

Carmelina Bevilacqua
Francesco Calabrò
Lucia Della Spina *Editors*



New Metropolitan Perspectives

Knowledge Dynamics, Innovation-driven
Policies Towards the Territories'
Attractiveness Volume 1



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Lucia Della Spina
Editors

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Editors

Carmelina Bevilacqua
University of Reggio Calabria
Reggio Calabria, Reggio Calabria, Italy

Francesco Calabrò
Mediterranea University of Reggio Calabria
Reggio Calabria, Reggio Calabria, Italy

Lucia Della Spina
Mediterranea University of Reggio Calabria
Reggio Calabria, Reggio Calabria, Italy

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Preface

This volume contains the proceedings for the fourth International “*NEW METROPOLITAN PERSPECTIVES. Knowledge Dynamics and Innovation-driven Policies Towards Urban and Regional Transition*”, scheduled from 26 to 28 May 2020, in Reggio Calabria, Italy.

The Symposium was jointly promoted by LaborEst (Evaluation and Economic Appraisal Lab) and CLUDs (Commercial Local Urban Districts Lab), Laboratories of the PAU Department, *Mediterranea* University of Reggio Calabria, Italy, in partnership with a qualified international network of the academic institution and scientific societies.

The fourth edition of “*NEW METROPOLITAN PERSPECTIVES*”, like the previous ones, aimed to deepen those factors which contribute to increase cities and territories attractiveness, both with theoretical studies and tangible applications.

When the call for papers of New Metropolitan Perspectives was launched in September 2019, no one could imagine that in a few months we would find ourselves suddenly catapulted into a totally unknown future. And the papers sent in January 2020, of course, could not in any way reflect the dynamics caused by the spread of COVID-19, the outlines of which will all be discovered and deepened in the coming years: it is still too early to fully understand the extent of these changes.

Today, we are still dealing with what appears to be a cataclysm of planetary proportions; it will take time to “historicize” events and interpret their profound meaning and long-term impact, through the multilevel observation—through the interpretation of macro-data and the in-depth investigation of the different realities involved—that the scientific community will be able to develop when the health emergency is over. At that point, the scenarios can begin to be configured with scientific rigour, which are beginning to be intuitively delineated in constant events. It will be possible to appreciate the permanent (real and perceived) effects on the daily life of communities, on the organisation of work and logistics chains and in the system of social relations.

At present, we can only hypothesise scenarios, more or less well founded.

The common thread, that linked the different themes from the Symposium in its original conception, was technology, in particular the effects produced on the settlement systems by the relationship between man and technology, in two different aspects: the progressive replacement of man with machines in practically all production processes and the spread of ICT.

The pandemic and the policies and practices put in place to contain the infection have brought this issue to the fore with arrogance. The replacement of physical interactions with “virtual” contacts has used consolidated technologies but has accentuated their pervasiveness, generating impacts of different nature. The next few months will tell us how much of this acceleration will persist in our daily lives and how much it will be a transitory phenomenon.

Permanent changes are conceivable, for example, in the organisation of work, with the adoption of smart working as an ordinary way of carrying out various tasks, also in areas where until a few months ago it seemed a distant future, such as in teaching.

And these changes will probably also affect other areas, just think of the use of culture, in a broad sense, as the many virtual opening initiatives of museums and sites of cultural interest have shown us in this period.

As well as central issues for democratic systems will be those related to the use of big data and their impact on individual freedoms: the ongoing debate on tracking movements and personal preferences is extremely topical.

However, the data that seems to emerge with greater force from the phase we are experiencing is the progressive loss of relevance of the location factor: the pandemic has made even more evident the fall of many barriers to the global dimension of relationships and exchanges. This change brings with it, as a consequence, a change also on the plane of centre–periphery dualism: what is centre and what is periphery, when the two terms no longer refer to accessibility to physical places but, for example, accessibility to goods and services and, ultimately, to knowledge? And how do you measure accessibility if you can no longer measure in metres or hours?

The other phenomenon on which it will be increasingly necessary to reflect in the future is the speed of changes. As already underlined on the occasion of the past edition of the symposium, while society evolves with accelerations impressed by endogenous and exogenous factors (such as the pandemic COVID-19), the physical dimension of space adapts with extended times.

