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MEASURING SOCIAL POVERTY FOR CONCRETE REGENERATION OF SUBURBS: THE NEAPOLITAN CASE OF SAN GIOVANNI A TEDUCCIO

Emanuela Coppola[a], Giusy Sica[b]

[a] *Department of Architecture, University of Naples Federico II, IT*
[b] *Centre L.U.P.T. of University of Naples Federico II*

HIGHLIGHTS

- The urban regeneration cannot ignore a social regeneration that rethinks territories as places where the population lives and develops through their involvement.

- The case of the Federico II University Hub in San Giovanni a Teduccio is an experience of Civic University, which proposes and hopes that universities can act as a "pivot" of society and for economic and social development processes in urban and territorial areas.

- The experience of the international RURS workshop demonstrates that regeneration is a complex issue but improving the recognisability of places through urban microsurgery is the first necessary step.

ABSTRACT

This paper focusses on the 6th Municipality of Naples and in particular on the neighborhood "San Giovanni a Teduccio". We use quantitative indices to measure social disease and inequalities, as well as indices to describe the sociodemographic history of this neighborhood. Methodologically, we compare the values of few population-based and socio-demographic indices provided by the Italian National Institute of Statistics (ISTAT) for San Giovanni a Teduccio, for the entire Napolitan metropolitan area and, when available, of the entire Italy. The index of social disease (ISD) for San Giovanni a Teduccio in 2011 was 21.16%, one of the highest of the entire Italian territory. This demonstrates that the inhabitants were living in a really uncomfortable situation, specifically due to a high unemployment rate, especially affecting uneducated young people. This motivated and engaged the community, as well as the University of Naples Federico II, to undertake bottom-up territorial regeneration and social innovation actions, which are briefly described in the paper. Although the data and statistical analysis presented are far from being exhaustive and unfortunately cannot yet map the results of these actions, they highlight the need for a deep reflection. Hence in the conclusions, we invite to consider an approach which is much more people-oriented and starts from the bottom. In fact, concrete urban regeneration cannot be achieved without their social regeneration. Only real listening to the local community, the prefiguration of possible microactions of territorial regeneration but, above all, the activation of a shared and democratic decision-making process can lead to real territorial development.
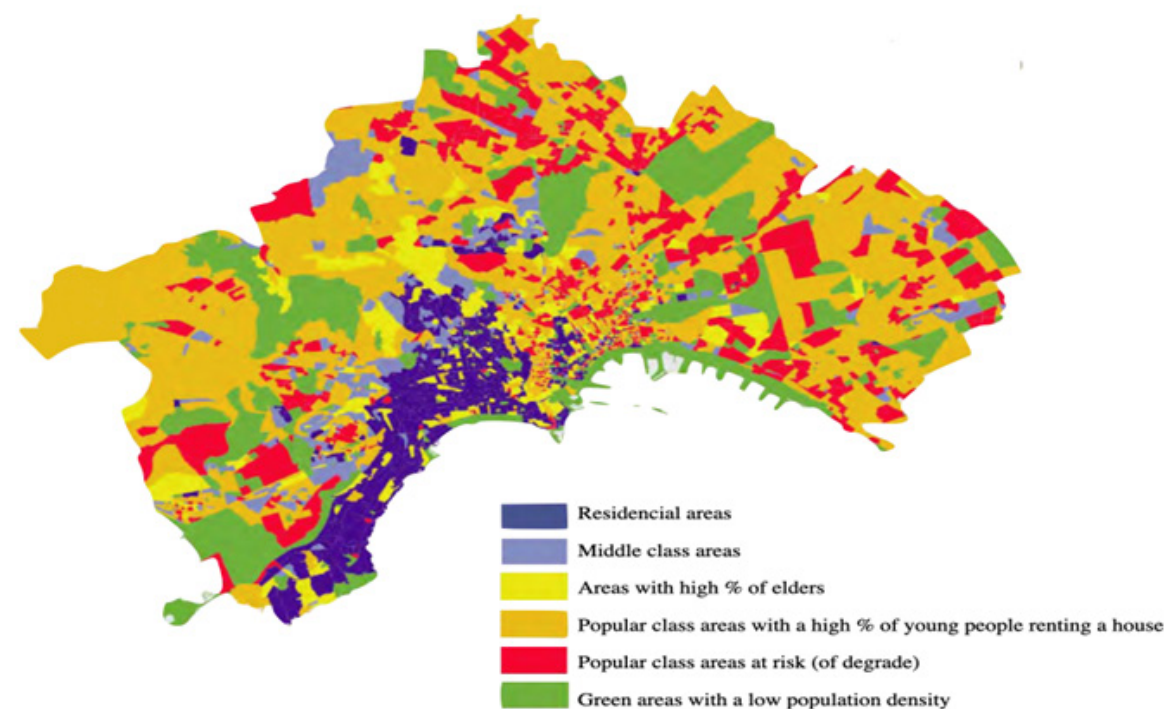
Figure 1:   The area of the metropolitan city of Naples and its degrade status. Source: Comune di Napoli
                  - Servizio Statistica, Anagrafic comunal List 31/12/2016.

