2.1 The European Capitals of Culture

The Program was born in 1985 (Immler & Sakkers, 2014; Steiner et al., 2015), from the intuition of Greek minister Melina Mercouri. It was originally named the European City of Culture, and only one city was nominated per year (Green, 2017). According to the available information and the official European

Commission materials[3], the program has changed in many ways over the years, from the name to accepted participants, to the selection process. selection of the city was based on the rotation of countries, in alphabetical order. Each year from 1996, the title would be awarded alternately to members of the EU and non-members, as well as between capital cities and provincial cities. In 1999 the name was changed to European Capital of Culture, as we know it to this day.

Today, the ECoC title is normally awarded annually by the European Commission to two cities in Europe, in two different countries. The host country is selected on a rotational basis, leading to the winning candidacy of one city. For instance, in 2019 it was Italy's turn, which led to a national competition among cities to win the title for that year – while the same happened in Bulgaria.

The call for applications is usually published six years before the event year by each country's Ministry of Culture, followed by the submission of applications by various competing cities. Although applications must be submitted by a city, the surrounding area may also be included in the project. The title is generally awarded four years before the title year, after a selection procedure that lasts roughly two years. This period is crucial for the preparation of the events (e.g., engaging citizens and institutions, building infrastructure, etc.) and the integration of the activities in a long-term development strategy for the city (Németh, 2016).

The winning candidates are chosen by jury of experts (a panel, appointed each year) that works alongside the European Commission. The jury that draws up a report about applications submitted, assessing whether they meet the objectives and characteristics of the ECoC initiative (European Commission, 2017).

After a pre-selection phase, the panel agrees on a shortlist of cities, which are then asked to submit more detailed applications to support their candidacy. The panel then assesses the final applications and makes a recommendation for one city per host country, which is then awarded the title by its most relevant cultural authority (e.g., the Ministry of Culture).

As per a Decision[4] by the organizing institutions, in the 2020 to 2033 period the title can be awarded also to a country/city outside the EU but member of the

[3] Available at: https://culture.ec.europa.eu/policies/culture-in-cities-and-regions/european-capitals-of-culture

[4] Decision No 1545/2017/EU of the European Parliament and of the Council of September 13, 2017.

European Free Trade Association (EFTA) party to the Agreement on the European Economic Area (EEA)– as will be the case in 2024 with Norway, for instance.

The Program has become incredibly popular and coveted since its beginnings. Athens was named the first ever ECoC in 1985, and until today over 60 cities have been awarded the title (Table 4). Because of the Covid-19 pandemic, the calendar of the European Capitals of Culture was modified. According to the Decision[5], the two ECoCs for 2020, Rijeka (Croatia) and Galway (Ireland) were given the possibility to prolong their event year until 30 April 2021. The next title years will slide forward accordingly. The title year of Novi Sad (Serbia) has been moved from 2021 to 2022 and the title year of Timisoara (Romania) and Elefsina (Greece) from 2021 to 2023.

Table 4. List of all designated ECoCs, at the time of submission of this thesis (source: author's own elaboration based on European Commission reports and website).

Year	Location
1985	Athens, Greece
1986	Florence, Italy
1987	Amsterdam, Netherlands
1988	(West) Berlin, (West) Germany
1989	Paris, France
1990	Glasgow, Scotland
1991	Dublin, Ireland
1992	Madrid, Spain
1993	Antwerp, Belgium
1994	Lisbon, Portugal
1995	Luxembourg City, Luxembourg
1996	Copenhagen, Denmark
1997	Thessaloniki, Greece
1998	Stockholm, Sweden
1999	Weimar, Germany
2000	Avignon, France
	Bergen, Norway
	Bologna, Italy
	Brussels, Belgium
	Helsinki, Finland
	Krakow, Poland
	Prague, Czech Republic
	Reykjavik, Iceland
	Santiago de Compostela, Spain

[5] Decision No 2229/2020/EU of the European Parliament and of the Council of December 23, 2020.

2001	Rotterdam, Netherlands
	Porto, Portugal
2002	Bruges, Belgium
	Salamanca, Spain
2003	Graz, Austria
2004	Genoa, Italy
	Lille, France
2005	Cork, Ireland
2006	Patras, Greece
2007	Sibiu, Romania
	Luxembourg City, Luxembourg
2008	Liverpool, UK
	Stavanger, Norway
2009	Vilnius, Lithuania
	Linz, Austria
2010	Essen-Ruhr, Germany
	Istanbul, Turkiye
	Pécs, Hungary
2011	Turku, Finland
	Tallinn, Estonia
2012	Guimarães, Portugal
	Maribor, Slovenia
2013	Marseille, France
	Košice, Slovakia
2014	Riga, Latvia
	Umeå, Sweden
2015	Mons, Belgium
	Plzeň, Czech Republic
2016	San Sebastiàn, Spain
	Wrocław, Poland
2017	Aarhus, Denmark
	Paphos, Cyprus
2018	Leewarden, Netherlands
	Valletta, Malta
2019	Matera, Italy
	Plovdiv, Bulgaria
2020-21	Rijeka, Croatia
	Galway, Ireland
2022	Kaunas, Lithuania
	Esch-sur-Alzette, Luxembourg
	Novi Sad, Serbia
2023	Veszprém, Hungary
	Timișoara, Romania
	Eleusis, Greece
2024	Tartu, Estonia
	Bad Ischi, Austria
	Bodø, Norway
2025	Nova Gorica/Gorizia (joint bid), Slovenia+Italy
	Chemnitz, Germany
2026	Trenčín, Slovakia
	Oulu, Finland
2027	Liepāja, Latvia
	Évora, Portugal

Becoming an ECoC is conceived as an opportunity to bring new life to a city and its surrounding region, fostering cultural, social, and economic development (Demartini et al., 2018; Piber et al., 2017). Over time, the importance of the themes linked to the European identity and common cultural traits has also increased (Immler & Sakkers, 2014). So much so that in recent calls, the stress on the European dimension of the initiative has become central for the application and selection process (European Commission, 2018). Since its beginnings, the ECoC Program has become one of the EU's most highly regarded (Steiner et al., 2015) and successful (Immler & Sakkers, 2014) programs. As such, it's important to understand its complexities, its scope, and its potential legacy. The idea is to place the selected cities at the center of cultural life across Europe, highlighting what Europeans have in common, but also celebrating the richness that comes from the diversity of traditions, languages, and history spanning the continent (European Commission, 2017).

Once a city has been awarded the ECoC title, the processes of preparing and implementing the cultural program are subjected to monitoring. The role of the expert panel/jury is not exhausted in the selection phase. It has a continuing role during the four years of preparation, providing the selected ECoC with advice and guidance – when needed (European Commission, 2017).

However, a second type of monitoring is vital for the ECoC Program – and more important for this research project. Every year, the European Commission publishes an evaluation report on the outcomes of the European Capitals of Culture of the previous year. From 2019 onwards, the Capitals themselves must carry out their own evaluation and deliver it to the Commission by the end of the year following that of the title (European Commission, 2018). That report must be public and accessible through the Commissions official channels and can be published also on the Capital's official website. The European Commission has issued a Guidelines Report (2018) to support cities in their own monitoring of results, including suggestions on methods and innovative processes to collect data and transform them into insight for the future.

3.2.2 The Italian Capitals of Culture

The Italian Capital of Culture (ICoC) is a city designated each year by the Italian Ministry of Culture (MiC), to host cultural events and showcase its cultural life and development for a period of one year. The title was established in 2014 by the Ministry of Culture and Tourism Dario Franceschini[6], following the proclamation of the city of Matera as European Capital of Culture 2019 (Camera dei Deputati, 2021; Ministero della Cultura, 2015). While there had been other Italian cities awarded the ECoC title before Matera (e.g., Bologna in 2000 and Genoa in 2004 — see Table 4), the opportunity to appoint an Italian city as ECoC in 2019 stirred a fierce and unprecedented creative competition among potential candidates. The cultural vibrancy experienced in that period convinced the Ministry to promote a national spinoff of the main Program, with its own objectives and rules, and awarding a different Italian city each year. Since then, each edition of the ICoCs has aimed at concrete and positive effects on tourism development and on the fruition of the tangible and intangible cultural heritage of the winning cities and urban areas (Camera dei Deputati, 2021).

The aim of the program is that of "supporting, encouraging and enhancing the planning and implementation capacity of Italian cities in the field of culture, so that the value of cultural leverage for social cohesion, integration, creativity, innovation, growth, economic development and individual and collective wellbeing is increasingly understood" (Ministero della Cultura, 2015).

The process to become an Italian Capital of Culture starts a few years before the actual date of the event. The bidding must be officialized through an application dossier containing, under penalty of exclusion, the program of cultural activities (Camera dei Deputati, 2021; Ministero della Cultura, 2019). As per Ministerial indications (2015), the dossier must contain an assessment of economic and financial sustainability, and a timetable of the planned activities (lasting one year). The activities should integrate in a larger long-term project, for the cultural and tourist development of the candidate city. Also important is the indication of the entity/institution/partnership responsible for the development and

[6] Decree of the Minister Cultural Heritage and Tourism, December 12, 2014, comma 3-quater of Article 7 of Decree-Law No. 83 of May 31, 2014, converted with amendments by Law No. 106 of July 29, 2014.

promotion of the project, its implementation and monitoring. Finally, bidding cities are required to declare the objectives pursued, in qualitative and quantitative terms, as well as the indicators that will be used for measuring their achievement.

From 2015 to the present, the title has been awarded to Cagliari, Lecce, Perugia, Ravenna, and Siena in 2015, Mantova in 2016, Pistoia in 2017, Palermo in 2018, Parma in 2020 and 2021 (due to Covid-19), Procida in 2022, Brescia and Bergamo in 2023, Pesaro in 2024 and finally Agrigento in 2025. In recent years, every bidding city also selected a theme for its candidacy, a slogan, to briefly illustrate the main features they would develop. All selected cities and themes (where present) are summarized in Table 5.

Table 5. List of designated ICoCs by year and their themes, at the time of submission of this thesis (source: author's own elaboration).

Year	City	Theme
2015	Ravenna Cagliari Perugia Lecce Siena	N/A
2016	Mantova	N/A
2017	Pistoia	N/A
2018	Palermo	"La città che vogliamo"[7]
2019	*not designated*	-
2020-21	Parma	"La cultura batte il tempo[8]"
2022	Procida	"La cultura non isola[9]"
2023	Brescia Bergamo	"La città illuminata[10]"
2024	Pesaro	"La natura della cultura[11]"
2025	Agrigento	"Il sé, l'altro e la natura. Relazioni e trasformazioni culturali[12]"

[7] English translation: "The city we want". It was also the slogan used for Palermo's candidacy dossier to the 2019 ECoC title, which was awarded to Matera.
[8] English translation: "Culture beats time".
[9] English translation: "Culture does not isolate".
[10] English translation: "The illuminated city".
[11] English translation: "The nature of culture".
[12] English translation: "The self, the other and nature. Relationships and cultural transformations".

Analyzing the Calls and some applications and dossiers (Ministero della Cultura, 2019) shows that the main idea behind ICoCs is generally less complex and less ambitious than its European counterpart. The idea is basically to use the program as a boost for tourism, but also as a driver to set in motion urban innovation processes (e.g., city branding but also construction of infrastructure, public works and restoration) that would be difficult to implement outside of an extraordinary event such as the awarding of the title.

After the bidding phase, the dossiers are examined by a jury of experts appointed by the Ministry. After a first round of consultations, a maximum of 10 finalist projects is selected. The final evaluation is actuated through a public meeting for presentation and discussion ("hearing") of the candidacies. After the hearings, the jury shall recommend to the Ministry the most suitable candidate, accompanying the proposal with a motivated report (Ministero della Cultura, 2015, 2019).

The selected candidate city then must prepare and implement its program, as it was expressed in the dossier. Within two months of the end of the event year, the selected city must submit a final report on the activities carried out, containing the results achieved and the degree of realization of the objectives set out in the candidacy dossier. This report must be submitted to the General Secretariat of the Ministry of Culture (MiC), responsible for monitoring the implementation of the program and for verifying the achievement of the objectives (Ministero della Cultura, 2015, 2019). The awarded city must ensure the publicity and transparency of all the acts relating to the candidacy, selection and subsequent implementation of the projects contained in the candidacy dossier, as per the Italian legislation for public administrations[13].

3.3 The Capitals of Culture in the academic literature

As was mentioned, the ECoC Program has been thoroughly studied over the years. Several aspects related to the impact of the Program have been studied, both from a social and economic perspective. While in general a critical view has emerged in recent years (Ooi et al., 2014), in the academic literature of the past

[13] Decreto Legislativo No. 97 of May 25, 2016

decade especially three main currents are distinguishable– although tightly interlinked and in some cases overlapping.

The first one relates to the dimension of tourism and city branding as the main output of the Program (Campbell, 2011; Åkerlund & Müller, 2012; Liu, 2014). Enhancing tourism and promoting the city's image as a cultural center is one of the declared goals of the ECoC candidacy guidelines (European Commission, 2018), to be accompanied by a profound rethinking of the city's own characteristics and identity, together with a restructuring of the urban cultural system (Ooi et al., 2014) and an openness towards other countries and Europe in general (Fage-Butler, 2020; Lähdesmäki, 2012). The main point presented by different scholars is that over time the reassessment of urban resources and the capability to rethink urban processes intended by the Program has mostly resulted in tourism-based strategies aimed at increasing the number of visitors and thus brand the city as an attractive destination (Åkerlund & Müller, 2012; Ooi et al., 2014). This approach highlights the use of the Program made by cities – mostly medium-sized and post-industrial – as an infallible method to relaunch a city's (or a country's) tourism attractiveness (Bianchini, 2013; Immler & Sakkers, 2014). In the case of medium-sized cities in particular, some authors remark that the opportunity to become less marginal in the international scene and more European (as intended by the Program) in the long term is often based on the cities' own characteristics and strategies (Hudec et al., 2019).

The second emerging trend is related to the Program's regenerative capability on cities (Bianchini, 2013), mostly analyzed through the lens of governance able to make strategic event-based decisions and create tight, interconnected networks of local actors working together to provide new opportunities for the city (Demartini et al., 2018; Piber et al., 2017; Németh, 2009, 2015; O'Brien, 2011). This topic has caused debate among scholars, and skepticism by authors who analyzed in-depth the example of certain cities. Several case studies have been analyzed, to understand and then deconstruct both the official narratives and the processes that have led to the event (Boland, 2010; Cox & O'Brien, 2012; O'Brien, 2011; Connolly, 2013). Similarly to what emerges from studies on tourism and city branding, scholars in this field tend to agree that the "success" of the ECoC Program (Bianchini, 2013; Boland, 2010) needs to be analyzed not as a package but starting from the specific characteristics of the city considered – history, economic environment, social fabric, institutional setting. What emerges is that the Program has had a more or less lasting impacts, resulting in deep or shallow urban regeneration processes (Németh, 2016) and changes in the social

structure and governing institutions (Boland, 2010) depending on the starting characteristics of cities. Lack of a dialogue between the local governance and community networks of local actors often results in conflicts over decisions, use of space and activity implementation (Lähdesmäki, 2013), threatening not only the success of the Program, but the durable and wished for regeneration of the city (Németh, 2016; O'Brien, 2011).

Related to the concept of local networks is the third current, dealing with the Program's declared goal of creating more engaged and tight communities, improving both attendance to city events and participation in the organization processes (EU Commission, 2018; Urbančíková, 2018). Here, the tendency is to admit that despite good intentions declared in terms of social inclusion, cohesion and in general social change, results have often been inconclusive (Nagy, 2018). Authors approaching these topics highlight the issues of the ECoC event in terms of direct impact on the urban social system (Fitjar et al., 2013; Demartini et al., 2018). One emerging risk is the potential marginalization of certain groups of citizens in "cultural" cities, leading to ever higher involvement of already active stakeholders and the exclusion of entire communities, disadvantaged or simply on the outskirts of the cultural and political life of the city – generating conflict (Fitjar et al., 2013; Nagy, 2018; Németh, 2016). Also in this case, authors appear to focus their attention on the starting characteristics of the city's social fabric, and argue that the levels of attendance to events, inclusion and participation in local networks may be linked to socio-economic factors (geographic position, income, social status) (Fitjar et al, 2013), but also be dependent on the pre-existing cooperation culture of the city (Nagy, 2018; Németh, 2016), which can in turn enhance or limit the possibilities of creating lasting changes and improvements in the everyday life of local communities.

In the field of studies on the social impacts of the ECoC, a particularly interesting though understudied direction is the analysis of the Program's impacts on residents' quality of life (Steiner et al., 2015), that is investigating whether the ECoC has an actual impact (positive or negative) on the perceived wellbeing of locals – in terms of inclusion, sense of community, happiness and belonging. This theme and consequent literature gap are reminiscent of the lack of studies on the effects of cultural initiatives on SWB (Blessi et al., 2016), argued in Chapter 2. While some authors have started to embrace the idea that the perception of locals is an important variable to study in these contexts (Arfò & Salone, 2020; Bencivenga et al., 2016), such studies are a rare minority. Studies of this kind may provide evidence for local (and national) stakeholders and policy makers to

start pushing toward policies and programs that actually affect their citizens, and how to avoid potentially negative situations.

Contrary to the European context, and due to the relative novelty of the award, at the academic level not much has been published on the ICoCs. Most of the literature concerns evaluative reviews of single case studies (Colavitti & Usai, 2016; Guerzoni, 2018; Mamì & Nicolini, 2017; Palmentieri, 2021a, 2021b), on specific aspects and objectives listed in the application (Pinto & Viola, 2019) or other contextual issues (Marietta & Melis, 2018). Interest is rising, both at the professional and academic level, although the phenomenon is extremely recent and specifically national in range.

3.4 Main objectives and relevance to the research topic

The ECoC Program's documentation almost never explicitly mentions SWB. The concepts of wellbeing and life satisfaction are almost never mentioned in the relevant literature either (Steiner et al., 2015). However, the social impacts of the Program are among the most studied topics, especially in the past two decades. The European Commission (2017) itself admits that many ECoCs have gained significant social benefits from the Program (e.g., lasting infrastructure and services, physical urban regeneration, but also increased pride, sense of belonging and self-esteem).

I reviewed the documentation from both the ECoC and ICoC Programs, focusing on both the objectives (general and specific) and the selection criteria. I reviewed also the institutional and technical documentation produced in recent years to explain the changes in the ECoC program, promote its successes and its legacy. I have used the gathered information to make a straightforward connection between the Program and social impacts and SWB, which is presented in the following sections.

3.4.1 Wellbeing as a goal?

It was shown in Chapter 2 that the list of variables included in the framework has been drawn from the relevant academic literature, from the points of contact of the different theories on subjective wellbeing. The next step to connect such knowledge to the case study, by linking each determinant with a CoC Program objective from the European Commission's latest "Guide for cities preparing to bid" for the European Capitals of Culture Program (2017) and the General Secretariat of the Italian Ministry of Culture's "Bando per il conferimento del titolo di Capitale italiana della cultura per l'anno 2021" (2019), to explicate the relationship between subjective wellbeing and the Program.

For clarity and brevity, I extrapolated the concepts that refer to social impacts and variables and simplified them in four main goals: "Develop lasting social impacts", "Share cultural values", "Create relationships with others", "Foster participation and engagement of local communities". A simplification of the identified goals and respective ECoC and ICoC objectives is portrayed in Figure 8.

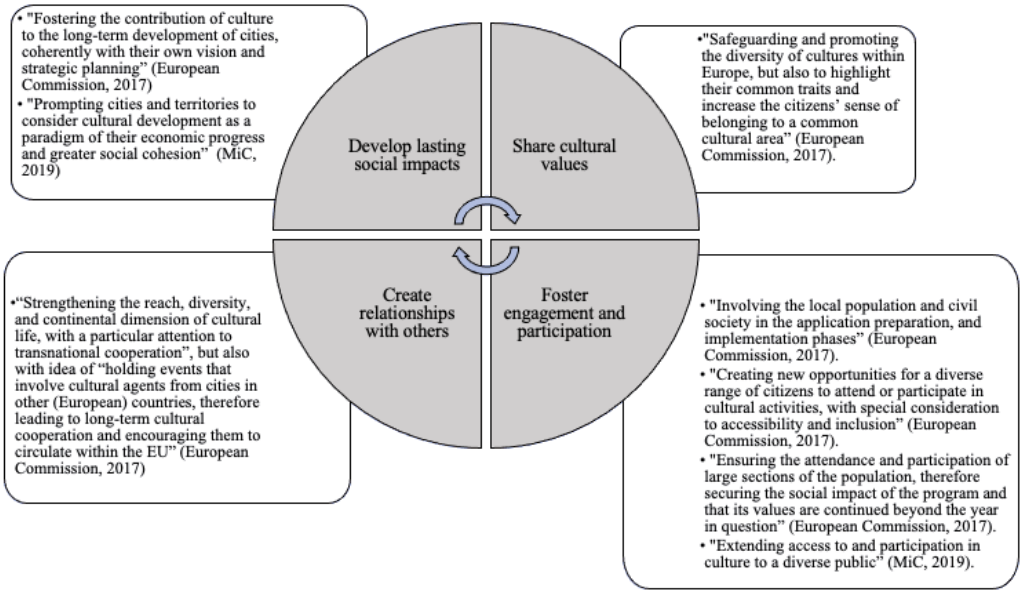

Figure 8. Identified CoC social goals and respective Programs' objectives/criteria (source: author's own elaboration based on: European Commission, 2017; MiC, 2019).

The broadest – and most general – goal I identified is "Developing lasting social impacts", which ideally encompasses most of the determinants identified in the framework. It relates to the General ECoC Objective of "fostering the contribution of culture to the long-term development of cities, coherently with their own vision and strategic planning" (European Commission, 2017), but also to the General ICoC Objective of "prompting cities and territories to consider cultural development as a paradigm of their economic progress and greater social cohesion" (MiC, 2019). In both programs, the main reference is to the capacity of culture (and the initiative) to regenerate cities, from a physical transformation, economic and social point of view. The main SWB reference here is made to "social cohesion" in the Italian bidding call (2019), although it is not specifically addressed in any other document or section of the document. Finally, the implication of a "strategic vision" implies a temporal element, which fits well with the "Process" dimension idea that some determinants, once "activated", generate a virtuous circle for the city and the entire urban area. However, this objective remains quite generic. It also relates to the dimensions of "Context" and "Relations", as the Programs impact and reshape both structural variables (e.g., the density and presence of cultural amenities) and the emotional determinants (e.g., trust, pride).

The second goal I identified is to "Share cultural values". It communicates the need to share experiences through the cultural offer and create a hospitable environment not only for the hosting community, but for all who can be considered stakeholders (all that somehow are involved – tourists, users, firms, associations, etc.). At a conceptual level, this objective is also linked to the concept of density of cultural events and their accessibility, but also to inclusion and engagement, as well as to emotional variables (pride of sharing ones' culture, sense of belonging, trust in other people to understand and appreciate one's values, etc.). For the ECoC Program in particular, it is linked to the European dimension of the initiative and to the General Objective of "safeguarding and promoting the diversity of cultures within Europe, but also to highlight their common traits and increase the citizens' sense of belonging to a common cultural area" (European Commission, 2017). This European-level goal specifically refers to the "sense of belonging" of citizens and how the initiative should impact it in a positive way, which is one of the few direct links to SWB in the analyzed documentation.

Linked to the concept of sharing values and promoting a common identity is the third goal identified, to "Create relationships with others". In this case, the

"others" are intended both as other members of the community (e.g., creating new networks, interacting with local associations and interest groups, forming bonds, etc.) and "outsiders" who are engaged in the initiative (e.g., minorities, people living in different parts of the city, tourists, etc.). This goal conveys the need to create a tight, strong community of users and to feel connected to others to become "better". Specifically, it is taken from the ECoC Objectives (both general and specific) of "strengthening the reach, diversity, and continental dimension of cultural life, with a particular attention to transnational cooperation", but also with idea of "holding events that involve cultural agents from cities in other (European) countries, therefore leading to long-term cultural cooperation and encouraging them to circulate within the EU" (European Commission, 2017). Again, in this case much stress in put on the European dimension of the Program, but the concepts relayed by these Objectives can be translated to a smaller scale (national, for instance, or urban – in the case of very large cities with disconnected neighborhoods). It implies concepts like inclusion, presence of networks and quality of relationships, but is also refers to the need for interpersonal relationships, self-validation, and self-esteem.

Finally, last goal identified – and the easiest to extrapolate – is to "Foster participation and engagement". This goal has a double target. On the one hand, we find the participation and engagement of the local community in the preparation and implementation phases, where the participative processes are most frequent. To succeed in preparing and implementing the initiative, it is fundamental to engage the locals in a positive way, as that impacts positively on their perception of both the event and its later impacts. This first perspective is expressed well in the ECoC Selection Criteria, which specifically require for any CoC to involve the "local population and civil society in the application preparation, and implementation phases" (European Commission, 2017). On the other hand, the goal implies the need to broaden inclusion, engagement and accessibility for both citizens and the general public. Both the ECoC and ICoC Selection Criteria express this concept quite clearly. In the European level, the city is required to "create new opportunities for a diverse range of citizens to attend or participate in cultural activities, with special consideration to accessibility and inclusion" (European Commission, 2017). At the Italian level, it is required to "extend access to and participation in culture to a diverse public" (MiC, 2019). The idea is to "ensure the attendance and participation of large sections of the population, therefore securing the social impact of the program and that its values are continued beyond the year in question" (European Commission, 2017). This last criterion is linked explicitly to the first goal identified for the framework of this

research, the creation of lasting social impacts, which reiterates the link of this fourth goal with the processual dimension determinants.

Counterevidence of the relevance of the SWB in the CoC initiative lies in the criteria for selecting cities. In order to be selected as CoCs, in fact, applications — prepared on the basis of the objectives seen above — must necessarily be reviewed against a set of established criteria.

In the Italian program, we do not find specific references to SWB or its determinants. The call (2019) simply refers to the need for the selected city to "share the project with other local authorities and with public and private stakeholders in the area" and "implement permanent projects of public utility".

In the European Commission documentation (2017), however, the evaluation criteria are more stringent and specific. They are divided into six main categories: "contribution to the long-term strategy", "European dimension", "cultural and artistic content", "capacity to deliver", "outreach" and "management". Specifically, with regard to SWB, the most interesting category is the outreach of the project. Out of all the listed requirements[14], the selected city must in particular ensure:

a) The involvement of local population and civil society preparing the application, as well as in the implementation phase.
b) The creation of new opportunities for a diverse range of citizens to attend or participate in cultural activities, with particular attention to accessibility and inclusion.

Such specific criteria imply that, having been selected as an ECoC, the awarded city has included in its program (and thus had to implement) activities that impact these variables, which are also determinants of SWB. This adds to the motivations behind the selection of the case study — because we know from selection criteria that these impacts (on SWB) must be there.

[14] As taken from the European Commission's "Guide for cities preparing to bid" for the European Capitals of Culture Program (2017)

3.4.2 Capitals of culture and determinants of subjective wellbeing

Although none of the objectives explicitly refer to subjective wellbeing, it was shown how the determinants identified in the framework (Table 2) are implied when analyzing the meaning of each objective.

The relationship with the determinants of SWB identified in the framework is made evident, in practice, by a quick analysis of the ECoC-related literature. As was detailed in Section 3.3, many of the determinants of SWB that have been included in the framework have been studied as distinct social impacts – e.g., participation, inclusion, engagement, access, pride, sense of belonging, etc. – stemming from the implementation of an ECoC (European Commission, 2017).

Participation is one of the most studied determinants in ECoC-related literature. The majority are studies that investigate the positive characteristics of participatory processes, seen as being able to convey the specific goals of the program in a given city to improve its conditions and create a positive connection with and for communities (Biondi et al., 2018, 2020; Demartini et al., 2018; Piber et al., 2017; Németh, 2016). But participation is also investigated in a critical manner, in particular questioning its real identification as a structural and necessary process (Lähdesmäki, 2012, 2013; Nagy, 2018; Németh, 2016) for the successful implementation of the Program.

A second much-studied determinant is the Program-related presence/creation of networks within the community, to provide a propulsive boost to the city's regeneration. This very specific interest on networks implies an equally specific – though shared – indication and interpretation of ECoC's goals on how to intervene in community life.

Finally, a set of determinants that have been studied in depth in the context of ECoCs are those related to the emotions such as sense of belonging and pride (Fišer & Kožuh, 2019; Richards & Wilson, 2002). In particular, the sense of belonging is seen as a positive element that, on the one hand, unites the ECoC's target community from the very early stages of candidacy (i.e., all stakeholders involved: citizens, insiders, area institutions, associations, etc.), while on the other hand, it is closely linked to the implementation and individual projects that are developed within the program, which must be consistent with the goal of creating a shared culture (Fišer & Kožuh, 2019; Richards & Wilson, 2002). Pride, on the

other hand, is closely linked to results and is a consequence of the successful implementation and success of the program (Fišer & Kožuh, 2019).

The fact that so many of these determinants have been the focus specific studies on ECoCs means that their importance has been recognized by both academics and practitioners. For this research it means, in turn, that there is solid indication of a tight relationship between the determinants of SWB and the declared objectives of the ECoC program. What was missing until now was an operative link to connect them.

As a final remark, it is worth noting how recently recognition of wellbeing as a direct impact of the Program has appeared. An extremely relevant example is one long-term project on the impacts of the ECoCs, the "Impacts 18" research program (2019)[15]. This project has not only taken up the work from a study conducted over ten years prior (Impacts 08; Garcia et al, 2008; Langen & Garcia, 2009), but it has innovated the research areas including new forms of social impacts in the effects of the ECoC Program. In particular, "Impacts 18" has focused on areas such as "Participation and engagement", and "Cultural vibrancy", but it also included a research area explicitly dedicated to "Social capital and wellbeing", highlighting the rising relevance of wellbeing within social impact research in ECoCs and validating the link with social capital (and its components). However, although relevant, this effort has treated wellbeing as a single social impact, seemingly independent from others. The approach of the Impacts 18 project is thus significantly different from what is proposed in this research – which considers wellbeing as interconnected with and determined by other social impacts such as those expressed in the framework. Still, the emergence of wellbeing as a topic of interest deserved a particular mention.

[15] See: http://iccliverpool.ac.uk/impacts18/

3.5 Two cities: Matera and Palermo

For the empirical part of the research, two cities have been selected among the Capitals of Culture of years past – one at the European level, and one at the Italian level. For technical reasons the selection had to consider two main criteria. The first one is related to time. Because of the nature of the materials and data needed for the analysis, the cities selected had to be recent, to have access to online content (social media posts, for instance). The second specific criterion is linked to language. It was decided to analyze these cases with textual analytics, and though not all techniques used are necessarily tied to a specific dictionary, a working knowledge of the language used to process the text and context and understand all potential meaning. More on these technical issues is detailed in Chapter 4, dedicated to the methodology.

Availability of specific resources — such as dossiers and evaluation reports — and already existing external data and literature have also been considered in the final choice.

For the abovementioned reasons, the two cities selected for the empirical part of the research are Matera (ECoC in 2019) and Palermo (ICoC in 2018).

3.5.1 Matera

Matera, located in southern Italy's Basilicata region, was one of the two ECoCs in 2019. The main slogan of the initiative was "Open Future", declaring the need for a vision that opens an historically closed off, hard region, to the world at large through its landscape beauty, invaluable heritage, and peculiar atmosphere (Ivona et al., 2019; Wise et al., 2018). In the bidding phase, among the reasons given to support the decision to put become an ECoC stand out precisely specific references to improving the socioeconomic environment of the city.

Regarding the object of the present research, Matera as a case study is interesting because in the documents arranging the candidacy there are some references to issues related to wellbeing. In particular, in the first dossier submitted (first selection phase) there are some specific references to the wellbeing and quality of life of citizens, seen as both users and co-creators of the initiative. This very specific reference to wellbeing (collective and individual),

however, disappears in the second application dossier, the one reformulated after Matera entered the shortlist of potential ECoC cities (second selection phase). However, although references to the concept of wellbeing are dropped, references to some of the determinants I identified in Chapter 2 remain an integral part of the dossier.

One element that fades from one selection phase to the next is that of inclusion. In the first dossier specific interventions and goals are detailed to include in the processes (of creation, participation, but also accessibility) certain categories that are normally excluded (i.e., women, youth, migrants, people with disabilities) — however with little differentiation and depth, not considering social exclusion (Belfiore, 2002) as a composite concept related to social class or economic availability, or even to different propensities (for various reasons, be them cultural, economic, opportunity- or habit-based) to cultural consumption. In the second dossier, the one closest to the actual implementation, the concept of inclusion is made even flatter, with a just few lines on accessibility for people with disabilities but no specific details.

On the other hand, the most pronounced aspects in the dossier concern bottom-up creation of the candidacy and the potential implementation phase, with the participation and involvement not only of citizens, but of all the associative and institutional realities of the city and urban system. Not only Matera, but the indicated involved area also includes the whole Basilicata region and other provinces. A special reference in the description of the bottom-up process (especially in the second dossier) is related to the unanimity of the decision to apply and to support the application and project in any way possible — both from the beginning and, cynically, by "jumping on the bandwagon" only after being shortlisted. Such a broad consensus is tightly linked to the involvement of a large panel of stakeholders, who in different capacities participated in every phase of the ECoC's life. First and foremost, the organizing and managing body of the event, the Matera Basilicata 2019 Foundation, which together with the Municipality of Matera (Mayors Adduce and De Ruggieri) and other local and regional entities presented and managed the bid and the implementation phase. Other institutional actors[16], on the other hand, were key players in the evaluation phase of the effects of the initiative (University of Basilicata, CityO srl, PtsClas

[16] The complete evaluators' list is available at: https://www.matera-basilicata2019.it/it/report-2019/studi-valutativi-su-matera-2019.html

Spa, Arteco Sas, Ecorys), and produced several evaluation dossiers related to the different impacts caused (or expected) by the ECoC. On the side of communication of the events and the general progress of the activities a primary role was given to newspapers (national, local and sector), but also to the promotion on social networks from the official pages of the event. Finally, a fundamental role was played by citizens and the community, with the birth of an association of volunteers (Associazione dei Volontari Matera 2019) and a great participation and engagement of the public. The aggregative aspect is in general very stressed, with participation, engagement and the bottom-up approach being the elements at the base of the candidacy, and seemingly one of main motivations behind the actual selection of Matera as ECoC.

In general, then, quite a few elements in Matera's candidacy relate more or less explicitly to wellbeing — and to improving the wellbeing and quality of life of citizens and the community —, which make the city a good case study for this research.

An additional relevant element (not a motivation per se, but an added bonus) is the presence both in the literature (Arfò & Salone, 2020; Bencivenga et al., 2016) and in the evaluation reports of a section devoted to the perception of users, tourists and citizens. This presence indicates the increased attention to the social but also personal aspect of the initiative and provides this research with some additional interesting data to complement and interpret the empirical results.

3.5.2 Palermo

Palermo, Sicily's regional capital, was awarded the title of Italian Capital of Culture of 2018. On a culture and heritage level it is something of a unicum, in which Arab, Norman and seventeenth- and eighteenth-century art remains coexist (Cannarozzo, 2010), giving different souls to the city. Over the years, however, especially since the 1980s and '90s, the city became a symbol of the Mafia's presence in Sicily, a legacy that has remained in spite of itself to this day. For years, institutions and associations have attempted to skim off a city this sort of "criminal identity", focusing heavily on culture and the riches of the city's artistic heritage while trying to renew and regenerate an historic center in a total state of neglect and at risk of destruction (Cannarozzo, 2007, 2010; Costantino, 2010). This was the rationale, for example, behind the introduction of a conservative

Master Plan, the candidacy of the city center's Arab-Norman heritage as a UNESCO World Heritage Serial Site and cultural initiatives such as Manifesta 18. Palermo's bid to become ECoC 2019 (competing with Matera, the winner, and other Italian cities) also fits into this strand of interventions. The bid was unsuccessful — Palermo did not even make the shortlist — but the cultural fervor generated by the competition was so impressive that it led to the creation, as seen, of the Italian spinoff (Camera dei Deputati, 2021). The ECoC candidates were almost all invested with the title of ICoC over the years, and Palermo's turn was in 2018 after bidding and winning with its dossier.

As was the case for Matera, Palermo was chosen for the empirical analysis for specific reasons. First, the similarities with the case of Matera make it comparable — in particular the timing, overall goals, geographic location and Southern Italian identity, candidacy to be ECoC. Second, analyzing Palermo's candidacy reveals some goals and motivations that fit well with the research objective.

Specifically, the Palermo 2019 candidacy dossier (2013) makes specific references to both wellbeing and some of its determinants. With regard to the concept of wellbeing (individual and collective), this is linked in the application to the concept of happiness (similar to what we saw in the literature in Chapter 2), but also and above all to conditions of justice, equality and legality — which is framed in the sentiment of fighting the stereotypical image of Mafia Palermo seen earlier and at the base of the candidacy's slogan, "the city we want" as opposed to its past history. The wellbeing and happiness of the community (both at the collective level and at the individual level, somewhat confusing the planes), is thus referred to as a "common good" to be achieved, including through cultural initiative.

As for individual determinants, the most stressed is that of social capital, understood both as a network of interactions among citizens (which should be tightened and improved by the program) and as potential of existing capabilities (to be improved with capacity building actions). The role of institutions (also part of social capital, as seen in Chapter 2), is also mentioned as one of the objectives: decidedly negative in previous years and instead positively impacted by the bid and then — in case of victory — by the implementation of the program. The latter part is tied very well with the concept of well-being related to rights such as legality and equality, which it is noted institutions have failed to ensure previously, but which is expected to be improved instead with the initiative.

Much emphasis is placed on the fact that the initiative was the result of a bottom-up process (as was the case for Matera), with the involvement of a large stakeholder pool. In particular, after a careful reconnaissance of the available documents and materials on the context of the ICoC bid and event, some key stakeholders emerged. These are first of all the institutions, with the Municipality of Palermo (and the mayor, Leoluca Orlando), the research foundations that were in charge of writing the dossiers (Human Foundation, the main evaluating body, and the University of Palermo), the Organizing Body and manager of the initiative (Fondazione Sant'Elia). Then the local community, which includes the public (citizens and users), but also the involved artists, the associative realities of the area and the management of the urban spaces used. Finally, the journalists and newspapers (local, national, industry) that gave coverage to the individual events and the event as a whole.

Both participation and engagement of the general population are particularly cited elements in the candidacy documents, although often in a very generic manner. The same goes for community empowerment and integration, not well explained in their meaning. It could be assumed that these elements refer to the inclusion of marginalized parts of the community.

In general, the rather vague and generic use of the terms, as well as the concept of wellbeing/happiness make Palermo an interesting case to study. On the one hand, there is unquestionably an intent to impact these variables as they are deemed important, on the other hand, it is interesting to investigate in more detail the real meaning placed behind these terms and whether these then actually match the determinants of SWB identified in the literature.

Additionally, also in the case of Palermo among the evaluation documents there is an interesting insight into the perception of users — citizens and tourists — which can be a relevant integrative and comparative element for the empirical analysis of this case study. This once again proves the interest in such themes and the relevance of such direction for potential future studies.

3.6 Conclusions: case study of case studies?

In this chapter I introduced the choice of the Capitals of Culture and the initiative to study in the empirical part of the thesis. Giving the goal of the research, I have detailed throughout the chapter the reasons behind the choice, by highlighting the relevance of SWB within the scope of the program.

It was shown how, despite the program being declined both at European and Italian level (and the case studies selected reflect this duplicity), the literature of reference for Capitals of Culture is mainly related to the European Program (ECoC), while the Italian spinoff (ICoC) has taken up most of the objectives and key guidelines but hasn't produced much academic literature nor new concepts or ideas.

The analytical review carried out in the chapter has shown that, both in the academic literature and at the practical level in calls for proposals and selection criteria, there is a close connection between the initiative and subjective wellbeing, as a standalone concept and broken down into its determinants, at both levels selected. In both the European and Italian cases, specific determinants such as a sense of belonging, participation, engagement and inclusion are foundational elements of the goals of the initiative and involve real elements of the city (citizens and users in particular).

The selected cities, Palermo and Matera, had points of contact in CoC's history, although obviously their paths as selected cities were very different. In both cases, however, there are both references to well-being and its determinants, which is the main reason why the choice to analyze them empirically fell on these two cities. In both applications and then in their implementation there is also an interest in the individual perceptions of citizens and users with respect to the effects of the initiative, and this is another reason that validates and supports the choice.