At the dawn of the studies on the impacts of ICT on the city, the “wired city” studied by the research group of Corrado Beguinot was divided into a system of three cities: stone, relationships and experience. To harmonise the development times of the physical city with the “liquid” city of human relations is, after thirty years, still a priority.

So how will our cities and, more generally, the settlement systems on a planetary level record these changes? Will the trend towards population concentration persist in hyper-equipped and congested metropolitan areas or will we see reflux? New perspectives open up towards what are now considered peripheral areas (such as the Inner Areas so dear to our Master Edoardo Mollica), in which perhaps some

organisational processes are more easily managed and there are still values that could be appreciated by future generations.

The ethics of research, in the disciplinary sectors that the Symposium crosses, invites us to feed, with scientific rigour, policies and practices that make the territory more resilient and able to react effectively to events such as the pandemic that we are suffering in recent months: we hope to know the outcomes of these courses in the next editions of the New Metropolitan Perspectives Symposium.

For this edition, meanwhile, approximately 230 papers published allowed us to develop six macro-topics about “*Knowledge Dynamics and Innovation-driven Policies Towards Urban and Regional Transition*” as follows:

- 1 - Inner and marginalized areas local development to re-balance territorial inequalities
- 2 - Knowledge and innovation ecosystem for urban regeneration and resilience
- 3 - Metropolitan cities and territorial dynamics. Rules, governance, economy, society
- 4 - Green buildings, post-carbon city and ecosystem services
- 5 - Infrastructures and spatial information systems
- 6 - Cultural heritage: conservation, enhancement and management

And a Special Section, *Rhegion United Nations 2020–2030*, chaired by our colleague Stefano Aragona.

We are pleased that the International Symposium NMP, thanks to its interdisciplinary character, stimulated growing interests and approvals from the scientific community, at the national and international levels.

We would like to take this opportunity to thank all who have contributed to the success of the third International Symposium “NEW METROPOLITAN PERSPECTIVES. *Knowledge Dynamics and Innovation-driven Policies Towards Urban and Regional Transition*”: authors, keynote speakers, session chairs, referees, the scientific committee and the scientific partners, participants, student volunteers and those ones that with different roles have contributed to the dissemination and the success of the Symposium; a special thank goes to the “Associazione ASTRI”, particularly to Giuseppina Cassalia and Angela Viglianisi, together with Immacolata Lorè, Tiziana Meduri and Alessandro Rugolo, for technical and organisational support activities: without them the Symposium could not have taken place; and, obviously, we would like to thank the academic representatives of the University of Reggio Calabria too: the Rector Prof. Marcello Zimbone, the responsible of internationalisation Prof. Francesco Morabito, the chief of PAU Department Prof. Tommaso Manfredi.

Thank you very much for your support.

Last but not least, we would like to thank Springer for the support in the conference proceedings publication.

Francesco Calabrò
Lucia Della Spina

Cities and Regions Towards Transition

The fourth edition of the New Metropolitan Perspective Symposium took place in a period of global uncertainty that is calling into question the essence of the economic prosperity pursued in the last decades. It is recognised that what is urgently required is a policy shift from a primary push towards ever-increasing productivity and competitiveness goals to one that pursues a “renewed” concept of competitiveness—socially just and environmentally responsible—employing a reformed pan-economic approach. **The continuing and progressive changes due to the systemic impact of shocks and stresses at the global level need a convergence of efforts by all countries.** This is critical to balance the need to maintain economic prosperity generated by globalisation and to mitigate global crisis like climate change and the ongoing COVID-19 pandemic. The scenario that is emerging these days is similar to a post-war reconstruction economy, alongside climate change and the risks associated with it, the emergency of the pandemic has seriously questioned social stability at the urban level and the confluence of institutions in multilevel governance processes. Concurrently, the main question to be addressed can no longer be confined to how cities and regions can compete in a global context, but rather how they can survive in a world that must face the effects of continuous shocks by ensuring socially acceptable living conditions for everyone.