1.   INTRODUCTION

The topic

The complex nature of urban poverty has dealt researchers to develop various theories to explain its origin and the mechanisms that favour its production and reproduction in the city. The idea of poverty that has taken hold since 1979 can be referred to a lack of income and, according to this approach, which is the most widespread in Europe, the poverty threshold is identified as a proportion of the national median income, usually between 40 and 60%. Since 2013, however, poverty has been identified with the ability of low-income people to actively participate in society. Urban poverty is a complex phenomenon, whose specific manifestations depend from time to time on the characteristics of the territory, institutions and resident populations. Various studies on permanence in poverty, carried out at a national level in Italy, have shown that it is more frequent for individuals or families to experience transient episodes of poverty at a certain point in their lives rather than permanent poverty. More recently, subjective poverty has also been defined in relation to the share of people who believe they have fewer resources than they would need for the most varied reasons – illness, non self-sufficiency, housing stress, etc. – and which escape objective definitions.

The gap in the literature

Since the eighties, the European Commission has begun to carry out an important information and guidance work for the development of policies to combat poverty, in particular the European Community Household Panel (ECHP) surveys in the period 1994-2001 and the EU-SILC survey starting from 2004 In Italy the Poverty Investigation Commission was established in 1984 at the Presidency of the Council of Ministers which, together with the Italian National Institute of Statistics (ISTAT), will have a fundamental role in relaunching the interest of scholars and the media towards the issue of poverty in Italy. Since 1980, ISTAT has published an annual report on poverty in Italy, which is the main source of information on the phenomenon. The purpose of the article is to define, with the limited data available, a possible set of multifunctional indicators that allow to verify the improvement of poverty in a neighborhood undergoing regeneration. In particular, this paper deals with urban regeneration in the suburbs of Naples, Italy, but from a highly social perspective. Indeed, according to the Italian Recovery and Resilience Plan (PNRR), social inclusion is one of the main actions in the regeneration of urban and rural territories. It is really significant that regeneration is a crucial part in the strategical axis of social inclusion rather than in that of the ecological transition. This highlight the social mission of the regeneration process, that, to be effective has to be both physical and social and to overcome the boundaries of functional sectors. Regeneration needs to offer a integrated and complete vision of the possibilities of intervention at the local level . Urban regeneration is then seen from a completely new perspective, that of the community, aimed at decrease housing discomfort, poverty, social exclusion and disequalities .

Urban regeneration becomes in this way, the PNRR tool for social regeneration. However, this implies that urban regeneration needs to find new "rules and measures" able to take into account the social regeneration of a territory. Hence the list of indicators from the release issued on April 2nd 2021, to reduce human marginalisation and social inequalities, has been integrated with new and more specific indicators that refer to energy efficiency and the total surface area of the intervention in square metres. Towards the end of 1990, there were 3 millions of people in Italy in active condition and within the working-group age without a job . From 2005, the Istituto Nazionale di Statistica has elaborated ways to measure poverty and unemployment. Through these statistical data, in 2018, the newly installed Italian Parliament issued a reform realising that the number of jobless people in absolute poverty conditions raised to 5 millions, corresponding to almost 2 million of families, with peaks in Campania, Calabria, Sardegna and Sicilia.

The research problem

In this paper, as already said, we are particularly interested in the analysis of the metropolitan city of Naples and its social degradation, visualised in Figure 1. This geographical area is very interesting from a urban and social regeneration point of view, both because of the presence of many sites of cultural interests (MANN, Madre, PAN, Porta Capuana), and because of the possibly regeneration interventions in ex-industrial peripheries . In particular, in the East District of Innovation, the active role of a number of associations and organization allowed a deep process of regeneration, a real revolution, often denominated "Sud Innovation", and characterised by participative and people-oriented processes, especially in the most vulnerable zones of the city. The concrete example that we are presenting here is that of the San Giovanni a Teduccio district (Sec.2.1). This choice is motivated by the recent intervention of the University of Naples Federico II, that, together with national and international high-tech companies, has started a transfer of knowledge process in order to progress a civic, social and economical growth. Although the data used in this work is only updated to 2011, and hence they cannot map the progresses that were made thanks to the University project, and as we will stress in Section 4 they need to be complemented with more dynamical and crowd-sourced data, our analysis permits to make a first important picture of the incredibly difficult situation in which the San Giovanni community has lived so far . The main limitations of the data presented here and some possibilities to improve are presented and discussed in the next Section.

The question

It is also crucial to introduce and embrace a new concept of territorial regeneration, operating on multiple dimensions, not only that of the territory but above all of the society. The approach cannot be only placed-based, but must also be people-based, allowing the researchers and stakeholders to gather new data, which although will be much more complex to analyse, will give a much more detailed and complete image of the community that populates a territory . Crowdsourcing, through entirely participated and bottom-up projects that fully involve the community living in the area , is the natural way to achieve this goal.

The aims

A particularly relevant element in this context are social media which enable, for the first time, the study of social phenomena through technology . Shared posts, preferences and opinions on Facebook, comments on Twitter and Instagram images, all record the conduct and ideas of individuals and the community with unprecedented punctuality and precision, producing digital metrics of social phenomena that enable new interpretative and predictive studies.