These are two cities (and two applications) that present similar and comparable characteristics, even though the program is declined at two different scales and, consequently, has different objectives as cultural policy (Arfò & Salone, 2020). This duplicity — similarity on the one hand, divergence on the other — becomes additionally interesting from the perspective of empirical analysis. The two cities are two separate case studies, but could they be considered two examples of the same initiative? Can we treat the "CoC event" as a single case study, i.e., a single "capitals of culture" program — rendered in the two examples of cities analyzed — or are the differences in scale reflected in the effects on SWB? Put differently, are there such substantial differences in the two

programs (and their effects on the selected cities) that can be explained by the difference in scale to which the program is applied?

These specific questions about the different scope of the initiative are in addition to the initial research questions and will also partly guide the analysis and especially the interpretation and discussion of the empirical results. All of these questions I will attempt to answer in Chapter 6.

Chapter 4

Methodology: Using textual analytics to capture the impact of a cultural initiative on subjective wellbeing

This chapter is devoted to methodology. Specifically, in these pages I will try to explain both the choice of an "alternative", unconventional methodology for assessing the impact of SWB on CoC users, its details and specifics. This chapter links the positioning of the thesis within the context of urban cultural initiatives and social impacts with that of applications of machine learning and data science, an in-so-far rather unexplored (and innovative) combination.

After reviewing the potential of textual analysis for impact assessment and describing the techniques chosen specifically for this research, I will elaborate on the choice of data sources and the construction of the database. This will be followed by a brief overview of the processes of data collection, processing, and analysis, with its characteristics and limitations, ending with some suggestions on the interpretation and integration of the results. All will be explained with reference to the context of the CoC, a urban cultural initiative. To close, a brief commentary on the general expectations on which impacts will be captured through this methodology, which will be presented and discussed in subsequent chapters.

4.1 Introducing textual analysis for impact assessment

It was shown earlier in the dissertation how the effects that cultural policies, programs, and initiatives have on cities, including effects on the social and personal sphere of individuals, have been thoroughly studied (Belfiore, 2002; Blessi et al., 2016; Grossi et al., 2011, 2012; Stern & Seifert, 2009). As mentioned, a particularly suitable tool for verifying the impact of a cultural initiative on people's lives is the questionnaire (Ballas, 2013; Van Winkle & Woosnam, 2014). The construction of the questionnaire varies according to the objective of the study (Kim et al., 2015; Ribeiro & Correia, 2021). For example, if we are interested in the environmental impact of a music festival, the questions will be constructed to bring out the "green" aspect of the initiative or, on the contrary, its polluting effect. In this case, the biggest problem is the over-specificity of the answers and the initial bias: it is the researcher who asks the questions, constructed *ad hoc*. Therefore, the answer is induced, in some way distorted by how the question is posed.

An opposite problem occurs when an attempt is made to use certain indicators (Miller et al., 2007) to understand the impact of a cultural initiative. Most of the indicators provided by institutions (e.g., Istat, Eurobarometer) provide data that concern quantifiable aspects, even when talking about social issues (e.g., employment growth). However, their use arbitrarily omits some aspects of life that can be related to personal preferences or individual choices (e.g., life satisfaction) (Ballas, 2013). This means that the subjective and personal component can be lost.

What is missing, is an approach that considers the subjectivity of the effects (and, therefore, the opinions and "voices" of the various categories of interested parties) while trying to reduce the "question-induced" bias (Kim et al., 2015) to a minimum. Such an approach could be capable of innovating the field of social impact assessments in capturing the results (effects) of a public initiative or policy from the point of view of the people involved. To build a method suited for this task, there is a need to broaden the range of data that can be used as a basis for assessing the impacts of cultural initiatives (European Commission, 2018), sometimes distancing sharply from traditional techniques.

The main objective of the present research is to assess the impacts of the Capital of Culture initiative on the subjective wellbeing of people, the public, in other words its users. This objective fits into the literature strand of the impacts of

culture on SWB (and more generally on the social sphere) as a component of the development of an area, but it also contributes to the more specific discussion of the impacts (and usefulness) of programs such as CoCs – and their referenced literature. To make such a contribution more interesting and worthwhile, I decided to test a different methodological route than what is usually performed.

I propose the use of textual analysis of different sources (produced for different purposes by different actors) concerning the "Capitals of Culture" programs at European and Italian level, to analyze their impact on subjective wellbeing. To limit the complexity caused the plurality of actors involved in the CoC initiatives, I will consider three main interest groups, each corresponding to a type of written source: the institutions (corresponding to the official documentation of the program), the press (corresponding to the articles and opinions of journalists) and the population (corresponding to the unsolicited content posted on social media). By studying the language used by the different actors and the different narration carried out by each of them, the analysis will provide insights on the impacts of the initiative on subjective wellbeing, but also on the general impacts and results generated on the urban area. Multiple perspectives are interesting to study in this context, because usually it is not certain that the outcome (positive or negative) of a policy or program, as identified by its promoters, is perceived in the same way by the recipients of that policy, or by the affected population in general. Analyzing the different perspectives is thus extremely interesting for assessing the impacts of the initiative, especially using the words and subjective perceptions of the different stakeholders. (Ballas, 2013; Mencarini et al., 2019).

Through the analysis techniques that we will see in the next section, it is possible to identify the topics covered by different texts, analyze their linguistic components, and extrapolate the mood and emotional state of their author. These three actions, in sum, make it possible to capture the impact on SWB of the initiative and — thanks to the framework built in Chapter 2 — to determine which determinants of SWB were affected by the initiative and how this impact was perceived.

4.1.1 Textual analysis

Data can come from any kind of source. Particularly important, as mentioned in the previous section, are the data contained in written content. Or rather, the information contained in written content that, if processed and handled in the appropriate way, becomes data that can be analyzed and used to gain insights on several different topics. This can happen because a written text – but also a speech – is codified, that is, it is produced thanks to a series of words and linguistic expressions that evoke concepts, images, and recognizable imagery, shared and accepted by most subjects in specific contexts. Therefore, by analyzing a written text, it is possible to extrapolate different meanings expressed by those who wrote it (Di Maggio et al., 2013; Liu, 2012). This type of analysis is very common, for instance, in the field of politics. In the discourse analysis of a politician, a candidate for office, or a prominent member society, researchers attempt to capture the political message from what is being said (and was previously written) in any public circumstance.

Often, this kind of work is done manually by the researcher, who personally reads and interprets what the politician – or any author – has written or spoken (Di Maggio et al., 2013). This method requires a careful study of the political and cultural context, and a knowledge of the encoding, to capture the real intentions behind the text and its true meaning (Di Maggio et al., 2013; Liu, 2012). However, this knowledge can lead to a hyper-specialization towards that character and context – often with a comparison over time of the same subject and their ideas (e.g., comparison between how it was in the past, and how it is now). This specialization could lead to biased results, as the researcher has *a priori* expectations over what they will find in the text (Di Maggio et al., 2013). A further weak point is that the manual procedure requires a lot of time and constant attention, and there are some limits in the amount of information that can be processed by a person or even a group of researchers (Di Maggio et al., 2013).

One way to bypass this limitation is to use an automated procedure, which quickly analyzes large texts (or sets of texts, called “corpora”) to extract information of different types, useful for the analysis (Mencarini et al., 2019). The results the automated procedure will then have to be interpreted through the study of the context of reference, but already having some clue about the dimensions to be investigated from the textual analysis (Ferri et al., 2018). In this way, the process of discourse analysis is reversed. Here we start from the objective extraction of the data, and then move on to the interpretation of its meaning. In

this way, the human bias does not concern the extraction process, but possibly only the interpretation. This step is crucial, because it allows to limit the influence of potential biases of the researcher on the veracity of the result – an interpretation can be refuted, the objective data remain.

Different kinds of information can be automatically extracted from a text. What is of interest for the purposes of this research are the topics and perceptions/opinions – i.e., how the topics are expressed (the sentiment). Thanks to various machine learning algorithms, it is not only possible to automate the reading and analysis of corpora, but also to set this analysis to intercept the recurring topics within a text or the sentiment that accompanies them (Mencarini et al., 2019). In the next sections we will see in detail the main types of analysis that will be used in this study.

4.1.2 Main techniques

Automated text analysis is interesting and complex, because there are many types of algorithms and techniques that offer many different possibilities for research.

In particular, a high number of analyses that can be done on texts that fall into the category of Natural Language Processing (NLP) are extremely popular and useful. It includes a package of data libraries and specific algorithms that are used to analyze "natural" language, that is, written as if spoken by the authors, including idiomatic and colloquial expressions (Cambria & White, 2014). NLP falls into the wider discipline of Machine Learning (ML), which means that the algorithm is fed information on issues similar to what we are studying, "learns" from it, and then uses that information to return useful insights for the research at hand (Mahesh, 2020). ML includes many techniques and can be applied to many topics and types of research (clustering, image detection, predictive models) (Mahesh, 2020), NLP specifically does that with texts (Cambria & White, 2014; Liu, 2012).

Thanks to these algorithms it is possible to perform many kinds of analysis and visualizations, from word frequency analysis to wordclouds, time series to visualize trends, diagrams of specific recurring terms' usage, text selection and categorization. For example, sentiment analysis, which we will see in more detail

below, is one of the most widely used techniques, and it is based on NLP (Liu, 2012; Mencarini et al., 2019).

NLP libraries optimized for different programming languages are very versatile (Python's "nltk" and others, especially), together with specific lists and dictionaries allow exploratory analysis of texts quickly and accurately (Liu, 2012; Basile et al., 2018). This allows the researcher to obtain preliminary data useful for conducting the actual analysis and having a complete package of information about the texts under analysis.

Below we look in detail at two of the main techniques selected for analysis, topic modeling and sentiment analysis. I have selected these two techniques as the basis of the methodology because they allow to identify respectively what is being talked about (in this case, identify if the topic of SWB is being touched) and how the subjects treated are being talked about (the underlying opinion of authors on the topics).

4.1.2.1 Topic Modeling

Topic modeling is an analytical technique based on Bayesian statistics. It enables the analysis of large volumes of texts by iteratively analyzing texts and grouping words according to their co-occurrences (Ferri et al., 2018), that is creating "topics". The most popular topic modeling algorithm is called Latent Dirichlet Allocation (LDA; Blei et al., 2003; Ferri et al., 2018; Di Maggio et al., 2013). LDA is based on Bayesian statistics and allows to determine and develop the topics in the text in a completely automated way through a probabilistic model (Di Maggio et al., 2013; Ferri et al., 2018).

Topic modeling's main characteristics make it a valuable tool for research and text analysis (Di Maggio et al., 2013). In the first place, it allows the researcher to analyze large bodies of texts that would be otherwise impossible for a human being to handle. Secondly, topics are automatically produced without need for a priori categorization (which means less bias in the extraction process). Thirdly, topic modeling recognizes polysemy (Di Maggio et al., 2013; Hannigan et al., 2019), that is the model recognizes the different meanings of the same word based on their context (the other words surrounding it). Finally, both the topics and the process are explicit, which means that transparency of the process is extremely high, and other researchers may reproduce the analysis or use the process to fit

their own research questions (Ferri et al., 2018), with an improvement also in the reliability of the technique (DiMaggio et al., 2013).

What makes topic modeling particularly interesting for the present research is the possibility to discover relevant emerging themes in different types of text – written and conceived with different purposes in mind – while using the same methodology for all of them.

Topic modeling is useful for both the objectives of the analysis. A first result is obtained by analyzing the different corpora in their entirety – that is, without distinguishing within them texts belonging to temporally different phases. By categorizing the words, the algorithm groups them by similarity into topics that can be compared with the framework presented in Chapter 2. In this manner we can determine whether the determinants of SWB have been considered and impacted – and which ones.

4.1.2.2 Sentiment analysis

Sentiment analysis is a type of textual analysis widely used to know the writer's state of mind, and their opinion on the matter at hand (Liu, 2012; Mencarini et al., 2019). With this type of analysis, it is possible to identify the author's opinion on a topic from the words they use, even if the text in question is purely descriptive or impersonal. This is also why it is called "opinion mining" (Liu, 2012).

In sentiment analysis, words are identified and categorized according to the "sentiment" behind them, that is they are seen as positive or negative according to the vocabulary of reference (Liu, 2012; Basile & Nissim, 2013). In short, automated sentiment analysis is based on an algorithm that – given a predefined vocabulary of words, constructs and recurrences recognized by the computer – breaks down the text into smaller pieces (tokens) and assigns to each of these a positive, negative, or neutral valence (Basile & Nissim, 2013). According to the percentage of positive, negative, or neutral terms, the text (or parts of it) will be considered as positively, negatively, or neutrally connoted. This type of analysis is very important to capture the perceptions of a subject (institution, group or individual) on a given topic (Liu, 2012). The language used is critical in determining the underlying perception (opinion).

Being a system based on natural language processing (NLP), however, this technique has some limitations (Liu, 2012; Mencarini et al., 2019). One of them – the aspect to be most careful about – is the initial setting of the algorithm, based on the dictionary of positive and negative words. Right here is a crucial first step, the construction of the dictionary as a real list of words to which associate a positive or negative connotation (Liu, 2012). Generally, we rely on existing lists (Basile & Nissim, 2013; Basile et al., 2018) – in the world of computer programming it's useful to remember that the problem at hand has surely already been faced at least in part by others, so there are often available some "pieces" of code that are ready to be used. Often these lists are based on the current usage and meaning of words in the vocabulary of the chosen language (Basile & Nissim, 2013). Thanks to the work done over the years by researchers and programmers, today it is possible to use entire libraries (containers of tools and algorithms ready to launch) created for NLP and optimized for different languages (Basile & Nissim, 2013; Mencarini et al., 2019). There are also lists of stop words (e.g., conjunctions, interjections, adversatives) that can be used to eliminate "non useful" words from the text, so that they don't interfere with the analysis. Lists such as these can be modified over time, by adding new components to better tune the algorithms (Basile et al., 2018).

What can happen is that for the language selected (e.g., Italian) or for a specific, technical topic, there are not enough words matched to a sentiment in a given list. Or that compound words are separated, and their parts are recognized as singles and matched to the sentiment incorrectly. Or that certain idioms are not considered to be more than words strung together in a row, and thus matched separately, losing some of their meaning (that can be the case for wordplay, figures of speech and so on) (Liu, 2012). Another issue can be the presence of irony in the text that often is not identified by the algorithm, leading to misinterpretation and wrong categorization (Mencarini et al., 2019). Therefore, the initial (and ongoing) analysis setup is critical. The code that analyzes the text decomposes the words into parts (lemmas) and according to the setting recognizes singles or part of composite words or co-occurrences (Basile & Nissim, 2013). The algorithm "runs" several iterations on the same text – it reads it several times, decomposing and assigning words to a sentiment – and recognizes the different co-occurrences until it arrives at the result with a certain degree of accuracy, imposed by the researcher. The result is a list of words contained in that text, and their sentiment (based on the initial dictionary selected).

So, given a text, the sentiment analysis returns the author's perception expressed – more or less explicitly – in that text (Mencarini et al., 2019). Combined with topic modeling, it complements the results and provides more precise insights into how different topics are treated by different actors.

Sentiment analysis can be applied at different levels. It can be applied to an entire text, a paragraph or to single phrases, depending on the type of text and on the necessities of the researcher (Liu, 2012).

The results of a sentiment analysis are further refinable. Since the setting can be modified, as more insights into the reference context are gathered (e.g., specific wording or figures of speech, especially in the case of analysis of an unfamiliar language or culture), it is possible to update the starting dictionary and relaunch the analysis. This confirms the vital importance of integrating textual analysis with experience and knowledge of the context, the actors, and the reference city, as we will see in the next section.

Sentiment analysis is crucial to analyze the impacts of the CoC initiative on users' SWB. This result is given in particular by the analysis carried out on the content posted on social media. The analysis allows us to capture the subjectivity of CoC effects, as analyzing the language returns people's perceptions of the initiative, which is window into their personal and emotional sphere. This is traditionally the hardest component to capture unless specific questions are asked during an interview or in a questionnaire. It's been already mentioned, however, how the influence of specifically worded questions can lead to some bias in responses. Sentiment analysis makes it possible to minimize this risk by reporting the actual opinion of the subjects and giving insights into their mood, their perception, their level of satisfaction with the subject of the study.

Sentiment analysis, however, is not useful only when applied to social media content. Its application is also interesting with respect to the other two sources – institutional and journalistic – as it is possible to trace the opinion of the different actors who generated them. Thus, we would expect enthusiastic opinions and perceptions from the institutions (which promoted and carried out the initiative), and voices more or less aligned with this perception in the press review, depending on several factors, such as the scale/scope of the newspaper (local or national), the political orientation of the journalist, and the type of article (news or opinion). All of these elements can provide very valuable information about the

context of the research and are crucial to the subsequent interpretation of the results.

In addition, some very recent literature presented the case of predictive models of SWB being tested, with specific sentiment analysis algorithms and lexicons as benchmarks.

4.2 The sources

As anticipated, the analysis considers different types of data. Each one of them not only refers to a specific source of information, but to a specific group of actors involved in the Capital of Culture initiatives, at different levels – the citizens and locals, the media, and the institutions. This means that different data sources represent the different points of view that need to be considered in the analysis to have a complete representation of the actors involved. In complex contexts such as CoCs, often, despite the strong consensus and synergies put in place to win the title, divergences and power hierarchies emerge among stakeholders who have different views or interests (Arfò & Salone, 2020). Therefore, it is interesting to have a multi-actor view that keeps track of the different points of view that emerge in the event narrative.

So far, I have focused on explaining the analysis methodology and describing the algorithms to be used. Now I'll move on to explain the detail of the sources to be used to build a database for analysis. The sources used are of different nature – although all written texts – so according to the specific characteristics of each, the database will be divided into different corpora. Each corpus (e.g., the corpus of newspaper articles) will be as homogeneous as possible, while the final database will be heterogeneous (different corpora together) but held together by the type of analysis carried out. This is because the algorithm needs to be fed the specific characteristics of the text under analysis, so to obtain a homogeneous result for the whole database, it is necessary to run the analysis in a customized way on the different corpora – finally obtaining the same information, comparable, from each one. Being able to modify the tuning of the algorithms according to the type of text makes it easier for the researcher to work on the text and to obtain the information useful for the study, without loss of time or meaning. For example,

formal language used in official files does not require tuning to abbreviated words, while social media language does.

Analyzing texts with such different languages would be difficult to set up, and not using the same one would bring great results from the analysis point of view. Therefore, it is vital to define the corpora as subsets of mostly homogeneous texts (with the same characteristics and algorithm tuning) that will then flow into the final database. A first schematization of the database is provided in Table 6.

Table 6. Composition of the database for textual analysis: corpora broken down by source (source: author's own elaboration).

Corpus A	Corpus B	Corpus C
Social media	**Journalistic sources**	**Institutional sources**
- Official Facebook pages' posts - Public comments to official Facebook pages' posts - Tweets	- National press articles - Local press articles - Sector-specific press articles	- Monitoring documents - Evaluation documents

This distinction, however, does not exactly match the different stakeholders and their respective views on the Program and its implementation.

4.2.1 Unconventional sources: social media

The first perspective to consider in the analysis that of people. "Unsolicited content" is hereby defined as all the content produced by individuals without any sort of specific outside input, or any direct question. Within this category fall all social media statements and posts, spontaneous reviews of specific events or activities, comments, and other forms of content. The term "social media" is hereby referring to the main sites and platforms that host content produced and consumed by individuals as users of those sites (Zajc, 2015). This type of document is important in this research for two main reasons. First, it is spontaneous. Content of this kind channels the words and thoughts of people,

individually and collectively. It provides insights into how people in a specific, finite environment really deal with the initiative and what they think about it. Secondly, it is personal. The words of people distinguish different narratives about the initiative and understand different points of view from multiple actors. Each own's opinion makes up the "map" of how the impact of the initiative is perceived, and by whom, uncovering all the details that are deemed important by each citizen.

As anticipated in Chapter 2, a great many studies in the last decade have focused on the use of social media as a source of data. In some cases, spontaneous content posted on the various platforms has been the starting point precisely for studies on SWB (Curini et al., 2015; Kross et al., 2013; Schwartz, 2016). Despite some critiques moved to social media with regards to authenticity and subjectivity (Zajc, 2015), and others regarding implications on the use of these platforms with respect to SWB (Kross et al., 2013), the fact that some interest in this content is maintained is early evidence of its potential as a data source. The use of these platforms as a source of data also arose as a response to the increasingly obvious limitations of techniques such as questionnaires (Jaidka et al., 2020): in this way much more subjective data can be collected, in real (or near) time, with the possibility of being able to obtain information from people very different in geographic location for example, and a corollary of useful information that would not be possible to obtain otherwise (Curini et al., 2015).

In this research, content posted on social media acts as a proxy for people's point of view (Mencarini et al., 2019), if properly filtered and processed. It is the main source of information on the perception of users. Clearly, the language used by users is different from that currently used for articles or official documents. It is precisely a different grammar, with abbreviations, graphic signs (e.g., hashtags, emoticons, etc.) and very different tones (Mencarini et al., 2019). Therefore, the algorithm for collecting and analyzing texts must account for the specificities of this medium (Ceron et al., 2016).

From the data obtained from social networks, we can therefore get the users' point of view. By analyzing this kind of content, we can get to understand the impacts perceived by the users (Mencarini et al., 2019), which are very close – in theory – to the effects produced by the CoC initiative on the city. The comparison between these impacts and the results of the analysis of the other sources (expected and declared impacts, in short) will be able to provide a complete

picture of the documentary sources, from which to draw some preliminary conclusions (to be integrated and interpreted).

In the context of this research, the two social media that I am considering are Facebook and Twitter, two of the most popular and used. Although similar in operation – possibility to write and publish posts (written content) or comment on those of others – in practice and analysis these two platforms are very different from each other, have different rules and different mechanisms. Therefore, although considered in the corpus of social media, the two datasets obtained will be analyzed separately, based on their characteristics. We will see some differences immediately below.

a) Facebook[17]: It was the first social network and for many years the most popular. Facebook allows you to publish spontaneously written texts (posts), comment on those of others, publish photos and other content on your personal page or on the public pages of companies or institutions, and interact with them. There is no predefined limit of characters to be used, so one can find even quite long and substantial texts.
   For this research - that is, to make sure that the data to be collected relates to the CoC initiative – I used public posts and comments (characterized by a lower privacy level), linked to the official pages of the CoCs considered (Palermo and Matera).
b) Twitter[18]: this social network has a different nature from Facebook, it is more fast-paced and immediate. Twitter allows the sharing of spontaneous texts (tweets), although short, with a limit of 280 characters – until 2017 it was 140. This restriction forces the use of many abbreviations and emoticons, which make the texts distinctly fragmented and informal. Again, it is possible to interact with other users or pages, and "categorize" one's posts according to certain topics using hashtags or keywords.
   For the present research, public tweets were considered based on specific keywords – as will be described in the "Data collection" section.

[17] See: https://www.facebook.com/.
[18] See: https://twitter.com/?lang=it.

The use of social media as a source of data and information to study the effects of culture on SWB is the true methodological innovation that this research introduces to the field of urban studies and culture. By returning the perceptions of people and users who have experienced firsthand the effects of the cultural initiative, social media in this research are the primary source of information about its impacts on SWB. By analyzing through ML and NLP techniques first the words used (type and category assigned, but also particular linguistic constructs and presence of key words) and then the sentiment, it is possible to extrapolate useful aggregate data (Jaidka et al., 2020) on the impact the CoC has had in people.

Social media texts are the main reservoir of information regarding the perceived results of the CoC – those perceived by the population, my benchmark – which must be compared with the perception of the institutions and reported by the press. The sentiment behind the texts can and should also be compared, returning the different degree of "satisfaction" toward the results. Particularly, it is interesting to analyze whether users maintain a markedly positive, negative or neutral view toward the work of the organizing institutions on the one hand, and a similar or dissimilar opinion to that expressed in the newspapers (generally of outright condemnation or, on the contrary, of extreme satisfaction) on the other.

The use of this type of data is new especially in the cultural field, and it is experimental. It also responds to the explicit request of the European Commission regarding the introduction of new data sources and analysis techniques to evaluate the Program's outcomes (European Commission, 2018).

4.2.2 Journalistic sources: the press review

The second point of view is that given by the press. Newspapers usually cover topics when institutional actors turn their attention to them (Di Maggio et al., 2013). What's more, news stories are often built directly around quotes from influential people, and they represent "the assumptions and narratives those authorized speakers use to frame the topic at hand" (Di Maggio et al., 2013, p. 573). Given all this, it is only natural that they influence the views of the reading public. In this case, the analysis of newspaper articles and press releases is particularly important, because the frames used by newspapers (words, images,

figures of speech, narratives, etc.) can be used to track and identify themes recurring also in other types of content (social media posts, for example).

The point of view of the press is a bit of a middle ground between what is promoted by the institutions and what is received by those who read the newspapers, especially in the area in question. And there is a kind of further mediation, in that a newspaper article (and a newspaper itself) is rarely impartial – it contains its own point of view and expresses the author's opinion on the subject. It is therefore a very interesting source to analyze, which can provide important insights to better understand what impacts are being discussed, how and in what context – and with what background.

To try to understand if there are scale-based differences in the perspective, the analysis considers three types of articles:

a) National newspapers: At the national level, it will be interesting to understand how much space (in terms of number of articles, but also in terms of relevance) was given to the Capitals of Culture, and by what means they were reported (reports, interviews, in-depth analysis, ...). The language used and the national relevance of the content are both aspects to be considered for the analysis. From this type of source, one expects to be able to extrapolate the stated impacts in a more critical manner, more "truthful" if you will, because verified by an external party (journalist) who then gives his or her own account. In this case, we are talking about "macro" impacts, those that may make sense to report in the national press.
b) Local newspapers: A fundamental component for understanding at a "micro" level the narrative is the local press, which is based in an area that is geographically connected to the "Capital" and reports – most likely – news related to it and its initiatives (including the CoC and its events). The perspective here is more related to what the initiative means for the city in terms of small stories, groups and realities that would not find visibility in big newspapers. Integrating the press review with a local point of view is a way to intercept the discussion on the impacts at the micro level, which are the most relevant from the point of view of the host community.
c) Magazines and sectorial press: this type of press can be interesting because it deals with issues related to culture. We could expect to find

in-depth information relevant to the field, debates, and opinions on the specific initiative of interest.

The journalistic sources, in the case of this study, are functional primarily to the second objective of the research, the evaluation of the success of the initiative through the analysis of its objectives and results. They return a perspective that is influenced by institutional statements but has a constant eye on what the public does or may think. Newspapers are a very interesting type of intermediate source for understanding context and putting the other two into perspective. They are "middle ground", so it is interesting to analyze them (content and sentiment) and to compare them with the other sources and get more complete context information and results – both in terms of SWB, and in terms of macroscopic CoC results.

The interpretation of these sources, however, must consider that the opinion expressed by journalists is often biased (Di Maggio et al., 2013), by different potential influences (e.g., political orientation of the author or the newspaper, knowledge of the initiative, advertising necessities, etc.). This aspect needs to be remembered in the interpretation of the results, requiring caution and potential integrative information (as will be explained in section 4.5).

4.2.3 Institutional sources: official documentation

The third point of view to consider is that of the institutions that promoted the candidacy of the cities as "Capitals of Culture" and therefore had to follow the guidelines of the program (whether national or European). Among the requirements, there are some written documents that are essential for the selection process, which will be the subject of my analysis.

This type of document is usually filled with rhetoric and predetermined narratives, which can become a good benchmark for the findings in other types of text. It will be interesting to compare the results found in the different types of texts so far identified to see whether the "official", public narrative is truly the one predominating on all the rest or if other, emerging ones should be considered more relevant. One more thing to consider with this type of document is how the main results and objectives of the initiative are depicted. The words and tones used, together with the type of narrative they promote, can be particularly interesting when compared to the same topics seen from other perspectives (i.e.,

how they are described by the press and how the people see them). The representation of different topics in official reports is then crucial, especially in interpreting the results.

Regarding both case studies selected – Matera (European Capital of Culture in 2019) and Palermo (Italian Capital of Culture in 2018) – I will consider the following documents (if present):

a) Ongoing monitoring documents: These are "intermediate" documents between the application and the final dossiers, in which progress is monitored or critical points are highlighted. From these documents it is possible to extrapolate how close or how distant the project is to the original plan and therefore to the stated objectives. An analysis of these documents can be useful in case there is a discrepancy between objectives (expected impacts) and results (stated impacts) – one can go back and understand "what went wrong" and at what point.
b) Final monitoring dossier: cities that become Capitals of Culture are required to draw up a series of documents reporting the monitoring of the results of the initiative, both general and according to the individual objectives declared at the beginning. Also, in this case the time horizon is to be considered important (with a distinction between short-, medium- and long-term results). From these documents it is possible to understand the initial measure of the success of the initiative. By analyzing the results as they are expressed, it is also possible to have a clear picture of the declared impacts, and how they approach or deviate from the expected ones (initial objectives).

The use choice of analyzing institutional sources is more traditional and seems to contrast somewhat with the experiment of using social media. On the contrary, the use of such diverse sources enriches the analysis and renders the results more complex and complete and allows to deepen the analysis and the understanding of the CoC program as a whole.

It is interesting to understand through the language used whether an impact on the SWB of users was described by the organizers (by searching the topic modeling categories for the determinants of the SWB and the tone of the documents) and whether it is the same to the one present — if any — in the spontaneous content of users and in the press.

4.2.4 Divergence between sources and points of view

Up until this point, the three types of sources (institutional, journalistic, and "alternative") have been associated with three points of view – institutions, press, and people, respectively. However, after collecting the data and conducting a quick overview, it's clear that the attribution of the perspectives to the sources is not quite so linear.

In fact, it may happen that documents belonging to one type of source do not correspond exactly to the views of one actor, but to another. An example of this is press releases. Based on the distinction by sources (as seen in Table 6), it would be correct to attribute press releases to the corpus of newspaper articles, as that is what they are. But the point is that they actually convey the institutional point of view. The same is true for the social media corpus: posts published on the official pages of the CoCs are for all intents and purposes spontaneous digital content, however they do not return the point of view of people, but that of institutions.

This discrepancy, once detected, must be corrected. Not intervening exposes the analysis to fallacies and biases that should not exist and can be avoided. The potential solution is presented in Table 7.

Table 7. Composition of the database for textual analysis: corpora broken down by relevant actor's point of view (source: author's own elaboration).

Corpus A **User's POV**	**Corpus B** **Press POV**	**Corpus C** **Institutional POV**
- Public comments to official Facebook pages' posts - Tweets	- National press articles - Local press articles - Sector-specific press articles	- Official documentation: Monitoring documents Evaluation documents - Institutional press releases - Posts on official Facebook pages

Table 7 shows a new distribution of texts to the different corpora, according to the point of view of the actors considered – institutions, press, and users/people. Returning to the previous example, in this case both institutional press releases and posts on official pages were moved to the institutional corpus, freeing the other two corpora from a conceptual "interference" that would have compromised their analysis.

It is important to be able to distinguish the points of view of the three actors considered, because their precise identification is essential to achieve the objectives of the analysis. First, it becomes easier to search for the impacts of the CoC initiative on subjective wellbeing and its determinants, because in this way the perceptions of all three actors – and especially that of the people – are clear. Second, by neatly separating the three perspectives it the distinction between expected objectives, stated results, and perceived results becomes more evident, just as investigating the convergence or divergence between them gets easier.

While conceptually correct, this change increases the complexity of analysis. Analyzing a corpus that is homogeneous in terms of text characteristics is technically simpler and faster. On the contrary, analyzing together texts of different types (long and short, linguistically formal or informal, technical or discursive) makes the procedure longer and more complex, with more steps and variables to consider. Despite complexity, I decided to prioritize sense and point of view over homogeneity of sources, so I opted for the second option, the one shown in Table 7.

4.3 Criticalities and adopted solutions

So far, I have outlined the methodology developed for this project, the sources selected and the goals. This is an experimental methodology and as such is subject to potential problems and limitations to overcome, as well as interesting challenges and future developments.

In the following sections, I will try to illustrate the critical issues I encountered in carrying out the research, and how in some cases I was able to overcome them.

4.3.1 Cambridge Analytica and social media access restrictions

Since the beginning of social media, it has been possible to access and download the data of (public) posts and comments produced by all users. Anything that was posted and made visible to all users could be downloaded and used by third parties. In the jargon, this was called scraping – i.e., it was possible to set up automated data collection procedures from social media without any restrictions. To do so, it was sufficient to have some programming skills and go through the API (Application Programming Interface), launching the collection algorithm. That is, until 2018. With the Cambridge Analytica scandal, everything changed. Starting in 2018, in fact, there has been an increasing focus on restricting access to social media data for privacy reasons, in some cases taken to the extreme (Mancosu & Vegetti, 2020).

The most emblematic case is that of Facebook. Starting in 2018, Facebook (now Meta) has effectively blocked the public API, *de facto* forbidding access to data and content on the platform (Mancosu & Vegetti, 2020). This has banned scraping practices, making them illegal. This information can be found directly in the "robots.txt" file addressed to the data collection "bots" (i.e., automated "users" that operate the scraping algorithms) that contains the rules of behavior[19].

Facebook is the most striking case because it is also the most restrictive – and the one that has had the most drastic reversal. Instagram – also part of Meta – follows the same guidelines and generally restrictive policy. The average general user is not allowed to perform any kind of automated scraping from either social network.

Twitter, on the other hand, follows a more permissive policy and allows researchers to continue to use the API to access the data they need for their studies (Basile et al. 2018). In the case of Twitter, it is possible to apply a search by hashtag via the API, but without being able to enter other parameters and restrict the search of useful content. Twitter also allows the use of a specific API for developers[20] to enable search and facilitate content analysis for academic purposes.

[19] To consult the "robots.txt" files, see the following: Facebook: https://facebook.com/robots.txt; Instagram: https://instagram.com/robots.txt; Twitter: https://twitter.com/robots.txt.
[20] See: https://developer.twitter.com/en/products/twitter-api/academic-research.

This issue of data access (from Facebook in particular) was problematic in the beginning, mainly because although the GDPR is very clear, some parts of the legislation and practice are not, at least as far as research is concerned. Specifically, it was difficult to understand whether the restrictions were so stringent only with respect to users' personal data or also on written texts publicly available. That is, whether the texts (with a "public" privacy setting) were also to be considered personal data or whether they could be used, obviously under proper anonymization. It was not easy to find a solution to this issue, despite the help of the Politecnico's legal department, as the subject matter is — or was, at the time of the inquiry — still rather gray. Fortuitously, the research community tends to find practical solutions to problems of this kind, and thanks to a specific referral I was able to get beyond the problem posed by the Facebook data.

After realizing that a total ban would be detrimental to research activity worldwide, very recently Meta has softened its stance a bit with regard to access and use of its social networks' data (Mancosu & Vegetti, 2020). To facilitate academic research, it launched a specific program for researchers, allowing them to access data and metadata on users' activity on the platform through a program called CrowdTangle[21]. This program however does not allow the download and use of textual content, and its use is limited to researchers whose request has been approved by Facebook based on their research topic.

To access and download textual content (posts and comment on public pages) and the relative metadata, researchers can access and use another platform, Facepager[22] (Jünger & Keyling, 2019). This program can be accessed freely and allows researchers to access and download written content from not only Facebook, but other social media as well (e.g., Twitter, YouTube, etc.).

With respect to the use and "ownership" of data, what remains to be clarified the role (and the possibilities) of users who are also administrators of public pages (especially on Facebook): could they use their data (and those of users who interact with the page) to improve their performance? Are there limitations or licenses? This point remains to be investigated.

Through the approved – and legal – procedures, in any case, it is possible for a user to collect the necessary data for their research, but still respecting the rules

[21] See: https://www.crowdtangle.com/.
[22] See: https://github.com/strohne/Facepager/releases.

imposed for privacy. For the present research, I have opted to acquire the needed Twitter data from the Developer's API, and the textual data from Facebook (comments and posts of public pages) through Facepager. The complete procedure will be explained in the section dedicated to data collection.

4.3.2 Language and time range

A technical issue that it is good to address at the initial stage of analysis is that of language. Since we are talking about written texts, it is inevitable for the language in which they are written to become a pivotal issue. This sounds like a trivial statement, and in part it is obvious, but there are some specific pitfalls that it's best to keep in mind from the outset.

There are basically two language-related issues to consider. On the one hand, before collecting the data it is good to consider whether the researcher is knowledgeable in the language in which the texts are written. Thanks to algorithms and automated procedures, the researcher's knowledge of the language is not essential. Entire libraries and dictionaries of words and meanings are available in most of the languages spoken today that can be used for analysis without the researcher running into major problems. However, while not essential, having even a basic knowledge of the language and socio-cultural context being analyzed is a considerable advantage. This is especially true when analyzing highly fragmented texts with abbreviations (e.g., tweets), but also in the case of colloquial or idiomatic expressions, euphemisms, or acronyms. This knowledge can be bypassed in the case of field research and collaborations with researchers who speak the language in question, but it may not always be a viable solution.

A second problem is given, especially in the case of an international case study, by the possible presence of documents in different languages – usually English and the language of the country hosting the event. In this case, it is necessary to decide how to proceed while setting up the analysis. A first step is to determine the number of texts in the different languages, and their nature. If, for example, the official documents produced by the institutions were written both in the language of the country and translated into English, it might be sufficient to use those in the language preponderant in numerosity. In the case of this research, for example, if the content of the documents is the same, but translated into two different languages (Italian and English), and the rest of the texts used –

newspapers and social media – are in Italian, the solution can be to not use the English texts, which would be redundant in terms of the information contained. Alternatively, it is necessary to separately process the documents in separate analyses based on their language – although this may raise the level of complexity in linguistic analysis and comparison with the framework. There is no one-size-fits-all solution; it is necessary to evaluate on a case-by-case basis. In this case, I choose to discard the English texts, and focus the research only on the content in Italian.

Another technical issue — and consequent decision to be made at the start of the research — is related to the temporal terms of the data collection and analysis. To reduce complexity, in designing the research I decided to only consider textual content regarding the event year. For newspapers and institutional documentation, I preferred a slightly wider time range instead. This time discrepancy was a purposeful choice based on both the data features and the type of analyses. Social media are immediate, they allow us to obtain information and feelings in real time. Newspapers and – especially – institutional documents, on the contrary, need more time to be published. The main discriminant in the data collection phase at this point is the relation of the textual content to things and events that happened during the event-year.

4.4 Working with the data

This section briefly describes the stages of analysis, from data collection and processing procedures to the actual analysis techniques used for each type of source, to the necessary steps to hit the two specific analyses. Finally, I will propose an explanation on how to interpret the data using the analytical framework built in Chapter 2. The general steps for handling textual data are represented in Figure 9.

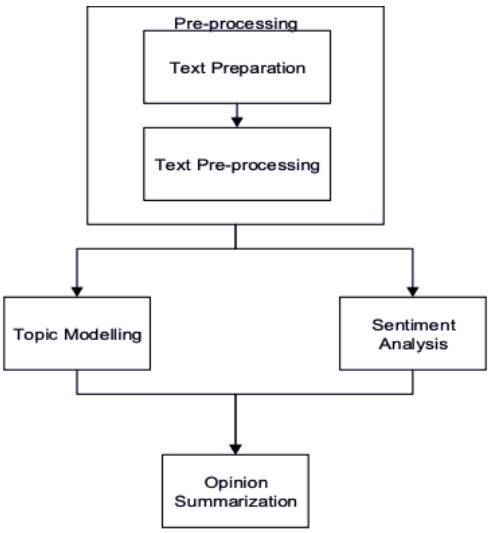

Figure 9. Exemplification of the opinion mining process (source: Deraman et al., 2020's Architecture of opinion mining).

The specifics for the current research will be specified in the following sections, as well as in Chapter 5, when needed.

4.4.1 Data collection

The data collection process started with finding official sources, the easiest to locate. The search and collection were manual, starting with the institutional websites of the stakeholders in charge of producing and publishing the monitoring and evaluation dossiers and reports: European Commission website (for Matera, which has the added complexity of the European scale), official CoC website, municipal websites, authorized repositories.