At European level, this need has been stimulating the debate for the revision of policies designed to build a better Europe for its citizens and a “restructuring process” of EU institutions in the light of anti-European, populist and sovereign political movements. These movements together with far-reaching global crises and shocks are threatening the future of EU and the Cohesion Policy grounded on the virtuous principle to reduce disparities by promoting social, economic and territorial cohesion. In response, the European Commission has recently introduced the European Green Deal, a set of policy initiatives to strive for a green transition based on solidarity and fairness. This marks a novel growth strategy that is comprehensive, ambitious and bold, integrating climate, environmental and social protection goals with economic ones. Such a transformative pathway helps set the stage for policy actions in the upcoming post-2020 programming period of the Cohesion

Policy. Arguably, these days the perspective of the EU mission will be redesigned, through new priorities and new tools launched for shaping the Conference on the Future of Europe.

In this context, the debate on how to prepare EU territories and cities to address the challenges of regional and global implications cannot be more relevant. The current development approaches need to be adjusted to formulate a new development pattern. Such a pattern is characterised by a more flexible approach in allocating investment, a more integrated approach to reach the goal of transition development and a more tailored, place-sensitive approach to regional development. It should facilitate a sustainable transition process towards transforming regional and urban socio-economic and technological systems. This process will be driven with an evolutionary approach in which knowledge and innovation dynamics can break path dependency and promote an effective regional diversification. This pattern should be underpinned by an integrated, multiscale and multidimensional approach aimed to enhance the resilience capacity of territories to respond to the various crises and shocks they are exposed to.

To substantiate these arguments, the Symposium was also part of the TREnD (Transition with Resilience for Evolutionary Economic Development) research project funded by the European Union's Horizon 2020 Research and Innovation Programme under the Marie Skłodowska-Curie Actions—RISE 2018. Considering the above-mentioned unparalleled yet controversial complexity while responding to the European call for the green transition, TREnD proposes a new approach in the design process of place-sensitive, innovation-oriented development policies that can facilitate the regional and urban transition to sustainability while reinforcing resilience to shocks induced by transition economies (e.g. post-carbon economy). TREnD's approach is focused on how to strengthen the regional capabilities to trigger, implement and manage transition strategies towards driving "resilience-building" processes. The scope is to combine Transition with Resilience for Evolutionary Development in different territorial contexts towards a reforming process of Cohesion Policy for the next programming period 2021–2027. The TREnD, therefore, seeks to: 1) identify and examine the factors enabling or hindering the transition strategies at a governance standpoint; 2) assess the territorial characteristics critical to enable a resilient-building process; 3) unveil the unexploited potentials for "re-shaping trajectories" disclosed through the windows of local opportunities due to the external shocks cities and regions are continuously exposed to.

TREnD highlights regional diversification seen more as a process of co-creation of solutions and concepts to solve development problems through the enhancement of the resilience capacity of regions, which can be achieved by implementing tailored place-based innovation policies with a transitional approach. Stemming from the current debates on regional diversification together with the emerging role of the city in pursuing local innovation ecosystem, the aim is to explore new development policy configuration within the evolutionary framework to help different territories effectively respond to continuous shocks. It is expected to gain a sound understanding of the triggering mechanisms conducive to frame a more

inclusive S3 process for the post-2020 Cohesion Policy. This new framework, thanks to resilience-based process and transition management, will help define tailored S3 processes more sensitive to different regional contexts and needs. In so doing, it will reinforce innovation diffusion, facilitate diversification and tighten the linkages between advanced and peripheral areas (at regional and sub-regional levels) through more inclusive approaches.

Considering this vision, the Symposium tried to offer possible solutions to sustainable development as defined by the UN Agenda 2030, focusing on the complex and dynamic relationships between human society and technological development, and the latter's socio-economic, political, institutional and environmental impacts on territorial and urban systems. Indeed, investigating the nexus between the ever-changing societal needs and rapid technological development represents a valuable opportunity to achieve this ambitious goal. The desired shift towards a more sustainable knowledge-based economy and society since the beginning of the 2000s, especially in developed countries, is impeded by several challenges. In Europe, the Smart Specialisation Strategy (S3) represents the strong push to boost economic development through knowledge, research and innovation. The current academic and policymakers' debate are questioning its capacity to break down path dependencies and facilitate economic diversification. The difficulties in implementing and doubts about the effectiveness of this ambitious innovation-oriented policy—especially at regional level—suggest the need to revise the post-2020 Cohesion Policy and the approach beyond Regional Smart Specialisation Strategy (RIS3). Among the rising concerns, the controversial effect of innovation concentration on peripheral areas due to the new geography of knowledge is coming to the fore. The surging discontent shows how policymakers are struggling with continuous mutating scenarios characterised by more complex territorial dynamics. The pillar on which the current policy action seems to rest is represented by the potentials underlying knowledge complexity and innovation in reversing negative trends. However, recent studies have pointed out how such complexity is giving rise to inequalities in both core and lagging regions, making peripheral areas a common issue to tackle. More efforts are needed to address different aspects of inequalities connected with the new geography of knowledge. Therefore, a more inclusive and integrated approach is desirable to advance technological innovation while addressing social issues of health, environment, education and social exclusion.