Creation of new jobs, but also as a function of the

Background of the research

At a time when social challenges are increasingly complex and important, the availability of technological opportunities is increasing and will presumably shift the nature of interventions from labour-intensive to capital-intensive, public resources are decreasing especially in some welfare segments and private capital is increasing, new market opportunities are emerging. Social innovation has been identified as one of the strategic resources that should be deployed by countries and organisations wishing to develop a society in which social needs are met and the quality of life of individuals and communities is improved. If we really want to innovate, we must necessarily look up and use non-traditional tools at an early stage. So-called Big Data is a tool that, in terms of intervention planning, now provides opportunities that were once unthinkable. The systematic use of this information, aimed at analysing the dynamics of our cities or, on a smaller scale, of a neighbourhood and its inhabitants, makes it possible to understand their movements, needs and habits. At the same time, reading this enormous mass of data makes it possible to identify relationships and dependencies between different sets of information, facilitating the understanding of critical issues as well as the creation of virtual scenarios for improving physical reality. Despite the great usefulness of Big Data, resulting from the enormous amount of data acquired and available, today only a small percentage is used for the formulation of city management policies. In fact, the challenge is to use them not only as a means of reading and analysing, but as a planning tool, because they are able to provide the necessary indications to the planner to create a new effective urban model, capable of intercepting and satisfying citizens' needs, calibrating services and infrastructures, thus avoiding useless dysfunctions and bringing renewal and greater quality.

The analysis presented here is entirely based on the use of indicators measuring social inequalities together with other indicators able to describe the social-demographic history of the district. These indicators are not sufficient, by themselves to improve the life conditions. On one side, this is because most of them are tabulated on a national basis and hence the granularity is not enough to describe very specific and extreme cases, such as that of San Giovanni. Moreover, the national census is only carried on every 10 years. The most recent already processed and published data refer to

the 2011 census. Hence, unfortunately, there is no updated information which could describe the intervention from the University (started in 2016). The potential offered by the availability of digital data and information (big data, open data, socio-technical systems) will soon make it possible to experiment with new innovative models and to conceive initiatives, projects and social innovation programs in a new way .

Big data seems to offer the possibility of experimenting with new models and new processes of social innovation, the so-called user-driven innovation, capable of overcoming the approach based on a linear relationship between the supply and demand of social solutions . They do not fight the complexity inherent in the economic and social system, but use it as a resource. Big data therefore enable the creation of new approaches to the social innovation that can be applied in various contexts, such as, for instance that of the smart cities . In conclusion, the use of analytical techniques and technologies based on big data is important to develop social innovation. Not only because it allows the identification of emerging problems that would otherwise be invisible and because it facilitates the creation of effective solutions, potentially very different from those normally employed. But also because it allows a precise and complete measurement of social impact , modulo the definition of new metrics capable of evaluating the positive outcomes of interventions and of transforming them into assets for the financial markets .

Unfortunately, however, the potential that big data has in enhancing social impact is still under-exploited. As a matter of fact, even if we realise the huge importance of big data, these are not yet available for the analysis presented in this paper. However, the paper presents a necessary first step to map and quantify the degradation, poverty and low level of schooling in the San Giovanni district.

2.   MATERIALS AND METHODS

In this session, after having introduced the urban history of the neighborhood we are analyzing (Sect. 2.1), we briefly describe some of the most widely used indices in the literature to quantify and measure social inequalities, the territory's degradation (Sec 2.2) and its socio-demographic conditions (Sec 2.3). These indices will be then reported for case of the San Giovanni a Teduccio and for the entire Neapolitan area.

The international workshop on Urban Regeneration and Sustainable Rehabilitation (RURS) organized last year by the Federico II University with the UPC - Polytechnic University of Barcelona, which will be discussed in more detail in paragraph 3.3, is both part of the process of knowledge of the territory and data collection but also aims to represent a demonstration action of possible regenerative micro-interventions aimed at establishing trust in the community. In fact, the measurement of poverty is a fairly complex technical matter. The methodology for defining the poverty threshold was developed in the early 1960s by M. Orshansky and since then the threshold has only been updated to take inflation into account . For some years now, the spread of absolute poverty has also been estimated in Italy by ISTAT, with a methodology that takes into account not only the characteristics of the family nucleus, but also the area of residence (north, center and southern Italy) and the size of the municipality (large, medium and small). In this sense, reasoning on some international indicators such as the ones we will introduce in the next sections, tends to broaden the reading of poverty beyond the lack of income since the current statistical indicators still appear limited both for really understanding the phenomenon and for the data available.

San Giovanni a Teduccio

San Giovanni a Teduccio is a large district that extends in the eastern area of Naples (Fig. 2) and is part of the 6th Municipality, together with the neighboring districts of Barra and Ponticelli. It occupies a strategic position in the organization of the Neapolitan territory because it acts as a connection between Naples and the centers of the Vesuvian coast. Morphologically, the territory of San Giovanni a Teduccio is flat, with an altitude close to sea level. The area borders the coastline in the stretch that goes from Ponte della Maddalena to Pietrarsa. In the past, the entire area has been populated by the presence of a large number of industries, of which, however, only few are still in business. The internal area is characterized by a growing development of social housing. This creates an incredibly dense and crowed district, that competes with Beijing in terms of population density.