For newspaper articles, the collection procedure was also manual. After surveying the online versions of the main national, local and sectorial newspapers, for each case study I opted for a search by temporal range and keywords: that is, I selected the most appropriate time period for the type of analysis I would carry out (December 2018 to mid-2020 for Matera; December 2017 to mid-2019 for Palermo), taking into account the timing with which the newspapers cover the

events – beginning a few months earlier and ending a few months later for possible evaluations. Once the time frame was selected, the search was done by keywords, with the name of the city and the words “capital of culture”. The search was deliberately broad, to also get a general overview of journalistic production on the topic.

Within the collected articles, interviews with members of institutions or press releases were manually identified, separated, and placed in Corpus C (Institutions’ perspective).

As for social media, due to the restrictions described in Section 4.3.1, obtaining the necessary data for analysis was not easy, especially in the beginning – when the available legal solutions were still not well known. To collect the necessary data, I made use of the two “legally safe” and social network-approved platforms themselves – and Facepager (Jünger & Keyling, 2019) in particular – for capturing public posts and comments, but also their metadata.

Facepager is software that allows the download of textual content and metadata from various social platforms, especially Facebook. It works only on public pages, not for groups or private profiles. The first step is to locate the exact (public) page from which you need to get information. Then, it is necessary to locate its ID (the identification name or unique number of the page, which can be found through a quick web search). The ID is the seed that the program needs to connect to the platform (via a registered account) and download the data. As far as page posts are concerned, the data that can be obtained are not limited to the text but can also cover some interesting metadata at the discretion of the researcher – e.g., count of likes and reactions (total and/or divided by type), presence of attachments (photos/videos), date, author (only for public page posts not for comments), comment count. This last piece of information is extremely important because it allows to identify which posts got commented on and then collect those comments.

Since it is not possible to download all the posts (and all the comments) at once – both because of API limitations (maximum 25 extractions at a time) and to avoid losing some content due to technical features of the program – once I identified the specific time range for each case study, I proceeded backwards by two months, sometimes by month (from the most recent to the most distant).

For example, for the case study of Matera I identified the official page “Matera 2019”, and the time range of reference starts from January 2019 to January 2020-that is, from the beginning of the event year to its official conclusion. Therefore, for the collection, I started from January 2020 and went backwards month by month to get the data sorted correctly and not miss any. Based on the posts collected for this page in this time range, all related (public) comments were then identified and collected in the database through a similar procedure, along with their own metadata (with the exception of the author identifier, complying with GDPR). The backward collection procedure for comments is the same as for the posts, but it is based on a specific template. The same procedure was followed for Palermo: the public page “Palermo Culture” was identified, with a time range from January 2018 to January 2019. Comments on the posts were then identified and collected.

Posts and comments on both pages were then separated, as they refer to different corpora (comments to corpus A, posts to corpus C). Finally, the data were exported to csv format files, two for each case study (one for posts, one for comments).

Regarding the collection of Tweets, I used the Twitter's Developer API full search by keywords. Following the instructions on the site, I launched the query for both case studies. Specifically, in order to obtain the correct data (i.e., tweets regarding the two specific CoCs), I set the search for tweets containing the name of the city (Palermo, Matera) and at least one of the words “culture”, “event”, or “capital” (e.g., “palermo (culture OR event OR capital)”; “matera(culture OR event OR capital)”). Based on the characteristics of the search, the time range I set is the whole 2018 (January to December) for Palermo and 2019 (January to December) for Matera.

The search results include the text of the tweets, but also metadata, including interaction/engagement count (retweets, likes, shares) and time reference. These results were also exported to csv files, one per case study.

4.4.2 Data preparation: processing and cleaning

As seen in Figure 9, texts must be cleaned and pre-processed before being analyzed. First of all, the data must be anonymized, to comply with the GDPR. This means eliminating all references and metadata that could be used to trace back to a specific user.

Then, the texts must be pre-processed. This means, for example, eliminating commonly used words that would get in the way of interpreting the results (the so-called stopwords, which are specific to each language), but also transforming the texts into formats suitable for analysis, tokenization, etc. In particular, the pdf texts (institutional documents and newspaper articles), which could not be manipulated, were transformed into txt files. On the other hand, the csv files of social media data were cleaned of unnecessary columns (i.e. user metadata) and retained their easily manageable format.

As for data cleaning, a list of the main stopwords to be eliminated (auxiliary verbs, conjunctions, prepositions, articles, etc.) in Italian was used on each type of text. For social media data a manual cleanup was also necessary, with the inclusion in the stopwords lists of repeated but unrecognized words and signs in official lists (e.g., RT, #, account names, http strings, urls, etc.). For Facebook data, names entered in comments (tags) were anonymized and/or hand-deleted in compliance with GDPR and privacy regulations to avoid user identification.

The following step is tokenization, that is the transformation of upper-case characters into lower case and reduction of the words to their root, retaining their meaning but in a simpler form. This procedure is necessary to make the words easily recognized and analyzed by programs through the construction of token-based word vectors as the basis of analysis.

A procedure specific to sentiment analysis is the manual annotation of symbols and emoticons not automatically recognized by the program.

Finally, in the case of the newspaper articles, a preliminary screening was also carried out and some texts that had been collected in the keyword search but did not actually refer to the CoCs in question were eliminated. This however drastically reduced the sample size of the entire corpus B, for both case studies.

4.4.3 Data analysis: software and algorithms

The first step in the analysis would be to explore the data and get a first idea of I would be dealing with. That required the use of some specific Python libraries for the exploratory analyses (Nltk, Wordcloud, Numpy, Pandas, Matplotlib, Seaborn), while in some cases, I opted to use pivot analyses and specific external software.

As far as topic modeling is concerned, a distinction based on corpora must be emphasized: corpora B and C, which composed of rather long and complex, formally coded texts, can be analyzed with specific topic modeling software, because their structure allows them to be analyzed in this way. Corpus A, on the other hand, due to the fragmented and informal nature – often interspersed with symbols and emoticons – of the texts reported on social media cannot be analyzed in the same way. Therefore, a clustering algorithm (i.e., categorization based on a parameter set at the source) was chosen.

For institutional sources and newspaper articles I opted to use the software MALLET[23], which allows topic models to be obtained through a code directly entered in the computer command prompt. This software was chosen for its ease of use combined with remarkable computational capacity and high accuracy in sampling results (Gibbs sampling). In addition, it is one of the most complete resources for Italian: it has built-in training set and list of stopwords that make analyses in this language particularly easy and accurate. The input of the program is a file obtained by concatenating the texts of the different corpora into a single text file, which is processed by the code and analyzed (test set) based on a training set already embedded in the software itself, without the need to obtain an externally annotated one. The output is a file that groups the different words according to their meaning, thus returning the different topics. The number of topics that the program returns is to be entered manually at the beginning of the analysis, and it is chosen by the researcher. The optimal number of topics (n) is identified after a series of runs, based on how effectively the words are attributed to the different topics (i.e., how precisely the program manages to group words into distinct and internally homogeneous and distinguishable sets). A simplified version of the process is visually represented in Figure 10.

[23] https://mimno.github.io/Mallet/index

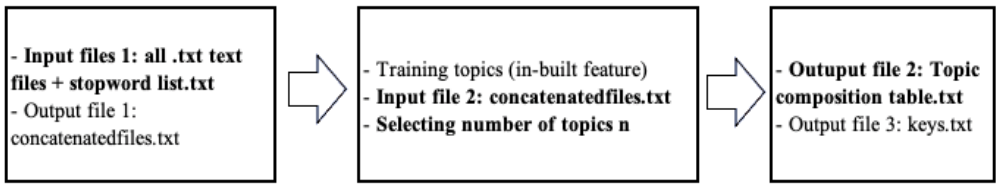

Figure 10. Simplified MALLET workflow (source: author's own elaboration).

For social media, on the other hand, I used the k-means algorithm. In these cases, the input files for Facebook comments and tweets are the csv files derived from Facepager and the Twitter API, respectively. The output file is the same csv, processed through the k-means algorithm, with the addition of a final column showing the cluster number (topic). As for the analysis itself, the texts are transformed into vectors using the doc-to-vec[24] representation of Python's SpaCy[25] library. The average length of token vectors (individual word roots) was calculated thanks to a preexisting model built for Italian with the same Python library[26]. This procedure transforms the texts into word vectors that are then clustered via the k-means algorithm. The parameter k is to a finite integer (e.g., 2, 3, 4, ..., n) that will serve as the basis for dividing the dataset into k distinct clusters (categories), homogeneous within them by meaning. These categories will represent the topics. By filtering the dataset by cluster (i.e., retaining, for example, only cluster 1 and not considering the others) it is possible to identify the texts/records that fall into that cluster and analyze its internal composition (the words that make it up). In this way we obtain the topics of each cluster in a way that is compatible and comparable with the result obtained with specific software such as MALLET, though being able to deal more accurately with hyper-fragmented and informal social media texts. The value of the parameter k is not fixed; it can be changed (by running the analysis multiple times) to obtain different results. The decision regarding the value of k is up to the researcher who sets it after a series of tests and trials. The simplified process is exemplified in Figure 11.

[24] https://spacy.io/api/doc#vector
[25] https://spacy.io/
[26] https://spacy.io/models/it#it_core_news_lg

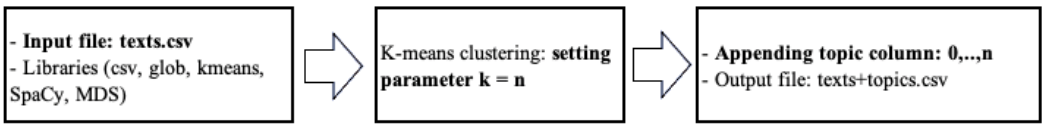

Figure 11. Simplified k-means workflow (source: author's own elaboration).

For sentiment analysis, a SVM (Support Vector Machine) was trained on a "Bag of Words" representation (unigram) of the union of a training set and a test set of the corpus released by Sentipolc[27], specific for the Italian language. The workflow for this process is synthesized and exemplified in Figure 12. The labels resulting from the analysis are as follows:

- neutral: label appended in the case of score pos 0 neg 0
- mixed: label appended in the case of score pos 1 e neg 1
- positive: label appended in the case of score pos 1 e neg 0
- negative: label appended in the case of score pos 0 e neg 1

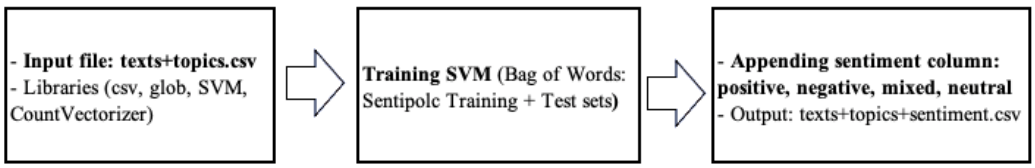

Figure 12. Simplified sentiment analysis workflow (source: author's own elaboration).

In the case of Corpus A, the label corresponding to sentiment is displayed as a column added at the far right of each record (i.e., each row of the csv/post/comment/tweet file), next to the cluster indication. In the case of Corpora

[27] See: http://www.di.unito.it/~tutreeb/sentipolc-evalita16/data.html

B and C, the analysis was conducted at the individual text level, but due to the length and complexity of the texts, it was not possible to predict sentiment based on the relevant topic (also due to the different analysis tools used). In this case, therefore, I opted for a sentiment analysis that considers the corpora as a whole, and not divided by topic. At the conceptual level, this technical difficulty does not hinder the methodology, because the focus of the analysis is on social media content (which is studied minutely as the baseline of the SWB research), while for the analysis of corpora B and C it is sufficient to obtain correct but not extremely detailed information.

It should be noted, however, that due to the limited linguistic resources available for Italian, the quality of sentiment annotation is not exceptional.

4.5 Interpretation and integration of results

Textual analysis automated by machine learning algorithms has some substantial advantages over manual counterparts or the use of traditional techniques (e.g., questionnaires). This methodology allows me to obtain "answers" about my research objective, without transmitting bias to the a priori "respondent subject" (in this case, the written text). Moreover, being a set of automated procedures, they allow to analyze very large corpora, without accuracy being affected (limited human error) and without time constraints (Di Maggio et al., 2013). Finally, they are perfectible and refinable algorithms, so at any time it is possible to reset the code and run it to get a better result.

However, as seen, the results must be interpreted. Knowledge about the urban context and the specific setting is fundamental to really understand the depth of information the model provides (Ferri et al., 2018). For the interpretation of the results and the correct contextualization of the words and topics identified, the results need to be read with the lenses of SWB presented in the framework in Chapter 2. Are the determinants and dimensions discussed? Are they identified in the same way? Is the repeated study of certain determinants instead of others justified? Or are specific variables emerging that have not been studied in the literature? These questions are answered when we to look for the determinants with topic modeling, which returns sets of words that can be traced back to

meaning categories. These meaning categories need to be interpreted, which means to infer whether there is a match with the determinants of SWB identified in this framework (from the literature and the goals of the initiative).

Then, sentiment analysis is used to assess the perception users have of such determinants, how they are impacted in the context of the CoC. The texts at that point are divided according to the categories; then, we move on to the analysis that determines the perception for each text (or of the corpus in general, for corpora B and C). In this way, each text will be marked by topic membership and will have its own emotional connotation.

In this manner it is possible to account for all the elements (contextual, relational, and processual) that make up SWB present within the texts, and to assess whether the initiative had an impact (positive or negative based on sentiment) on users' SWB according to the actors who expressed their opinion.

However, this type of interpretation may not be enough, and acquiring integrative information could be needed. An easily accessible integrative source of information could be the analyzed contents' metadata (Riley, 2017). All content downloaded from the Internet – and social media especially – comes with metadata that can be used to learn more about the content and the user who generated it (e.g., number and type of interactions, images attached, geolocation, user activity details, etc.) (Acker, 2018; Boy & Uitermark, 2017; Riley, 2017). This additional form of information is extremely valuable. It allows the researcher to delve into the processes that led to the creation and dissemination of those contents, their topics and sentiments. For example, it may be possible to map the results and visually track how the topics (and the related sentiment) are distributed in the city (Boy & Uitermark, 2017). This type of analysis can be useful in determining whether issues are seen as relevant in certain parts of the city, and potentially help solve rising conflicts. Or, on the opposite, see if the narrative emerging from the analysis is homogeneous on the whole urban environment. This is information that, combined with other types of integrative data can provide insights for the interpretation of results of the analysis and give rise to other future inquiries.

An additional source of supplementary information can be the extensive use – in a comparative way – of secondary sources, datasets and reports already published. Qualitative information of this kind can serve as a benchmark for the results of automated analysis and help the researcher to complete the analysis of

the CoC event in all its complexity. This is the case, for example, of the analyses on user perception commissioned by both Palermo and Matera in the evaluation phase of the CoC event – that were introduced in the previous chapter and will be discussed thoroughly in Chapter 6 with the thesis' empirical results.

4.6 Conclusions: what to capture?

In this chapter I have presented the methodology that I have selected to investigate SWB in the context of the CoC programs: automated textual analysis of data produced by different stakeholders (sources). Given the literature and what has been explained in this chapter and Chapter 2, I expect to identify in the written language of the different actors considered the variables – at least some of them – that underlie the SWB (the determinants and consequently the urban dimensions of the event: context, relationships, and processes), because I do expect the existence of an effect (if not really an impact) of any kind on SWB (Blessi et al., 2016; Grossi et al., 2011, 2012).

The combined analyses of content and sentiment as explained in this chapter will expose in particular the perceived effects of the initiative on SWB. We know (from Chapter 3) that the program has some intended effects on SWB (as were extrapolated from the specific objectives), so we assume that these effects exist and that they can be measured. Such a measure would be possible, for example, by treating the program as a cultural policy, and comparing – for example – the objectives with the results (Bonini Baraldi & Zan, 2016) of the CoC, from the documentation of institutions and press and with the user's point of view. This would require a multi-step analysis based on the different phases of the initiative (candidacy and selection, preparation, implementation, evaluation) and could be an interesting further step in which to take the research. However, what I intend to do in this thesis is to focus on the implementation phase of the CoC, to take intentions (i.e., intended effects) as a basic assumption to start analyzing the effects on SWB as they are perceived by users – as defined in Chapter 2 through the framework built from the relevant literature – obtained through the combination of content and sentiment analysis. In this case, therefore, I will analyze and take as a baseline the users' point of view and compare it with the points of view of the other two identified stakeholders, who through their texts

provide their perspective on the effects brought by the initiative on the users' SWB.

The point is not to determine whether the initiative has been a "success" (with the initial stated objectives and intended effects being achieved) as many other studies have attempted to prove through impact assessments, but rather to further develop the idea that effects of such initiatives can also be considered via the perception of the people that are involved in them (Arfò & Salone, 2020). Perceived effects can indeed be considered relevant in impact assessment practice, and this thesis tries to use a novel methodology to further the debate on this subject. This will, in turn, hopefully advance the debate and understanding of CoCs and similar programs, and their reach.

Chapter 5

Findings

This chapter discusses the results of the empirical analysis of the two selected case studies, the 2019 European Capital of Culture Matera, and the Italian Capital of Culture for the year 2018 Palermo.

After a first section devoted to the overview of the two databases and their internal composition, the Chapter is structured following the logic of the three points of view presented in Chapter 4, that of the users, that of the press, and finally that of the institutions. For each point of view (i.e., Corpus), the main results of the textual analyses carried out on the different sources are presented, as well as a timely explanation of the meaning – technical and conceptual. The actual discussion, with the interpretation of the results and an explanation of the implications, is deferred to Chapter 6.

Finally, one last note of method: word frequency figures, as well as a number of tables showing the extracted topics, and their composition, have been included in this chapter. While English was used for the topic definition, I decided to keep the Italian version – i.e., the original language of the texts analyzed – for the overall word clouds and topic composition. The translations – along with additional tables – are available in Appendix A.

5.1 Preliminary notions

In the present section I will present the findings, the results of the analysis on the Matera and Palermo databases. The two databases' compositions are summarized in Tables 8 and 9.

Table 8. Matera 2019 database by corpora (source: author's own elaboration).

Corpus A	**Corpus B**	**Corpus C**
User POV	**Press POV**	**Institutional POV**
Public comments to official Facebook pages' posts (2505) Tweets (35417)	National press articles (84) Local press articles (26) Sector-specific press articles (8)	Official documentation (16): Monitoring (2) Evaluation (14) Press statements and interviews (8) Posts on official Facebook pages (924)

Table 9. Palermo 2018 database by corpora (source: author's own elaboration).

Corpus A	**Corpus B**	**Corpus C**
User POV	**Press POV**	**Institutional POV**
Public comments to official Facebook pages' posts (557) Tweets (17648)	National press articles (9) Local press articles (24) Sector-specific press articles (11)	Official documentation (3): Monitoring (1) Evaluation (2) Press statements and interviews (3) Posts on official Facebook pages (717)

In detail, the composition of the database for the case study on Matera, European Capital of Culture 2019 is as follows:

- Corpus A is comprised of 37146 records, divided in tweets related to Matera 2019 (35417 records) and public comments to the official Matera 2019 Facebook page (2505 records).
- Corpus B is made up of 118 records specifically 84 articles from national newspapers (Corriere della Sera, La Stampa, La Repubblica), 26 articles from local newspapers (Il Quotidiano del Sud, L'Eco della Basilicata, Sassi Live, Matera News), and 8 articles from sector-specific newspapers (Artribune, Arte.it).
- Corpus C is made up of 947 records, specifically: 16 official documents (2 monitoring reports, 14 evaluation reports), 7 institutional interviews and 924 posts on the official Matera 2019 Facebook page.

The database for the case study of Palermo, Italian Capital of Culture in 2018 is composed as follows:

- Corpus A is comprised of 18205 records, divided in tweets related to Palermo 2018 (17648 records) and public comments to the Palermo Culture Facebook page (557 records)
- Corpus B is made up of 44 records specifically 9 articles from national newspapers (Corriere della Sera, Ansa.it, La Repubblica, L'Espresso), 24 articles from local newspapers (Balarm, Il Quotidiano del Sud, Giornale di Sicilia, ilSicilia.it, Palermo Today, Meridione News Palermo), and 11 articles from sector-specific newspapers (Arte.it, DOVE, Touring Club Italiano, Le Vie dei Tesori Magazine, Vogue Italia)
- Corpus C is made up of 947 records, specifically: 3 official documents (1 monitoring report, 2 evaluation reports), 3 institutional interviews and 717 posts on the Palermo Culture Facebook page.

The results of the analyses on the two case studies will be reported in a comparative manner. The data are divided in sections according to the corpus they belong in (Corpus A, B and C). Within these sections, the findings are presented starting from a general overview of the Corpus, and then detailed for each data source.

The main findings of the analyses regard word frequency (to determine the most relevant words according to their "weight" in the texts), temporal distribution of the texts and other relevant features, mapping of the relevant topics

present in the text and – where appropriate – sentiment analysis of the content and of each presented topic.

Specifically, I organized each section – and, consequently, the description of the results – according to the main analysis techniques used. First for each corpus, or for each source (in the most relevant cases), is the word frequency count. This type of exploratory analysis has been useful in beginning to approach texts, as it allows us to extract the most frequent words by weighing them for their relevance in the total corpus. This allowed me to begin to understand what the relevant themes might be at the level of individual words, to get an idea of what I might find in more specific analyses (i.e., co-occurrences, emergent meanings, sentiment, and so on). Visually, I opted for "wordclouds", graphical elements that precisely juxtapose the most frequent words using different colors to distinguish them, and different sizes to represent their relevance (i.e., their weight, basically: the larger a word is, the more frequent it is in the text and the more relevant it turns out to be). The wordclouds were performed at the level of a single source as far as Corpus A is concerned (i.e., one for tweets and one for Facebook comments), both as a matter of volume of texts (these are sources with a very high number of records compared to the other corpora) and as a conceptual matter. The latter stems from the opportunity to be able to analyze the views of users through two types of sources that are in any case different from each other, two social media that by characteristics and users should – by research expectations and literature – provide different texts and types of content. Since the users' point of view is the main – and definitely more numerous – focus of the research, a distinction between these two sources seemed to me particularly interesting also from the point of view of preliminary exploratory analysis. This concept – and this way of differentiating analyses by source – has also been taken up in other types of representation, which will be made explicit in a timely manner.

The second type of preliminary analysis I have adopted is that of time series analysis, to assess the time distribution of texts over the two years considered - 2019 for Matera and 2018 for Palermo. This type of analysis made sense with regard to Corpus A and Corpus B, and for a part of Corpus C (the one related to posts on official Facebook pages). Evaluation and monitoring reports by their very nature follow a different temporality, so it did not make sense to try to distribute them graphically over time. In general, I tried to distribute over time all those features that emerged from the data that could tell something interesting about the views of the stakeholders considered, which may differ from source to source.

The real focus of the analysis is the part about Topic Modeling. In each corpus, for each source I have analyzed and graphically represented the internal composition of the texts according to topics – in ways similar for both case studies and explained in detail in Chapter 4. Based on the subdivision of the texts into thematic clusters based on word meaning, co-occurrences of words, and emerging themes, I was able to internally analyze the clusters and infer/extract the topics of each. This process of inference and topic definition is, as explained, entirely arbitrary, although based on the meaning of the words extracted as foundational to each cluster – which are reported in the tables (in Italian) and in Appendix A (in English).

Finally, the last type of analysis I implemented is sentiment analysis. This type of analysis, as mentioned, allows us to capture the opinion and emotion behind the expression of a given written concept. This type of analysis has been particularly useful for me in investigating the views of users, and it is graphically represented very comprehensively in the section on Corpus A. It was very interesting to see the temporal trend of sentiment to understand whether there was distribution of positive or negative emotions at certain times of the year. But also, the analysis of sentiment according to the different topics extracted from the texts of the different sources. As for the other corpora, however, the sentiment analysis was carried out in a milder way, at the general corpus level. Conceptually, this decision was motivated by the fact that I was interested in capturing the opinion of the users, while the other two corpora served as an indicative benchmark of the other two points of view. From a technical standpoint, given the length and complexity of the individual texts (especially in Corpus C), I would have needed to break down the texts into smaller units (e.g., paragraphs, sentences), and then proceed with the analysis – and interpretation. This process, given the little specific relevance of an in-depth sentiment analysis on "benchmark" sources, would have been too time- and resource-consuming for this study, and was therefore shelved.

To conclude, while the discussion will take place in Chapter 6, in the following presentation of results I will identify and highlight the main points that can lead to the detection and assessment of impacts on subjective wellbeing, as per the framework in Chapter 2.

5.2 Corpus A: Users' POV

Corpus A, as seen, expresses the views of users and consists of two main data sources, tweets and comments to posts on the official Facebook pages of the chosen Capitals of Culture.

I have already anticipated in the previous section and chapters how these two sources are different but equally interesting, and how the very comparison between these de sources can broaden and deepen the knowledge possible with respect to the spontaneous content of CoC users and its meaning. The goal of the analyses below is therefore to extrapolate as much information as possible regarding user perceptions expressed on these two social media, through specific analysis of the content, its temporal distribution, and its characteristics.

I can anticipate that, as I expected before conducting the analyses, I got different results depending on the source used, in terms of tone, mode of expression, themes chosen, and characteristics of the texts posted. In general, given the wealth of information extracted, I can say that this type of content was particularly suitable for this research, albeit with all the limitations described in Chapter 4 and taken up in the concluding stages of the thesis.

5.2.1 Twitter

Word frequency

The first source represented here is Tweets. Once the texts of the tweets have been downloaded and merged, the first thing to do is an exploratory investigation to begin to determine what these texts are talking about. Figure 13 shows the wordclouds for the Matera (on the left) and the Palermo (on the right) Tweet datasets.

Figure 13. Wordclouds (most frequent words according to their frequency) of Tweets on Matera 2019 (left) and Palermo 2018 (right) (source: author's own elaboration)

In the Matera Tweet dataset, the most frequent words refer to the city and the events (predictably), and they seem to have a negative connotation – as we can infer from words like "frega", "niente", "nessuno"[28] (Presumably referring to the phrase: "it doesn't matter to anybody"). We also notice words related to the organization of the event ("fondi", "riscatto", "progetto", "passerella"[29]), and to institutions ("Mattarella", "convegno", "inaugurazione"[30]). Apart from the negative words mentioned earlier, no specific reference to impacts or any determinant of subjective wellbeing relevant to the present research seems to emerge from the "heavier" words.

Going deeper, among the more frequent but smaller words we find reference to some specific events that – logically, ignoring anything about the context – can be referred to the negative words mentioned above. This is the case of words like "allagamenti", danni", "furia", "colpita"[31], that seemingly refer to adverse weather conditions that caused damages which "did not matter to anybody". So, if this first interpretation is correct, the negative words refer to the reaction of users to a

[28] English translation: "matter" (Italian slang), "nothing", "nobody".
[29] English translation: "funds", "redemption", "project", "walkway".
[30] English translation: "Mattarella" (Italian President of the Republic at the time), "convention", "inauguration".
[31] English translation: "floodings", "damages", "fury", "hit".

disastrous meteorological event that happened in Matera in the considered timeframe more than to ECoC events.

In Palermo's wordcloud we find also very negative words, presumably linked to a specific news story ("aggression", "forzanuova", "antifascismo", "brutale"[32]). We can presume that the story involves a brutal aggression with Forza Nuova members as protagonists. Looking at the other words, we can also find other relevant themes, like hospitality and immigration ("porti", "aperti", "accoglienza"[33]), but also words relating to the cultural program of the city and to Manifesta, another important cultural event Another cultural event held at the same time as the ICoC event year.

Time series

The second method of exploring the data is to relate them to time axes, then to study their evolution over time. However, the data collection process led to the availability of not only the tweet texts, but also of a whole range of other relevant information about the tweets. This is the case for example of quick reactions, such as the ability to re-share (i.e., re-tweet, RT) tweets of others or to react positively in agreement with a specific tweet (i.e., like). This type of additional data is useful to learn more in detail about users' intentions and perceptions, consensus to specific tweets, and in general what the dataset is composed of.

Figure 14 represents, for each case study, the temporal distribution of tweets, likes and retweets over the course of the considered year (divided in months, 1-12). Given the significant difference in numerosity between the categories represented, in order to graphically show the three trends together, I opted for a logarithmic base 10 transformation. This transformation flattens the curves somewhat but is necessary in order to compare distributions over time. This way the trends are immediately visible and comparable.

[32] English translation: "aggression", "forzanuova" (Italian extreme right party, of fascist inspiration), "antifascism", "brutal".

[33] English translation: "ports", "open", "welcome".

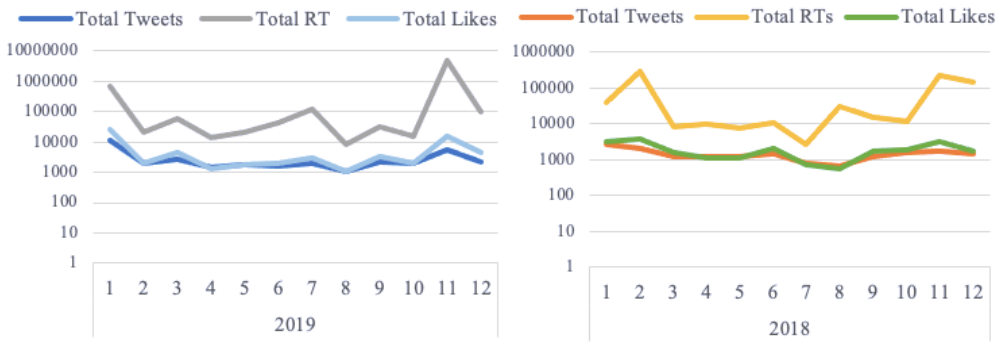

Figure 14. Temporal distribution of Matera 2019 (left) and Palermo 2018 (right) - related tweets, cumulative likes, and cumulative retweets (RT); Log10 scale transformation applied (source: author's own elaboration).

Starting from Matera, the graph on the left shows an initial peak in January, the initial month of the event-year, with a total of 11151 messages. In the rest of the year the curve is rather flat and stable, ranging from 1515 and 1079 tweets. Another, though lower, peak appears in November, then a decided decrease at the end of the year. This means that the users' online engagement has been quite consistent during the whole event-year, with certain spikes in conjunction with specific events – could be an exhibition, a concert, or other happenings.

Trying to better understand the trend, I looked at the temporal distribution of retweets (RT). Here the graph shows a single, extremely high peak in November, at the same time as the second peak in the total number of tweets. Going deeper, the single most retweeted message has a count of 2112, and analyzing its content I discovered that it referred exactly to the meteorological problems and damages (specifically, heavy rain and floods) that emerged in the preliminary word frequency analysis:

> "Questa non è Venezia è Matera, capitale della cultura, devastata dall'acqua ma non frega niente a nessuno"[34]

[34] English translation: "This is not Venice but Matera, Capital of Culture, but nobody cares at all"

Similarly, I analyzed the most liked message (6667 likes), which is also in November, and linked to the one reported above. The second most liked tweet (1934 likes) is found in January, and it reports enthusiasm towards the ECoC events and Matera:

> "Viva Matera capitale della cultura europea! Viva Matera, simbolo del riscatto di una terra ricca di storia! Viva Matera orgoglio del nostro Paese nel mondo! #Matera2019 #19Gennaio"[35]

So, we can conclude that in Matera's case, the two highest points of online engagement (tweets, RT and likes) coincided with, on the one hand, the start of the event year, and on the other hand (further down the line, probably once the initial enthusiasm waned) with an onslaught of negative news not related to the CoC at all. Thus, a mixed type of reaction is noted, neither totally positive nor totally negative, which needs to be further investigated.

In the case of Palermo, the temporal distribution of tweets shown in the graph has a decreasing trend, starting high in January (2714 tweets), decreasing in the central months of the year (with the lowest point at 673, in August), and then slightly increasing (though to a lower point) in November (1803).

The distribution of likes also follows the same trend of total tweets, with the same slopes and peaks in February and November, a slight increase in June and the lowest point in August. The single most popular (liked) tweet reaches 2195 likes and, as happened in the case of Matera, it is linked to a news story, also the one found in the most frequent words (Figure 13) – and with a negative connotation, though not the one I was expecting when thinking of Forza Nuova and a "brutal aggression":

> "Condanno la brutale aggressione di #Palermo ai danni di un esponente di #ForzaNuova. I violenti non usino l'antifascismo per giustificare le loro azioni. L' #antifascismo è una cultura di pace"[36]

[35] English translation: "Long live Matera, capital of European culture! Long live Matera, symbol of the redemption of a land rich in history! Long live Matera pride of our country in the world! #Matera2019 #19January"

The retweets follow a similar trend, with two peaks in February and November, and a decline in the central months of the year. The main difference from the other trends is the lack of increase in the month of June. The maximum retweet of a single message has a count of 886, and it focuses once more on a particular news story, with a negative connotation:

> "RT Egr. Sig. Sindaco, fermi il trasferimento dei cani del Canile Municipale. #Palermo diventi la capitale dei diritti animali"[37]

In this case the news story appears to be of lower interest for the general public – or it simply used less peculiar words – as it did not appear in the wordcloud.

While in the case of Matera, online engagement coincided with the start of events and extra-CoC events, in the case of Palermo, on the other hand, the interest of the tweeting users was particularly focused on events completely unrelated to the cultural initiative, despite what might have emerged from the word frequency analysis. In any case, the tone seems rather negative, although commentary on this initial analysis is still very premature.

Topic Modeling

As was explained in Chapter 4, in the case of tweets, it was not possible to run a proper topic modeling analysis in MALLET. This is due to the fragmented and extremely short composition of tweets, and social media content in general. I opted for a clustering analysis to determine categories of similar words (or words used in similar contexts) and use them as a proxy for topics.

To try to make the analysis of both case studies, but also of the whole Corpus A, homogeneous, I used the k-means clustering technique (see Chapter 4), and

[36] English translation: "I condemn the brutal attack in #Palermo on a #ForzaNuova member. Violent people should not use #antifascism to justify their actions. #antifascism is a culture of peace."
[37] English translation: "Dear Mr. Mayor, stop the transfer of dogs from the Municipal Kennel. #Palermo become the capital of animal rights"

after a series of tests on the datasets (of both sources) of both case studies, I selected a value of k=3. This value of k (number of clusters extracted) allowed me to keep the analysis manageable and to compare the sources (tweets for Matera and Palermo, and Facebook comments for Matera and Palermo) to each other, and between the selected cities. Figure 15 represents the topic composition of the two tweet databases.

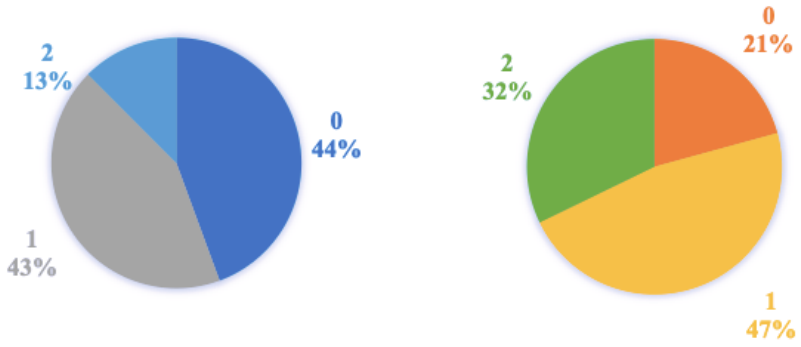

Figure 15. Topic composition of the Matera 2019 (left) and Palermo 2018 (right) tweet datasets (source: author's own elaboration)

Starting from Matera, we notice how Topics 0 and 1 are the most frequent. Quickly overviewing the clusters, I found these two topics to be linked to the news and to a higher number of "polarized" messages (as was expected, due to the specific positioning of Twitter among other social media mentioned in Chapter 4).

Also in the case of Palermo we find an imbalance of topics, although with one definitely prevailing over the others. The prevailing topic is, also in this case, related to the news.

The next step is the identification the topics. I organized them results in Tables 10 and 11, that represent the composition of topics based on similar words for each case study. The "Inferred topic" column is a personal interpretation (translated in English) of the content of each extracted topic. The structure of the table is followed for the reporting of all topic modeling results. As mentioned, for

space and organization reasons, the English translation of the topic composition is reported in Appendix A.

Table 10. Topics composition of the Matera 2019 tweet dataset (source: authors own elaboration)

Topic id	Topic composition	Inferred topic
0	passaporto programma risultati diritti sud apre progetto arte mattarella trailer festa inaugurazione convegno turismo spettacolo	**Access**
1	riscatto colpita comunita ricca danni ripartire ferrovia occasione vergogna allagamenti insopportabile l'evento turisti appuntamento paradigma passato	**Recovery/redemption**
2	bond piazza riprese carta presentato foto film europea programma die radio storia heroes mostra capitale concerto progetto libro festa	**Events**

Table 11. Topic composition of the Palermo 2018 dataset (source: authors own elaboration)

Topic id	Topic composition	Inferred topic
0	palermo cultura capitale evento naturale sicilia resa economicamente mafia archeologica mediterraneo occasione ricca bella normanna locale società	**Sicilian culture**
1	esponente brutale manifestazione iniziativa aggressione stasera leggi palermo violenti condanno via danni dell'accoglienza porti sindaco l'antifascismo	**News stories**
2	cerimonia presentazione svolgerà commemorativo ricerca villa turismo ricchissimo apre stampa migranti aperto servizio sviluppo europea	**Events**

In the case of Matera, the topics identified in the analysis refer to organizational issues and access to the events (Topic 0), to the process of redemption of the entire southern-Italy community, but also of recovery after the already mentioned flood (Topic 1) and to the various of events happening in the city (Topic 2).

As for Palermo, the topics identified refer to Sicilian cultural identity (Topic 0), news stories (Topic 1) and the Palermo 2018 events, with a reference to the inaugural ceremony (Topic 2).

After identifying the main topics addressed by the Twitter users, I thought it would be interesting to plot them on a temporal axis. This has been done to determine whether certain topics have arisen during specific times, or in specific circumstances (namely, to confirm whether there could be a correspondence with the temporal distribution of tweets that was seen earlier in Figure 14). The topic distribution of both case studies is represented in Figure 16.

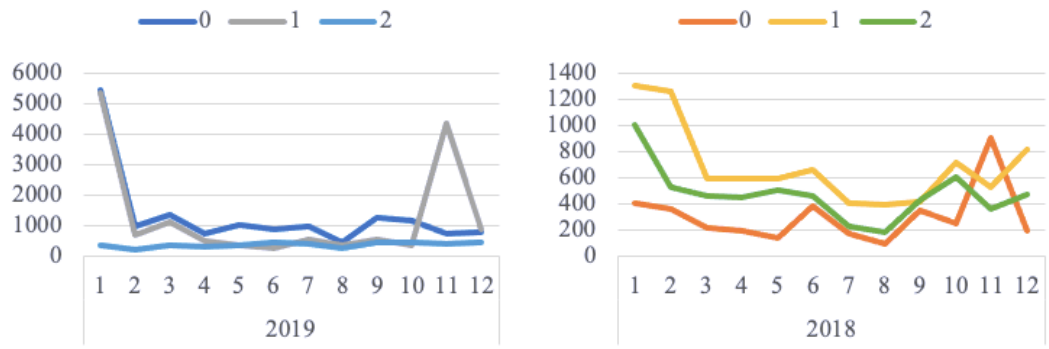

Figure 16. Temporal topic distribution of the total Matera (left) and Palermo (right) Twitter datasets (source: author's own elaboration)

In Matera's graph, the topics' temporal distribution is rather balanced and follows the distribution seen in Figure 14. While Topic 2 remains extremely lower than the rest, we can observe the peaks in November and January to be due to mostly Topic 1 (although Topic 0 is also extremely relevant at the beginning of the year). This confirms what was assumed in the initial part of the analysis, that is the extreme relevance of news stories and non-ECoC events in tweets.

The temporal distribution of Palermo's tweets at first appears to be more varied. However, the graph shows how the topics also follow the general distribution of tweets presented in Figure 14, with the sharp increase of Topic 0 in November to explain the corresponding peak in numerosity, presumably with the round of closing activities of the ICoC event year. Also in this case, we can see

how daily news and happenings seem to guide and determine the trend in tweets more than CoC-related events, with Topic 1 clearly the highest in numbers.