Accordingly, the Symposium stimulated multidisciplinary discussions on the key elements of the debate on a shift in policy design and implementation, including transition management, resilience, diversification and quality of governance to leverage the potentials of peripheral areas and reshape the trajectory of economic growth for more equitable development. It aims to identify a new and balanced developed pattern, casting light on the multiscale and multidimensional analysis of different perspectives, strategies, tools, objectives and impacts of local economic development and innovation processes. Such a pattern needs to be framed within the United Nations 2030 Agenda (TS25) and to reach the Sustainable Development Goals (SDGs).

The sessions have been organised around key elements affecting vertically (multilevel) and horizontally (cross-sectoral and multidisciplinary) the social, economic, institutional, organisational and physical/environmental dimensions of local economic development. The themes of sessions followed the key elements of the debate on a shift in policy design and implementation to drive transition-oriented structural change of regions. This echoes the EU's desirable smart transition that requires an economically prosperous and socially inclusive transition process to promote regional convergence. Sessions TS04T1, TS04T2, TS04T3 and TS04T4 altogether build up the overall theoretical framework of sustainable transitional development, offering insight into knowledge complexity, transition management, resilience, diversification and quality of governance to leverage the potentials of peripheral areas and reshape the trajectory of economic growth for more equitable development.

To achieve a smart transition, it is critical to reinforce the resilience of regions at different territorial scales, especially those expected to be more affected, to respond to the shocks that green and digital transitions are likely to trigger. In this regard, the Symposium undertook a multifaceted and multidimensional conceptualisation of resilience, for which sessions TS01, TS25 and TS26 investigated territorial systems resilience, urban resilience and sustainability. Session TS07 looked into smart and resilient infrastructures, and sessions TS09 and TS23 investigated urban and built environment with sustainability and resilience. Sessions TS02, TS06, TS10 and TS21 pay close attention to territorial and urban regeneration. Urban and territorial regeneration are considered as a useful tool to facilitate territorial and urban resilience-building processes by promoting positive physical transformations and thereby increasing cities' preparedness and response capacity to crises and shocks. Sustainable urban and territorial regeneration need to define new economic and territorial strategies within a period of financial constraints. Therefore, session TS21 casts light on the issue of circular regeneration, while session TS03 conducts a critical review of territorial dynamics and urban growth models.

The value-adding of local assets from the urban–rural perspective offers a chance to define alternative development patterns. In this respect, cultural heritage, as potential local assets, needs to be properly leveraged to drive sustainable local development. The Symposium, therefore, highlighted innovative approaches to heritage management. Session TS19 casted light on the enhancement of cultural heritage in fragile areas; session TS20 presents new management strategies for the value-adding of heritage in inner areas; and session TS22 relates heritage management to climate change, exploring integrated conservation strategies based on traditional and innovative technologies able to help mitigate the negative effects of climate change. The Symposium equally gives insight into the urban transition towards a post-carbon society, a key element useful for the discussions on the new objectives of the post-2020 Cohesion Policy and new strategies and tools. Accordingly, session TS23 investigated an ecosystem services approach to the evaluation of settlement transformations; session TS12 was focused on green building related to post-carbon transition, and session TS30 furthers session TS12 and proposed eco-design-based strategies and approaches.

As in the past editions, this year's Symposium has received generous support from and will see the participation of a high-quality international network of higher academic institutions and scientific societies. Therefore, it will undoubtedly serve as an important occasion for exchanging and disseminating research findings and stimulating a fruitful debate on global challenges among academics and policy-makers. All in all, the Symposium and the contributions to its different sessions contributed to deepening the discussions on a transition-oriented approach—on which the TRENd project is grounded—while offering insights into how to fill the existing gaps.

Carmelina Bevilacqua

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Carmelina Bevilacqua
Francesco Calabrò
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