Figure 2:   Geographycal position of San giovanni a Teduccio (red), part of the 6th municipality, , and the other Napolitan districts, numbered from 1 to 10.

However, differently from the Chinese metropolis, the entire district of San Giovanni is in a state of decay and abandonment which has however recently undergone a territorial redevelopment for the establishment of new businesses, as well as a new Campus of the Federico II University of Naples. The University complex of San Giovanni was inaugurated in academic year 2016/17, in the former industrial area of the "Cirio" company, which in the 1960s represented the main economic and social development of the neighbourhood . Today, it hosts part of the Engineering teaching area. The area has potentially become a hub for advanced technological services and many companies have chosen the area (Cisco, Apple Academy, CESMA, Eni, Terna, etc...). Designed to accommodate around 4,000 students, it hasn't been helped by the recent lockdown, so a regeneration of the urban fabric around the university hasn't really started yet.

In particular, the Federico II University participated in the elaboration of the centre of San Giovanni a Teduccio, focussing on the development of infrastructures for mobility and the correlated urban configuration. A general re-development of the entire territory is planned, including that of the recovery of the coast line with a shift of the railway line from the coastal section to the underground urban one, along the main road axis. Furthermore, the construction of the tourist port in Vigliena is also planned, in agreement with the port authority.

Hence, in accordance with the idea of "Civic University" , the Federico II University is trying to contributing to the public good by opening a dialogue with those responsible for local development policies.

Social innovation always implies "democratic governance", i.e. the identification of new forms of political participation, capable of translating the needs of citizens into policies and actions, making the decision-making process as inclusive as possible, also using new technologies . Digital technologies, regeneration and innovation are all themes at the basis of the Prin SOUND project, within which this article is placed.

Indices of social inequalities, poverty and deterioration

In any contemporary city, the crisis of a single neighbourhood is likely to cause a crisis of the entire city . The dynamics that become intertwined within a large area, affect also the individual parts.

At the same time, individual internal fractures can influence a large area as a negative propagation. Urban regeneration as development project for a community, is also an affirmation of "the right on the city": the possibility for all to benefit from the goods constituted by the urban organisation of the territory, as well as to participate in decisions on transformations" , without any distinction between "the city of the rich and that of the poor" .

It is however difficult to intersect the topic of development with that of regeneration. Useful in this sense, may be the Human Development Index (HDI), which is constructed at national level on the basis of three indicators: life duration, the level of education (adult education and enrolment in primary-middle higher education), and the average pro-capite gross domestic product (GDP) . In particular, the HDI, that can take values between 0 and 1, indicates how close each country has come to the following targets:

• Life expectancy up to 85 years, expressed in terms of longevity as measured by life expectancy at birth;

• Access to Education for all. This target is further divided into educational attainment measured by a weighted average of literacy of adults (two-thirds) and elementary-middle-high school enrolment rate (one third),

• Good level of income or in other terms the standard of living, as measured by purchasing power parity expressed in US dollars.

The maximum theoretical value of the Index (HDI = 1) means that the country has achieved all the objectives. Clearly a very low value for this index indicates a high degree of disease in the economical and social life of a country. To measure poverty, the Human Development Report (1997) introduced for the first time a Human Poverty Index (HPI). This index evaluates whether or not individuals within their societies have the necessary opportunities to live long and healthy lives and enjoy a decent standard of living . With this index, the development, in terms of quality, is judged for the first time from the perspective of the poor people, in the sense that the parameters used are those of exclusion rather than inclusion. The 1996 Human Development Report had already attempted something similar, through a particular version of the 'poverty capacity measure'. The HPI takes the same approach but focuses on a broader and more representative range of variability. Rather than poverty in terms of income, the HPI uses indicators of the most basic dimensions of deprivation,

or exclusion: a short life, lack of basic education and lack of access to public and private resources. The first and perhaps most extreme deprivation refers to survival: exposure to death at a relatively low age, which, is quantified specifically as the the percentage of people expected to die before the age of 40. The second dimension refers to knowledge, i.e. exclusion from the world of reading and communication, which is measured by the percentage of adults who are illiterate. Finally, the third aspect refers to the decent standard of living, specifically the set of activities required to receive this standard. This aspect is measured by the combination of three variables: the percentage of people with access to health services, the percentage of people with access to drinking water, and the percentage of malnourished children under the age of five. Obviously these are all macroeconomic data, which are impossible to asses and quantify at the local (sub-regional) level .

At the sub-local level, to analyse and quantify inequality, it is possible to use the the Social Inequality Index (SDI). This index is derived from the national average values (ISTAT,). In particular, it results from the weighted average of the standard deviations of four different quantities:

• the Unemployment Rate (ratio between the population aged 15 and over seeking employment to the workforce of the same age group),

• the Employment Rate (percentage ratio of the population which is employed to the total population of the same age group),

• the Youth Concentration Rate (ratio of the resident population under 25 years old of age to the total population),

• the Schooling Rate (ratio between the population with at least an upper secondary school diploma and the total population aged 25 and over).