Sentiment analysis

The sentiment analysis was performed both on the total datasets (Figure 17) and based on the topic modeling results (Figure 18). Each record in the Twitter dataset (i.e., each tweet) contains both the information on the topic (i.e., the according cluster) and the corresponding sentiment. For each record, the analysis shows whether its textual content can be considered positive, negative, neutral or mixed, based on the training on the Sentipolc dataset (see Chapter 4). Such information is useful to fully understand both the overall sentiment composition of each case study's tweet dataset, and the specific opinion that the users had on each topic extracted. From this knowledge, and the knowledge built in the whole analysis, the interpretation phase of the results will return the perceived impact.

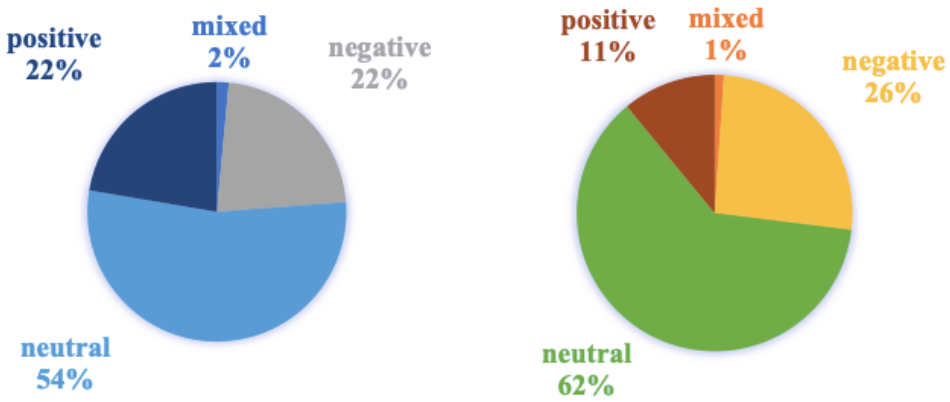

Figure 17. Sentiment composition of Matera 2019 (left) and Palermo 2018 (right) Tweet datasets (source: author's own elaboration).

In general, neutral tweets are the most frequent and mixed ones are the least. In Matera's case, positive and negative tweets are balanced, while in Palermo's case the negative sentiment is more relevant than the positive.

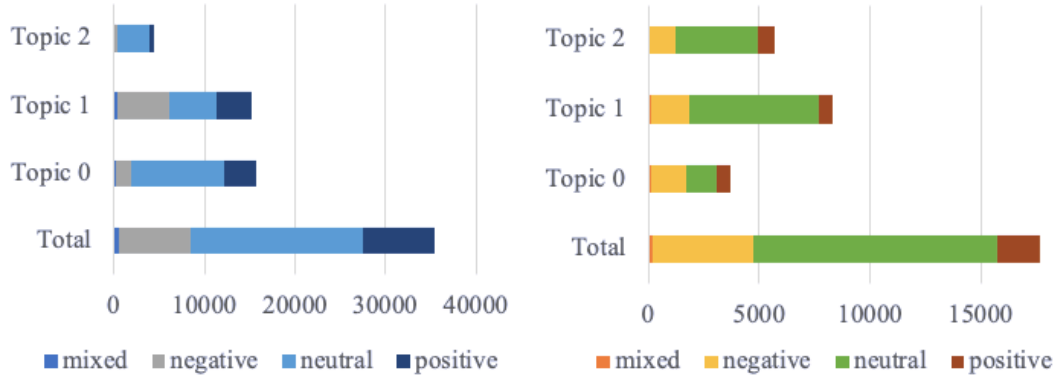

Figure 18. Sentiment analysis on the Matera (left) and Palermo (right) Tweet datasets, total and by topic (source: author's own elaboration)

Dividing the data by topic, results are the following. For Matera, Topic 0 (Organization/access) is mostly neutral, but with a slight prevalence of positive tweets over the negative ones. This shows a neutral-positive perception of the topic and its contents. Topic 1 (Recovery/redemption) sees neutral messages still relevant, but with a majority of negative tweets – which confirms the trends showed above. This reveals a mostly negative perception of the topic, where the idea of recovery and redemption of the city and the region appears not to have gained much consensus. Finally, Topic 2 (Events) presents an evidently neutral tone, with a slight prevalence of positive messages over negative ones.

As for Palermo, Topic 0 (Sicilian culture) is mostly negatively connotated, though with a high percentage of neutral tweets. This shows a mostly negative perception of the topic and its contents. Topic 1 (News stories) sees neutral messages as the vast majority, followed by negative tweets. This could be due to the high number of retweets, that do not express specific opinions but rather share the (neutral, usually) tone of news. Lastly, Topic 2 (Events) presents again a decidedly neutral nature, with negative reactions still accounting for a large share of the total (21%). Mixed sentiment is not relevant enough to appear in the graphical visualization.

As I did with the topics, I decided to also plot the overall sentiment of the Tweet datasets to a temporal axis, to understand its changes over time. The result is showed in Figure 19.

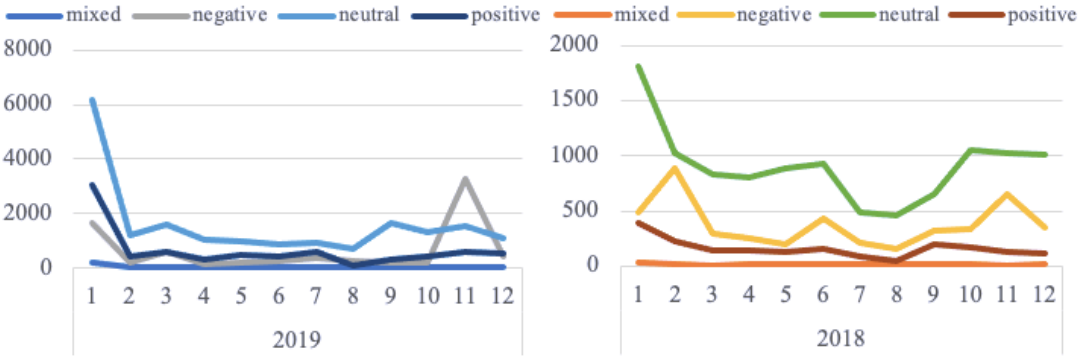

Figure 19. Temporal sentiment distribution of the total Twitter dataset for Matera (left) and Palermo (right) (source: author's own elaboration)

The temporal distribution of sentiment in the entire Matera Twitter dataset follows the trends previously described for general tweet distribution (Figure 14) and topic distribution (Figure 16). The peak of negative sentiment in November, strengthens the hypothesis that increased tweets in that part of the year are due to responses to the flood news and corresponding comments. The same confirmation can be seen for the peak in January, mostly neutral and positive, possibly related to the comments on the opening of the event year. Here I expected a more enthusiastic (positive) trend, so the temporal distribution of sentiment has proven to be a valuable source of information.

As for Palermo, the temporal sentiment distribution also follows the previously shown ones of tweets and reactions and topics. Particularly interesting the discrepancy in January, with negative opinions starting low to reach a peak in February, while all other sentiment starts high to proceed in a decreasing manner. This trend could be consistent with what was shown in Figure 14, with the spike in retweets following the municipal dog shelter news.

To conclude, regarding both Twitter datasets, net of neutral tweets we can see a slight prevalence of negative sentiment. This is probably directly influenced by the tendency to re-share news stories, in many cases quite negative, and to comment on them, which, by the very nature of twitter, often turns out to have a critical and polarized tone.

5.2.2 Public comments to posts on the official Facebook pages

Word frequency

As seen for tweets, the first step for public comments to posts on the official Facebook pages of the Capitals of Culture is an exploratory analysis of the available texts and data. First, the count of the most frequent words gives us an initial idea of what the contents of the dataset are, laying the groundwork for some assumptions about subsequent analyses. Figure 20 shows the wordclouds for the comment dataset of both Matera (left side) and Palermo (right side).

Figure 20. Wordclouds of public comments to posts on the Matera 2019 (left) and Palermo Culture (right) official Facebook pages (source: author's own elaboration)

We can see at first glance that in both cases there is a positive tone with respect to the words used to describe the events ("bellissimo"), although the vocabulary is different between one city and another. In Matera's case the most frequent words refer to specific events ("Subsonica", "eventi", "mostra", "concerto", "manifestazione"[38]) and the access to events ("passaporto", "biglietti", "entrare", "informatevi"[39]). Other concepts that emerge are related to the festive atmosphere of the event year ("festa", "capitale", "bella", "bellissimo"[40]), but also to the city's

[38] English translation: "Subsonica" (Italian band), "events", "exhibition", "concert", "demonstration/rally".
[39] English translation: "passport", "tickets", "entrance", "get information".
[40] English translation: "party", "capital", "pretty", "beautiful".

traditions ("carro", "tradizione", "cavalli", "bruna"[41]). Some negative elements also stand out, albeit to a lesser extent ("poveri", "invidia", "ignoranza", "brutalità", "paura"[42]).

As for Palermo, we identify words related to citizen pride and to a general sense of satisfaction with the events ("orgogliosa", "orgoglio", "bellissimo", "emozione", "palermitani"[43]), but also to the religious heritage and tradition of the city ("amen", "santa-rosalia", "gesù", "famiglia"[44]). There is also a reference to the dimension of giving and helping others ("dona", "aiutiamo", "aiutare"[45]).

Time series

Once I broadly understood the content of the comments and given the more or less specific references to particular events, I moved on to analyze the temporal distribution of comments during the years considered.

Again, as seen for the tweets, the data collected contain not only the texts of the comments, but also some additional information about the behavior of online users and their perceptions. Along with the comments to the official pages, therefore, I collected and graphically distributed on a temporal axis the instantaneous reactions (i.e., the emoticons that users can use in lieu of a comment: "like", "love", "haha", "angry", "sad", "wow") that the users themselves left on those posts. This information returns the measure of both verbal and nonverbal reaction and allowed me to get broader and deeper insights into the perception and opinion of the main target (stakeholder) of the research.

The graphs showing this distribution are presented in Figure 21. As was the case in the tweet datasets, I also used a logarithmic base 10 transformation to show the data in one graph for each case and compare the trends, despite the difference in numerosity.

[41] English translation: "carriages", "tradition", "horses", "bruna" (referring to the Palio della Bruna, a traditional event with horse-drawn carriages).
[42] English translation: "poor", "envy", "ignorance", "brutality", "fear".
[43] English translation: "proud", "pride", "beautiful", "emotion", "palermitans".
[44] English translation: "amen", "Santa-Rosalia" (patron saint of Palermo), "Jesus", "family".
[45] English translation: "give", "helping", "help".

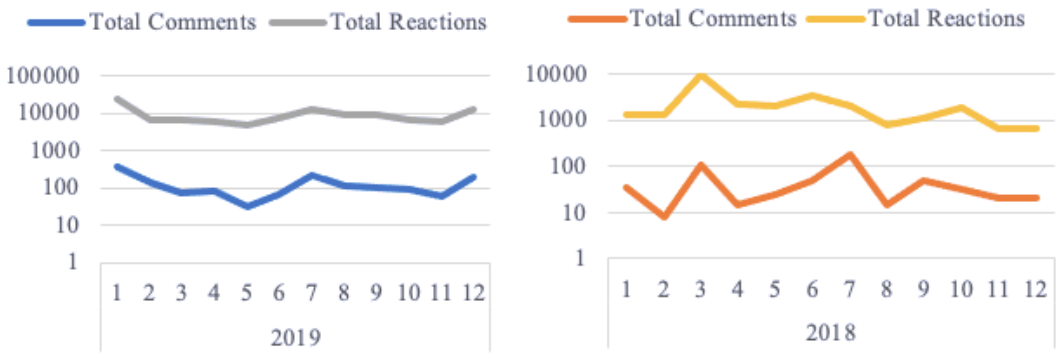

Figure 21. Temporal distribution of public comments and cumulative reactions to posts on the Matera 2019 official Facebook page (left) and on the Palermo Culture Facebook page (right). Log10 scale transformation (source: author's own elaboration).

The first thing that stands out when looking at the two graphs is that the distributions follow the same trend, in both case studies.

Starting from Matera, it is noticeable that the temporal distribution of comments has a fluctuating pattern, with some peaks (albeit not very pronounced) in certain months of the year. Comments reach the highest point in January (540 comments), then in July (342) and December (286) 2019. A fairly pronounced low point can also be seen at the month of May, with the lowest number of comments recorded at 46. The reactions' temporal distribution resembles the comments' one. We notice the same peaks in January, July and December, though in general the trend is more stable, with less marked fluctuations. The most used reactions have positive meanings, and are distributed as follows:

- Like, maximum value: 3485.
- Love, maximum value: 357.
- Wow, maximum value: 94.

Negatively connotated reactions sad, haha and angry have as maximum values 9, 13 and 10 respectively, drastically lower.

If we look at the case of Palermo, we see how instead both timelines have a more varied pattern. The temporal distribution of comments shows two positive peaks (105 in March and 180 in July) and three negative points (8 in February, 15 in April and 15 in August). The reactions to the same posts that were commented also show a follow this trend, though less sharply. The graph shows an increase in

March and a fluctuating yet decreasing tail over the rest of the year. The most divergent month is July, with a sharp increase in comments but a steady decrease in reactions. The most used reactions are more polarized than what observed in Matera's case, and are distributed as follows:

- Like, maximum value: 1982.
- Love, maximum value: 212.
- Sad (negative), maximum value: 72

Reactions wow, haha and angry have as maximum values 10, 6 and 9 respectively.

The information on reactions is extremely relevant, as it tells us two things: first, how much to trust the comments and how much to relativize their number and weight. Reactions generally outnumber comments, perhaps because they are a more immediate way to express oneself. So, at this preliminary point in the analysis, we can assume that if a user takes the time to comment on a post, they do so to express a more complex and linguistically interesting concept.

The second piece of information that comes from the reactions tells us something about the consensus generated by the activity of the official Facebook page and, by proxy, the activity of the CoC itself. With a stretch, we could say that it is a kind of sentiment analysis on the work of the CoC. In general, we can see that in both case studies there is an appreciation – given by the majority of positive and very positive reactions – from users. For Matera it is an absolute appreciation, with a totally positive polarization of reactions, while for Palermo there is also a small percentage of negative "sentiment". This information may be confirmed or disproved in the later stages of the analysis, but it gives us an interesting starting point.

Topic Modeling

As Facebook comments are usually short texts, fragmented and containing abbreviations – like tweets – I opted for the k-means clustering technique also in for this dataset. Also following what said in the Twitter section, the selected value of parameter k was k=3.

Comments containing peoples' names (tags), or other personal data have been modified or deleted, to eliminate any potentially recognizable features and anonymize the data (complying to the GDPR norms). The general topic composition of the two datasets is represented in Figure 22.

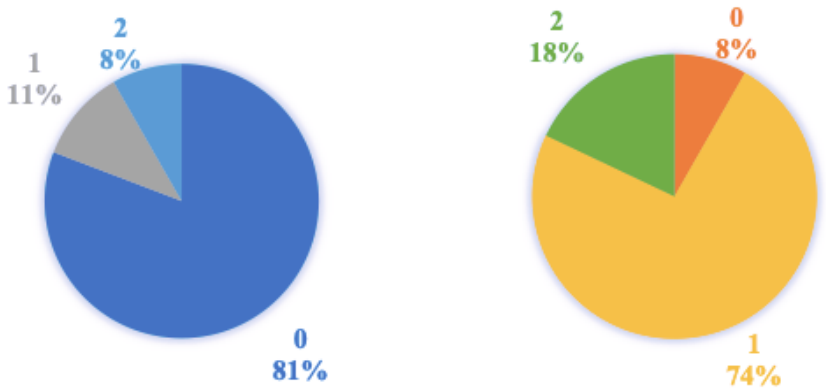

Figure 22. Topic composition of the public comments to posts on the Matera 2019 (left) and Palermo Culture (right) official Facebook pages (source: author's own elaboration).

In both cases, there is a clear imbalance in the composition of the topics, with one clearly outweighing the others. To understand what was talked about, and to be able to make a comparison, I analyzed the internal composition of the topics. The results are summarized in Tables 12 and 13, while the English translations of the tables are available in Appendix A.

Table 12. Topic composition of the Matera 2019 Facebook comments dataset (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	sistema cultura spettacolo passaporto capitale vedere non prenotare organizzazione eventi davvero evento cuore c'è funziona prezzo	**Organization/Access**
1	nativa disponibile spettacolare serata orgogliosa emozionante stupendi magnifico perdere felicità strepitoso brivido orgoglio emozione riscatto riuscita andateci fiera	**Pride**

2	matera bellissima the complimenti bellissimo cultura musica capitale performance festa universale spettacolo super magica	**Events**

Table 13. Topic composition of the Palermo 2018 Facebook comments dataset (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	diventerà complimenti meravigliosa lavoro siciliano orgoglio traditore interessantissima realtà conosco bellissima nazionale soddisfazione	**Satisfaction (belonging + pride)**
1	amen palermo santa rosalia viva festa chiesa cultura orlando sindaco bellissimo capitale casa palermitani sicilia	**Religion/tradition**
2	congratulazioni complimenti emozione palermo viva	**Emotional response**

As shown in the details of Table 12, for Matera Topic 0 is related to Organizational and access procedures – the high percentage of messages may be due to the rather informative and promotional nature of the Matera 2019 Facebook page that is being commented on. Topic 1 is related to the citizens' pride of being involved in the CoC "Sono orgoglioso di far parte di questo meraviglioso gruppo di volontari"[46]) and Topic 2 refers to the emotional reaction to specific events. In all topics we can start to decipher a clearly positive connotation and satisfaction – which confirms the information gathered with the reactions' analysis.

Palermo's results represented in Table 13 show this positive tendency as well. The topics are linked to the satisfaction of citizens (we can see words related to pride and sense of belonging) elicited by Palermo 2018 (Topic 0), but also to the religious tradition of the city (Topic 1) and to the emotional response of users (Topic 2). Notably, in Topic 2 of both case studies a good part of the content was composed of positive emoticons used to comment the posts.

The next step in understanding the topics is to analyze their temporal distribution over the course of the event year, which is visualized in Figure 23.

[46] English translation: "I am proud to be part of this wonderful group of volunteers".

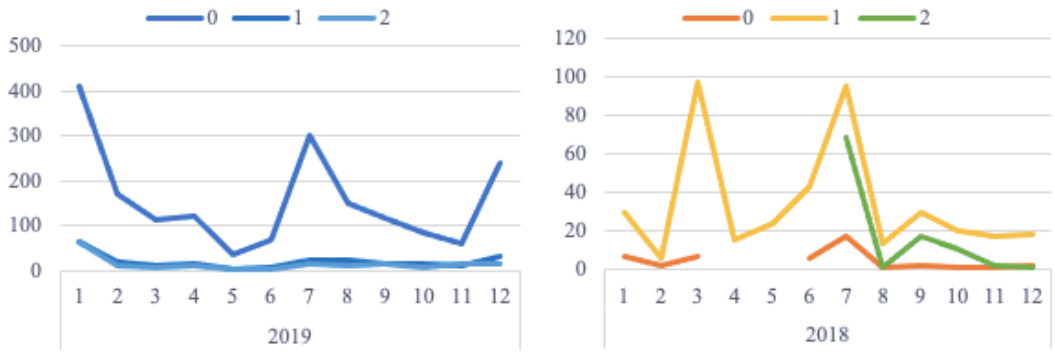

Figure 23. Temporal topic distribution of the total Matera (left) and Palermo (right) Facebook comments dataset (source: author's own elaboration).

The graph shows that for Matera it is Topic 0 that determines the sudden increases in the distribution of comments over the year, probably concurrently with certain events. Topics 1 and 2 mostly overlap and remain stable, aside from a slight curve upwards in January and December.

In Palermo's case, the graph shows a rather uneven distribution of topics over time. Topic 1 (most numerous) follows the same fluctuating trend of the comment distribution (Figure 21). Topic 0 sees a stop between March and June (while Topic 1 records an increase). In general, April and May are the least commented months, with the sole presence of Topic 1 building up to the summer months – and the religious, traditional festivities. Topic 2 appears in July, with a sharp increase followed by a long decrease – possibly due to the closing months of the CoC and the consequent emotional response.

Sentiment analysis

Once the topics were identified, I moved on to sentiment analysis. Again, as with the tweets, this was done both on the dataset as a whole (Figure 24) and on the basis of the different topics (Figure 25).

The Facebook comments, however, are different in type than the Tweets. As also emerged from Topic 2 of both case studies, it can happen that users comment using emoticons, which are not read correctly by the algorithm (which was trained on a test dataset - Sentipolc - that did not contain them). In the event of the algorithm's failure to read particular characters, and emoticons (207 records for Matera, 100 for Palermo), those records have been annotated manually.

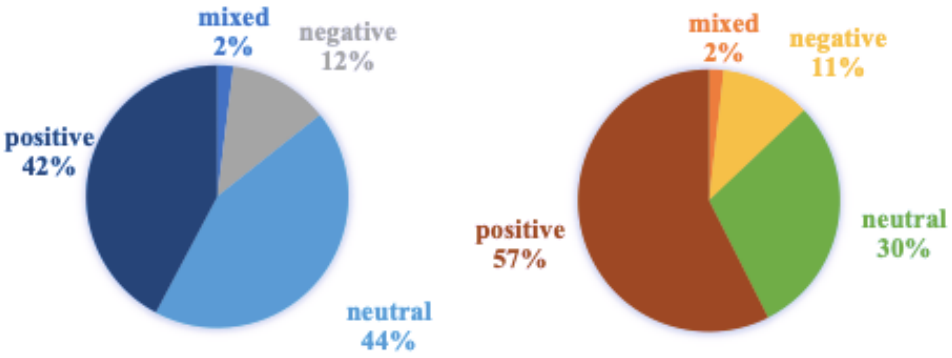

Figure 24. Sentiment composition of Matera 2019 (left) and Palermo 2018 (right) Facebook comments' datasets (source: author's own elaboration).

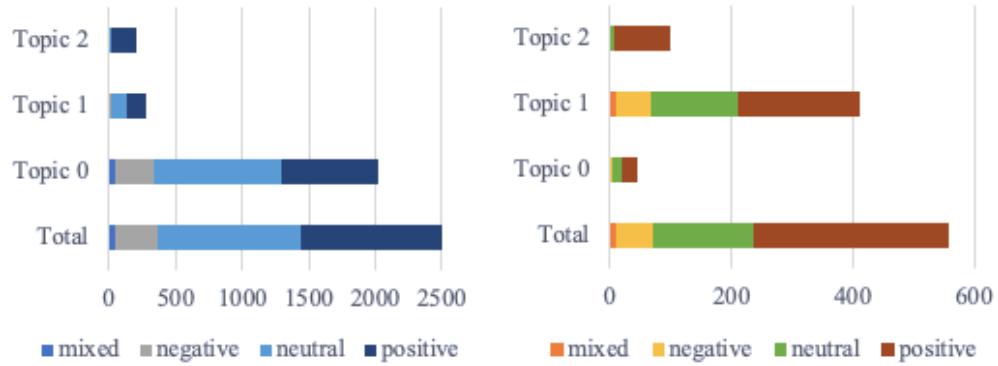

Figure 25. Sentiment composition of the public comments to posts on the Matera 2019 (left) and Palermo Culture (right) official Facebook pages – total and by topic (source: author's own elaboration).

For Matera, we can see that in general, net of the relative majority of neutral messages, the dataset is connotated by an elevated number of positive comments. Visualizing the sentiment by topic, the graph shows that Topic 0 (Organization/access) is mostly neutral, but with a clear prevalence of positive comments (36%) over the negative ones (14%). Most negative comments refer to the high prices and technical troubles in purchasing tickets, and in general issues with the "Passport" system. Overall, the data show a neutral-positive perception of the topic and its contents, and it follows the general sentiment composition of the entire dataset. Topic 1 (Pride) sees neutral messages still relevant (42%), but the majority of comments are decidedly positive (51%). Topic 2 (Events) presents a decidedly positive nature (95%), with negative reactions reduced to a mere 1%.

For Palermo, in general comments are positive (Figure 13). Analyzing the sentiment by topic, results are mostly following the same trend. Topic 0 (Satisfaction) is mostly positive (59%) with a high percentage also of neutral comments (33%), followed by negative ones (9%). This shows a very positive perception of the topic and its contents, and by proxy a positive impact. Topic 1 (Religion/tradition) sees once more positive messages as the majority (48%), followed by a high percentage of neutral comments (35%). Topic 2 (Events) presents again a decidedly positive nature (94%), with neutral comments being the only other sentiment identified (6%).

If we plot the distribution of the sentiment over time, we obtain even more information and insights on the opinion of users and how it has evolved during the event years. The temporal distribution of the overall sentiment of the two case studies is represented in Figure 26.

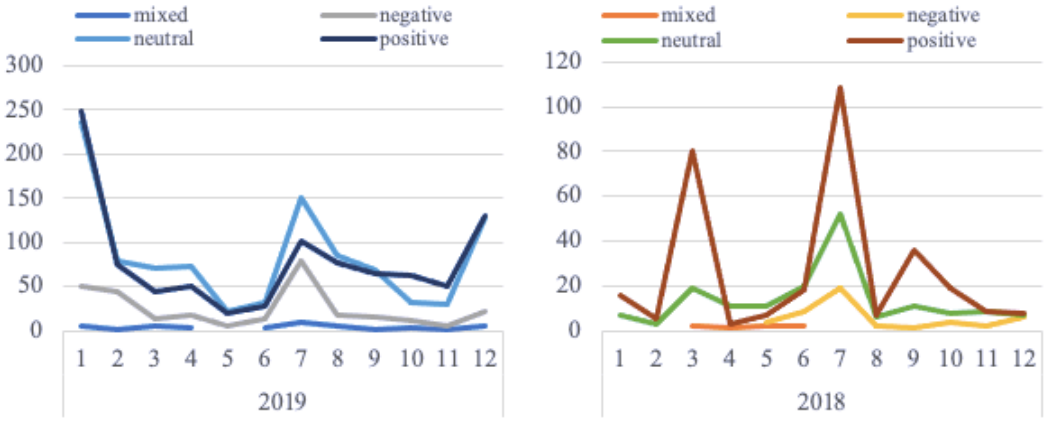

Figure 26. Temporal sentiment distribution of the total Matera (left) and Palermo (right) Facebook comments dataset (source: author's own elaboration).

In Matera's case, the temporal distribution of sentiment shows positive peaks in January, July, and December, coinciding with the opening and closing ceremonies. July – probably with the peak of summer activities – has been a particularly commented and engaging month, as in general we see a spike in all sentiment during that month (mixed and negative especially). This peculiar result made me go check on the data, and I found that the month of July is the month when the famous Palio della Bruna happens. This event reminded me of the most frequent words seen in Figure 20, and of both the traditional and negative lexicon found there. Checking with more attention, I discovered this event to be a particularly polarized affair: on the one hand, the criticism from tourists of the treatment of horses during the event and the destruction of the carriages:

> "Xke nn lo portate voi uomini questo carro invece di quei poveri cavalli obbligati alle vostre tradizioni così inutili!!!!"[47]

> "Ma i cavalli?? Possibile che nel 2019 la capitale della cultura non pensi ai cavalli terrorizzati? 😡"[48]

[47] English translation: "Why don't you men bring this wagon instead of those poor horses obliged to your traditions so useless!!!!".

On the other hand, citizens defending their tradition and local pride:

> "Se la festa nn è di vostro gradimento restate a casa o andate al mare...quando dite poveri cavalli...non andate il giorno dopo a mangiare la carne di cavallo neo paesi limitrofi...la nostra tradizione è questa vi piaccia o no..."[49]

> "Leggo determinati commenti e mi chiedo cosa ho fatto di male per condividere l'ossigeno con certa gente. Ma vi riprendete? "Poveri cavalli" (quando in realtà sono muli), "pezzi ad estrazione", "brutalità senza senso"... Ma sapete cos'è una tradizione? Se non vi piace non guardate, non partecipate e soprattutto NON COMMENTATE che se questo è ciò che vi esce dalla bocca non oso immaginare cosa possa uscirvi dal c**o."[50]

In any case, the spike in July is most likely due to this particular wave of comments, as well as the polarized (and sometimes violent) sentiment.

In Palermo's case, the temporal distribution shows how the mixed comments are not only very few, but also limited to very few months (from March to June). The negative comments start in May and then decrease until December. Match the two peaks in March (80) and July (109), following the general trend seen in Figure 21. Neutral comments follow the general distribution, with just one peak in July. What is interesting is that the negative sentiment appears at around half the year (May) and continues through the end, potentially representing some "unhappy" with the progress of the initiative.

Overall, however, the sentiment is positive, with several appreciations and a general positive view of the CoC in both case studies. The combination of Topic Modeling and sentiment analysis reveals to us, preliminarily, a positive impact on some variables attributable to subjective wellbeing presented in Chapter 2, which

---

[48] English translation: "But what about the horses? Could it be that in 2019 the capital of culture does not think of terrified horses?".

[49] English translation: "If the feast is not to your liking stay home or go to the sea...when you say poor horses...do not go the next day to eat horse meat neo neighboring countries...our tradition is this you like it or not...".

[50] English translation: "I read certain comments and wonder what I did wrong to share oxygen with certain people. But will you recover? "Poor horses" (when in fact they are mules), "pull-out pieces," "senseless brutality..." But do you know what a tradition is? If you don't like it don't watch, don't participate and above all DON'T COMMENT that if this is what comes out of your mouth I don't dare to imagine what might come out of your a**".

we will see in detail in Chapter 6 – such as pride and belonging, but also engagement.

5.3 Corpus B: Press

As for Corpus B, both word frequency counts and time series were calculated on the total dataset – i.e., on all articles collected. This was done for two reasons: the first is purely graphical, namely that, for example, in order to have a time series that covered the whole year, it was not possible to distinguish in the different categories of articles (there were too many "holes" in some categories). The second is that the exploratory analysis makes sense if done on the total number of articles at the point when the corpus is internally homogeneous: the texts grouped in Corpus B are all of the same type and roughly of the same length, and the distinction in categories/sources is purely instrumental to the kind of information I wanted to extract and the initial expectations of different topics between the sources. Thus, I decided to perform the preliminary analyses on the whole corpus, and then apply the Topic modeling to the separate categories. Sentiment analysis, as mentioned, was also performed on the whole corpus, and it is to be conceived as a general indication for benchmarking.

Starting with word frequencies, the wordclouds are represented in Figure 27.

Figure 27. Wordclouds of all newspaper articles on Matera 2019 (left) and Palermo 2018 (right) (source: author's own elaboration).

For the Matera case, in general the words most used by the press refer to tourism ("turismo", "turisti", "pubblico"[51]), institutions ("sindaco", "presidente"[52]), access and spaces ("passaporto", "spazio", "aperti", "percorso"[53]) and the events in general. Highly relevant is the reference to the European dimension of the program ("capitale", "europea", "Europa", "internazionale"[54]) but also to the local context ("territorio", "regione", "sud", "città", "cittadini", "comunità", "sviluppo"[55]). From this initial overview there does not appear to be a specific positive or negative connotation to the words.

In the Palermo case, the most frequent words have to do with the cultural and artistic value of the event ("palazzo", "patrimonio", "artisti", "design", "arte", "culturale", "restauro"[56], and so on), as well as some specific Sicilian cultural features ("Sicilia", "mediterraneo", "accoglienza"[57]). Also in this case, no particular connotation (positive or negative) emerges from the preliminary analysis.

As for the temporal distribution of articles, it is plotted in Figure 28.

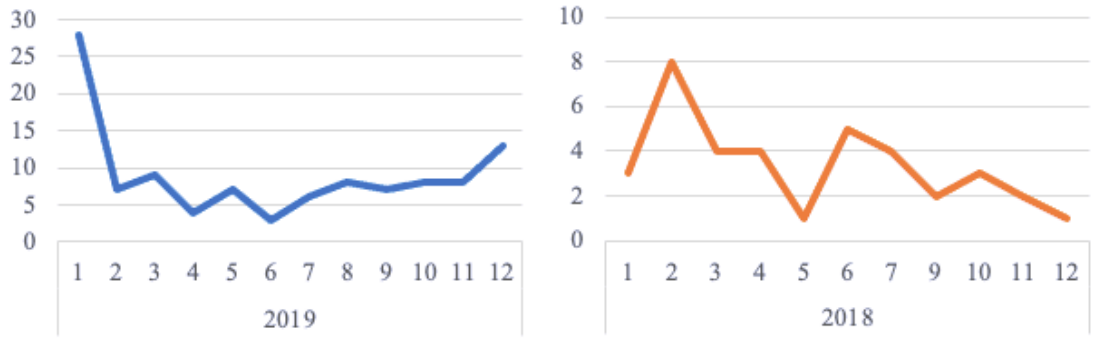

Figure 28. Temporal distribution of all newspaper articles on Matera 2019 (left) and Palermo 2018 (right) (source: author's own elaboration).

[51] English translation: "tourism", "tourists", "public".
[52] English translation: "mayor", "president".
[53] English translation: "passport", "space", "open", "route".
[54] English translation: "capital", "European", "Europe", "international".
[55] English translation: "territory", "region", "south", "city", "citizens", "community", "development"
[56] English translation: "palace", "heritage", "artists", "design", "art", "cultural", "restoration".
[57] English translation: "Sicily", "Mediterranean", "welcoming".

For Matera, the temporal distribution of newspaper articles is not dissimilar to the one of Facebook comments (Figure 21) or tweets (Figure 14), with a peak in January and one in December – predictably, the months of opening and closing of the event year. As for Palermo, articles are distributed unevenly over time with the highest number being reached in February followed by an asymmetrical tail with a decreasing trend.

One thing I found interesting to explore while approaching corpus B is the relationship between the press and tweets. In particular, I wanted to see if there was a correspondence between the articles collected using the method presented in Chapter 4 and the commented and re-tweeted news stories seen in the analysis of Corpus A. To find out, I plotted the time series of total tweets against that of articles on a graph, and the result can be seen in Figure 29. Also in this case, because of the difference in volume of the two datasets, I used a logarithmic base 10 transformation.

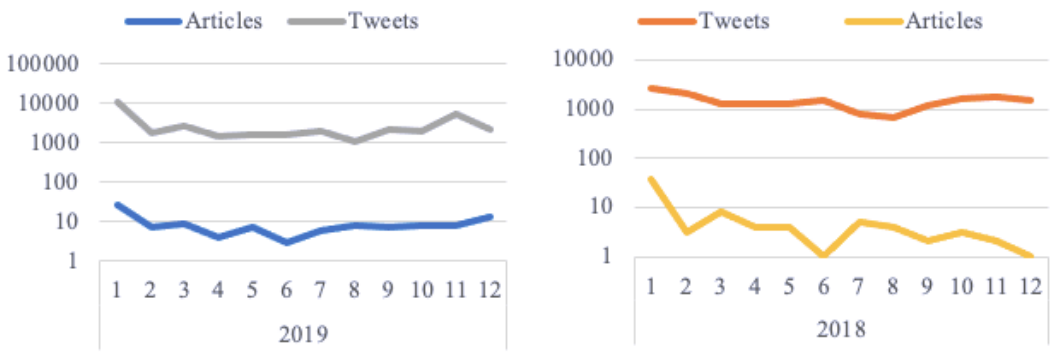

Figure 29. Comparison of total newspaper articles and total tweets over time, Matera 2019 (left) and Palermo 2018 (right). Log10 scale transformation applied (source: author's own elaboration).

Figure 29 shows that, in the case of Matera, the trend is similar, though with a slight divergence in the month of November – the month of the reported floods and damages. This fits, as the word frequency analysis did not show any indication of such news in the articles' total dataset. For Palermo, on the other hand, the trends are too dissimilar.

The data is not enough to trace a correspondence between corpus B and tweets. However, this could be due to the fact that the news stories so relevant in the tweet datasets and the newspaper articles collected in corpus B are inherently different, as they come from different methods of collection and sources, so they do not perfectly correspond to one another.

5.3.1 National newspaper articles

Analyzing the timeline of national newspaper articles, we find that the ones regarding Matera 2019 have a higher concentration in January, and then tend to remain rather stable over the rest of the year, with the less covered months being April and June. Regarding Palermo, national newspaper articles are not evenly distributed over the course of the event-year, they are limited to the months of January, February, March (highest point) and September. The resto of the year is not covered.

As for topic modeling, the articles – divided in the three different sources of data – have been run with MALLET, selecting a number of topics (n) per dataset that would be comparable and at the same time effective. For national newspaper articles, after a few trials, I have selected a parameter n=10. The results are synthesized in Tables 14 and 15, while the translations are available in Appendix A.

Table 14. Topics extracted from the Matera national newspaper dataset (source: author's own elaboration).

Topic id	Topic composition	Inferred topic
0	pasolini paolo sassi guida matteo riprese vangelo repubblica set film immagini regista case cinema danza rocco quei cristo perdere c'era	**Filming activities**
1	culturale luoghi turismo centro territorio visitatori san vaglio case chiesa viaggio tradizione piano locali percorso d'arte collaborazione antiche forte francesco	**Religious tourism**
2	matera c'è importante basilicata realizzato lavoro dato successo almeno aggiunge resto ricorda lucani gioia senso conto consumo posti possibilità volontari	**Citizen engagement**

3	matera sassi capitale terra cultura fondazione lavoro mano bellezza vergogna massimo casa ovvero milano scelta tanti andare pochi materana viene	**Project issues**
4	cultura europea capitale euro progetti regione primi giovani italia progetto numero italiani parco roma presidente culturali culturale europa paesi mondiale	**International dimension**
5	matera progetto festa realtà museo mediterraneo storie scuola corso settore migranti verrà europe vivere racconta sale uomini maria presentata fatta	**Inclusion projects**
6	capitale matera mostra storia info fondazione fotografia teatro arte casa cura mostre passato grandi rupestri spazi progetto studio ingresso l'arte spettacoli musica festival	**Events**
7	bari turisti cammino strada lavori tratto raggiungere rifiuti bus causa difficoltà servizio taxi collega mare cantiere stazione mezzi orari informazioni sottopasso cittadini stazione	**Access**
8	matera cultura capitale sud europea comunità spazio programma artisti basilicata pubblico radio punto scena sfida ospiti festa particolare idee lucana	**Local identity**
9	matera eventi piazza sole open sassi presidente gennaio cittadini europea future cava sasso caveoso pietro cultura cerimonia passaporto dicembre via	**Opening ceremony/Institutions**

Table 15. Topics extracted from the Palermo 2018 national newspaper articles dataset (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	teatro musica minori concerto coro massimo palermitani bambini dell'anno francesco centinaia presenti solidale voce diretti arcobaleno bianche voci orchestra kids	**Children activities**
1	culture dialogo palazzo zisa marzo giugno grandi tavolo sant'elia coinvolgera concerti sito butera sede massimo belle cronaca migrarti l'enorme europei	**Cultural dialogue**
2	ballaro comunita centro via comune territorio stranieri progetto dibattito importante complesso terra quartiere orlando soluzioni sicilia the aprile mobilita itinerario	**Local community/inclusion**
3	contemporanea europea civico arabo presentazione straordinario giovanni migliore direttore soccorso pronto prenotazione punto dodicesima l'elezione dossier monumenti l'anno teatri proposte	**International culture**
4	palermo conad aaster cittadini dati attivita valori rinascita colloca quota abitanti tasso numeri sesto piano dirigente immigrati sociali disoccupazione dinamiche	**Social impact**
5	euro significa valutazione studio istituzionali partner spese europee meta resta totale operatori domanda almeno corso sviluppo report effetti investimento fronte	**Economic evaluation**
6	palermo cultura capitale italiana sindaco programma orlando leoluca presentato iniziative realta lunga laboratorio festa collaborazione portale sistema media artistico livello	**Program organization**
7	eventi manifesta culturale cantieri biennale arte capoluogo realizzare turistico internazionale vista ospitare nomade	**Hospitality**

	ospitera comuni turisti quest'anno calendario ricevuto ruolo	
8	santa albanesi piana tradizione settimana tradizionali integrazione interviste dato distribuzione morte palme secolare rito storica nata dell'accademia domenica promesse venerdi	**Tradition**
9	culturali mediterraneo mafia patrimonio storico giovani san storia museo passato nazionale cantiere nuove appena sud segna parchi restauro capace italiani	**Local history**

We can see from the inferred topics columns that the national newspapers tend to follow general topics, not particularly focused on local dynamics but rather the program in general.