Socio-demographic indices

Socio-demographic indexes and quantities are useful to describe the composition of the population or community living in a district, a city or any other specific territory. They are based on data collected with the Geographic Information System (GIS). The most commonly used indicators, surveyed by the Municipality of Naples are:

• Total population, which is then often divided into young (under 20 years old), adults (between 20 and 64 years old, fter referred to as "active" or "working-age" population) and elders (over 65);

• Seniority index: this is the ratio between

the population aged 65 and over and the population aged 14 and below;

• Foreign population index: the number of foreign citizens registered in the registry office of the Municipality;

• Density of households. This index represents the average household size and is calculated by dividing the total number of residents in the household by the total number of registered households;

• Index of non-completion of secondary school: the ratio between the population in the 15-52 age group that has not completed a secondary school degree and the total population in the same age group;

• Social and material vulnerability index: the weighted arithmetic mean of the seven different indicators (normalised values) referring to the dimension of social and material vulnerability: 1) percentage of illiterate adults (25-64 years old); 2) percentage of families with more than 6 members; 3) percentage ratio of mono-parental families with young parent (<35 y.o.), and with adult parent (from 35 to 64) to the total number of families; 5) percentage of families presumably in need of help, because composed by only elders (>65 y.o.) components, with at least one over 80 years old; percentage of the population which is in serious crowding (4 people living in less than 40 sqm., 5 people living in less than 59 sqm., 6 people living in less than 79 sqm.); 6) percentage of young people (15-29 y.o.) outside the job market and from the schooling system; 7) percentage of families in economic difficulties (families with no income);

• Population density per sq. km: the ratio between the total population residing in a given area and the surface area of it;

• Dependency Index: the ratio between the people who are presumably not autonomous for demographic (age) reasons and the people who are assumed to support them with their activity;

• Youth dependency index: indicates the relative burden of very young people on the presumably active population;

• Elder dependency Index: indicates the relative burden of the elders on the presumably active population;

• Active (working-age) population turnover index: proportion of those who are about to leave the working age and those about to enter it.

The last index describe an important phenomenon: new recruits can find a job not only as a function of the expansion of the economy and the

jobs that are made available by those leaving the job market (especially for reasons of age and retirement). When the index turns down, conditions become more difficult as fewer people go out from the active age with respect to the people that enter it. And vice versa: an increasing value for the index shows an improvement in terms of job market. However, we note that this index is subject to strong fluctuations and is therefore highly variable.

3. RESULTS: A PRELIMINARY ANALYSIS OF SAN GIOVANNI

Index of social desease (ISD)

Each 10 years ISTAT makes public the results of the census. In 2017, the City of Naples carried out an analysis of the social desease index (ISD) summarising its values from the census of 2001 and that of 2011 in each of the Napolitan district, to identify variation over a ten-years range. The values for San Giovanni and the entire Naples are summarised in tabular form in Table 1, where we also report the four single indices that are used to compare the ISD also for the entire Italian territory. Although the disease has slightly improved from 2001 to 2011 (both for San Giovanni and the entire Naples, the ISD for San Giovanni is twice as high as that computed for Naples. Moreover, in the ISTAT 2020 report , the district of San Giovanni was placed at the highest level of the index developed for the study of vulnerability (IVSM), together with the areas in the north and the east of the city.

Table 1. Socio-demographic indices for San Giovanni, Naples and the entire Italian territory and social desease index for San Giovanni and Naples. Data published in 2016, comparing the ISTAT census carried out in 2011 with that from 2001. A slight improvement can be seen in time, however the degrade of San Giovanni remains much higher than the Napolitan average. Within the entire Napolitan territory, the unemployment (occupation) rate is already much higher (lower) than that of Italy as a whole. Interestingly, the number of young people is largest in San Giovanni, and lowest in Italy.

District	Year	Unemployment rate	Occupation rate	Young people	Schooling level	ISD
San Giovanni	2001	42.60	21.03	34.56	26.47	22.72
	2011	38.44	24.09	31.60	31.91	21.16
Naples	2001	31.39	29.28	30.98	47.72	12.04
	2011	27.76	31.81	28.03	51.52	11.09
Italy	2001	11.58	42.94	25.42	42.27	
	2011	11.42	45.04	23.97	51.39	

Analysing in more detail the four indexes that make up the IDS presented in the ISTAT 2017 report , also reported in the same table, for San Giovanni we find that in 2011:
•   the unemployment rate is 38.44%, more

than three times higher than the Italian average (11.42%). Both in Italy and in San Giovanni this number is improved in 10 years.
•   the employment rate is consequently much lower than the Italian average (24.09% versus 45.04%),
•   the Youth Concentration Rate is high for San Giovanni a Teduccio (31.6%), compared to the Italian one (23.97%), however, - the Schooling Rate is very low (31.91%), twenty per cent below the Italian average (51.39%).
Hence, the resulting ISD for 2011 is 21.16% for the district of San Giovanni, compared to the average ISD for the entire Neapolitan territory of 11.09% . We note that the SDI index is not computed for the entire country.
We note to the reader that these data show the social situation of the San Giovanni district, the object of analysis in this paper, in 2011, hence before the urban regeneration process started in 2016 with the new Campus of the Federico II University in the ex-Cirio area.

Census and socio-demographic indexes for San Giovanni a Teduccio

The total population by gender and age group for the San Giovanni a Teduccio district, is presented in Table 2, and compared with the entire Neapolitan territory.