In Matera's case, worth noting is the emergence of citizen participation and the sense of joy ("gioia") and belonging expressed by the local community as seen in Topic 2, as well as the importance of local identity shown by Topic 8. On the contrary, Topic 3 contains the expression of some critical and negative feelings, such as shame ("vergogna"), related to the implementation of the program. Similar negative lexicon can be found in Topic 7 (Access), especially related to infrastructure, existing and new. In sum, the general sense of neutrality and negativity anticipated in the general preview of the Corpus B is also present here in Matera's national articles dataset.

As for Palermo, the topics extracted refer mostly to general concepts, such as impacts of the initiative, but also local community activities, identity, history and integration. These are, in general, the kind of topics I expected to find in the dataset of articles in the national press, as was the case for Matera. In this case there are no specific references to emotions or particularly polarized vocabulary, but the direct reference to Inclusion (Topic 2) and social impacts in general (Topic 4) is interesting for the research.

5.3.2 Local newspaper articles

Contrary to national articles, for Matera the local press has covered mostly December, the month of closing ceremonies and end-of-event accounts. The

central months of the year (from May to August) have not been covered by local articles at all (although this may be an issue with the sample). This "inversion" with respect to national articles is noticeable also in Palermo's local article dataset, though in reverse. In this case local articles are evenly distributed over the course of 2018, with the highest points reached in February and October. This concentration of local newspaper articles could be related to the fact that the Italian capital of Culture is not as relevant nationally as its European counterpart, but it is extremely valued locally.

As for topics discussed, as expected, in the local newspaper datasets the focus of authors is on local subjects. The topic composition of the two datasets is shown in Tables 16 and 17. After a few trials, for both case studies I selected a parameter n=8, which gave me the best and most comparable results.

Table 16. Topics extracted from the Matera 2019 local newspaper articles dataset (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	matera cultura capitale europea cittadini centro piazza sole eventi sassi presenza cava programma giornata basilicata fondazione notte culturali evidentemente corso bande diretta festa gennaio	**Events**
1	risultato sviluppo livello punto vero molte rifusa lavori arrivare praticamente arrivati pulizia mezzi pochi rimangono stazione elementi parcheggio turistico numeri servizi almeno termini regione personale spesa	**Infrastructure**
2	sud regioni nazionale nord scuole residenti mezzogiorno pubbliche quota punti valore puglia flessione costruzioni lombardia romagna opere cultura bandiera gap	**North/south comparison**
3	film cinema progetto storia lucana madre ottobre rocco maria realizzato international italia comunità piccolo regista vasai provincia bello opportunità tataranni imma spot ciak scenario televisiva	**Filming activities**
4	presidente sud regione portato serata sindaco parole ministro fischi territorio bardi sottolineato parlamento c'è dimostrato provato aggiunto ormai sassoli iniziative mattarella palco	**Institutional presence**
5	crescita dell'anno imprese settore periodo dati d'italia dato calo auto domanda resta addetti turistici aumento precedente semestre segnali investimenti nuove centro rioni danni necessità notizie operatori sicurezza	**Economy/ tourism impacts**
6	matera euro basilicata mese passaporto alcune bari possibile poter turistica situazione maniera grandi storico fondazione bilancio dato massimo ultimi difficoltà	**Access**
7	dicembre festival digitale san open presso francesco piattaforma direttore legati stefano pubblico culturale produzione giovani teatro problemi scena punto mattina	**Digital events**

For example, Table 16 shows that in the Matera case the focus is put on local infrastructure (Topic 1), or the presence of institutions (Topic 4), or the north vs south Italy comparison, (Topic 2). From the topic composition column, we can see how many words and concepts within each topic return a somehow negative interpretation made by the press of certain issues (for example “danni”, damages presumably caused by tourists in Topic 5). From the point of view of relevance to this research, the most interesting are Topics 4 and 6, which have a direct correspondence with the variables of well-being as it is understood in this thesis. In both topics there are words that have to do with difficulty and generally a negative connotation (“difficoltà” in Topic 6, “fischi” in Topic 4).

In Palermo’s case, (Table 17) the topics extracted refer to mostly events and certain artistic practices. This result conflicts with the initial expectations presented in Chapter 4 that hypothesized a focus on local social phenomena (as opposed to the national press), and not so much on artistic content. None of the extracted topics is particularly relevant for the goal of the research.

Table 17. Topics extracted from the Palermo 2018 local newspaper articles dataset (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	palermo arabo araba monumenti arabi sicilia percorso normanni dominazione normanno periodo presenza san giardini normanna quartiere storico centro vera certamente	**Sicilian heritage**
1	capa guerra mostra robert fotogra foto giugno tunick fotografo secolo europa importanti vespucci storia aprile nudita domenica seconda lavoro magnum	**Photography**
2	progetto via passi piazza comune linea nuova design urbano percorsi sviluppo pubblico presso porto realizzazione mobilita istud all’interno principale urbana	**Urban planning**
3	culturali palermo museo palazzo eventi spazio teatro opere iniziative cultura capitale musei salinas diverse contemporanea palermitano europea arte verrà casa	**Events**
4	settore strutture crescita palermo presenze dato dati livello imprese turismo rosalia turistiche alberghiere turistico stelle senso tesoro posti economica pezzi	**Economic impact**
5	manifesta biennale palermo temi video presenta progetti artisti collaborazione dedicata propone siciliano sedi programma realizzato palazzo studio giardino luoghi euro	**Art and space**
6	cultura palermo capitale italiana culturale mediterraneo sindaco orlando rth mare culture collezione economico restauro importante internazionale pace cittadinanza territorio simbolo	**Mediterranean identity**
7	palermo design maria santa i-design spasimo sicilia arti chiesa designer cura ricerca belle corso industriale andriolo professore disegno curata mostre	**Design**

5.3.3 Sector-specific online newspaper articles

In Matera's dataset he temporal distribution of sectorial articles is hardly a distribution at all. In overage only in the months of January and December 2019, with other articles being published outside the temporal range of the ECoC events. This could be due to an issue in sampling, but that would not be a resolvable issue at present. However, the same problem can be seen in the Palermo dataset, and with all other datasets analyzed so far. Sector-specific articles do not cover evenly the course of 2018, with the only months with news coverage being February, April, June and July. As for identifying and extracting topics, considering the numerosity of the two datasets and concerned with comparability, I selected a parameter n=10 for both case studies. The results of the topic extraction with MALLET are shown in Tables 18 and 19.

Table 18. Topics extracted from the Matera 2019 sector-specific newspaper articles dataset (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	studio report impatto studi risultati breve guidato team l'incontro turismo monitoraggio valutazione pil cambiamento risorse emerso dati sud obiettivi sostenibile economia investimento	**Impact/evaluation studies**
1	turisti roma ormai voleva dell'economia dovrebbe assunti fuoco lavori punto fase struttura sorta bianco ministero delocalizzate centri chiusura capire operatori	**Tourism**
2	sassi idee cittadini mostre guarda all'interno dedicate proprie l'anno verri programmatici piani portare società europeo concetto progetti sede raccontare matera culturale eventi processo competenze	**Program**
3	nuove creare regione valorizzazione economico spazio lavoro crescita sociale aumento visioni poteva piccoli laterza politiche ruolo valore scale d'italia sviluppo territorio	**Local development**
4	attività capitale settimana dicembre etc storie google collaborazione comunità nell'ambito piattaforma strumento programmazione grandi diversi produzioni internazionali pace street appuntamenti	**Collaboration platforms**
5	opere progetto accoglienza luoghi spiega scambio alberghi francesco arte d'arte san hotel alberga cascino esperienza laboratori viaggiatori abitanti convivenza vedrà	**Hospitality/Inclusion**
6	archivi i-dea mostra progetto strumento materani l'archivio basso bilancio siravo chiara grima joseph database digitale lavorando materiali soggettivo visitatori chiedere	**Archives**
7	fondazione artisti spazi coinvolti presso l'obiettivo dario curato anzi campo aperti data fonte urbana speso rappresentato conoscenze possibile presidente racconta istituzionali	**Institutional presence/involvement**

8	basilicata tema produzione curatori produzioni patrimonio diverse processo poiché laboratorio stimolo libro nationhood emerge permesso frutto archivio vengono gillick manifestazione	**Local artistic production**
9	casa netural coworking incubatore progetti modello paoletti progetto servizi condividere sogni community impegnata imprenditoriali vista percorso motore giovani incubazione quartiere	**Sharing**

Table 19. Topics extracted from the Palermo 2018 sector-specific newspaper articles dataset (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	teatro mare garibaldi architetti galleria scarpa lavori architetto palermitani complesso storica spazio milano siciliana punto luigi scoprire giorgio laboratorio monumentale	**Renovations**
1	palazzo contemporanea carlo artisti arte sede piano architettura abatellis c'e possibile internazionale inaugurato palermitano secolo barone letizia ospita principali all'interno	**Event venues**
2	manifesta biennale giardino nomade palazzi giugno pochi arredi botanico edizione capoluogo palermitana realta hedwig ospitare araba passato straniero format locali	**Open spaces**
3	palermo cultura capitale progetto culturale storico italiana novembre culturali programma europea patrimonio quartiere installazioni nuova locale tema terra progetti territorio	**Events program**
4	piazza antonello cucina messina giovanni sicily company good magione ritratto mola aja spazio via sicilia buatta caffe pittura presto valigeria	**Urban spaces**
5	santa strada rosalia festino festa performance tradizione luglio culture quest'anno porta speciale diventata foro processione i-design naturali attesi compagnia peste	**Religion/tradition**
6	centro eventi storia mostre restauro cambiamento mediterraneo rinascita contemporanea sicilia museo diverse planetario zisa straordinario aperto marzo pubblico l'anno garden	**Sicilian culture**
7	euro siciliano urbano report narrazione sindaco iniziative presenza risorse soggetti percorso erta cittadina urbana orlando manifestazione visitatori tipo dell'o turisti	**Evaluation**
8	sella pizzo guerra palazzo casa stile sala societa luoghi collettivo nazionale mutilato forcella famiglia viene seconda situato nuove	**Exhibition**
9	opere design artisti giuseppe mostra studio celebre grandi designer serie lavoro novita realizzati appuntamenti ottobre ideato spasimo artistico forma luce	**Design**

In this case I expected a specific focus on the events and on the cultural of the initiative. This feature is present, however in the topics extracted appears also a focus on social values and impacts that I had not foreseen, especially in the Matera dataset (Table 18).

Palermo's results (Table 19) are more reflective of expectations, with special focus on different artistic activities and expressions. The topics identified mostly regard places, spaces, and events, one refers to the religious identity of the city, but none to social impacts or similar themes – which complies with the initial expectations. In neither case emerged any polarized lexicon or any reference to emotions or personal opinion at all.

5.4 Corpus C: Institutions

The corpus for institutional perception is the most heterogeneous within it. Nevertheless, it was possible to perform some analyses on the entire corpus without encountering major difficulties. This is the case, for example, with word frequency counting, and the subsequent creation of wordclouds for the two case studies (Figure 30).

Figure 30. Wordclouds of all institutional sources regarding Matera 2019 (left) and Palermo 2018 (right) (source: author's own elaboration).

For Matera, the words most used by the institutions refer to the institutions themselves and the city ("città", capitale", "verri" "presidente", "sindaco"[58]), the

[58] English translation: "city", "capital", "verri" (general director), "president", "mayor".

general program ("eventi", "cultura"[59]) but also the local community and social variable ("riscatto", "cittadini", "comunità", "sviluppo"[60]). For Palermo, the most frequent words focus on local stakeholders ("stakeholder", "comitato", "fondazione"[61]) and the evaluation process ("sviluppo", "intervento", "analisi", "valutazione", "proposte", "ricerca"[62]).

Regarding topic modeling, despite the internal variety of this corpus I decided to use MALLET for all analyses, even on posts on official Facebook pages. This is both for a matter of internal homogeneity and because MALLET works particularly well on somewhat longer posts, such as those collected in this corpus (as opposed to comments, which are shorter and more fragmented).

In Matera's Corpus C, the topic composition presents many references to the economy and tourism, but also to the local community and on social variables. Worth noting are the topics related to local processes, like participation, events (linked to emotional aspects), citizen engagement, access, and institutional involvement. As for the sentiment, the results are unexpected: I found a predominance of mixed sentiment (particularly from the institutional articles), but especially a relevant percentage of negative documents (from the official documentation). This result disrupts completely the initial hypothesis of finding a positive narrative to promote the success of the initiative and proves the relevance of such sources of data in research of this kind.

For Palermo, the topic modeling results are mostly focused on spaces and the program in general. Some topics that emerge as relevant for the research include participation (though its identification is bit forced) and institutional presence. As for sentiment, it is mostly mixed (especially with respect to the official documents), though it is worth noting a relevantly negative opinion in the institutional interviews (33%).

[59] English translation: "events", "culture".
[60] English translation: "redemption", "citizens", "community", "develoment".
[61] English translation: "stakeholder", "committee", "foundation".
[62] English translation: "development", "intervention", "analysis", "evaluation", "proposals", "research".

5.4.1 Official documentation (monitoring and evaluation reports)

It doesn't make much sense in the case of official documentation to consider temporal distributions, as most of the documents are dated after the event year and do not have a monthly reference in most cases. As for the topic modelling of the official documentation, I made a break from my rule of trying to make everything symmetrical and comparable, because the asymmetry between the numerosity of the Matera and Palermo sources is too overwhelming to overlook (see Tables 8 and 9). Therefore, in the MALLET analysis I have kept a higher n parameter (n=14) for Matera, to better analyze the large number of reports (evaluation reports, mostly) available. For Palermo, I kept a lower n parameter (n=10). The results are presented in Tables 20 and 21. As usual, English translations are available in Appendix A.

In analyzing Matera's results (Table 20), it is noticeable how many of the identified topics relate to useful categories for research, and in particular to some of the determinants of subjective wellbeing presented in Chapter 2. Not only that, Topic 9 referring to Participation (precisely one of these determinants) we find the only reference in all the databases to the concept of wellbeing. This may corroborate the connection between wellbeing and participation, but also with the concepts of engagement, and social processes-always found in this topic. The determinants of access and cooperation with the local community are also very present. However, the tone from these topics seems mostly neutral, so it is not easy to identify the nature of the effects that I expect there to have been – given the specific mention described above.

As for Palermo (Table 21), the topics extracted have mostly to do with broad, general concepts (e.g., internationalization, evaluations, impacts, etc.). Only one topic is particularly interesting for the present research and that is Topic 2, Engagement. Despite the relevant topic, however, it is not possible to identify a lexicon that gives some idea of the effect the initiative had s this aspect-this determinant of subjective well-being. Worth noting, however, is the presence of a topic having to do with user perceptions (which will become central in the discussion in Chapter 6).

Table 20. Topics extracted from the Matera 2019 official dossiers (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	pubblico eventi intervistati campione fruizione manifestazione altofest figura valutazione tabella culturale valore mostra residenti festival media valori istruzione biennale livello	**Evaluation**
1	matera l'ods giuria progetti manager fornitori intervistati design team dell'ods lab progetto open business living school dott.ssa figura sviluppo programma	**Program development**
2	fondazione culturale attività ecoc culturali territorio iniziative istituzioni piano sviluppo partecipazione dossier piattaforma locale all'interno soggetti ruolo candidatura attori maggiore	**Local institution involvement**
3	servizi risorse attività matera culturali totale culturale settori studio euro dati termini fondazione distribuzione produzioni contratti sistema economici cultura fornitori	**Economic resources**
4	comunità ricerca project nuove attività territorio collaborazione capacità realizzazione possibilità locale culture particolare diverse risorse studio spazio generato punto legacy	**Local community engagement**
5	progetto progetti sociale l'impatto livello mostra teatro partecipazione sviluppo business nave sicomoro model film fase cooperativa processi silent cinema laboratori	**Projects for social development**
6	competenze matera culturale produzione effetti sviluppo gestione maniera capacità aspetti figura pubblici diversi tramite creazione professionali culturali rispondenti programma fonte	**Capabilities**
7	fondazione spazio effimero ente matera-basilicata matera pubblico natura esistente privato associativa uso piazza indoor centro performance musica arte workshop sassi	**Closed spaces**
8	matera basilicata cultura capitale europea eventi analisi particolare regione possibile viene culturali rapporto grado relazione possono fase diverse internazionale luoghi	**Internationalization**
9	partecipazione sociale livello co-creazione processi dimensione attiva mcec ovvero **benessere** processo intervistati sviluppo soggetti riferimento coinvolgimento relazione partecipanti domanda territorio	**Participation**
10	card sistema territorio passaporto servizi fruizione soggetti strumento basilicata vendita target residenti musei turistici attività progettazione flussi livello numero siti	**Access**
11	matera basilicata cultura eventi cittadini europea capitale programma fondazione luoghi open spazi teatro candidatura grandi school mostre dossier museo culturali	**Events**
12	culturale progetto culturali progetti nazionale cittadini lavoro processo importante valore obiettivi artisti locali gestione comunità programmazione ruolo modello comune post	**Local development and cooperation**
13	turismo settore investimenti infrastrutture economico crescita congressuale turistica dati spesa ecoc turisti turistici impatto pari turistico stima impatti creative industrie	**Tourism**

Table 21. Topics extracted from the Palermo 2018 official dossiers (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	sviluppo valore operatori riguarda dato appare focus recensioni infine nazionale positivo generato misura settore festival base museo comuni cose processo	**Local development**
1	percezione pari visita storico maggiormente questionario stima dell'intervento l'iniziativa valutazione stampa realtà integrata capitolo contesto sottolineato miglioramento risposte sostenibilità nell'ambito	**User perception**
2	patrimonio locali particolare istituzioni cambiamento fruizione manifesta comprendere metropolitana consapevolezza palermitani turistica palazzo partecipazione gestione crescita rapporto diversi cultura coinvolgimento	**Engagement**
3	proposte fondazione comitato art avviso progetti valutazione presente call ricognizione finanziamento potranno sant'elia devono documenti partecipanti categorie presentazione lingua presentare	**Proposals**
4	pcc attività residenti locale senso partner livello cambiamenti stakeholder group centro partenariato outcome analisi numero turismo rispondenti fattori sentiment servizi	**Evaluation**
5	culturale sociale processo spazi realizzazione quadro europea processi culture storia diverse propri diritti internazionale artistico contemporanea principi arti elemento mediterraneo	**Internationalization**
6	turisti tal propria ricerca toc interviste domanda risultati coinvolti sant'elia permesso lavoro tavolo istituzionali percorso componenti l'analisi nazionali intervento rafforzare	**Research**
7	culturale territorio dati fondazione cfr visitatori economici dell'iniziativa organizzazioni contributo effetti dell'offerta politiche importante rispondenti evidenziato calendario nonché specifico presenti	**Impact**
8	culturali italiana eventi progetto soggetti economico termini candidatura sicilia tramite partnership modello promozione pubblico via pubblici cittadini occorre relazioni privati	**Promotion**
9	palermo cultura capitale comunicazione comune iniziative sistema risorse presente valorizzazione teatro periodo internazionali elementi inclusi rafforzamento flussi proposta stranieri web	**Valorization**

5.4.2 Institutional articles (interviews and press statements)

In general, official content in newspapers (interviews and press releases mainly) is few but and concentrated in a few months of the year, both for Matera and Palermo. Given the rather low number of articles, for topic modeling in MALLET, I opted for a relatively low n parameter, n=8 (Tables 22 and 23).

In analyzing these kinds of sources, I didn't have high expectations in terms of content. I expected – and the analysis proved me right – texts mainly focused on

the institutional role and politics – national and local. The focus on the presentation of activities and events was also somehow expected. I imagined a promotional role, in short, ranging from institutions to the program itself. And so it is, with some logical and evident differences in vocabulary, in both case studies. What I did not expect was the neutral-to-negative tone of this type of source, unexpected and to be investigated more – as much as possible with the resources available.

Table 22. Topics extracted from the Matera 2019 institutional articles (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	successo sola marcello simbolo primi tornare politiche movimento centrosinistra c'era guida adduce all'interno scelta bisogna difficoltà evidente legislatura vito stabilire	**Government**
1	eventi cittadini collaborazione numeri regione c'è spettacolo turisti materani comuni possono punto credo vedere contenuti partecipato apt insistito cose sole	**Event fruition**
2	cultura lavoro luca culturale culturali storia musica valorizzare formazione c'è zero progetto dicembre tavoli gestione reale franceschini musei dovere intervento	**Valorization**
3	regionale pittella teatro palco regione governatore cultura evitare primarie vinto lucano posti professoressa affrontare corte capogruppo ragioni puntando spada metri	**Local politics**
4	europea presidente sole sassi centro rai ministro governo conte riscatto investimenti euro spiegato sfida bonisoli far modello bellezza premier giuseppe	**Institutions**
5	matera cultura capitale napoli sud sindaco sviluppo sociale innovazione ruggieri mezzogiorno raffaello senso passato dignità regioni leader napoletani convinta rapporto	**Development of the South**
6	matera basilicata cava verri cerimonia capitale fondazione paolo banda presenze artisti direttore giornata bande repubblica spettacoli volontari resto candidatura seconda	**Opening ceremony**
7	comunità provincia penso lavorare luoghi nord storie aree serve ricostruire italiana sovranismo torino locali portare realtà basso co-creazione senso territorio	**Province dynamics**

Table 23. Topics extracted from the Palermo 2018 institutional articles (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	palazzo culture chiesa palazzi eventi butera crescita contemporanea sviluppo progetti jazz sedi ecosistema incontro restera comunicazione battenti rinascita the letteratura	**Heritage**
1	mafia certamente mobilita centinaia mafiosi arriva soggiorno umana sfida fastidio ateo palermitani politico chiesto pride padri sfruttatori permesso musulmani europee	**Local culture**
2	cultura internazionale c'e biennale importante dovrebbe progetto vista cusumano giugno migliaia identita spazio iniziative parla importanti tornera raccontare costruendo	**Space identity**
3	teatro massimo storico fondazione aperto francesca percorso nobiliari piante calendario banche cambiare rapporto rassegna programma giugno unesco mosaici viaggio riaprire	**Private residences**
4	diritti umani migranti sicurezza google europea orlando l'identita ahmed idioti utili dato comunista parigi dedicato omosessuali gay l'unione via afferma	**Human rights**
5	palermo visione sindaco scelto senso propri patria violenza ultimi complici mondiale sede orlando leoluca dati paesi residenti connessione torniamo new	**Institutional role**
6	sistema italiana culturali cantieri spazi unico tema punto diversi studio zisa europa pubblico livello planetario mostra beni periferie polo	**Sharing spaces**
7	palermo capitale manifesta culturale centro storia collezione valsecchi sicilia programmazione posso propria artisti grandi possiamo penso nazionale spasimo sito museo	**Program**

5.4.3 Posts from official Facebook pages

In analyzing the posts on the official Facebook pages, I echo the exposition structure used in corpus A – given the similar nature of the dataset. First, I analyzed the time series of posts to understand the trend during the event years considered (Figure 31).

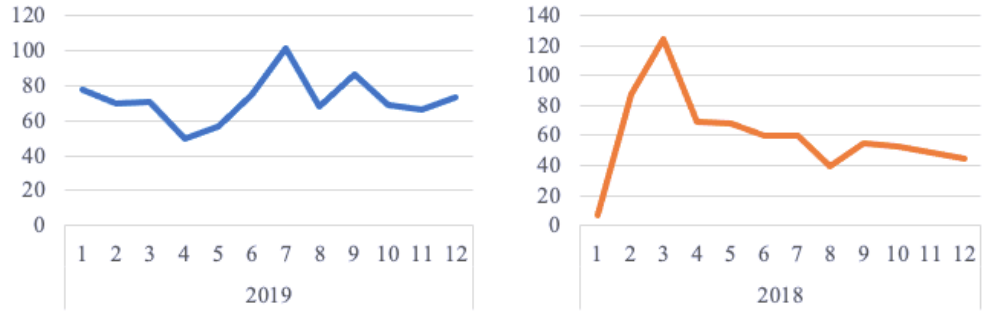

Figure 31. Temporal distribution of posts from the Matera 2019 (left) and Palermo Culture (right) official Facebook pages (source: author's own elaboration).

The temporal distribution of the Matera 2019 Facebook posts sees the highest point in July (101), followed by a slow decrease towards the end of the year. The lowest point is recorded in April (50 posts). The distribution of the Palermo Culture Facebook posts spans all months of 2018, with the highest point in March (124 posts). Then, it starts to decrease slowly but steadily, with the lowest point reached in August (39).

Then, similarly to what I did for Facebook comments, I decide to compare this temporal distribution to the ones that directly descend from it – that is comments and reactions to these posts. The results are showed in Figure 32 (note that I once again applied a logarithmic base 10 transformation to deal with differences in numerosity).

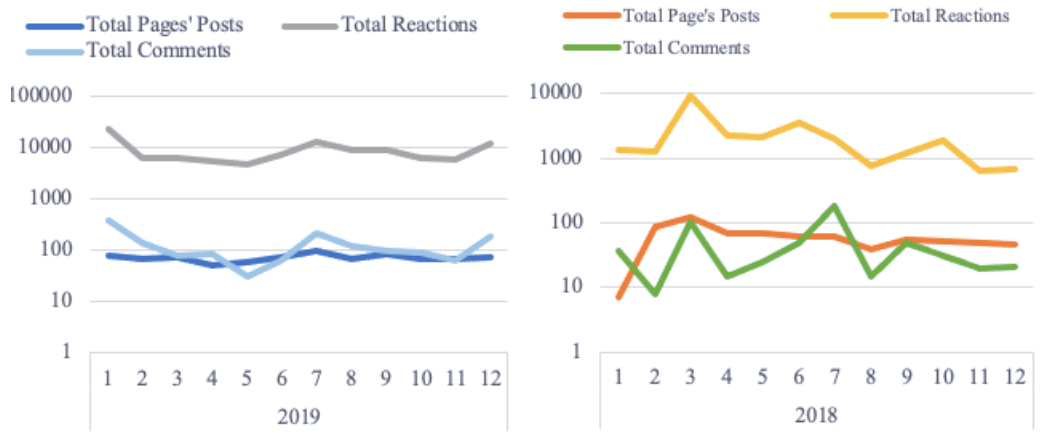

Figure 32. Temporal distribution of posts, comments and cumulative reactions from the Matera 2019 (left) and Palermo Culture (right) official Facebook pages. Log10 scale transformation applied. (source: author's own elaboration).

In the case of Matera, we see how the trend of the three curves is similar, and all in all constant over the year. This means that the page has been covering activities consistently, and that users have maintained constant engagement along with the page. As for the consensus reached by the posts, I analyzed the number of posts that elicited reactions and their type:

- 924 posts with at least 1 "like".
- 883 posts with at leat 1 "love".
- 318 posts with at least 1 "wow".
- 38 posts with at least 1 "haha".
- 32 posts with at least 1 "sad".
- 23 posts with at least 1 "angry".

Palermo's graph confirms the more variable nature of Facebook activity. While users (between comments and reactions) are more erratic in their engagement, page activity remains more constant over time, with coverage tending to vary little from March onward (after a rather uncertain start to the year). Fluctuations in user activity may therefore be due to posts that were particularly interesting or that publicized particularly heartfelt or attended events. As for reach and engagement, I analyzed the number of posts that elicited reactions and found 712 posts with at least one reaction, and 228 posts with at least one comment. For the reactions in particular I found:

- 712 posts with at least 1 “like”.
- 297 posts with at least 1 “love”.
- 62 posts with at least 1 “wow”.
- 19 posts with at least 1 “haha”.
- 11 posts with at least 1 “sad”.
- 6 posts with at least 1 “angry”.

So, in general we notice a rather positive impact of the posts on the audience, both in the case of Matera and Palermo. It is good to remember, however, that the posts on the official pages are generally informative, promotional posts or following specific events. This influences both user reaction and Topic Modeling results, which are presented below (Tables 24 and 25).

Table 24. Topics extracted from the posts on the Matera 2019 official Facebook page (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	scopri artisti eventi luglio polo gennaio esaurimento laboratori fotografia sport progetti sera atlante cerimonia internazionale continua guarda together volontari confini	**Laboratories**
1	sabato sole installazioni ridola school capitale opening luoghi circusplus archivi rai l'arte bellezza ars digs prenotazione aperto materadio orari petra	**Open spaces**
2	the mostra ingresso appuntamenti festival and domani casa febbraio settimana contemporanea archeologico museale domenico info scena curata venerdì festa ideamatera spazio live danza	**Events**
3	basilicata musica marzo events spettacolo circo storia circus terra straordinario viaggio cinema francesco diretta sud opere percorso parco luna aperta	**Performing arts**
4	progetto cultura c/o programma palazzo incontri design grandi lanfranchi comunità alberga lezioni arti concerto suoni culturale protagonisti teatrale paradiso film	**Lectures**
5	open sassi san weekend i-dea posti spettacoli compagnia ceremony prodotto vergogna pane workshop gratuito presso ufficiale lucana with visita finale passaporto radio video emozioni cittadini	**Access**

Table 25. Topics extracted from the posts on the Palermo Culture Facebook page (source: authors own elaboration).

Topic id	Topic composition	Inferred topic
0	programma sicilia film the giovedì comune appuntamenti arti incontri storico premio giornata partire galleria quest'anno italiano terra fotografia culturale aperto	**General information**
1	venerdì storia giugno sito febbraio siciliana festa san cura maria visitabile spazio sala siciliano prenotazioni brass mese tesori design spazi	**Religious events**
2	info sabato museo festival presso aprile massimo edizione arte fondazione contemporanea libero ballarò stasera lunedì simbolo tour francesco diretta nazionale	**Contemporary art**
3	ottobre opere novembre organizzato biglietti evento notte terrà palazzo spasimo rassegna concerti siamonoi garibaldi scoprire tradizione corso siciliani sant'elia piazza	**Concerts**
4	artisti luoghi grandi giovani lavoro weekend visite classica quartiere giuseppe santa raccontare artistica dedicato occasione regista porta leoluca scuole studenti	**School activities**
5	palermocapitalecultura teatro progetto eventi settembre maggio appuntamento scena centro pubblico settimana luglio torna dicembre italia bambini visitare diverse musicale	**Children's theater**

As mentioned, given that most posts are rather long and informative (mostly advertising or following specific events), I have opted to analyze them with MALLET – it works best, as there is no longer the issue of short, fragmented texts of other social media content. Once again retaining the informative nature of such posts, after a few trials I selected a parameter n=6 for both case studies.

As expected, the topics extracted from both case studies have very much to do with the events' program, and – more relevant for the research – access arrangements. The underlying tone is mostly neutral and informative.

5.5 Highlights, trends, and general remarks

To conclude, below I summarize the main information for the two case studies that emerged from the analysis and will be discussed in more detail in the next chapter. For the case study of Matera I found a mixed perception of users (Corpus A), with very positive Facebook comments, and neutral-to-negative tweets. The press perception was also mixed-to-negative press, while I expected to see more diversity within the sentiment (or at least some positive articles). The greatest surprise was found in the institutions' datasets (Corpus C), with mixed-to-negative perception. This was extremely unexpected: institutions in this case do not try to sell the "success" of the initiative with stereotyped narratives, despite the high number of evaluation studies analyzed. So in general, sentiment is polarized in social media, neutral-negative in the other corpora. As for topics, the ones that emerged from the analysis mostly relate to events and other Program-related features, but I also identified development and social themes.

For the case study of Palermo, I also found a mixed perception within the users' Corpus, with positive Facebook comments, and mostly negative tweets. The press' perception has also a slightly negative prevalence. It is not so surprising, but I envisioned more thematic diversity and especially more focus on urban impacts as opposed to such extensive chronicles of the events. I was once again surprised by the mixed-to-negative perspective of the institutions, and the same comments made for Matera apply. In general, the sentiment is leaning towards a negative connotation (Facebook comments somehow rebalance, but all other sources tend toward negative sentiment). As for topics, also in this case study the are mostly related to events and the Program, though with some reference to social variables, urban features and in general, impacts.

Finally, I anticipate an attempt to read the results with the lens of the framework, which will done more in detail in the next chapter. The result of this first attempt is synthesized in Tables 26 and 27.

Table 26. Synthesis of SWB-related topics found in the Matera database (source: author's own elaboration).

	Users	Press	Institutions
Context	Presence/density of events/amenities	Presence/density of events/amenities	Presence/density of events/amenities
		Institutional presence	Institutional presence
Relations	Pride/self-esteem		
Process	Access	Inclusion	Participation
		Engagement	Engagement
		Access	Access

Table 27. Synthesis of SWB related topics extracted from the Palermo database (source: author's own elaboration).

	Users	Press	Institutions
Context	Presence/density of cultural amenities/events	Presence/density of cultural amenities/events	Presence/density of cultural amenities/events
			Institutional presence
Relations	Sense of belonging		
	Pride/self-esteem		
Process		Inclusion	Inclusion
			Engagement

For Matera, I found some reference to the determinants of SWB (33,8%): newspapers (28,5%) approach these themes much like the institutional documents (28,5%). All in all, I found good feedback from social media: almost all topics extracted relate to the determinants of SWB (83%), though some more than others.

For Palermo, I expected to see more determinants of SWB (15,5%) either among the topics or within them, especially in newspapers (10,7%) and institutional documents (12,5%). Once more I found good feedback from social media

(although not at the levels of Matera): 50% of topics extracted relate to the determinants of SWB as were defined in Chapter 2. More on the relevance of the findings presented in this Chapter for the goal of the research will be discussed in Chapter 6, together with a thorough assessment of the methodology and theoretical basis of this work.

Chapter 6

Discussion

In this chapter I will discuss the findings shown in Chapter 5, focusing on their interpretation with respect to the research topic – impact of an urban cultural initiative on subjective wellbeing. After summarizing the main findings, I will link them to the concept of SWB using the framework presented in Chapter 2, thus reading the results of the analyses with the theoretical lens adopted for the present research.

The discussion – about the results and the framework itself as a tool for reading them – has the goal of answering the research questions posed at the beginning of the present study: Do cultural initiatives such as the "Capitals of Culture" have an effect/impact on users' SWB? If any, of what type is this effect? How can such effects be measured?

6.1 Interpreting the findings: what the data say

In general, the textual analysis yielded interesting results, some of which I expected and some of which were surprising. For a quicker comparison, I synthesized the extracted topics of all corpora in a single table, and then decided to use their individual elements to make comparisons and support the commentary

and discussion of the results presented below. The full table can be found in Appendix A.

6.1.1 User perspective

Table 28. Synthesis of Corpus A topics (source: author's own elaboration).

		Matera	Palermo
Corpus A	**Topic id**	**Inferred Topic**	
Facebook comments	0	Organization/**Access**	Satisfaction (**belonging** + **pride**)
	1	**Pride**	Religion/tradition
	2	**Events**	**Emotional response**
Tweets	0	Organization/**Access**	Sicilian culture
	1	Redemption/recovery	News stories
	2	**Events**	**Events**

Starting with the main point of view, that of users collected in Corpus A (Table 28), I envisioned a certain degree of polarization – more in sentiment than in topics – that I indeed found. Such polarization was, however, different than what I expected. In particular, comments on Facebook were in both case studies very positive, with sentiment leaning heavily toward enthusiastic – which was unexpected. Also with respect to topics, Facebook comments have been most heavily connotated and directed data source, especially towards the emotional sphere – *pride* and *belonging* are both associated with positive feelings and perception. As for Tweets, in the case of both Palermo and Matera the polarization was less prominent, with significantly less enthusiastic sentiment. In both cases the prevailing sentiment is at best "mixed", with a tendency toward a negative perception of the event. This negativity, however, is probably related not only to the CoC event itself, but also to concomitant external factors (such as news reports) that affect people's perception at the same time as the cultural initiative and are thus not easily distinguishable from it. This possibility is partly confirmed by the topics extracted from the datasets of the two cities, that differ from Facebook comments mostly because of the tendency to follow news and news events much more closely (by Twitter's nature). The topics tend to reflect this characteristic and to be somewhat related – and influenced – by the press, and its perception. In sum, I identified a rather sharp divergence, both in tone and in

the topics covered, between the two data sources belonging to corpus A, and that applies to both the Matera and Palermo case studies. The perception of users should therefore be considered mixed. However, given the overwhelming majority of positive versus negative sentiment in both cases (meaning that the positive sentiment is much more positive than the negative sentiment is negative), we can speak in general terms of a tendentially positive user perception of the effects of the CoC.

A second element that confirms both the duplicity of the sources in terms of perceived impact and the tendentially positive perception of users is that of "reactions", i.e., the instantaneous reactions to the posts of others (the emoticons/ reactions to the posts of official Facebook pages and the likes/retweets of Twitter). Reactions on Facebook show a substantial lack of negative perception – with an extremely small number of negative emoticons out of the total – and instead a very high concentration of very positive reactions ("like" and "love" especially). With regard to Tweets, on the other hand, reactions differ in sentiment and content and confirm the idea that the impact perceived is mixed and not as polarized as one would expect. Retweets (from now on RTs – i.e., reposts of a Tweet that held particular significance for another user) are mostly about relaunching news, in most cases negative. Likes, on the other hand, are about mostly positive comments and tweets. This trend is common to the two case studies, and it consolidates a cross-sectional concept by validating the idea of a mixed effect with positive prevalence pervading the users' perception. As for capturing subjective wellbeing, the use of social media as a source of data gives some initial positive feedback, as many of the topics extracted from the datasets match the framework used for the study. In Matera's case a very high percentage of topics relate to SWB (around 83%), while in Palermo's case the percentage was 50%. This indicates that in the spontaneous expression of user perception (i.e., the personal comments/tweets on social platforms) we find indication of an effect that the commented event (the CoC) had on one or more determinants of subjective wellbeing. For both Matera and Palermo that most impacted determinants were the ones related to the emotional sphere – i.e., pride and sense of belonging – but also access to the activities and their number and quality. The impact (or effect) on these determinants perceived by users was generally "mixed", with the emotional sphere impacted in a decidedly positive way (as mentioned earlier), while the other determinants were affected in less polarized manner. So, to conclude, the textual analysis on the users' perspective (Corpus A) has returned

the perception of a mostly positive impact on SWB, especially on the determinants of pride and sense of belonging.

6.1.2 Journalistic perspective

Table 29. Synthesis of Corpus B topics (source: author's own elaboration).

		Matera	Palermo
Corpus B	**Topic id**	**Inferred topic**	
National newspaper articles	0	Filming activities	Children activities
	1	Religious tourism	Cultural dialogue
	2	**Citizen engagement**	Local community/**inclusion**
	3	Project issues	International culture
	4	International dimension	Social impact
	5	Inclusion projects	Economic evaluation
	6	**Events**	Program organization
	7	Tourism access	Hospitality/**Inclusion**
	8	Local identity	Tradition
	9	Opening ceremony/**Institutions**	Local history
Local newspaper articles	0	**Events**	Sicilian heritage
	1	Infrastructure	Photography
	2	North/south comparison	Urban planning
	3	Filming activities	**Events**
	4	**Institutional presence**	Economic impact
	5	Economy/tourism impacts	Art and space
	6	**Access**	Mediterranean identity
	7	Digital events	Design
Sectorial newspaper articles	0	Impact/evaluation studies	Renovations
	1	Tourism	Venues
	2	Local development	Open spaces
	3	Collaboration/digital platforms	Events program
	4	Hospitality/**Inclusion**	Urban spaces
	5	Archives	Religion/tradition
	6	**Institutional presence/involvement**	Sicilian culture

7	Program	Evaluation
8	Local artistic production	Shared spaces
9	Sharing	Design

The second point of view analyzed is the press', with the analysis of national, local and sector-related (i.e., cultural) newspapers. In general, the sources provided interesting information, especially when compared with the users' results, and diverged somewhat from expectations. From a content perspective (Table 29), I expected more differentiation in the three types of newspapers analyzed, which did not emerge so evidently in the analysis.

The three sources showed roughly the same topics, with some differences in vocabulary, but not in the substance of the stories covered. This statement holds true in the case of both Matera and Palermo. In addition, the topics that emerged intra-source are rather homogeneous; I expected more coverage on different areas – for example, more local and community impacts in local newspapers, and more cultural/events-related articles on sectorial newspapers – and not just a didactic review on upcoming events by all of them. The main topics include mostly the description of events, infrastructure and specific information about the different cultural forms expressed by the initiative.