Table 2. Population in San Giovanni a Teduccio compared to the entire Napolitan territory (sum of the 10 municipalities). Data from ISTAT 2011.

District	Total	Male	Female	Young (0-19 y.o.)	Adults (20-64 y.o.)	Elders (over 65)
San Giovanni	23839	11305	12534	5886	14024	3929
Napoli	962003	456097	505906	208885	580408	172710

The socio-demographic events in the San Giovanni district, reconstructed through the ISTAT data updated to 2011, were analysed considering the following six indicators: seniority index, dependency index, active population turnover index, social and material vulnerability index, the index of incomplete secondary schooling and the unemployment index. An operational definition of each of them is provided in detail in Section 2.3. The numerical values for the district of San Giovanni a Teduccio and for the entire territory of Naples are listed in Table 3.

Table 3. Socio-demographic indices for San Giovanni and the entire Napolitan territory Data from ISTAT [40].

District	Seniority	Dependency	Active turnover	Vulnerability	Incomplete Schooling	Unemployment
San Giovanni	0.91	52.77	0.86	114.8	17.0	38.4
Napoli	1.14	50.7	1.01	111.2	10.7	27.8

Figure 3 shows the values of the population per gender, age and nationality (first row, logaritmic scale), and of the six indicators under analysis (second and third row), in bar graphs (blue for San Giovanni and green for Naples). An interesting evidence to highlight is the low seniority index of San Giovanni (and all Municipality 6, equal to 61.14%), much lower than the city as a whole (91.13%). Unfortunately, however, the dependency index is much higher in San Giovanni than for the average of all Neapolitan municipalities. This, hence, demonstrates that a large fraction of the population in San Giovanni is in a very young-age group and hence, for demographic reasons (note that no economic argument is made in defining the dependency index) is assumed to be supported by adults. Another highly worrying data is the unemployment percentage, that combined with a high rate of non-completion of secondary schools and an equally high index of social and material vulnerability, fully describes the strong discomfort in the district of San Giovanni a Teduccio.
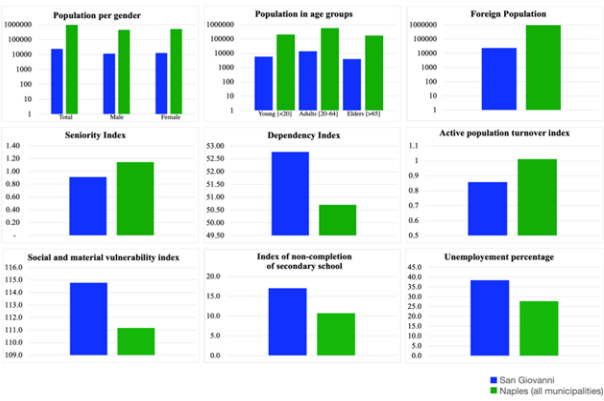

Figure 3:   Bars graphs representing the population and the social-demographic indices described in the main text, for San Giovanni a Teduccio (blue) and Naples (green). *Data from ISTAT 2011.*

The high number of adults with a low level of education is also very significant, especially when considering the high density of the population in San Giovanni (between 12 and 15 thousand inhabitants per square km). A high spatial concentration of groups both economically and socially disadvantaged is present in this district. This confirms a condition which ISTAT defines as 'integrated poverty': a condition of structural poverty with a strong family connotation, handed down from generation to generation and with a strong identi-

ty linked to the residential context.

Current state and projects for possible improvements

The role of urban plannins is central in redefining critical elements of livability in the districts and the city. From 2005, the area has been subject to a Municipal Urban Plan (PUA), which in 2009 became the 'PIAU - Innovative Urban Programme' in 2009. The PIAU has the following main objectives:
•   recovery of the relationship with the sea, through a new network of coastal paths, replacing the currently level and internal crossings;
•   systematisation of public spaces and facilities, thanks to both already existing and new installations;
•   urban reconfiguration of certain nodal areas, in particular the areas affected by the land-sea interchange node;
•   detailed guidelines for private interventions in the residential and productive building fabrics.
The project includes a well thought set of interventions, located along the coast and the railway axis, from Vigliena to Pietrarsa. The lowest boundary consists of the intervention in 'Porto fiorito' and on the coastline, while the upper one coincides with Corso San Giovanni. The subsequent post-earthquake Extraordinary Housing Plan led to the construction of 1600 flats between Barra and San Giovanni, 524 of which were built in the highly recognisable and 'outsized' 3 area of Taverna del Ferro, which contributed not only to occupying the few empty spaces left in the neighbourhood, to draw a new urban geography designed from the accessibility of major road axes, a post-seismic reticulation.
Despite the above described planning strategy and the intervention of the University Federico II, the neighbourhood, also due to the recent pandemic, still does not show measurable signs of regeneration. It rather appears in a almost complet abandonment, and the district's characteristic feature is a building chaos that makes even orientation in these places difficult. Since 1970, after the Cirio industry closed, and up to today, the neighbourhood of San Giovanni a Teduccio a major former industrial area of the city of Naples, has been in a serious state of deterioration. Regeneration is a complex issue but improving the recognisability of places through urban microsurgery is undoubtedly the necessary first step. This has been the goal of the international workshop on Urban Regeneration and Sustainable Rehabilitation (RURS) organised last year by the University Federico II (in Naples) with the UPC - Universidad Polytech

of Barcelona, on 6-8 February 2022, which involved 30 Spanish students. The workshop aimed at developping a project in a fragment of a city, part of the San Giovanni a Teduccio district, as a work of synthesis between town planning, architecture and technology. It defined a path in which places are analysed and identified, ideas are formulated and micro-interventions are designed to improve the urban layout of the area around the new university campus (Figure 4).

In order for regeneration to also become social, a participatory process with the numerous associations that are present in the area must occur, also through the provision of all available data, planning and analysis.

4.   DISCUSSION AND CONCLUSIONS

This paper studied the case of San Giovanni a Teduccio, one of the neighbourhoods in the East side of Naples. According to data elaborated by ISTAT in 2011, this district was among the most degraded and deprived in the Neapolitan territory. This contribution is intended as a starting point to identify social changes, improvements and developments that will be possible thanks to the intervention of a community research empowerment carried out on site by the University of Naples Federico II. The first step was to analyse the so-

called index of social degradation (IDS), calculated as a weighted average of the deviations of the unemployment rate, employment rate, youth concentration rate and schooling rate. This was combined with a census of the population, by gender, age groups and nationality. Looking at 2011 ISTAT data, the IDS for San Giovanni is almost twice as high as that for the entire Naples area (10 municipalities). Moreover, some other population and socio-demographic indexes were then analysed, deducing that:

•   San Giovanni is a densely populated district where almost 40% of the adult age population is unemployed;

•   Social and material vulnerability (a measure of household distress) in the neighbourhood is very high;

•   Schooling is very low and the dependency index is very high, compared to the Neapolitan average; however,

•   The old-age index is lower than the Neapolitan average;

•   The last two points imply a high rate of young people who are illiterate or otherwise poorly schooled.

The analysis presented here is entirely based on the use of indicators measuring social inequalities together with other indicators able to describe the social-demographic history of the district. Clearly, the data and the analysis used in this paper are far from exhaustive. In fact, they are static and dated
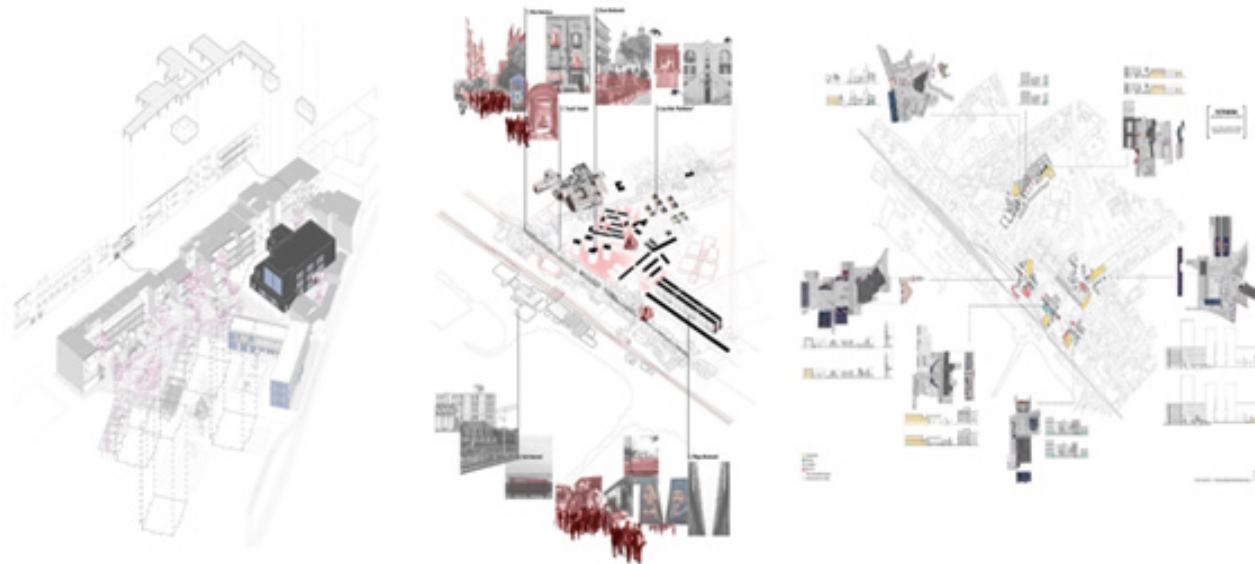
and therefore do not allow for a dynamic and realistic view of the disease and social negative phenomena affecting San Giovanni. Moreover, these indicators are not sufficient, by themselves to improve the life conditions.