As for the sentiment, the most interesting thing I found is the negative trend of the analyzed articles. Although slight and emerging from the whole Corpus B (not by source), the tendency toward a negative view of the topics covered is surprising compared to expectations, especially given the total lack of "peaks" in positive sentiment. An additional interesting element that was already mentioned is the influence of the press on the content (topic and sentiment) expressed by users on Twitter. This knowledge allows to understand the context in which those opinions/thoughts (formulated through Tweets) were expressed, and to relativize their scope – or at least to better understand their meaning and implications. Although the newspaper articles analyzed were most probably not the same ones commented and retweeted, we can hypothesize that the sample of press content analyzed in Corpus B is indicative of a series of other articles with the same – or similar – perception, that have in turn influenced the users' views. In terms of SWB, for Matera only 28,3% of topics related to the determinants, while for Palermo the percentage drops drastically to 10,7%.

6.1.3 Institutional perspective

Finally, the institutions' point of view (Table 30). Overall, in Corpus C I found the most surprising results. Before performing the analysis, the idea was to find elements (topic and sentiment) supporting the success of the initiative and therefore definitely positive. After the analysis, I found the opposite, though with some differences – In Matera's documentation only 28,5% of topics relate to SWB, and in Palermo's the numbers are even lower, 12,5%.

Table 30. Synthesis of Corpus C topics (source: author's own elaboration).

		Matera	**Palermo**
Corpus C	**Topic id**	**Inferred topic**	
Official documentation	0	Evaluation	Local development
	1	Program development	User perception
	2	**Local institution involvement**	**Engagement**
	3	Economic resources	Proposals
	4	**Local community engagement**	Evaluation
	5	Projects for social development	Internationalization
	6	Capabilities	Research
	7	Closed spaces	Impact
	8	Internationalization	Promotion
	9	**Participation**	Valorization
	10	**Access**	-
	11	**Events**	-
	12	Local development and cooperation	-
	13	Tourism	-
Statements/interviews	0	Government	Heritage
	1	Event fruition	Local culture
	2	Valorization	Space identity
	3	Local politics	Private residences
	4	Recovery/Redemption	Human rights

	5	Development of the South	**Institutional role**
	6	Opening ceremony	Sharing
	7	Province dynamics	Program
Facebook page posts	0	Laboratories	General information
	1	Open spaces	Religious events
	2	**Exhibitions**	Contemporary art
	3	**Performing arts**	**Concerts**
	4	**Lectures**	School activities
	5	**Access**	Children activities

From the side of the topics covered, I expected a lot of emphasis not only on cultural activities and events, but also on the intangible impacts that the initiative would (should) have on users and the city. The idea is that institutions do not implement CoCs for themselves, but "for the citizens" (as seen in the objectives in Chapter 3) and to have benefits of different kinds – from tourism to consensus to economic impacts.

What has emerged is a focus in particular on processes, particularly *participation, engagement,* and *access*, which appear to be the most impacted. I find it particularly interesting to have found a focus on these processes, which are also those most widely recognized as trigger mechanisms for the regenerative effect of CoCs on cities. It would be interesting to understand to a greater and deeper extent whether such an "external" interest in these kinds of processes is influenced by practice or whether it is itself an influence or guide for CoC practice and implementation (given the relevance of some studies in the public debate and the presence of universities and scholars as partners in evaluation reports). Other determinants that have emerged relate to events and the pivotal presence and role of institutions, also expected given who the stakeholder is. What is unexpectedly missing among the most relevant topics is the emotional sphere (the relational dimension), which is instead the one most impacted by the initiative according to users (Corpus A). This is especially relevant in Matera's case, which has a considerable number of thematic evaluation reports – none of them addresses these features in depth, the analysis says.

A further surprising element is the perception returned by these sources, which is mostly mixed, but leaning toward the negative. It seems that institutions (especially in official reports and interviews) have deviated from the usual narrative of success – although from this analysis it in not possible to determine whether consciously or subconsciously. This result may also depend on the partners the institutions relied on to carry out both monitoring and evaluation, which, as mentioned earlier, are largely composed of scholars, universities, and independent bodies.

6.1.4 Comparing the case studies

Examining the results of the two case studies – which are in general similar, but different from each other – I also considered the differences between the two programs analyzed: one at the European level, one at the national level. Are there any differences in the two case studies that can be attributed to the scope of the initiative? Both are CoCs, both in the South of Italy, both rich in heritage. One is a regional capital (Palermo), the other is not, but the one targeted by the European program (which means more money, more interest, more requirements) is the smaller, non-capital one (Matera). One initiative is the spinoff of the other (as seen in Chapter 3). The founding principles, general goals, and – most importantly – the desired benefits of implementing the ICoC program are based on those of the ECoC program, excluding references to Europe, Europeanization, and the creation of a more united "European community" of citizens through the sharing of cultural values and participation.

Chapter 3 pointed out how the two CoCs at the two levels can be considered as cultural policies pertaining to different categories (Arfò & Salone, 2020). In choosing these two case studies I was trying to understand whether we could bypass such division and talk of a "CoC case" or whether the scale-specificities of the two programs (the European dimension vis-à-vis the national vision) influence the results in any way. That is, if the results of the analysis can be read with the idea that the different level/scope of the initiative (thus its "policy-type", its objectives and strategies) determines a different interpretation (or can/should do so). Going into the specifics, I wondered whether the results from Palermo and Matera could take into account the different "scale" of the initiative in the interpretation phase, despite the fact that in neither Call there is any specific reference to wellbeing, but only to some specific determinants (identified as such

in Chapter 2). The theoretical divide presented in Chapter 3 appears to be not particularly relevant in practice. It is mostly seen in the emergence of certain topics (especially in Corpora B and C) specific to each case study, but not at the level of impacts on the SWB.

At first glance, no specificity related to the European or national nature of the initiative seems to emerge from the results. Especially in the first word frequency analysis (see the wordclouds in Chapter 5), specific references to the event(s) and – in some cases – to specific local holidays or festivities are noted in both case studies. This is related to the connection between the initiative and the host city/traditions but is not in my opinion indicative – at this level – of an effect due to the different scale of the program. Some clues about a difference between the two case studies emerge by analyzing the results of topic modeling instead (Tables 26 and 27). While in the case of Matera there are not many references to the internationality and European dimension of the event (only in Topic 5 of the National newspaper articles and in Topic 8 of the Official documentation), in the case of Palermo there are many more references to Sicilian tradition and cultural identity, and more emphasis on the city's heritage and history. This reflects the larger strategic plan that has led Palermo to promote its cultural identity for the revitalization of the city's image (which began with the UNESCO nomination of Arab-Norman Palermo) as opposed to narratives related to organized crime and mafia. And it very much ties the ICoC initiative and its events to the national dimension, because it is projected toward Sicilian and Italian citizens rather than outward (e.g., foreign tourists, Europe, the world). This intention is reflected in the results, whereby both comments and tweets associated with Sicilian pride and tradition and identity are the clear majority, and topics related to a more collected dimension, aimed at drawing a new identity to be presented to citizens and the country, are the most relevant in terms of numbers and variety.

In the case of Matera, on the other hand, it is noticeable from the texts and topics how the tone is less projected in an "internal" dimension and more open. One does not perceive – from the texts analyzed – a strong national connotation, but a kind of "collective identity", a tone that is also found in the identified topics. Despite the statements of pride and belonging, it is possible to see in the results that there is a kind of greater "complexity" and variety in the identified topics, probably a sign both of an attempt to adapt to the demands and goals of the program (especially institutions), and of an overall vision more careful to include a much wider and more diverse audience – users, but also artists, foreign press, interested non-participants. This attempt connects to the spirit of openness and

internationalization of the program at the European level and fits into those generic goals that refer to the concepts and determinants of SWB – sharing values, engaging local communities, creating a European spirit.

A final element to consider with respect to the scale of the Program is the disparity in the volume of data available. While in general the distribution of corpora numerosity is the almost the same in the two cases (from most to least numerous: tweets, Facebook comments, institutional sources, articles), the magnitudes are different in absolute numbers from case to case. This is especially evident in the case of evaluation reports, which in the case of Matera are a European requirement and must be very comprehensive and examine different areas of the initiative, while for Palermo we have only one evaluation document, well-articulated but more general. Also, the content on social media is a smaller number in the case of Palermo and at a general analysis it is made up of almost only Italian users (unlike Matera, which also has international users among the "commentators"). In the case of newspapers there is also a difference between the two cities, with more local newspapers' coverage for Palermo and more national relevance for Matera (probably aided by the greater notoriety and prestige of the European program). These differences can in general be explained by the greater fame of the ECoC program, but in the specifics of the impacts they do not tell us much – aside from the fact that we start from different databases in terms of numbers and composition, given the different availability of data. It cannot be said that there is a substantial difference in the impacts caused on the SWB determinants – which are mostly the same in the two case studies – but the premises made it interesting to compare the "same" program at two levels, on similar cities from the geographical point of view, in the same country and historical period.

6.2 Interpreting the findings: using the framework to read the data

The textual analysis of corpora A, B, and C showed that there exists, in the perspective of the different stakeholders considered, an effect of the CoC cultural initiative on users' SWB. Using as a definition of SWB that of perceived well-being, which is composed of several determinants (illustrated in the framework in

Chapter 2), the analysis performed shows that some of these determinants are impacted more than others. A summary of the determinants of SWB that were impacted by the initiative is provided by Table 31.

Table 31. Map of topics present in the corpora according to the theoretical framework (source: author's own elaboration).

	Matera			Palermo		
	Users	**Press**	**Institutions**	**Users**	**Press**	**Institutions**
Presence/density of cultural amenities/events	33,34%	7,14%	10,71%	16,67%	3,57%	4,16%
Equality/inequality						
Institutional presence		10,71%	7,14%			4,16%
Social capital						
Cohesion						
Presence/density of networks						
Trust						
Sense of belonging				16,67%		
Pride/self-esteem	16,67%			16,67%		
Quality of relationships						
Participation			3,57%			
Inclusion		3,57%			7,14%	
Engagement		3,57%	3,57%			4,16%
Access	33,34%	3,57%	3,57%			

Drawing from the data presented in Chapter 5 (Tables 26-27) and Tables 28-30, the table simply summarizes the presence/absence of the determinants and dimensions of SWB in the different corpora, weighting them accordingly to their relevance in the topic modeling results. The resulting table shows the many common points of the two case studies. The views of the three stakeholders are also more or less homogeneous comparing the two cases, making it possible to reason in transversal terms.

6.2.1 Ranking the most affected determinants

The first and most generally recognized as an impacted determinant is the presence and density of cultural amenities and events. There is always a reference to this determinant in the results – in all corpora – although the vocabulary and terms used can vary both between case studies and within corpora of the same case study (e.g., "events", "exhibitions", "lectures", "concerts"). This omnipresence is partly obvious, given that we are talking about a cultural initiative (the CoC) that necessarily sets up activities, events, and other arts and cultural amenities. Simplifying, the literature suggests how the density and "critical mass" of cultural activities and events have a positive impact on the SWB of those involved (Blessi et al., 2016), almost automatically. In this case, going to investigate the results more deeply, we note how the impact is present, but its perception is different depending on the perspective analyzed. While, for example, users register a positive effect, the other two reference perspectives tend to be less decisive, and with a mixed and neutral outlook. In any case, the results seem to corroborate the literature considered so far that an impact does exist.

One element that on the other hand does not emerge from the users' point of view in this analysis is the presence of institutions and the relationship with them, which instead is emphasized by Corpus B, especially in the case of Matera. In general, all determinants that have to do with social capital (presence of institutions, social capital, cohesion, presence and density of networks, trust) (Helliwell & Putnam, 1995, 2004; Portela et al., 2012) are not present in the users' perceptions – and many of these do not emerge as affected in any corpus, in either case study.

The third determinant of SWB that emerges strongly from the analysis as affected by the initiative is that of users' pride. The literature suggests how cultural events affect in a positive way the sense of pride of communities/users who take part in them (Collins, 2016; Fišer & Kožuh, 2019), to the point of building a real shared identity based on the image of one's city shown to the rest of the world. The results seem to confirm – at least in a small way – this trend, showing a very positive impact on this determinant from the users' point of view. A similar argument can be made regarding the impact on the users' sense of belonging, particularly in Palermo's case. Again, in the literature this determinant has often been studied in relation to the ECoC program (Fišer & Kožuh, 2019), and also to various cultural (Van Winkle & Woosnam, 2014) and sporting events (Shipway et al., 2016). The theory is that these initiatives impact in a very positive

way the host communities, creating a sense of cohesion and unity that should extend beyond the duration of the event (before and after). This theory also seems to be supported by the data, whereby in the users' perspective the determinant of belonging has a decidedly positive connotation/effect. It may be useful to keep in mind in the case of these determinants that the language that is usually used to indicate pride and a sense of belonging is extremely similar, at least in the Italian language. This is why it proves difficult to be absolutely certain and unambiguous that the use of words related to pride (e.g., "proud of my city", from Matera's Corpus A), does not also indicate a rather developed sense of belonging (e.g., "my", again in the example given above). In this case, I opted for a rather immediate inference, but upon consideration of a more in-depth linguistic study, a more complex conclusion and further reflections could be reached. In any case, in both cases (pride and belonging) the sentiment - and thus the impact - is particularly positive, which allows me to affirm with certainty the statements above.

Despite the confirmations found in the literature, a universalization of these feelings (pride and belonging) to broader, shared concepts such as social cohesion or the presence of a tightly knit social tissue does not – and cannot – emerge from this type of analysis on texts. Based on the available data, it is not possible to confirm – or disprove – this further logical and theoretical shift. It is also not possible, because of the way the analysis was set up, to make estimates about the continuation of these effects over time beyond the year of implementation of the initiative, just as we cannot know whether these effects began with the event or in the years and months before.

From the users' point of view, the last determinant to be impacted is that related to access to the initiative (only in the case of Matera). In this case the literature is less clear about the type of impact expected, but the idea is that access to goods and services (e.g., to resources, to infrastructure, to services) has a positive impact on people's wellbeing (Ballas 2013), and this concept extends to cultural initiatives as well (Grossi et al., 2012; UNESCO, 2019). The determinant of "access" is connoted in a mixed way, with a slight prevalence of positive sentiment over the negative. Thus, there is no clear evidence of a positive impact on this determinant, even looking at the results of the other corpora and perspectives (which mention it, but with a neutral-to-negative tone). On a conceptual level, access has to do with inclusion: ensuring access to as many people as possible should result in different (even marginalized) groups being included. There is no concrete evidence of an impact on inclusion in the results of

Corpus A in either case study, although within the comments on how to access Matera's events a relevant minority people expressed complaints about the price of the subscription (called "Passport", the only way to access events) compared to the actual possibilities of fruition.

The theme of inclusion, as well as those of participation and engagement, do not emerge from the users' perspective. They are, however, mentioned quite frequently by the other two stakeholders, the press and the institutions. These are mostly "reported" impacts (i.e., because press and institutions report what they believe to be the impact on users), mixed or neutral, without a distinct positive or negative connotation.

It could be argued that the intense social media activity of users could be considered as a proxy for engagement and commenting on specific events they attended as a proxy for participation. And in this case, both would have a very positive meaning, a proxy in turn for a positive impact on SWB. However, with the way these two determinants are defined in the relevant literature, such a reading would, in my opinion, be too forced based on these data alone.

6.2.2 Ranking the most affected dimensions

It is clear from this initial analysis how only some (and not many) determinants of SWB inscribed in the theoretical framework are affected by the CoC initiative, and not all of them positively. At this point it is useful to try to understand which determinants, according to the analysis, have not been affected (either positively, negatively, or in a mixed and non-specific way) by the initiative, and whether there may be reasons for conceptual proximity or common characteristics to explain this lack. Picking up on Table 31, one notices how, graphically, the middle part is blank. This simple graphical representation indicates as a potential discriminant the determinants' belonging to a specific dimension, that of relational/endogenous variables. This observation prompts to consider the dimensions identified in the framework as a strong and characterizing element of the analysis and interpretation of the results.

The first dimension presented in the framework, that of context/exogenous determinants, has an interesting "distribution" in terms of impacted determinants.

All stakeholders mention the concentration and the presence in general of cultural amenities (this is the most numerically relevant and most mentioned variable), although not always with such a distinctly positive connotation. While the second determinant is related to institutions and is not present – as mentioned above – in the perspective of users but is only mentioned by the other stakeholders. The other contextual determinants do not emerge. This, on first reflection, might suggest that actions taken to have an effect on the context are actually of little relevance in terms of SWB and that the exogenous dimension does not ultimately impact much on the cultural initiative's users' quality of life.

The second dimension in terms of relevance in the point of view of users is that of processes, which, on the other hand, appears to be the most traditionally recognized in the CoCs, both from the literature and from the data available for this study. This result is very interesting, because it shows a divergence between what users perceive and what the other stakeholders (researchers, institutions, press) believe users perceive/should perceive in relation to the efforts made, to the activities implemented, and to the initial goals. Such a divergence may raise further questions – both about the methodology undertaken and the correct definition and interpretation of the concepts/determinants – and set in motion further research, perhaps on the evaluation of objectives and results.

Finally, what stands out when looking at the Table 31 and at the results of both case studies is the almost total absence of impacts on the relational dimension, with the exception of the determinants of pride and belonging. In this sense, there are no perceived impacts of any kind on users in terms of social cohesion, trust, formation/presence of networks or quality relationships. The impacts on the more societal aspects of individuals' (users') life, therefore, are null in this type of analysis. Furthermore, the impact on the determinants of pride and belonging emerges only from the point of view of users, and not from that of other stakeholders, and this is a significant finding.

Conceptually, this point is problematic, and partly contradicts what is found in the literature in Chapter 2. CoCs – in their goals and in studies conducted with documented case studies – target strong and cohesive communities, starting with cultural identity and shared values. "Strong communities" are such – as seen – in the presence of quality and interconnected relationships, with networking, participation, and trust. In the users' perception results these determinants are totally missing, and also in that of the press and institutions. So, what is the right

key to interpret this result? It is a too large and too conceptually significant group of determinants to simply accept that there may be no impact.

6.2.3 Reframing the framework

One possibility for the problem presented in the previous section is that purely relational determinants are by their nature difficult to capture with a methodology such as the one used. Reviewing the relational dimension with this idea, it can be seen that, in fact, the two determinants that were actually detected as impacted – pride and belonging – can easily be put into words as a personal expression of a distinct point of view, need, or emotion. The other endogenous determinants, on the other hand, while stemming from a personal vision and perception, are more difficult to manifest in written form, and consequently to capture by analyzing language. The answer to capture impacts on these types of determinants is found in the analysis of relationships with others, which is very difficult to capture with a methodology such as the one used int this study. Going deeper, it emerges how this "interpersonal" characteristic is also common to the other determinants that did not emerge in the analysis: social capital (inextricably linked to the concepts of trust, cohesion, and networks) and equality.

These determinants share the relational characteristic with the endogenous ones – that is, they are measured in the relationship with other members of the society or community – even though they sometimes have to do with exogenous and contextual aspects (e.g., institutional presence or socioeconomic conditions of the city or geographic area). Thus emerges the need for a further operational breakdown of the determinants of SWB, to improve our ability as researchers to understand the issue and find appropriate tools for analysis.

Based on such characteristics, discovered in the interpretation phase of the study, I propose a more appropriate division of the determinants of SWB to be used as framework for further research, summarized in Table 32.

Table 32. New theoretical framework, operatively framing SWB through its determinants and dimensions (source: author's own elaboration).

Type	Dimension	Determinants
Exogenous	Contextual	- Presence/density of cultural amenities and events - Institutional presence
Endogenous/Exogenous	Relational	- Social Capital - Trust - Presence/density of networks - Cohesion - Quality of relationships
Endogenous	Personal	- Pride/self-esteem - Sense of belonging
Exogenous/Endogenous	Processual	- Inclusion - Access - Participation - Engagement

The main difference from the former framework lies in the division of the relational dimension according to the type of input (i.e., the main characteristic that determines the nature of the determinants) between that which relates to the purely personal sphere and is detectable in individual statements (e.g., pride and belonging), and that which is related to relationships and detectable only in the relationship with others. The table shows how the Personal determinants are purely endogenous, while the new Relational dimension is not, and needs to be analyzed in relation to the context. Also included in this new definition of the relational dimension are the exogenous determinants that possess the characteristic of needing comparison with others to be properly captured (i.e., equality and social capital).

The new division of dimensions and determinants can thus become the starting point for a new session of research, which includes methodologies related to more traditional qualitative techniques and can investigate more deeply relational issues that do not emerge from a textual analysis.

The possibility or need to find feedback and additional information in other types of analysis is important also in the case of those determinants that emerged

as affected from the textual analysis, but not directly from the users' perspective. This is the case of the determinants of the procedural dimension, which have emerged from the institutional and press corpora, but not from the spontaneous content of users. I mentioned in an earlier section how one could see the high number of content (tweets and comments) and interactions as proxies for engagement and participation of users, and how this reasoning alone could be considered a stretch a bit too far and forced. However, with the support of external (and already validated or published) data, one can attempt to delve deeper into the issue and gain more insights for research, possibly reaching conclusions on general tendencies and considerations. Acknowledging this fact and understanding better the characteristics of the determinants of SWB that are to be analyzed makes it easier to identify the most correct methodology to achieve the research objective. This means being able to integrate and to supplement additional data and information that can be found in other studies or from existing sources, if it is not possible (or planned) to implement further steps of research – as in this case.

6.3 Integrating the findings: what the context says

In the collection phase and after a preliminary overview of the data, I recognized that both case studies presented some interesting and valuable qualitative content that could be used as integrative data sources for the analysis, other than serving as institutional texts for the Corpus C. The idea that understanding the perception of users and citizen has become more and more relevant while planning and implementing a CoC (be it national or European) is confirmed by the presence of specific references to this topic within official evaluation reports.

In the case of Palermo, a section in the evaluation report by the Human Foundation (2019) was dedicated to a sentiment analysis on users' reviews on specific heritage sites websites – the subtitle of the report cites "The effects of the initiative on the territory, institutional partnership and sentiment in Palermo". The report was commissioned by Fondazione Sant'Elia, one of the partners of Palermo 2018. Specifically, a sentiment analysis was performed on the textual data deriving from online reviews on Palermo's major cultural sites released in 2017 and 2018, to determine the perception ("external and internal", p. 84) of citizens

and tourists and to determine whether such perception and opinion had improved thanks to the initiative.

In the case of Matera, a specific evaluation report (2020) was published (by the European and Mediterranean cultures department of the University of Basilicata and Fondazione Matera Basilicata 2019), by supplementing a study on the point of view of residents and tourists on Matera 2019 by Datacontact srl (2014). Notably, the original study ("Analysis on the experience of the population residing in Matera a in the Basilicata region related to the path of Matera's candidacy as European Capital of Culture 2019") was commissioned in part precisely by the Matera 2019 Promoting Committee. The data collection, carried out through telephone interviews with citizens of age in July 2014, was based on the need to gather citizens' perceptions of the process leading up to the city's candidacy for ECoC. To make it useful in ex post evaluation as well, the Promoting Committee supplemented these results with the help of some additional questions about three specific events that took place during the event year. The goal was, probably, to have a kind of overall assessment of citizens' perception of the CoC initiative in its entirety.

What is interesting to my research at this stage is exactly this overall assessment, which allows me to obtain additional information to be able to interpret and validate the results obtained in the analysis - although the studies presented above have targets, methodologies and objectives that clearly differ from my own research and findings. In this section, the studies are critically analyzed with the lenses of the theoretical framework for subjective wellbeing, to detect some relevant features and provide integrative information for the results of my own analysis.

In Matera's evaluation report the variables analyzed that are relevant for this research are related to satisfaction for the program, participation and engagement data and inclusion. The satisfaction level for the events is fairly high (70% of users are "satisfied" or "very satisfied"), also regarding the perceived quality of the cultural program. On the other hand, users have felt more like "spectators" than "protagonists", which indicates a not so high level of engagement and/or participation. In general, residents tend to feel more engaged than tourists, which matches the findings related to pride and sense of belonging expressed in my analysis of social media. Finally, a special sector was dedicated to the mode of access to the events, that is the "Passaporto" (passport needed to book the events). In this case the report's feedback is rather good especially with regards to its

price, considered adequate (89%). This opinion seems to confirm what was expressed in the social media content, especially on Facebook, where only 14% of comments on Access (Topic 0) and the Passport system were negative.

As for the Datacontact report, it gives some other interesting integrative information, especially regarding residents (the target of the study). It supports my findings on "Pride towards the city", with 84% of interviewed citizens giving positive feedback. Also positive are the results on "Inclusion" (positive for 82,5%), and "Participation" (positive for 66,8%). Less polarized is the opinion on the active "Engagement" of citizens (as protagonists of the initiative), with 55,5% of positive responses. As for feedbacks on how to improve the event, most respondents have indicated the overall organization (53,1%), as well as inclusion of wider age groups and marginalized categories (16,3%). The report mentioned also the engagement of the urban system (citizens and enterprises, 0,8%) and accessibility (0,4%). These data – though collected in a different phase of the ECoC timeline – appear to match the results of my own analysis, especially the high relevance of the emotional response in terms of pride and sense of belonging.

Further confirmation regarding the purely positive perceptions of the population comes from the study conducted by Arfò & Salone (2020) on the impact of the initiative on the quality of life of the people of Matera. This study was based on a questionnaire conveyed via social media – a practical example of how technology can make up for some of the shortcomings of this method (Schneider & Harknett, 2022; Felderer & Blom, 2022; Iacus et al., 2020; Neuert et al., 2021). Questionnaire respondents (>200) generally expressed a positive perception, with 66.5% of respondents reporting an improvement in their quality of life. On the participation side, the impact was also definitely positive (89%), as was the engagement (60%). In particular, the study placed a comparison with the pre-initiative period, and from the results the improvement from the participation point of view was not negligible. Finally, the perceptions regarding the inclusion and involvement of areas of the city outside the historical city center are not very polarized, with very similar positive and negative percentages. Comparing with the empirical data of this thesis, we could interpret this as a mixed impact. It somehow reflects the lack of specificity towards inclusion and marginalization found in the candidacy dossiers (seen in Chapter 3) and the low rates on engagement of the urban system seen in the Datacontact report.

In general, in Matera's additional data I found more reference to the concepts of participation, engagement, and inclusion than in my own data, although I still

notice a lack referrals to trust, and in general data on the "health" of societal ties – which reflects the results of the Corpus C analysis.

As for Palermo, overall, the sentiment was found to be extremely positive over the whole timeframe. The reviews collected in 2018 increase in the period from August to October, in contrast with the tendency found in both social media (Facebook and Twitter). The reviews are all extremely positive, which contrasts a bit with was I found in my Corpus A data, where the topics associated to the events (particularly Topic 2 in the tweet dataset) were neutral at best, with the negative sentiment being more relevant that the positive.

As a general consideration, the sentiment over the impact of "Palermo Capitale della Cultura" is of an improvement in the perception of the city (over 63%), with a specific mention of the image of the city (which can be considered as a proxy for pride and self-esteem of users/citizens). In the social media data, we find divergence with these indications: while the tweets tend towards a negative sentiment (especially in the topic related to Sicilian Culture and Heritage, Topic 0), Facebook comments tend to validate the data on pride and positivity, with a positive sentiment of all Topics extracted.

From the perspective of references to subjective wellbeing, again we see that there are references to some determinants, while others are ignored or not investigated (due to lack of interest or ineffectiveness of the methodology, it is not known). However, I can say that these reports support the idea that there was indeed an impact on people's wellbeing and that this impact was mostly positive. This is especially true in the case of Matera, whose reports consider more relevant determinants than the supplementary data in the case of Palermo.

To conclude, in the published evaluation studies on both cities the perception of users is recognized as extremely important to detect and assess the impact of the Capital of Culture initiative. However, in both cases we do not find clear and extensive description of what exactly that perception consists of, and what it implies. This consideration is consolidated by the fact that both cases talk about perception but measure it in completely different ways.

Looking at those results with the lens of SWB can help put together a more complex and interesting picture, as well as highlighting some under investigated topics. In this perspective, I found that the results of these reports have some consistency with my own analytical results, both in terms of themes (topics) and

in terms of sentiment – giving an almost full recount of the impact of the initiative on SWB, or on aspects of it. Finally, worth mentioning is the fact that residents' responses are in line with the results from the social media content analysis, which could hint at a high presence of residents within the "commenting" base of social media users in my database.

6.4 Answering the research questions

With the analysis done and the results reviewed, interpreted, and integrated, I can finally try to answer the research questions underlying this study.

First, do cultural initiatives (and the CoC initiative, at the European and national levels, specifically) have impacts or effects on subjective wellbeing? If so, what are these effects? According to the results of this study, based on the text resources produced in the context of two case studies, the answer is yes, impacts are produced by the initiative on the users' SWB. The impacts in question specifically concern certain variables that according to the literature determine the level of SWB (i.e., determinants), which have to do with both exogenous and endogenous factors with respect to the users themselves. In particular, I found a distinctly positive effect on the pride and self-esteem of the "commenting" (engaged) users of both case studies, which in this study largely matched the citizens (or at least, a self-selected portion of citizens who commented), but also on the users' sense of belonging. It means that the initiative has improved the overall pride and self-esteem of users, as well as their sense of belonging to the host city. This may indicate – at least for the period of the initiative – the presence and strengthening of a sense of identity based on community and common values, in addition to geographical belonging. The recognition of common values, the willingness to communicate them externally and to share this sense of belonging is, also perfectly in line with the overall goals of the ECoC Program. Finding a match to this intention in the data fortifies the initial assumption that this program (and these programs in general) really impact certain dimensions and aspects of users' lives. Moreover, it was seen how the interest and frenetic online activity is matched by an equally intense in-presence activity, confirming a positive impact on the determinant of engagement. Engagement of the public and of local communities is also part of the goals on which CoCs are based, which are both

goals and prerequisite conditions for the success of the event. Again, I found a match in the data – both my own and supplementary – so that, even with premise made earlier in the discussion, we can speak of a positive impact on engagement.

For other determinants, however, the available textual data do not allow to clearly specify the kind of impact created by the initiative, but only to say that indeed there was an impact. This is the case for density/presence of cultural amenities, participation, inclusion, and access. For most of these determinants the impact was found to be mostly mixed, and not totally attributable to the direct perception of users (Corpus A). For the presence and quality of cultural amenities and events the data point to a neutral but tending to positive effect. For the other determinants the results are derived from supplementary data that are not entirely satisfactory, but show a mixed type of impact, either moderately positive (in the official CoC reports on perception) or negative (in the press and institutions corpora as a whole), depending on the source considered. The integrative data, on the other hand, suggest a positive impact on such determinants, which needs to be considered. To sum up, the composite data suggest a very positive impact on the personal dimension, mixed-to-positive on the contextual dimension and mixed-to-positive on the process dimension. No impact was found on the relational dimension (as per the evolution of the framework, seen in Table 32) in the textual nor in the integrative data.

Once the definition of the impacts is complete, the next question is how these impacts can be measured and, consequently, whether the methodology set out in this study has proved to be appropriate. As seen in the previous Chapters, impacts of CoCs and cultural initiatives with similar characteristics can be studied in many ways. In this study, I opted for underused data sources in these contexts – particularly social media – and analyzed them with textual analysis techniques, integrating the results with additional, freely available data. This methodology of analysis and interpretation yielded some interesting results and proved to be particularly suitable for studying effects on specific determinants. Specifically, social media proved to be a good source of data on personal dimension of SWB, but also on the context and processual dimensions – in some cases, none or little data is an interesting finding.

The other written sources also proved to be good sources of data, although incomplete (especially Corpus B of newspaper articles), because they allowed a comparison between what "external" stakeholders believe are (or should be) the impacts on users both in terms of topic and sentiment, and the impacts perceived

by the users themselves (Corpus A). As for the lack of indications on the relational dimension (Table 32), again one could act according to the principle that no data is data but, in this case, I think the "missing" determinants are too relevant in the literature to accept such a heavy absence with these premises. Therefore, I believe that in the case of the relational dimension, given the interpersonal and intangible nature of the determinants, it would be more correct to attempt to use other research techniques. Specifically, I imagine qualitative techniques such as participatory observation, ethnography (given an appropriate amount of time), or at least interviews and focus groups to integrate the work done on textual data. This type of research would complement nicely the methodology used in this study and would also allow to supplement the data with new insights and improve the interpretation of the results obtainable with the textual analysis. As a complex variable, therefore, the study of SWB requires in my opinion a complex and mixed methodology, with the combined use of quantitative/technological and qualitative/relational tools that allow to consider all the dimensions (and determinants) of the SWB impact of a cultural initiative in an urban context.

Chapter 7

Conclusions

The purpose of this last chapter is to finalize what has emerged so far in the thesis, summarizing the key steps to reach the conclusion of the research. After briefly reviewing what has been presented in the different chapters and summarizing the results, I will focus on the strengths and limitations of the research and the method used, try to propose solutions, and hypothesize some potential future directions in which to further develop the topic.

7.1 Highlights of the research

During the dissertation, I started from the concept of social impact and social impact assessment (Vanclay, 2003), applying it to culture and analyzing the relevant literature. The first evidence that has emerged is that there are some social impacts that are more studied than others, especially in an urban context, and one of the less studied ones is quality of life (Steiner et al., 2015) and subjective wellbeing (SWB). This is a concept mostly related to psychological studies, but it has been spreading over time to the point of being recognized as a pillar of sustainable development (from a social point of view) (UNESCO, 2019; Silvestri, 2015). In urban contexts specifically, one of the least studied phenomena from the perspective of subjective wellbeing is cultural initiatives (Blessi et al., 2016). Culture and the arts have increasingly been seen as essential elements in

increasing the public's wellbeing – both from a physical (Cicerchia & Bologna, 2017; Gordon-Nesbitt, 2019) and social point of view (Belfiore, 2002; Stern & Seifert, 2009; Stevenson, 2004). Several studies over the years have recognized the beneficial power of culture, to foster participation, engagement, inclusion, and a whole range of benefits for the community as well as for individuals (Belfiore, 2002; Nagy, 2018). Despite this, there is evidence of a lack of studies on the impact of city cultural initiatives on people's wellbeing (Blessi et al., 2016).

We have seen how one of the reasons it is so difficult to find studies on subjective wellbeing – especially in cultural settings – is the difficulty of describing and defining it in a way that is easily recognizable and analyzable with research techniques applicable to urban settings. If in the psychological field SWB is measured through personal and very thorough qualitative tools (Schimmack, 2008; Pavlukovic et al., 2017; Woosnam et al., 2013), we have seen that in the field of sociology and urban studies – which are my main reference – these techniques and corresponding definitions are problematic and tend to be unsuitable (Kroll, 2014; Veenhoven, 2008). Therefore, I felt it was necessary to propose a theoretical framework for defining SWB that would go beyond the traditional quality of life/affect dichotomy (Diener, 1984; Chen et al., 2017; Seligman, 2010), and that could operationally support the study of the impacts on SWB of a cultural initiative in an urban context.

In order to arrive at an operational definition of SWB, I reviewed the most relevant literature in the fields of psychology (Diener, 1984; Maslow 1943, 1954; Seligman, 2010, 2018) , sociology (Ballas, 2013; Helliwell & Putnam, 1995, 2004; Portela et al., 2012), and urban studies (Blessi et al., 2016; Grossi et al., 2012; Sacco et al., 2019), and extrapolated the variables I felt were most relevant used to describe subjective well-being in its concept, even if not explicitly called by that name. These variables were hereby named the determinants of SWB, as they are the ones that – when analyzed – can give a measure of the initiatives' impact on SWB.

The determinants I selected were divided into three categories (dimensions), based on their characteristics. All these dimensions (and determinants, accordingly) have the particularity of being relevant in an urban context, which is one of the main characteristics of the phenomenon being analyzed (a cultural initiative but in a specific context, that of a city, precisely). This is in turn derived from the literature. The first dimension identified is that of context, which includes exogenous variables (presence of institutions, presence and density of

cultural amenity and vibrancy, equality, and social capital). The second dimension is that of relationships, which includes the endogenous type determinants (trust, presence and density of networks, pride, sense of belonging, quality of relationships). Finally, the third dimension I have identified at this point is that of processes, which includes dynamic determinants in which exogenous and exogenous characteristics are mixed (participation, inclusion, engagement, and access).

Defining dimensions and determinants leads to having an operational grid to identify and define the SWB within the research. The next step is to apply the framework to a concrete case study, and to understand how it fits the specific characteristics of a cultural initiative with its own goals and peculiarities. The selected initiative/case study is that of the "Capitals of Culture", at two levels: European and national (Italian). This double selection was made for a conceptual reason – analyzing an urban initiative with a double scale, European and national – but also for practical reasons – Covid restrictions and the methodology that I intended to use.

Specifically, the idea of the "CoC program" fit well with the framework, because at the international and European level specifically (where this initiative originated) the concept of culture impacting wellbeing is increasingly relevant (UNESCO, 2019, Jagodzińska et al., 2015), and because there are concrete references to the determinants of SWB in the specific objectives of the program, even though SWB itself is never explicitly mentioned. I then moved on to selecting specific cities to analyze as case studies and identified Matera (European Capital of Culture in 2019) and Palermo (Italian Capital of Culture in 2018). Once I studied the two reference contexts – the main stakeholders, the specific objectives of the two winning programs in the call, etc. –, it was time to introduce the methodology.

The ECoC program has always been one of the most studied among international cultural programs, with a long list of literature references. Some of these studies have taken as their goal the analysis of certain impacts, which in the framework of this thesis are defined as determinants of SWB (Nagy, 2018; Fišer & Kožuh, 2019). Not only is the SWB in its entirety not one of the most treated topics, but also from the methodological point of view I noticed a certain uniformity of analysis tools and techniques.

For this reason, and to try to pursue a specific suggestion of the European Commission for the evaluation of ECoCs (2018), I decided to try a different approach and start from data sources that have so far been little used in this field. Specifically, I decided to analyze the effect of the CoC initiative on users' SWB from their spontaneous written content, using two of the most popular and widely used social media – Twitter and Facebook – as primary data sources. I collected the necessary tweets through the Twitter Developer's API and Facebook comments through the software Facepager (Junger & Keyling, 2019). In addition to users' tweets and comments, I decided to use two other sources of written data to also try to capture the views (on the impacts the CoC would have on users' SWB) of two other key stakeholders in the context of the initiative, newspapers (press point of view) and official documents (institutions' point of view).

To capture and analyze the impact on SWB, I decided to use some Machine Learning and Natural Language Processing techniques on the texts, specifically Topic Modeling and Sentiment analysis (Blei et al., 2013; Ferri et al., 2018; Jaidka et al., 2020; Liu, 2012). These two techniques used in combination make it possible to extract the topics (explicit and non-explicit) that different groups of texts talk about and the underlying opinion (positive/negative/mixed/neutral). These analyses allowed me to extrapolate from the texts the perceived impact of the different stakeholders (users, press, and institutions) develop a model to study users' subjective wellbeing from multiple perspectives (Basile and Nissim, 2013; Mencarini et al., 2019; Jaidka et al., 2020; Schwartz et al., 2016), and the effects that the initiative has had on it – if any.

In terms of outcomes, the analysis showed a positive impact on the relational/emotional sphere of users, with an increase in both pride and self-esteem and a sense of belonging to the city. Less polarized (but still tending toward the positive) impacts were also found regarding processual determinants (participation and engagement above all), while contextual ones had mostly mixed impacts. These results are the result of the textual analysis (which had more polarizing results), supplemented with other data available and already published in appropriate studies. Thus, although the applied methodology yielded encouraging results, the ability to supplement the data with additional information proved essential for a better understanding of the case studies.

7.2 Key results and contribution

Overall, the research presented in this thesis had satisfactory and enriching results, both in terms of knowledge and in terms of methods, from several points of view. First, it was a good test for the study of SWB. The operationalization of these determinants in an urban context has, in my opinion, helped to give more depth and complexity to the topic other than a practical dimension. By linking these determinants to each other and to SWB in an urban setting, it is possible to analyze the individual phenomena in a multidimensional way (as individual variables, but also as part of a much more complex whole) and at the same time contribute to the literature and to the study of the SWB in cities. A further cognitive contribution comes from the application to the specific case of a cultural initiative. It has been seen that in recent years internationally the interest of researchers and practitioners in the field of culture has increasingly turned to social impacts and how culture, art, and heritage can become drivers of development and consolidation for communities (UNESCO, 2019; Jagodzińska et al., 2015). The problem is often finding a holistic approach (Baioni et al., 2021) to contain and measure these impacts. Therefore, the application of a framework such as the one proposed in this thesis can add a piece of knowledge and operationalization in the cultural sphere as well, introducing the concept of SWB in a practical way.

From a case study perspective there is also an innovative contribution. We have seen how very few studies talk about Cultural Capitals and quality of life, or well-being. In general, the concept of SWB is almost never associated with this type of program. Therefore, the use of two case studies analyzed from the perspective of the SWB can contribute to the literature in the field and broaden the audience of studies on the impacts of CoCs to hitherto underexplored areas.

Beyond the theoretical contribution, the research (and the thesis) in my view also presents a methodological contribution. Indeed, the methodology proposed here had never yet been applied to the study of SWB in the cultural sphere. Although the use of social media as a source is not in itself new, the application to the case of the Capitals of Culture is an important and desired innovation for the development of evaluation studies (European Commission, 2018). The use of these written sources (social media, but also official documentation and newspaper articles) and the applied methods of analysis (topic modeling and sentiment analysis above all) can form the basis for a new model for measuring

SWB, applicable to other events and initiatives, cultural and otherwise (e.g., concerts, festivals, rallies, major sporting events, etc.), that have an expected impact on cities. So, the research produced a good result, both in terms of SWB analysis (it worked quite well, as seen in Chapters 5 and 6) and in terms of applying a new lens to impact analyses of initiatives of this type. We may not be able to talk about SIA tout court, or about "impacts" as intended by hardcore quantitative researchers, but the fact remains that this is a new kind of study on the effects of CoCs on the SWB of users in urban settings, that could be complementary to other types of research and techniques for better and more complete results.

Finally, as mentioned in the introduction to the thesis, I believe that the main outcome of this research is positioned somewhere between the advancement of urban studies (with the application of a new methodology and a contribution from the thematic perspective) and the practical application of ML to a new field — although perhaps not in a sufficiently technical way as purely computer science research might provide. Using a data-driven approach to serve the needs of the cultural sector, I think the research can be somewhat positioned within the concept of cultural analytics (Manovich, 2016, 2020), although ultimately the appellation and label are not as important as the concept is. This work and it's inspiration are about experimenting and trying to do something new, bringing together two normally distant fields through a curious approach and imprint to data science that, in my opinion, can open further doors from the perspective of cultural and urban research.

7.3 Limits and potential further research developments

Obviously, since this is an experimental research project, I have struggled with some emerging limitations. For some issues — technical ones especially — I tried my best to find and implement solutions during the research (see Chapter 4). In some cases, unfortunately, circumstances did not allow for great solutions — e.g., Covid-19 restrictions practically cancelled opportunities of field work and exchange of expertise in the first two years of research.

Other critical issues emerged during the empirical and final phases of the research, and it was not possible, due to timing and other difficulties such as those

seen above, to implement appropriate solutions/integrations. Thus, these ideas developed as potential future research possibilities to improve or continue the work presented in this thesis. For — almost — every limitation, there is thus an opportunity for improvement.

7.3.1 Conceptual issues

Starting with the conceptual limitations, the first one I identified is related to the timing of the research. For this study, I intended to analyze mostly the year of the CoC event, and the data collection phase followed this logic: data from social media were collected with 2018 (Palermo) and 2019 (Matera) as base years, while for newspaper articles and institutional documents the time base was necessarily broader-extended to a few months and a few years later, respectively-because of the different nature of the data themselves. This time discrepancy was a deliberate choice based on both the data features and the type of analyses. Social media is immediate and allows us to obtain information and feelings in real time. Newspapers and institutional documents on the other hand take longer to be published, they have a different timing. In any case, both the selected newspaper articles and official documents have as their objects facts that occurred during the year of the event — something I made sure of during the collection phase. However, the decision — albeit inevitable — to only cover this specific timeframe has limited the research capacity.

Future research could encompass the whole life cycle of the ECoC, from the initial bidding phase to beyond the end of the event year. Such a temporal extension could on the one hand improve our understanding of the effects of the program at the general level and during all its phases, from its conception and up to assessing lasting effects. On the other hand, a broadening of the terms for data collection would lead to more complete samples, with less risk of excluding some perhaps relevant text only based on search and selection by particularly stringent temporal parameters (this is a risk contemplated for example in the collection of newspaper articles).

A second conceptual limitation, but more related to the type of data and sources used is the current impossibility to distinguish users clearly and neatly between citizens (i.e., members of the host community) and tourists/other users (Ap, 1990; Balduck et al., 2011) within social media data (Corpus A).

Conceptually, it is not wrong to not make this distinction. The ECoC Program's objectives include among the recipients of the auspicated impacts both local communities (with participation and engagement as first goals) and visitors and in general the European community (European Commission, 2017), in a logic of sharing culture and inviting Europeans to interact more closely with each other. So, the impacts produced by the Program fall both on citizens and general users alike. However, such a separation could prove to be useful for more specific studies and to gain a better understanding of impacts of events on host communities and provide insights for local development (or, on the other hand, for tourism development). A potential solution to this problem is to use the metadata. Complete metadata usually include both geolocation of content and information on the user (Boy & Uitermark, 2017; Felderer & Blom, 2022). From these data it could be possible to filter the results to only include members of the local community (e.g., select the records/users that have a permanent location id in the city or that have registered in the same location for over 6 months, etc.). This type of solution, however, can be tricky and it is based on the quality of the data that is collected. Not all the data downloaded from Facebook or Twitter has a geotag, for instance, and not all that users register is verifiable (Acker, 2018) or can be ethically used (Felderer & Blom, 2022). This means that detection of members of the host community through the metadata may not be technically possible. This is the case of the current research, as the metadata collected is not enough, not only to discern tourists from citizens, but also to perform any sort of additional integrative analysis that was foreshadowed in Chapter 4.

However, there could be other methods to try and make a distinction between citizens and general users. One way that is always related to data that can be collected from social media is through the use of CrowdTangle, a Facebook (Meta) extension created to help researchers take advantage of the data on the platform, without failing to heed the cautions imposed by past events – i.e., GDPR and TOS compliance (Mancosu & Vegetti, 2020). CrowdTangle, however, is not accessible to everyone: access and availability of data is contingent on an official request as researchers to the Meta team, and is currently only extended to some specific areas of research (which are interesting for the platform). Furthermore, only some specific data (e.g., in this case only concerning Facebook) are searchable, with the real possibility of not having a match for the entire dataset but only for a portion of it (in my case, Twitter would be excluded).

Another example — momentarily the most practical one — is to start from content. In the findings (Chapter 5) it was shown that the topics and sentiment

related to pride and sense of belonging (the most numerous and polarized, especially in the case study of Matera) were in all probability generated by citizens and residents. Moreover, in the Discussion chapter I have highlighted how, in the analysis and integration of social media data, the results presented in Chapter 5 and those presented in official reports that specify the perception of residents present a certain degree of consistency. This means that it could be possible to go deeper and further develop this dimension, adopting analytical solutions that bypass the need for metadata. Identification and inference of user types could be determined by other forms of analysis with supporting integrative data.

7.3.2 Technical issues

The discussion on metadata and the limitations of using social media as data sources leads to the identification of the second type of research limitations, the technical ones. As was broadly mentioned during this dissertation, data collected from social media present many opportunities, but also some very specific limitations. A first bias is that of "non-representativity": however large it may be or seem (Reda et al., 2021), the population that uses social media is generally not representative of the real population (Lemire et al., 2008) (especially regarding Twitter, not among the most widely used social networks, at least in Italy), but only a small part of it, only certain age groups or social classes or genders. A second issue is selection bias (Iacus et al., 2020), which is typical of a random extraction process such as that of the Twitter API, for example. In addition, some users, more active than others, interacting more on social networks tends to "self-select" into the sample (based on the higher probability that one of their comments will be collected) at the expense of content from other, less active users (Kim et al., 2021). Finally, as was mentioned before, the specific time range selected for the research could represent a sort of "operational bias" in the data collection by keywords and time constraints, which could lead to the exclusion of relevant content.

A second problem that has inevitably influenced the research is related to language. One of the pieces of advice I was given at the beginning of the research was that in order to analyze language with automatic techniques, it is not necessary to know the language of the texts, because dictionaries and resources exist specifically to make the analysis automatic. However, for the interpretation

phase having a working knowledge of the language is essential or at least working in a team where someone has knowledge. This, together with the aforementioned Covid-related difficulties of not being able to move or interact profusely with others, made the choice of case studies rather forced, and thus the language to be analyzed was Italian. As seen in Chapter 5, all texts collected were in Italian. Although many of the European Commission's documents are written in English, each host city has its own language, and much of the content produced in the context of ECoC will be written in that language. Matera was no exception, so also for the official documentation in Corpus C I decided to focus only on Italian documents.

However, finding language-specific resources for idioms other than English is often difficult, as there are not many are available. I relied on the expertise and previous work of Italian researchers, who over the years developed language-specific resources for the analysis of Twitter data. Their research and specific dictionaries made it possible for us to perform sentiment analysis in Italian (Bosco et al., 2014; Mencarini et al., 2019). Such tools, however, are still underdeveloped. Specifically, the training set for the sentiment analysis (Sentipolc), was not built to detect a specific theme such as subjective wellbeing, nor to recognize emoticons. This means that the level of accuracy of the analysis is lower than it would have been using an English dictionary on English texts, for instance. That is why the sentiment analysis model at this stage of research did not allow us to determine precise scores for positive or negative sentiment. It is something to do with the interest in developing language-specific tools and current lines of research, and it is not an issue that could be fixed in a short amount of time. However, some research groups have recently published some new automatic models to determine SWB from Twitter data, especially, but based on other analysis methods and indicators (Iacus et al., 2021). Therefore, it might be interesting to expand research in this direction, reach out to other researchers and test different models by applying them to the case study presented here and compare the results.

7.3.3 Potential research developments

The limitations that can be developed in future research projects are basically three. The first is related to the impossibility of testing "social" variables with the

available data (the determinants related to the relational dimension of the framework, Table 32). As seen, these determinants are not accessible using textual data, even when integrated with other existing data sources. Ideally, therefore, a second research step should be designed, focusing on the use of qualitative techniques that are medium to long term or that otherwise allow one to immerse oneself in the context and the community and thoroughly understand its dynamics at the relational level. In this way, one could test the relational determinants of SWB and get a more complete answer on the impacts of CoCs. Some examples of that could ideally be applied or at least considered are citizen science approaches (Silvertown, 2009; Vohland et al., 2021), participatory observation and ethnography (Aktinson & Hammersley, 1998), but also focus groups (less time consuming, and another one of the methods promoted and suggested by the European Commission in its 2018 guide). To be able to present fully and in depth the methodologies that could be applied, or the practical implications of using such methodologies, would require already having a detailed plan for following up on the research – i.e., knowing which actors to engage, their specific mentality and history, and having planned an adequate strategy to engage them. That is not the case at the moment. However, the idea would be to complete the analysis particularly of relational determinants so the focus would be to obtain the missing data from the perspective of people. This could mean, for instance, setting up anonymous contact points around the city where people could express their opinion on the event (trying to leave as much freedom as possible in the responses) and/or engaging people (singularly or in groups) into commenting on their experience, using citizens and tourists to collect the data directly and having them participating in the research as active actors (European Commission, 2018; Vohland et al., 2021). But also partaking into the event's activities and investigating other people's reactions and opinions, a participatory, non-intrusive manner. Such methods would preserve somehow the spirit of "unsolicitedness" of the data (which is part of the innovation provided in this work), but at the same time allow to capture the information that are missing in the current setup.

Another – ideally complementary – step would be to study the economic and social context of the cities, but also the topography and the socio-demographic conditions – everything that can be directly or indirectly influenced by a cultural program of such scope and ambition. Specific data on wellbeing from Eurobarometer and Istat — if available — could be useful to understand the context and gain more insight on the involved cities. Information and knowledge of the context can then lead to a more correct interpretation of the results of the

textual analysis and a more truthful representation of the impacts of the initiative on the subjective wellbeing of the population in general (Ballas, 2013). Therefore, I imagine the possibility to have a mixed quantitative and qualitative method, to integrate all possible information about the SWB and complete the research.

This research is a first step toward creating an analytical model that could ideally be applied to any major event – festivals, concerts, major exhibitions, but also sports events like the Olympics, the World Cup and more. With some adaptations, the model could explore new possibilities for analysis and further the debate on the impact of these so-called "mega-events" (Langen & Garcia, 2009; Németh, 2016).

Finally, I also identified the possibility to evaluate the CoCs (or any similar event) as a cultural policy. As the CoCs are developed in different phases (i.e., bidding and selection, implementation, and evaluation), it could be interesting to analyze and compare, for example, initial objectives, changes in progress, and final results (Bonini Baraldi & Zan, 2016), so that the qualitative-quantitative effects of the CoC can be fully understood a multi-stage, longitudinal approach (Arfò & Salone, 2020). Such a comparison could be the starting point to an alternative evaluation of the program as a whole (to assess whether it accomplished its objectives and was "successful", or otherwise), to integrate other existing evaluation tools. This development could especially become beneficial in the case of the expansion of the time range of the analysis to the entire CoC life cycle (mentioned before), and it could complete the work done in this thesis by allowing to analyze and also measure the intended effects of the program in different dimensions, including SWB.

References

Acker, A. (2018). Data craft: The manipulation of social media metadata. *Data & Society Research Institute*, 13.

Adamowicz, W., Boxall, P., Williams, M., & Louviere, J. (1998). Stated preference approaches for measuring passive use values: choice experiments and contingent valuation. *American Journal of Agricultural Economics*, 80(1), 64-75.

Åkerlund, U., & Müller, D. (2012). Implementing tourism events: The discourses of Umeå's Bid for European Capital of Culture 2014. *Scandinavian Journal of Hospitality and Tourism*, 12(2), 164–180.

Aktinson, P., & Hammersley, M. (1998). Ethnography and participant observation. *Strategies of Qualitative Inquiry*. Thousand Oaks: Sage, 248-261.

Ali, M., Qureshi, M. I., & Mustapha, I. (2019). SROI in Social Enterprises: A Systematic Literature Review of Recent Trends and Future Agenda. *Societal Entrepreneurship and Competitiveness*.

Allpress, J. A., Rohani, M., & Meares, C. (2014). Measuring the value created by Auckland Museum's Moana−My ocean exhibition: A social return on investment (SROI) analysis (Auckland Council Technical Report, TR2014/014). Auckland Council.

Alsaawi, A. (2014). A critical review of qualitative interviews. *European Journal of Business and Social Sciences*, 3(4).

Anderson, B. & Holden, A. (2008). Affective Urbanism and the Event of Hope. *Space and Culture*, 11, 142–159.

Andersson, T. D., & Lundberg, E. (2013). Commensurability and sustainability: Triple impact assessments of a tourism event. *Tourism management*, 37, 99-109.

Ap, J. (1990). Residents' perceptions research on the social impacts of tourism. *Annals of tourism research*, 17(4), 610-616.

Arce-Gomez, A., Donovan, J. D., & Bedggood, R. E. (2015). Social impact assessments: Developing a consolidated conceptual framework. *Environmental Impact Assessment Review*, 50, 85-94.

Arcodia C, Whitford M. (2007). Festival attendance and the development of social capital. *Journal of Convention & Event Tourism*. 8:1–18.

Arfò, F., & Salone, C. (2020). Città e grandi eventi: il programma Matera Capitale Europea della Cultura 2019 nella percezione dei residenti. *Rivista geografica italiana*, CXXVII, 3, 5-29.

Argyle, M., Martin, M., & Lu, L. (1995). Testing for stress and happiness: The role of social and cognitive factors. In C. D. Spielberger & I. G. Sarason (Eds.), Stress and emotion (Vol. 15, pp. 173–187). Washington, DC: Taylor & Francis.

Ariza-Montes, A., Sianes, A., Fernández-Rodríguez, V., López-Martín, C., Ruíz-Lozano, M., & Tirado-Valencia, P. (2021). Social Return on Investment (SROI) to Assess the Impacts of Tourism: A Case Study. Sage Open, 11(1), 2158244020988733.

Armstrong, D., Armstrong, A. C., & Spandagou, I. (2011). Inclusion: By choice or by chance?. *International Journal of Inclusive Education*, 15(1), 29-39.

Báez, A., & Herrero, L. C. (2012). Using contingent valuation and cost-benefit analysis to design a policy for restoring cultural heritage. *Journal of Cultural Heritage*, 13(3), 235-245.

Báez-Montenegro, A., Bedate, A. M., Herrero, L. C., & Sanz, J. Á. (2012). Inhabitants' willingness to pay for cultural heritage: a case study in Valdivia, Chile, using contingent valuation. *Journal of Applied Economics,* 15(2), 235-258.

Bagiran, D., and Kurgun, H. (2016). A research on social impacts of the Foça Rock Festival: The validity of the Festival Social Impact Attitude Scale. *Current Issues in Tourism*, 19(9), 930-948.

Bailey, C., Miles, S., & Stark, P. (2004). Culture-led urban regeneration and the revitalisation of identities in Newcastle, Gateshead and the North East of England. *International Journal of Cultural Policy*, 10(1), 47–65.

Baioni, M., Cicerchia, A., Demartini, P., Marchegiani, L., Marchiori, M., & Marucci, F. (2021). SoPHIA model: the conceptual approach. *Economia della Cultura*, 32(Speciale), 15-20.

Balduck, A. L., Maes, M., and Buelens, M. (2011). The social impact of the Tour de France: Comparisons of residents' pre-and post-event perceptions. *European Sport Management Quarterly*, 11(2), 91-113.

Ballas, D. (2013). What makes a 'happy city'?. *Cities*, 32, S39-S50.

Bandarin, F., Hosagrahar, J., & Albernaz, F. S. (2011). Why development needs culture. *Journal of Cultural Heritage Management and Sustainable Development*.

Basile, V., Lai, M., & Sanguinetti, M. (2018). Long-term social media data collection at the University of Turin. In Fifth Italian Conference on Computational Linguistics (CLiC-it 2018) (pp. 1-6). CEUR-WS.

Basile, V., & Nissim, M. (2013, June). Sentiment analysis on Italian tweets. In Proceedings of the 4th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis (pp. 100-107).

Becker, H. A. (2001). Social impact assessment. *European Journal of Operational Research*, 128(2), 311-321.

Belfiore, E. (2002). Art as a means towards alleviating social exclusion: Does it really work? A critique of instrumental cultural policies and social impact studies in the UK. *International Journal of Cultural Policy*, 8(1), 91–106.

Belfiore, E. (2004). Auditing culture: The subsidised cultural sector in the New Public Management. *International Journal of Cultural Policy*, 10(2), 183-202.

Belfiore, E. (2009). On bullshit in cultural policy practice and research: notes from the British case. *International Journal of Cultural Policy*, 15(3), 343-359.

Belfiore, E. (2015). 'Impact','value'and 'bad economics': Making sense of the problem of value in the arts and humanities. *Arts and Humanities in Higher Education*, 14(1), 95-110.

Belfiore, E., & Bennett, O. (2007). Rethinking the social impacts of the arts. *International Journal of Cultural Policy*, 13(2), 135-151.

Belfiore, E., & Bennett, O. (2009). Researching the social impact of the arts: literature, fiction and the novel. *International Journal of Cultural Policy*, 15(1), 17-33.

Belfiore, E., & Bennett, O. (2010). Beyond the "Toolkit Approach": Arts impact evaluation research and the realities of cultural policy-making. *Journal for Cultural Research*, 14(2), 121–142.

Bencivenga, A., Buccino, L., Giampietro, A. M., & Pepe, A. (2016). Il processo partecipativo di una comunità coinvolta in un mega evento: il caso di Matera Capitale Europea della Cultura 2019. *Annali del turismo*, 1, 203-226.

Bertacchini, E., & Santagata, W. (2012). Atmosfera creativa. Un modello di sviluppo sostenibile per il Piemonte fondato su cultura e creatività, Bologna: Il Mulino.

Bianchini, F. (2013). The regenerative impacts of the European City/Capital of Culture events. In The Routledge Companion to Urban Regeneration (pp. 535-545). Routledge.

Biondi, L., Demartini, P., Marchegiani, L., Marchiori, M., & Piber, M. (2018), The Outreach of Participatory Cultural Initiatives: the Importance of Creating and Exchanging Knowledge.

Biondi, L., Demartini, P., Marchegiani, L., Marchiori, M., & Piber, M. (2020). Understanding orchestrated participatory cultural initiatives: Mapping the dynamics of governance and participation. *Cities*, 96, 102459.

Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent dirichlet allocation. *Journal of Machine Learning Research*, 3(Jan), 993-1022.

Blessi, G. T., Grossi, E., Sacco, P. L., Pieretti, G., & Ferilli, G. (2016). The contribution of cultural participation to urban well-being. A comparative study in Bolzano/Bozen and Siracusa, Italy. *Cities*, 50, S16–S26.

Bogdewic, S. P. (1992). Participant observation.

Boland, P. (2010). 'Capital of Culture – You Must Be Having a Laugh!' Challenging the Official Rhetoric of Liverpool as the 2008 European Cultural Capital. *Social and Cultural Geography,* 11 (7): 627–645.

Boland, P., Murtagh, B., & Shirlow, P. (2019). Fashioning a City of Culture:'life and place changing'or '12 month party'?. *International Journal of Cultural Policy*, 25(2), 246-265.

Bonini Baraldi, S., Governa, F., & Salone, C. (2019). "They tried to make me go to rehab. I said, no, no, no". Representations of 'deprived'urban spaces and urban regeneration in Turin, Italy. *Urban Research & Practice*, 1-21.

Bonini Baraldi, S., & Zan, L. (2016). Between Policies and Practices: Administration Matters. In: Managing Cultural Heritage (pp. 179-187). Routledge.

Bourdieu, P. (1986). The forms of capital.

Boy, J. D., & Uitermark, J. (2017). Reassembling the city through Instagram. *Transactions of the Institute of British Geographers*, 42(4), 612-624.

Bracalente, B., Chirieleison, C., Cossignani, M., Ferrucci, L., Gigliotti, M., & Ranalli, M. G. (2011). The economic impact of cultural events: the Umbria Jazz music festival. *Tourism Economics*, 17(6), 1235-1255.

Brida, J. G., Del Chiappa, G., Meleddu, M., & Pulina, M. (2012). The perceptions of an island community towards cruise tourism: A factor

analysis. *Tourism: An International Interdisciplinary Journal*, 60(1), 29-42.

Brundtland, G. (1987). Report of the World Commission on Environment and Development: Our Common Future. United Nations General Assembly document A/42/427.

Burdge, R. J., & Vanclay, F. (1995). Social impact assessment. *Environmental and social impact assessment*, 31-66.

Cambria, E., & White, B. (2014). Jumping NLP curves: A review of natural language processing research. IEEE *Computational Intelligence Magazine*, 9(2), 48-57.

Camera dei Deputati Servizio Studi (2021). Le Capitali della Cultura, 29 marzo 2021. Document downloaded on October 9, 2021.

Campbell, P. (2011). Creative industries in a European Capital of Culture. *International Journal of Cultural Policy*, 17, 510–522.

Cannarozzo, T. (2007). Centri storici come periferie: il caso del centro storico di Palermo, tra eccellenza e marginalità. In Conferenza INU Territori e città del Mezzogiorno: Quali periferie.

Cannarozzo, T. (2010). "Il recupero del centro storico di Palermo: problematiche e indirizzi" in Salvare Palermo n. 26, gennaio-aprile 2010, pp. 43-44.

Carey, M. A., & Smith, M. W. (1994). Capturing the group effect in focus groups: A special concern in analysis. *Qualitative Health Research*, 4(1), 123-127.

Carson, R. T., Flores, N. E., & Meade, N. F. (2001). Contingent valuation: controversies and evidence. *Environmental and resource economics*, 19, 173-210.

Carson, R. T., & Hanemann, W. M. (2005). Contingent valuation. *Handbook of environmental economics*, 2, 821-936.

Cashmore, M., Bond, A., & Sadler, B. (2009). Introduction: The effectiveness of impact assessment instruments. *Impact Assessment and Project Appraisal*, 27(2), 91-93.

Ceron, A., Curini, L., & Iacus, S. M. (2016). iSA: A fast, scalable and accurate algorithm for sentiment analysis of social media content. *Information Sciences*, 367, 105-124.

Chang-ming, L. (2002). The Revolution of Development – From Sustainable Development to Harmonious Development [J]. *Journal of Jinan University*, 1.

Cicerchia, A., & Bologna, E. (2017). Salute, benessere e partecipazione culturale: tra narrazioni e indicatori. *Economia della cultura*, 27(2), 313-322.

Cloquell-Ballester, V. A., Monterde-Diaz, R., & Santamarina-Siurana, M. C. (2006). Indicators validation for the improvement of environmental and social impact quantitative assessment. *Environmental Impact Assessment Review*, 26(1), 79-105.

Colavitti, A. M., & Usai, A. (2016). How cultural and creative industries are redefining policies for the historic urban landscape. The experience of Cagliari City as ECoC 2019's finalist and Italian Capitals of Culture. Cultural Management Education in Risk Societies-Towards a Paradigm and Policy Shift?!, 66.

Coleman, J. (1990). Foundations of Social Theory. Cambridge, Mass.: Belknap Press of Harvard University Press.

Collins, T. (2016). Urban Civic Pride and the New Localism. *Transactions of the Institute of British Geographers,* 41 (2): 175–186.

Colombo, A. (2016). How to evaluate cultural impacts of events? A model and methodology proposal. *Scandinavian Journal of Hospitality and Tourism*, 16(4), 500-511.

Comitato Matera 2019 (2014a). Matera Città candidata capitale Europea della Cultura 2019. Available at: https://www.matera-basilicata2019.it/images/2019/allegati/dossier_mt2019-candidatura_ita.pdf (Last accessed on May 15, 2023)

Comitato Matera 2019 (2014b). Matera Città candidata capitale Europea della Cultura 2019. Available at: https://www.matera-

basilicata2019.it/images/2019/allegati/dossier_mt2019-openfuture_ita.pdf (Last accessed on May 15, 2023)

Conge, P. J. (1988). The concept of political participation: Toward a definition.

Connolly, M. G. (2013). The 'Liverpool model(s)': cultural planning, Liverpool and capital of culture 2008. *International Journal of Cultural Policy*. 19:162–181.

Costantino, D. (2010). Dal risanamento alla conservazione: piani e politiche per il centro storico di Palermo. In Benedetto Colajanni opere, progetti e scritti in suo onore (Vol. 2010, pp. 497-510).

Cox, T., O'Brien, D. (2012). The "scouse wedding" and other myths: reflections on the evolution of a "Liverpool model" for culture-led urban regeneration. *Cultural Trends*. 21:93–101.

Crang, M., & Cook, I. (2007). Focus groups. Doing ethnographies. Sage Publications Ltd, London.

Curini, L., Iacus, S., & Canova, L. (2015). Measuring idiosyncratic happiness through the analysis of Twitter: An application to the Italian case. *Social Indicators Research*, 121, 525-542.

Datacontact (2020), Matera 2019. Il vissuto del 2019 e l'eredità della Capitale Europea della Cultura. Available at: https://www.matera-basilicata2019.it/it/report-2019/indagine-sulla-percezione.html (last accessed on May 15, 2023).

Davies, L. E., Taylor, P., Ramchandani, G., & Christy, E. (2019). Social return on investment (SROI) in sport: a model for measuring the value of participation in England. *International Journal of Sport Policy and Politics*, 11(4), 585-605.

Delamere, T. A. (2001). Development of a scale to measure resident attitudes toward the social impacts of community festivals, Part II. Verification of the scale. *Event Management*, 7(1), 25-38.

Demartini, P., Marchiori, M., & Marchegiani, L. (2018), Citizen Engagement as a Criterion to Select the European Capital of Culture: a Critical Appraisal.

Deraman, N. A., Buja, A. G., Samah, K. A. F. A., Jono, M. N. H. H., Isa, M. A. M., & Saad, S. (2021, March). A social media mining using topic modeling and sentiment analysis on tourism in malaysia during covid19. In IOP Conference Series: Earth and Environmental Science (Vol. 704, No. 1, p. 012020). IOP Publishing.

Diamond, P. A., and Hausman, J. A. (1994). Contingent valuation: is some number better than no number?. *Journal of Economic Perspectives*, 8(4), 45-64.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542–575.

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55, 34–43.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71–75.

Diener, E., & Seligman, M. E. (2002). Very happy people. *Psychological Science*, 13(1), 81-84.

DiMaggio, P., Nag, M., & Blei, D. (2013). Exploiting affinities between topic modeling and the sociological perspective on culture: Application to newspaper coverage of US government arts funding. *Poetics*, 41(6), 570-606.

Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, 29(1), 94-122.

Edwards, M., Onyx, J., Maxwell, H., & Darcy, S. (2012). Meso level social impact: Meaningful indicators of community contribution. *Cosmopolitan Civil Societies: An Interdisciplinary Journal*, 4(3), 18-37.

Esteves, A. M., Franks, D., & Vanclay, F. (2012). Social impact assessment: the state of the art. *Impact Assessment and Project Appraisal*, 30(1), 34-42.

European Commission (2017), European Capitals of Culture (ECoC) 2020-2033: A guide for cities preparing to bid. Available at: https://culture.ec.europa.eu/document/a-guide-for-cities-preparing-to-bid-european-capitals-of-culture-2020-to-2033 (last accessed on June 6, 2023).

European Commission (2018), European Capitals of Culture (ECoC) 2020-2033: Guidelines for the cities' own evaluations of the results of their ECOC. Available at: https://culture.ec.europa.eu/sites/default/files/2021-04/ecoc-guidelines-for-cities-own-evaluations-2020-2033.pdf (last accessed on June 6, 2023).

Evans, G. (2005). Measure for Measure: Evaluating the evidence of culture's contribution to regeneration. *Urban Studies*, 42, 959–983.

Fage-Butler, A. (2020). Audience perspectives on the European dimension in Aarhus 2017 events: Impacts of EU cultural policy. *International Journal of Cultural Policy*, 26(2), 150–165.

Felderer, B., & Blom, A. G. (2022). Acceptance of the automated online collection of geographical information. *Sociological Methods & Research*, 51(2), 866-886.

Ferri, P., Lusiani, M., & Pareschi, L. (2018). Accounting for Accounting History: A topic modeling approach (1996–2015). *Accounting History*, 23(1-2), 173-205.

Fišer, S. Ž., & Kožuh, I. (2019). The impact of cultural events on community reputation and pride in Maribor, the European capital of culture 2012. *Social Indicators Research*, 142(3), 1055-1073.

Fitjar, R., Rommetvedt, H., & Berg, C. (2013). "European Capitals of Culture: Elitism or Inclusion? The Case of Stavanger 2008". *International Journal of Cultural Policy*, 19 (1): 63–83.

Flockhart, A. (2005). Raising the profile of social enterprises: the use of social return on investment (SROI) and investment ready tools (IRT) to bridge the financial credibility gap. *Social Enterprise Journal*, 1(1), 29-42.

Fondazione Matera Basilicata 2019, Dipartimento delle culture europee e del Mediterraneo Università degli studi della Basilicata (2020). Indagine sul pubblico: Uno studio dell'esperienza e dei benefici percepiti durante matera 2019. Available at: https://www.matera-basilicata2019.it/images/valutazioni/6_Indagine_pubblico_Matera2019_ITA.pdf (Last accessed on May 15, 2023).

Florida, R. (2002). The rise of the creative class (Vol. 9). New York: Basic books.

Fredline, L., Jago, L., & Deery, M. (2003). The development of a generic scale to measure the social impacts of events. *Event Management*, 8(1), 23-37.

Fredline, L., Raybould, M., Jago, L., & Deery, M. (2005, July). Triple bottom line event evaluation: A proposed framework for holistic event evaluation. In Event Management Research Conference, Sydney.

Freud, Anna (1936). The Ego and the Mechanisms of Defence. Hogarth.

Garbarino, S., & Holland, J. (2009). Quantitative and qualitative methods in impact evaluation and measuring results.

Garcia, B., Melville, R., & Cox, T. (2008). Impacts 08-The Liverpool Model. Understanding the effect of cultural regeneration in the lead to Liverpool, 10-11.

Gaventa, J., & Valderrama, C. (1999, June). Participation, citizenship and local governance. In Background note for the workshop "Strengthening Participation in Local Governance", University of Sussex, Institute of Development Studies (Vol. 21).

Gibbon, J., & Dey, C. (2011). Developments in social impact measurement in the third sector: scaling up or dumbing down?. *Social and Environmental Accountability Journal*, 31(1), 63-72.

González, E. R., & Guadiana, L. (2013). Culture-led downtown regeneration or creative gentrification?. In The Routledge Companion to Urban Regeneration (pp. 556-567). Routledge.

Gordon-Nesbitt, R., & Howarth, A. (2020). The arts and the social determinants of health: findings from an inquiry conducted by the United Kingdom all-party parliamentary group on arts, health and wellbeing. *Arts & Health*, 12(1), 1-22.

Goodman, F. R., Disabato, D. J., Kashdan, T. B., & Kauffman, S. B. (2018). Measuring well-being: A comparison of subjective well-being and PERMA. *The Journal of Positive Psychology*, 13(4), 321-332.

Green, S. (2017). Capitals of Culture: An introductory survey of a worldwide activity.

Grodach, C. (2013). Toward sustainable culture-led regeneration. In The Routledge companion to urban regeneration (pp. 505-514). Routledge (Taylor & Francis Group).

Grossi, E., Blessi, G. T., Sacco, P. L., & Buscema, M. (2012). The interaction between culture, health and psychological well-being: Data mining from the Italian culture and well-being project. *Journal of Happiness Studies*, 13(1), 129-148.

Grossi, E., Sacco, P. L., Blessi, G. T., & Cerutti, R. (2011). The impact of culture on the individual subjective well-being of the Italian population: an exploratory study. *Applied Research in Quality of Life*, 6(4), 387-410.

Guerzoni, G. (2018). Effetto Capitale. L'impatto di comunicazione delle Capitali Italiane della Cultura: il caso Pistoia 2017.

Hammersley, M. (2006). Ethnography: problems and prospects. *Ethnography and Education*, 1(1), 3-14.

Hannigan, T. R., Haans, R. F., Vakili, K., Tchalian, H., Glaser, V. L., Wang, M. S., & Jennings, P. D. (2019). Topic modeling in management research: Rendering new theory from textual data. *Academy of Management Annals*, 13(2), 586-632.

Hausman, J. (2012). Contingent valuation: from dubious to hopeless. *Journal of economic perspectives*, 26(4), 43-56.

Helliwell, J. F., & Putnam, R. D. (1995). Economic growth and social capital in Italy. *Eastern Economic Journal*, 21(3), 295-307.

Helliwell, J. F. & Putnam, R. D. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society* B, 359, 1435-1446.

Herrero, L. C., Sanz, J. Á., Bedate, A., & del Barrio, M. J. (2012). Who pays more for a cultural festival, tourists or locals? A certainty analysis of a contingent valuation application. *International Journal of Tourism Research*, 14(5), 495-512.

Hill, S. E., & Buss, D. M. (2008). Evolution and subjective well-being. In: The science of subjective well-being, 62-79.

Hudec, O., Remoaldo, P. C., Urbančíková, N., & Ribeiro, J. A. C. (2019). Stepping out of the shadows: Legacy of the European Capitals of culture, Guimarães 2012 and Košice 2013. *Sustainability* (Switzerland), 11(5).

Human Foundation (2019). Valutazione di Palermo Capitale Italiana della Cultura 2018. Gli effetti dell'iniziativa sul territorio, sul partenariato istituzionale e sul sentiment di Palermo. Available at: https://www.comune.palermo.it/js/server/uploads/_16122019185032.pdf (Last accessed on May 15, 2023).

Hurley, A. E., Scandura, T. A., Schriesheim, C. A., Brannick, M. T., Seers, A., Vandenberg, R. J., & Williams, L. J. (1997). Exploratory and confirmatory factor analysis: Guidelines, issues, and alternatives. *Journal of Organizational Behavior,* 667-683.

Hymes, D. H. (1977). What is Ethnography?.

Iacus, S. M., Porro, G., Salini, S., & Siletti, E. (2020). Controlling for selection bias in social media indicators through official statistics: A proposal. *Journal of Official Statistics*, 36(2), 315-338.

Immler, N. L., & Sakkers, H. (2014). (Re) Programming Europe: European Capitals of Culture: rethinking the role of culture. *Journal of European Studies*, 44(1), 3-29.

International Council on Monuments and Sites (ICOMOS) (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties.

Ivona, A., Rinella, A., & Rinella, F. (2019). Glocal Tourism and Resilient Cities: The Case of Matera "European Capital of Culture 2019". *Sustainability*, 11(15), 4118.

Jaidka, K., Giorgi, S., Schwartz, H. A., Kern, M. L., Ungar, L. H., & Eichstaedt, J. C. (2020). Estimating geographic subjective well-being from Twitter: A comparison of dictionary and data-driven language methods. *Proceedings of the National Academy of Sciences*, 117(19), 10165-10171.

Jagodzińska, K., Sanetra-Szeliga, J., Purchla, J., Van Balen, K., Thys, C., Vandesande, A., & Van der Auwera, S. (2015). Cultural Heritage Counts for Europe: Full Report.

Jünger, J., & Keyling, T. (2019). Facepager. An application for automated data retrieval on the web. Source code and releases available at. https://github.com/strohne/Facepager.

Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The Day Reconstruction Method. *Science*, 306, 1776–1780.

Kim, W., Jun, H. M., Walker, M., & Drane, D. (2015). Evaluating the perceived social impacts of hosting large-scale sport tourism events: Scale development and validation. *Tourism Management*, 48, 21-32.

King, N. (2014). Making the case for sport and recreation services: The utility of social return on investment (SROI) analysis. *International Journal of Public Sector Management*, 27(2), 152-164.

Kitchenham, B. A., & Pfleeger, S. L. (2002). Principles of survey research: part 3: constructing a survey instrument. ACM SIGSOFT Software Engineering Notes, 27(2), 20-24.

Kroll, C. (2014). Towards a sociology of happiness: the case of an age perspective on the social context of well-being. *Sociological Research Online*, 19(2), 1-18.

Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., Lin, N., ... & Ybarra, O. (2013). Facebook use predicts declines in subjective well-being in young adults. PloS one, 8(8), e69841.

Lähdesmäki, T. (2012). Rhetoric of unity and cultural diversity in the making of European cultural identity. *International Journal of Cultural Policy*, 18(1), 59–75.

Lähdesmäki, T. (2013). Cultural activism as a counter-discourse to the European Capital of Culture programme: The case of Turku 2011. *European Journal of Cultural Studies*, 16(5), 598-619.

Langen, F. & Garcia, B. (2009). Measuring the Impacts of Large Scale Cultural Events: A Literature Review. Liverpool: University of Liverpool and Liverpool John Moores University.

Larsen, R. J., and Eid, M. (2008). Ed Diener and the science of subjective well-being. In “The science of subjective well-being”, 1-13.

Leck, C., Upton, D., & Evans, N. (2016). Social Return on Investment: Valuing health outcomes or promoting economic values?. *Journal of Health Psychology*, 21(7), 1481-1490.

Levasseur, M., Richard, L., Gauvin, L., & Raymond, É. (2010). Inventory and analysis of definitions of social participation found in the aging literature: Proposed taxonomy of social activities. *Social Science & Medicine*, 71(12), 2141-2149.

Li, X., & Wan, Y. K. P. (2017). Residents’ support for festivals: Integration of emotional solidarity. *Journal of Sustainable Tourism*, 25(4), 517-535.

Lingane, A., & Olsen, S. (2004). Guidelines for social return on investment. *California Management Review*, 46(3), 116-135.

Liu, B. (2012). Sentiment analysis and opinion mining. *Synthesis Lectures on Human Language Technologies*, 5(1), 1-167.

Liu, D. (2016). Social impact of major sports events perceived by host community. *International Journal of Sports Marketing and Sponsorship*.

Liu, Y. D. (2014). Cultural events and cultural tourism development: Lessons from the European Capitals of Culture. *European Planning Studies*, 22(3), 498–514.

Lowen, A. (1965). Bioenergetics. Howard, McCann & Ghegan, Inc., Newyork.

Mahesh, B. (2020). Machine learning algorithms-a review. *International Journal of Science and Research* (IJSR).[Internet], 9, 381-386.

Mair, J., Chien, P. M., Kelly, S. J., & Derrington, S. (2021). Social impacts of mega-events: A systematic narrative review and research agenda. *Journal of Sustainable Tourism*, 31(2), 538-560.