In Naples, the most recent research on areas of decay in the Municipality of Naples dates back to 2016. Therefore, one cannot rely on these data to measure the complex and central phenomenon of urban regeneration. In this sense, the recent indicators of urban regeneration that the Italian Government has defined for the PNRR are very interesting. These are measurable indicators through regeneration works of public and private spaces and energy efficiency operations. Only the monitoring of these interventions, in parallel with the analysis of poverty, will make it possible to monitor the real regeneration of this neighborhood on which the Municipality of Naples and the Federico II University are betting. In this sense, the international workshop of Urban Regeneration and Sustainable Rehabilitation (RURS) of 2022 with the reading of public spaces and the state of the buildings and the proposal of micro-projects to improve the urban space offers a method not only of analysis but also of impulse to urban regeneration. The activation in San Giovanni of the first energy and solidarity community in Italy activated by the Fondazione Famiglia di Maria with the involvement of 40 families in the neighborhood in a process to combat energy poverty, is certainly an indicator of positive regeneration . The Italian Real Estate Observatory, with regard to requests for rent and the sale of homes in the districts of Naples, still does not see a recovery in the San Giovanni district in 2023 despite having, together with Barra, the lowest real estate prices in the Municipality of Naples. Certainly the industrial past of this district slows down the regeneration process but the Municipality of Naples is proceeding with the redevelopment of the main residential area "Taverna del Ferro" (with 524 homes) built after the 1980 earthquake but also implementing the Urban Implementation Plan (Pua) of the coast of San Giovanni a Teduccio. In the future, therefore new set of data must be introduced and complemented to the indicators, which are not only based on measurements of a given tabulated phenomenon, but which allow one to draw a comprehensive picture of the ideas, needs, necessities of the people . It would be equally necessary to add other, new data from social media, questionnaires, surveys, all channels in which the engagement and involvement of society and people is more active . Such kind of data are the only ones that would allow us to directly monitor the effect of social innovation programmes and

conduct social experiments. Equally, any valid initiative promoting urban regeneration must consider the territories in the context of their inhabitants with the goal of improving their standard of living. In order to achieve this, the first step is to be able to characterise the real necessities and requests of the population and the community, mainly collecting more dynamical and partecipative datasets, e.g. through the development of crowd-sourcing platforms and initiatives. One could also use are civic empowerment and community engagement platforms, i.e. web platforms where users/citizens can discuss services, voice their problems and, above all, propose innovative solutions. Their purpose is to involve users in a structured process of analysis, for example of a social service, highlighting its merits and shortcomings. In this way, researchers and users can work together on re-designing the territory and its resources, with the aim of improving it and creating new living solutions. Their purpose is to involve users in a structured process of analysis, for example of a social service, highlighting its merits and shortcomings. In this way, researchers and users can work together on re-designing the territory and its resources, with the aim of improving it and creating new living solutions. The usefulness of these tools is evident: on one hand, essential information is obtained to create increasingly competitive services, on the other hand, a new relationship of trust, participation and complicity is established with users. Last but not least, engagement platforms allow the social enterprise to tap into new, external and potentially eccentric ideas, proposals and projects that are valuable to enrich the portfolio of innovative activities. However, without any claim to be exhaustive, these static data confirm that on a social and cultural level, the dichotomy between the city and its suburbs is still incredibly high. This is not the case anymore on a purely territorial level, thanks to new measures on the infrastructures and transport systems, also supported by advances in technology. Suburbs like San Giovanni a Teduccio are still suffering from serious social, cultural and economic difficulties. As demonstrated by the mapping realised during the workshop described in Section 3.3, the incapability of reconverting abandoned spaces, a sub-optimal re-use of spaces, the disorganised presence of small industries, residential complexes, schools, commercial activities, etc, are all elements that demonstrate the situation of high degrade in which the district still lives, which is common to all the East districts in the Neapolitan suburbs. This part of the city is still missing fundamental territorial, social and functional relationship with the centre. The terri-

Figure 4:   Some of the outputs of the workshop [RURS]. Source: international workshop by Coppola E. and Crosas C.

tory is still not seen as a urban public space when the citizens can reinforce their collective identity. Unfortunately, the East side of the Neapolitan territory still looks like a "nobody's land" in which quality of life is really low, as demonstrated in this study. Poverty, a poor educational system, unemployment, as well as illegal building and pollution are all elements very difficult to eradicate.

Considering the suburbs only as negative spaces, far away from the city identity, is absolutely not satisfactory. The indices reported and analysis presented in this paper picture a quite negative situation which can only be resolved with a broader and deeper analysis that takes into account people and their needs. A concrete urban regeneration cannot be carried out without a social regeneration that rethink the territories as places where the population lives and develops. Hence, it is necessary that these same people start projects together with entrepreneurs, researchers, practitioners, and stakeholders. The most important factors are therefore listening, networking, sharing experiences and expertise with the common goals of realising pro-

jects that are able to transform the suburbs into strategical links to the city. It appears clear that the driver of this social and people-based regeneration must be the real necessity of the inhabitants: a lack of a territorial identity, a fragmented space, illegality, unemployment, school dropout and delinquency are still the most evident and crucial signals of degrade of many Italian suburbs.

This urban discomfort can be reduced or fully eliminated through a urban and territorial planning which should constitute the basis of a good territorial governance. A planning that, however, happens from the people and for the people. Participation and sharing must guarantee a high quality in all decisions. Crucially, this is the biggest problem: the lack of a shared and democratic decision process where every single actor can have a say, including citizens. Only in this way a fruitful debate on how to shape and make cities and territories a better place to live and enjoy can start. The reborn must necessarily originate from the bottom, from those who are intentioned in changing things.

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