Mamì, A., & Nicolini, E. (2017). The emergency of resource flow management in Palermo, Italian Capital of Culture for 2018. A proposal for a circular management integrated in its old town center. *Fabbrica della Conoscenza*, 71, 1354-1363.

Mancosu, M., & Vegetti, F. (2020). What you can scrape and what is right to scrape: A proposal for a tool to collect public Facebook data. *Social Media + Society*, 6(3), 2056305120940703.

Manovich, L. (2016). The science of culture? Social computing, digital humanities and cultural analytics. *Journal of Cultural Analytics*, 1(1).

Manovich, L. (2020). Cultural analytics. Mit Press.

Marietta, C., & Melis, G. (2018). Spazi culturali e politiche urbane: Settimo Torinese, (quasi) capitale italiana della cultura 2018, *iQuaderni di U3*, 16, 2, pp. 35-42.

Marsh, H. W., Hau, K. T., Balla, J. R., & Grayson, D. (1998). Is more ever too much? The number of indicators per factor in confirmatory factor analysis. *Multivariate behavioral research*, 33(2), 181-220.

Martin, E. (2006). Survey questionnaire construction. Survey methodology, 2006, 13.

Maslow, A. H. (1943). Preface to motivation theory. *Psychosomatic medicine*.

Maslow, A. H. (1954), Motivation and Personality, Harper & Row Publisher Inc.

Matarasso, F. (1997). Use or ornament? The social impact of participation in the arts, 4(2), 34-41.

McLeod, S. (2007). Maslow's hierarchy of needs. *Simply Psychology*, 1(1-18).

Mencarini, L., Hernández-Farías, D. I., Lai, M., Patti, V., Sulis, E., & Vignoli, D. (2019). Happy parents' tweets. *Demographic Research*, 40, 693-724.

Merli, P. (2002). Evaluating the social impact of participation in arts activities. *International Journal of Cultural Policy*, 8(1), 107-118.

Millar, R., & Hall, K. (2013). Social return on investment (SROI) and performance measurement: The opportunities and barriers for social enterprises in health and social care. *Public Management Review*, 15(6), 923-941.

Miller, E., Buys, L., & Summerville, J. (2007). Quantifying the social dimension of triple bottom line: development of a framework and indicators to assess

the social impact of organisations. *International Journal of Business Governance and Ethics*, 3(3), 223-237.

Ministero dei Beni e delle Attività Culturali e del Turismo (2015). Bando per il titolo: capitale italiana della cultura 2016 e 2017. Document downloaded on October 9, 2021.

Ministero dei Beni e Delle attività Culturali e del Turismo (2019). Bando per il conferimento del titolo di «Capitale italiana della cultura» per l'anno 2021. Document downloaded on October 11, 2021.

Moody, M., Littlepage, L., & Paydar, N. (2015). Measuring social return on investment: Lessons from organizational implementation of SROI in the Netherlands and the United States. *Nonprofit Management and Leadership*, 26(1), 19-37.

Musante, K., & DeWalt, B. R. (2010). Participant observation: A guide for fieldworkers. Rowman Altamira.

Nagy, S. (2018). Framing culture: Participatory governance in the European Capitals of Culture programme. Participations. *Journal of Audience & Reception Studies,* 15 (2).

Nakagawa, S. (2010). Socially inclusive cultural policy and arts-based urban community regeneration. *Cities*, 27, S16–S24.

Németh, A. (2009) "Viability of urban development around cultural events? The European capital of culture". Culture as Innovation, The Search for Creative Power in Economies and Societies: 76-83.

Németh A. (2016): European Capitals of Culture – Digging Deeper into the Governance of the Mega-Event, Territory, Politics, Governance.

Neuert, C. E., Meitinger, K., & Behr, D. (2021). Open-ended versus Closed Probes: Assessing Different Formats of Web Probing. *Sociological Methods & Research*, 00491241211031271.

Nicholls, J. (2017). Social return on investment—Development and convergence. *Evaluation and Program Planning*, 64, 127-135.

Nielsen, J. G., Lueg, R., & Van Liempd, D. (2021). Challenges and boundaries in implementing social return on investment: An inquiry into its situational appropriateness. *Nonprofit Management and Leadership*, 31(3), 413-435.

Norman, W., and MacDonald, C. (2004). Getting to the bottom of "triple bottom line". *Business Ethics Quarterly*, 14(2), 243-262.

Noonan, D. S. (2002). Contingent valuation studies in the arts and culture: an annotated bibliography. Cultural policy center at the University of Chicago.

Noonan, D. S. (2004). Valuing arts and culture: a research agenda for contingent valuation. *The Journal of Arts Management, Law, and Society*, 34(3), 205-221.

Nunkoosing, K. (2005). The problems with interviews. *Qualitative Health Research*, 15(5), 698-706.

Oishi, S. (2018). Culture and subjective well-being: Conceptual and measurement issues. Handbook of well-being. Salt Lake City, UT: DEF Publishers.

Ooi, C. S., Håkanson, L., & LaCava, L. (2014). Poetics and politics of the European Capital of Culture Project. *Procedia-Social and Behavioral Sciences*, 148, 420-427.

O'Brien, D. (2011). Who is in charge? Liverpool, European Capital of Culture 2008 and the governance of cultural planning. *Town Planning Review*, 82(1), 45-60.

Palermo 2019 (2013). Progetto per la candidatura di Palermo a Capitale Europea della Cultura 2019, settembre 2013. Available at: https://www.rosalio.it/wp-content/Palermo2019-dossier.pdf (Last accessed on May 15, 2023).

Palmentieri, S. (2021a). Nuove prospettive dell'insularità. Procida Capitale Italiana della Cultura 2022. *Semestrale di studi e ricerche di geografia*, (2).

Palmentieri, S. (2021b). Culture-based social innovation. Procida Italian Capital of Culture 2022. The triumph of Utopia. Placetelling. *Collana di Studi Geografici sui luoghi e sulle loro rappresentazioni*, 2021(3), 145-148.

Parmar, B. L., Freeman, R. E., Harrison, J. S., Wicks, A. C., Purnell, L., & De Colle, S. (2010). Stakeholder theory: The state of the art. *Academy of Management Annals*, 4(1), 403-445.

Partal, A., & Dunphy, K. (2016). Cultural impact assessment: a systematic literature review of current methods and practice around the world. *Impact assessment and project appraisal*, 34(1), 1-13.

Patiwael, P. R., Groote, P., & Vanclay, F. (2019). Improving heritage impact assessment: An analytical critique of the ICOMOS guidelines. *International Journal of Heritage Studies*, 25(4), 333-347.

Pavot, W. (2008). The assessment of subjective well-being. In "The science of subjective well-being," 124-140.

Pavot, W., & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment*, 5, 164–172.

Piber, M., Biondi, L., Demartini, P., Marchegiani, L., & Marchiori, M. (2017). Pursuing Civic Engagement through Participatory Cultural Initiatives: mapping value creation, outcome, performance and legitimacy. International Forum on Knowledge Asset Dynamics (IFKAD 2017) Proceedings.

Pinto, M. R., & Viola, S. (2019). Processi di rigenerazione per la decarbonizzazione dell'ambiente costruito. Progettualita'in transizione: Parma, Capitale Italiana della Cultura 2020. BDC. *Bollettino Del Centro Calza Bini*, 19(2), pp. 417-440.

Portela, M., Neira, I., & del Mar Salinas-Jiménez, M. (2013). Social capital and subjective wellbeing in Europe: A new approach on social capital. *Social Indicators Research*, 114(2), 493-511.

Portney, P. R. (1994). The contingent valuation debate: why economists should care. *Journal of Economic perspectives*, 8(4), 3-17.

Pratt, A. (2010). "Creative Cities: Tensions within and between Social, Cultural and Economic Development." *City, Culture and Society,* 1 (1): 13–20.

Pratt, A. (2014). Cities: The Cultural Dimension. London: Foresight, Government Office for Science.

Putnam, R. D. (1993). Making Democracy Work: Civic Traditions in Modern Italy. Princeton, NJ: Princeton University Press.

Putnam, R. D. (2000). Bowling Alone. New Cork: Simon & Schuster.

Quinn, B. (2009). The European capital culture initiative and cultural legacy: an analysis of the cultural sector in the aftermath of Cork 2005. *Event Management*. 13:249–264.

Radbourne, J., Glow, H., & Johanson, K. (2010). Measuring the intrinsic benefits of arts attendance. *Cultural trends*, 19(4), 307-324.

Rao, V., & Woolcock, M. (2003). Integrating qualitative and quantitative approaches in program evaluation. The impact of economic policies on poverty and income distribution: *Evaluation Techniques and Tools*, 165-190.

Rawhouser, H., Cummings, M., & Newbert, S. L. (2019). Social impact measurement: Current approaches and future directions for social entrepreneurship research. *Entrepreneurship Theory and Practice*, 43(1), 82-115.

Rayman-Bacchus, L., & Radavoi, C. N. (2019). Advancing culture's role in sustainable development: social change through cultural policy. *International Journal of Cultural Policy*, 1-19.

Ribeiro, T., & Correia, A. (2021). The relationship between organisational issues and social impacts of Rio Olympic Games: a volunteer's perspective. *Journal of Policy Research in Tourism, Leisure and Events*, 13(1), 124-145.

Richards, G. (2000). "The European Cultural Capital Event: Strategic Weapon in the Cultural Arms Race?". *International Journal of Cultural Policy*, 6 (2): 159–181.

Richards, G., & Wilson, J. (2004). The impact of cultural events on city image: Rotterdam, cultural capital of Europe 2001. *Urban studies*, 41(10), 1931-1951.

Riley, J. (2017). Understanding metadata. Washington DC, United States: National Information Standards Organization (http://www. niso. org/publications/press/UnderstandingMetadata. pdf), 23.

Robertson, M., Rogers, P., & Leask, A. (2009). Progressing socio-cultural impact evaluation for festivals. *Journal of Policy Research in Tourism, Leisure and Events*, 1(2), 156-169.

Rogers, M., & Ryan, R. (2001). The triple bottom line for sustainable community development. *Local Environment*, 6(3), 279-289.

Rollins, R., & Delamere, T. (2007). Measuring the social impact of festivals. *Annals of Tourism Research*, 34(3), 805-808.

Rota, F. S., & Salone, C. (2014). Place-making processes in unconventional cultural practices. The case of Turin's contemporary art festival Paratissima. *Cities*, 40, 90-98.

Rotheroe, N., & Richards, A. (2007). Social return on investment and social enterprise: transparent accountability for sustainable development. *Social Enterprise Journal*, *3*(1), 31-48.

Ryan, P. W., & Lyne, I. (2008). Social enterprise and the measurement of social value: methodological issues with the calculation and application of the social return on investment. *Education, Knowledge & Economy*, 2(3), 223-237.

Saayman, A., & Saayman, M. (2004). Economic impact of cultural events. *South African Journal of Economic and Management Sciences*, 7(4), 629-641.

Sacco, P., Ferilli, G., & Blessi, G. T. (2014). Understanding culture-led local development: A critique of alternative theoretical explanations. *Urban Studies*, 51(13), 2806–2821.

Sacco, P., Ghirardi, S., Tartari, M., & Trimarchi, M. (2019). Two versions of heterotopia: The role of art practices in participative urban renewal processes. *Cities*, 89, 199–208.

Salone, C., Bonini Baraldi, S., & Pazzola, G. (2017). Cultural production in peripheral urban spaces: lessons from Barriera, Turin (Italy). *European Planning Studies*, 25(12), 2117-2137.

Santagata, W. (2009). Libro Bianco sulla Creatività. Per un Modello Italiano di Sviluppo, Milano: Università Bocconi Editore.

Sarracino, F. (2010). Social capital and subjective well-being trends: Comparing 11 western European countries, *The Journal of Socio-Economics*, 39, 482-517.

Schimmack, U. (2008). The structure of subjective well-being. In: The science of subjective well-being, 54, 97-123.

Schmitt, T. A. (2011). Current methodological considerations in exploratory and confirmatory factor analysis. *Journal of Psychoeducational assessment*, 29(4), 304-321.

Schneider, D., & Harknett, K. (2022). What's to like? Facebook as a tool for survey data collection. *Sociological Methods & Research*, 51(1), 108-140.

Schwartz, H. A., Sap, M., Kern, M. L., Eichstaedt, J. C., Kapelner, A., Agrawal, M., ... & Ungar, L. H. (2016). Predicting individual well-being through the language of social media. In Biocomputing 2016: Proceedings of the Pacific Symposium (pp. 516-527).

Shipway, R., King, K., Lee, I. S., & Brown, G. (2016). Understanding cycle tourism experiences at the Tour Down Under. *Journal of Sport & Tourism*, 20(1), 21-39.

Scollon, C. N., Kim-Prieto, C., & Diener, E. (2003). Experience sampling: Promises and pitfalls, strengths and weaknesses. *Journal of Happiness Studies,* 4, 5–34.

Scott A. J. (1997) The cultural economy of cities, *International Journal of Urban and Regional Research*, 21(2): 323–339.

Scott, A. J. (2008) Social economy of the metropolis: Cognitive-cultural capitalism and the global resurgence of cities, OUP Oxford.

Seligman, M. (2010). Flourish: Positive psychology and positive interventions. *The Tanner Lectures on Human Values*, 31(4), 1-56.

Seligman, M. (2018). PERMA and the building blocks of well-being. *The Journal of Positive Psychology*, 13(4), 333-335.

Signorello, G., & Santagata, W. (1998). Contingent valuation and cultural policy design: the case of «Napoli musei aperti. In: X International Conference on Cultural Economics, Barcellona.

Silvertown, J. (2009). A new dawn for citizen science. *Trends in Ecology & Evolution*, 24(9), 467-471.

Silvestri, M. (2015). Sviluppo sostenibile: un problema di definizione.

Slaper, T. F., & Hall, T. J. (2011). The triple bottom line: What is it and how does it work. *Indiana Business Review*, 86(1), 4-8.

Small, K., Edwards, D., & Sheridan, L. (2005). A flexible framework for evaluating the socio-cultural impacts of a (small) festival. *International Journal of Event Management Research*, 1(1), 66–77.

Stapleton, C. D. (1997). Basic Concepts and Procedures of Confirmatory Factor Analysis.

Staricoff, R. L. (2004). Arts in health: a review of the medical literature.

Steiner, L., Frey, B., & Hotz, S. (2015). European capitals of culture and life satisfaction. *Urban studies*, 52(2), 374-394.

Stern, M. J., & Seifert, S. C. (2009). Civic engagement and the arts: Issues of conceptualization and measurement. Philadelphia: University of Pennsylvania, School of Social Policy & Practice.

Stevenson, D. (2004). "'Civic Gold' Rush.". *International Journal of Cultural Policy*, 10 (1): 119–131.

Suhr, D. D. (2006). Exploratory or confirmatory factor analysis?.

Svensson, G., Ferro, C., Høgevold, N., Padin, C., Varela, J. C. S., & Sarstedt, M. (2018). Framing the triple bottom line approach: Direct and mediation effects between economic, social and environmental elements. *Journal of cleaner production*, 197, 972-991.

Thompson, E., Berger, M., Blomquist, G., & Allen, S. (2002). Valuing the arts: A contingent valuation approach. *Journal of Cultural Economics*, 26, 87-113.

Throsby, D. (1995). Culture, economics and sustainability. *Journal of Cultural Economics*, 19(3), 199-206.

Throsby, D. (2003). Determining the value of cultural goods: How much (or how little) does contingent valuation tell us?. *Journal of Cultural Economics,* 27, 275-285.

Throsby, D. (2010). The economics of cultural policy. Cambridge, UK: Cambridge University Press.

Throsby D. (2017). Culturally sustainable development: theoretical concept or practical policy instrument?.

UNESCO (2019), Culture 2030 Indicators.

Urbančíková, N. (2018). European capitals of culture: What are their individualities? *Theoretical and Empirical Researches in Urban Management*, 13(4), 43–55.

Van Aalst, I., & Van Melik, R. (2012). City festivals and urban development: Does place matter?. *European Urban and Regional Studies*, 19(2), 195–206.

Vanclay, F. (1999). Social impact assessment. *Handbook of environmental impact assessment*, 1, 301-326.

Vanclay, F. (2003). International principles for social impact assessment. *Impact assessment and project appraisal*, 21(1), 5-12.

Vanclay, F. (2020). Reflections on Social Impact Assessment in the 21st century. *Impact Assessment and Project Appraisal*, 38(2), 126-131.

Vanclay, F., & Esteves, A. M. (2011). Current issues and trends in social impact assessment. In: New directions in social impact assessment. Edward Elgar Publishing.

Van Hilvoorde, I., Elling, A., & Stokvis, R. (2010). How to influence national pride? The Olympic medal index as a unifying narrative. *International Review for the Sociology of Sport*, 45(1), 87-102.

Van Winkle, C. M., & Woosnam, K. M. (2014). Sense of community and perceptions of festival social impacts. *International Journal of Event and Festival Management*, 5(1), 22-38.

Vázquez, J. P. A., Tirado-Valencia, P., & Ruiz-Lozano, M. (2021). The SROI Impact Measurement Tool Applied to a UNESCO World Heritage and Tourism Site: Identifying the Difficulties Involved. *Co-Editors*, 142.

Veenhoven, R. (2008). Sociological theories of subjective well-being. In: The science of subjective well-being, 9, 44-61.

Viganò, F., & Lombardo, G. (2018). Misurare l'impatto sociale generato dai musei: L'applicazione della metodologia del Ritorno Sociale sull'investimento (SROI). In: Ambienti digitali per l'educazione all'arte e al patrimonio (pp. 332-350). FrancoAngeli.

Viganó, F., & Lombardo, G. (2019). Calculating the Social Impact of Culture. A SROI application in a Museum. In *Proceedings of the 1st International and Interdisciplinary Conference on Digital Environments for Education, Arts and Heritage: EARTH 2018* 1(pp. 507-516). Springer International Publishing.

Vohland, K., Land-Zandstra, A., Ceccaroni, L., Lemmens, R., Perelló, J., Ponti, M., ... & Wagenknecht, K. (2021). The science of citizen science (p. 529). Springer Nature.

Voukelatou, V., Gabrielli, L., Miliou, I., Cresci, S., Sharma, R., Tesconi, M., & Pappalardo, L. (2021). Measuring objective and subjective well-being: dimensions and data sources. *International Journal of Data Science and Analytics*, 11(4), 279-309.

Walton, H., Longo, A., & Dawson, P. (2008). A contingent valuation of the 2012 London Olympic Games: A regional perspective. *Journal of Sports Economics*, 9(3), 304-317.

Wassler, P., Nguyen, T. H. H., & Schuckert, M. (2019). Social representations and resident attitudes: A multiple-mixed-method approach. *Annals of Tourism Research*, 78, 102740.

Wicker, P., Hallmann, K., Breuer, C., and Feiler, S. (2012). The value of Olympic success and the intangible effects of sport events–a contingent valuation approach in Germany. *European Sport Management Quarterly*, 12(4), 337-355.

Wills-Herrera, E., Islam, G., & Hamilton, M. (2009). Subjective well-being in cities: A multidimensional concept of individual, social and cultural variables. *Applied Research in Quality of Life*, 4(2), 201-221.

Wilson, J. (2000). Doing justice to inclusion. *European Journal of Special Needs Education*, 15(3), 297-304.

Wise, N. (2016). Outlining triple bottom line contexts in urban tourism regeneration. *Cities*, 53, 30-34.

Wise, N., Aquilino, L., & Armenski, T. (2018). Preparing for Matera 2019: local resident participation in research and perceptions of destination competitiveness. In: Urban Renewal, Community and Participation (pp. 161-180). Springer, Cham.

Woosnam, K. M., Van Winkle, C. M., & An, S. (2013). Confirming the festival social impact attitude scale in the context of a rural Texas cultural festival. *Event Management*, 17(3), 257-270.

World Commission on Culture and Development, Our Creative Diversity, 1995

Yates, B. T., & Marra, M. (2017). Social Return On Investment (SROI): Problems, solutions… and is SROI a good investment?. *Evaluation and Program Planning*, 64, 136-144.

Yin, R. K. (2003). Design and methods. Case study research, 3.

Zajc, M. (2015). Social media, prosumption, and dispositives: New mechanisms of the construction of subjectivity. *Journal of Consumer Culture*, 15(1), 28-47.

Zhong, S. (2013). The neo-liberal turn:'culture'-led urban regeneration in Shanghai. In: The Routledge Companion to urban regeneration (pp. 515-524). Routledge.

Appendix A

Translation of Topic Tables

This Appendix contains the main tables presented in the thesis translated in English for a better comprehension of the topic composition. The tables presented below follow the layout of Chapter 5.

Table 10b. Topics composition of the Matera 2019 tweet dataset (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	passport program results rights south opens project art mattarella trailer party opening convention tourism show	**Organization/Access**
1	redemption affected community rich damages restart railroad opportunity shame flooding unbearable the event tourists appointment paradigm past	**Recovery/redemption**
2	bond square shooting paper presented photo film European program die radio history heroes exhibition capital concert project book party	**Events**

Table 11b. Topic composition of the Palermo 2018 tweet dataset (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	palermo culture capital event natural sicily yield economically mafia archaeological mediterranean pacultura occasion rich beautiful norman local society choose things contribute capital	**Sicilian culture**
1	exponent brutal manifestation initiative assault palace tonight laws palermo culture capital italian event violent condemn away damage usino of welcome ports mayor antifascism art	**News stories**
2	ceremony presentation will take place grand commemorative research leolucaorlando events villa tourism restart rich opens press mafia migrants open service frank development European	**Events**

Table 12b. Topic composition of the Matera 2019 Facebook comments dataset (source: authors own elaboration) – English

Topic id	Topic composition	Inferred topic
0	system culture show passport capital see not book organization events really event heart there is works price	**Organization/Access**
1	native available spectacular evening proud exciting stupendous magnificent lose happiness resounding thrill pride emotion redemption successful go proud of it	**Pride**
2	matera beautiful the compliments beautiful culture music capital performance festival universal show super magical	**Events**

Table 13b. Topic composition of the Palermo 2018 Facebook comments dataset (source: authors own elaboration)

Topic id	Topic composition	Inferred topic
0	will become wonderful compliments Sicilian traitor pride work interesting reality I know beautiful national satisfaction	**Satisfaction/belonging/pride**
1	amen palermo saint rosalia viva festival church culture orlando mayor beautiful capital home palermitani sicily	**Religion/tradition**
2	congratulations compliments emotion palermo alive	**Emotional response**

Table 14b. Topics extracted from the Matera national newspaper dataset (source: author's own elaboration). - English

Topic id	Topic composition	Inferred topic
0	pasolini paolo sassi guide matteo shooting gospel republic set film images director houses cinema dance rocco those christ lose therewas	**Filming activities**
1	cultural places tourism center territory visitors san vaglio houses church travel tradition plan local art route collaboration ancient fort francesco	**Religious tourism**
2	matera there's important basilicata realized work given success at least adds rest recalls lucani joy sense account consumption places possibility volunteers	**Citizen engagement**
3	matera sassi capital earth culture foundation work hand beauty shame maximum home or milan choice many go few materana comes	**Project issues**
4	culture european capital euro projects region first young italy project number italians park rome president cultural cultural europe countries world	**International dimension**
5	matera project party reality museum mediterranean stories school course sector migrants will come europe live tells salt men maria presented made	**Inclusion projects**
6	capital matera exhibition history info foundation photography theater art house care exhibitions past great rocky spaces project studio entrance the art shows music festival	**Events**
7	bari tourists walk road works stretch reach waste bus cause difficulty cab service connects sea yard station means timetable information underpass citizens station	**Access**
8	matera culture capital south european community space program artists basilicata public radio point scene challenge guests party particular ideas lucana	**Local identity**
9	matera events square sun open sassi president january citizens european future quarry sasso caveoso pietro culture ceremony passport december via	**Opening ceremony/Institutions**

Table 15b. Topics extracted from the Palermo 2018 national newspaper articles dataset (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	theater music minors concert choir massimo palermitani children of the year francesco hundreds present solidarity voice directed rainbow white voices orchestra kids	**Children activities**
1	cultures dialogue palazzo zisa march june big table saint elia will involve concerts site butera headquarters maximum belle chronicle migrate you the huge europeans	**Cultural dialogue**
2	ballaro community center street municipality territory foreigners project debate important complex land neighborhood orlando solutions sicily the april mobility itinerary	**Local community/inclusion**
3	contemporary european civic arab extraordinary presentation giovanni best emergency director ready reservation point twelfth the election dossier monuments the year theaters proposals	**International culture**
4	palermo conad aaster citizens data activity values rebirth places share inhabitants rate numbers sixth floor executive social immigrants unemployment dynamics	**Social impact**
5	euro means evaluation study institutional partners European spending meta remains total operators demand at least course development report effects investment front	**Economic evaluation**
6	palermo culture italian capital mayor program orlando leoluca presented initiatives reality long workshop party collaboration portal system media art level	**Program organization**
7	events manifest cultural yards biennial art capital realize international tourist view host nomad will host municipalities tourists this year calendar received role	**Hospitality**
8	saint albanesi piana tradition week integration interviews given distribution death palms secular rite historic born of academy Sunday promises Friday	**Tradition**
9	cultural mediterranean mafia heritage historical youth san history museum national past yard new just south marks parks restoration capable italians	**Local history**

Table 16b. Topics extracted from the Matera 2019 local newspaper articles dataset (source: authors own elaboration) – English

Topic id	Topic composition	Inferred topic
0	matera culture european capital citizens center square sun events sassi presence quarry program day basilicata foundation night cultural evidently course bands live party january	**Events**
1	result development level point true many recast works arrive practically arrived cleanliness means few remain station elements parking tourist numbers services at least terms region staff spending	**Infrastructure**
2	south regions national north resident schools noon public share points value puglia downturn construction lombardy romagna works culture flag gap	**North/south comparison**
3	film cinema project history lucana mother october rocco maria realized international italy community small director vasai province beautiful opportunity tataranni imma spot ciak scenario television	**Filming activities**
4	president south region brought evening mayor words minister whistles territory bardi pointed out parliament there is proven tried added now sassoli initiatives mattarella stage	**Institutional presence**
5	growth oftheyear businesses sector period data italy data decline auto demand remains tourist workers increase previous half year signals investments new center districts damage needs news operators security	**Economy/tourism impacts**
6	matera euro basilicata month passport some bari possible to be able tourist situation way big historical foundation budget given maximum last difficulties	**Access**
7	december festival digital san open at francesco platform director legacies stephan public cultural production youth theater issues scene point morning	**Digital events**

Table 17b. Topics extracted from the Palermo 2018 local newspaper articles dataset (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	palermo arab arab monuments sicily route norman domination period presence saint gardens norman historic district center true certainly	**Sicilian heritage**
1	capa war exhibition robert photogra June tunick photographer century europe important vespucci history april nudity sunday second work magnum	**Photography**
2	project street steps square common line new urban design paths public development at port realization mobility istud within main urban	**Urban planning**
3	cultural palermo museum palace events space theater works initiatives culture capital museums salinas diverse contemporary european art will come home	**Events**
4	facilities sector growth palermo attendance data data level enterprises tourism rosalia tourist hotel tourist stars sense treasure places economic pieces	**Economic impact**
5	manifesta biennial palermo themes video presents projects artists collaboration dedicated proposes sicilian venues program realized palace studio garden places euro	**Art and space**
6	culture palermo italian cultural capital mediterranean mayor orlando rth sea cultures collection economic restoration important international peace citizenship territory symbol	**Mediterranean identity**
7	palermo design maria saint i-design spasimo sicily arts church designer care research beautiful industrial course andriolo professor design curated exhibitions	**Design**

Table 18b. Topics extracted from the Matera 2019 sector-specific newspaper articles dataset (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	study report impact studies results brief guided team the meeting tourism monitoring evaluation gdp change resources emerged data south goals sustainable economy investment	**Impact/evaluation studies**
1	tourists rome now wanted economy should hired fire point work phase structure sort white ministry relocated centers closure understand operators	**Tourism**
2	sassi ideas citizens exhibitions looks inside dedicated own the year verri programmatic plans bring society European concept projects venue tell matera cultural events process skills	**Program**
3	new create region enhancement economic space work social growth increase visions could small laterza policies role value scales of italy development territory curators production	**Local development**
4	activities capital week december etc stories google collaboration community under platform programming tool large several international productions peace street appointments	**Collaboration platforms**
5	works project reception places explains exchange hotels francesco art san hotel alberga cascino experience workshops travelers inhabitants cohabitation will see	**Hospitality/Inclusion**
6	archives i-dea exhibition project tool materani the archives low budget siravo chiara grima joseph digital database working materials subjective visitors ask	**Archives**
7	foundation artists spaces involved at target dario curated indeed open field date source urban spent represented knowledge possible chairman tells institutional	**Institutional presence/involvement**
8	basilicata theme production curators heritage different process since workshop stimulus book nationhood emerges permission fruit as gillick manifestation	**Local artistic production**
9	netural home coworking incubator projects paoletti model project services share dreams community committed entrepreneurial view pathway engine youth incubation neighborhood	**Sharing**

Table 19b. Topics extracted from the Palermo 2018 sector-specific newspaper articles dataset (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	theater sea garibaldi architects gallery scarpa works architect palermitani complex historical space milan sicilian point luigi discover giorgio monumental workshop	**Renovations**
1	contemporary palace carlo artists art headquarters floor architecture abatellis there is possible international inaugurated palermitano century baron letizia hosts main inside	**Event venues**
2	manifest biennial nomadic garden palaces june few botanical furnishings edition capital palermitan reality hedwig host arab past foreign format local	**Open spaces**
3	palermo culture capital project historical Italian November cultural program European heritage neighborhood installs new local theme earth projects territory	**Events program**
4	square antonello kitchen messina giovanni sicily company good magione portrait mola aja space via sicilia buatta coffee painting presto valigeria	**Urban spaces**
5	saint street rosalia feast festival performance tradition july cultures thisyear door special became forum procession i-design natural expected company plague	**Religion/tradition**
6	center events history exhibitions restoration change mediterranean rebirth contemporary sicily museum diverse planetarium zisa extraordinary open march public the year garden	**Sicilian culture**
7	euro sicilian urban report narrative mayor initiatives presence resources subjects route erta urban town orlando event visitors type dell'o tourists	**Evaluation**
8	saddle lace war palace house style hall society places collective national amputee fork family comes second located new	**Exhibition**
9	works design artists juseppe exhibition studio famous great designers series work novelties made appointments october conceived spasimo artistic form light	**Design**

Table 20b. Topics extracted from the Matera 2019 official dossiers (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	audience events respondents sample enjoyment event altofest figure evaluation cultural table value exhibition residents festival average values education two-year level	**Evaluation**
1	matera ods jury projects managers suppliers interviewed design team ods lab project open business living school dr. figure program development	**Program development**
2	cultural foundation ecoc cultural activities territory initiatives institutions plan development participation dossier local platform within subjects role candidacy actors major	**Local institution involvement**
3	services resources activities matera cultural total sectors study euro data terms foundation distribution productions contracts economic system culture suppliers	**Economic resources**
4	community research project new activities territory collaboration capacity realization possibility local cultures particular different resources study space generated point legacy	**Local community engagement**
5	project projects social the impact level exhibition theater participation development business ship sycamore model film stage cooperative processes silent cinema workshops	**Projects for social development**
6	skills matera cultural production effects development management manner capacity aspects figure different publics through creation professional cultural responsive program source	**Capabilities**
7	foundation ephemeral space entity matera-basilicata matera public nature existing private associative use square indoor performance center music art workshop sassi	**Closed spaces**
8	matera basilicata culture european capital events analysis particular region possible comes cultural relationship degree can phase different international places	**Internationalization**
9	participation social level co-creation processes active dimension mcec or wellbeing process respondents development subjects reference engagement relationship participants demand territory	**Participation**
10	card system territory passport services fruition subjects tool basilicata sale target residents museums tourism activities design flows level number sites	**Access**
11	matera basilicata culture events citizens european capital program foundation places open spaces theater candidacy big school exhibitions dossier museum cultural	**Events**
12	cultural project cultural projects national citizens work process important value objectives artists local management community programming role model common post	**Local development and cooperation**
13	tourism sector investment infrastructure economic growth congressional tourism spending data ecoc tourists equal impact tourism estimates creative industries	**Tourism**

Table 21b. Topics extracted from the Palermo 2018 official dossiers (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	development value operators concerns given appears focus reviews finally national positive generated measure industry festival base museum common things process	**Local development**
1	perception equal historical visit more questionnaire estimation of the intervention the initiative evaluation press reality integrated chapter context emphasized improvement responses sustainability in the scope	**User perception**
2	heritage local particular institutions change fruition manifest understand metropolitan awareness palermitani tourist palace participation management growth relationship different culture engagement	**Engagement**
3	proposals foundation committee art notice projects evaluation present call reconnaissance funding will be able saint-elia must documents participants categories presentation language submit	**Proposals**
4	pcc activities local residents sense partner level changes stakeholder group center partnership outcome analysis number tourism respondents factors sentiment services	**Evaluation**
5	cultural social process spaces realization European framework processes cultures history different own rights international artistic contemporary principles arts element mediterranean	**Internationalization**
6	tourists tal own research toc interviews question results involved sant elia allowed work table institutional path components analysis national intervention strengthen	**Research**
7	cultural territory territory data foundation cfr economic visitors of the initiative organizations contribution effects of supply important policies respondents highlighted calendar as well as specific present	**Impact**
8	cultural Italian events project subjects economic terms candidacy sicily through partnership model promotion public via public citizens need private relations	**Promotion**
9	palermo culture capital communication common initiatives system resources present enhancement theater period international elements included strengthening flows proposal foreign web	**Valorization**

Table 22b. Topics extracted from the Matera 2019 institutional articles (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	success alone marcello symbol first return political movement center-left there was guide adduce inside choice must obvious difficulty legislature vito establish	**Government**
1	city events collaboration numbers region there is show tourists materani municipalities can point I think see content participated apt insisted things sunshine	**Event fruition**
2	culture work luca cultural history music enhance training there is zero project december tables management royal franceschini museums duty intervention	**Valorization**
3	regional pittella theater stage region governor culture avoid primary won lucano posts professor face court group leader reasons pointing sword meters	**Local politics**
4	european president sun sassi center rai minister government conte redemption investment euro explained challenge bonisoli make model beauty premier giuseppe	**Institutions**
5	matera culture capital naples south mayor social development innovation ruggieri noon raffaello sense past dignity regions leader neapolitans convinced report	**Development of the South**
6	matera basilicata cava verri ceremony capital foundation paolo banda attendance artists director day bands republic shows volunteers rest candidacy second	**Opening ceremony**
7	community province i think work places north stories areas need rebuild italian sovereignty turin local bring reality low co-creation sense territory	**Province dynamics**

Table 23b. Topics extracted from the Palermo 2018 institutional articles (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	palace culture church palaces events butera contemporary growth development projects jazz venues ecosystem meeting will remain communication doors revival the literature	**Heritage**
1	mafia certainly mobilizes hundreds mafiosi arrives stay human challenge nuisance atheist palermitani politician asked pride fathers exploiters permit Muslims European	**Local culture**
2	international culture there is biennial important should project view cusuman june thousands identity space initiatives talks important will return telling building	**Space identity**
3	theater maximum historical foundation open francesca pathway nobles plants calendar banks change relationship review program june unesco mosaics travel reopen	**Private residences**
4	human rights migrants security google european orlando the identity ahmed useful idiots given communist paris dedicated homosexuals gays the union street affirms	**Human rights**
5	palermo vision mayor chosen sense own country violence last accomplices world headquarters orlando leoluca data countries residents connection we return new	**Institutional role**
6	system italian cultural yards spaces single theme point different study zisa europe public level planetary exhibition goods peripheries pole	**Sharing spaces**
7	palermo capital manifest cultural center history collection valsecchi sicily programming can own artists great we can think national spasimo museum site	**Program**

Table 24b. Topics extracted from the posts on the Matera 2019 official Facebook page (source: authors own elaboration) – English

Topic id	Topic composition	Inferred topic
0	discover artists events july pole january exhaustion workshops photography sports projects evening atlas ceremony international continues look together volunteers borders	**Laboratories**
1	saturday sun installations ridola school capital opening places circusplus archives rai the art beauty ars digs booking open materadio hours petra	**Open spaces**
2	the exhibition entrance appointments festival and tomorrow home february week contemporary archaeological museum domenico info curated scene Friday party ideamatera space live dance	**Events**
3	basilicata music march events show circus history circus earth extraordinary journey cinema francesco direct south works path park moon open	**Performing arts**
4	project culture c/o program palace meetings design grand lanfranchi community lodges lectures arts concert sounds cultural protagonists theater heaven film	**Lectures**
5	open sassi san weekend i-dea places shows company ceremony product shame bread free workshop at official lucana with final visit passport radio video emotions citizens	**Access**

Table 25b. Topics extracted from the posts on the Palermo Culture Facebook page (source: authors own elaboration) - English

Topic id	Topic composition	Inferred topic
0	program sicily film the thursday town hall appointments arts meetings historical award day starting gallery this year italian land photography cultural open	**General information**
1	friday history june site february sicilian feast san cura maria visitable space hall reservations brass month treasures design spaces	**Religious events**
2	info saturday museum festival at april maximum edition art foundation contemporary free ballarò tonight monday symbol tour francesco live national	**Contemporary art**
3	october works november organized tickets event night will hold palazzo spasimo review concerts siamonoi garibaldi discover tradition course siciliani saint-elia square	**Concerts**
4	artists places great young people work weekend visits classical neighborhood giuseppe santa tell artistic dedicated occasion director door leoluca schools students	**School activities**
5	palermocapitaleculture theater project events september may appointment scene center public week july back december italy children visit different musical	**Children's theater**

Table 28b. Synthesis of all topics extracted from the corpora (source: author's own elaboration)

			Matera	Palermo
Data source		**Topic id**	**Inferred topic**	
Corpus A	Facebook comments	0	Organization/Access	Satisfaction (belonging + pride)
		1	Pride	Religion/tradition
		2	Events	Emotional response
	Tweets	0	Organization/Access	Sicilian culture
		1	Redemption/recovery	News stories
		2	Events	Events
Corpus B	National newspaper articles	0	Filming activities	Children activities
		1	Religious tourism	Cultural dialogue
		2	New infrastructure	Local community/inclusion
		3	Citizen engagement/Belonging	International culture
		4	Project issues	Social impact
		5	International dimension	Economic evaluation
		6	Inclusion projects	Program organization
		7	Events	Hospitality/Inclusion
		8	Tourism access	Tradition
		9	Local identity	Local history
	Local newspaper articles	0	Events	Sicilian heritage
		1	Local renovation works/Infrastructure	Photography
		2	North/south comparison	Urban planning
		3	Filming activities	Events
		4	Institutional presence	Economic impact
		5	Economy/tourism impacts	Art and space
		6	Access	Mediterranean identity
		7	Digital events	Design
	Sectorial newspaper articles	0	Impact/evaluation studies	Renovations
		1	Tourism	Venues
		2	Local development	Open spaces
		3	Collaboration/digital platforms	Events program
		4	Hospitality/Inclusion	Urban spaces

		5	Archives	Religion/tradition
		6	Institutional presence/involvement	Sicilian culture
		7	Program	Evaluation
		8	Local artistic production	Exhibitions
		9	Sharing	Design
Corpus C	Official documentation	0	Evaluation	Local development
		1	Program development	User perception
		2	Local institution involvement	Engagement
		3	Economic resources	Proposals
		4	Local community engagement	Evaluation
		5	Projects for social development	Internationalization
		6	Capabilities	Research
		7	Closed spaces	Impact
		8	Internationalization	Promotion
		9	Participation	Valorization
		10	Access	-
		11	Events	-
		12	Local development and cooperation	-
		13	Tourism	-
	Statements/ interviews	0	Government	Heritage
		1	Event fruition	Local culture
		2	Valorization	Space identity
		3	Local politics	Private residences
		4	Recovery/Redemption	Human rights
		5	Development of the South	Institutional role
		6	Opening ceremony	Sharing
		7	Province dynamics	Program
	Facebook page posts	0	Laboratories	General information
		1	Open spaces	Religious events
		2	Exhibitions	Contemporary art
		3	Performing arts	Concerts
		4	Lectures	School activities
		5	Access	Children activities