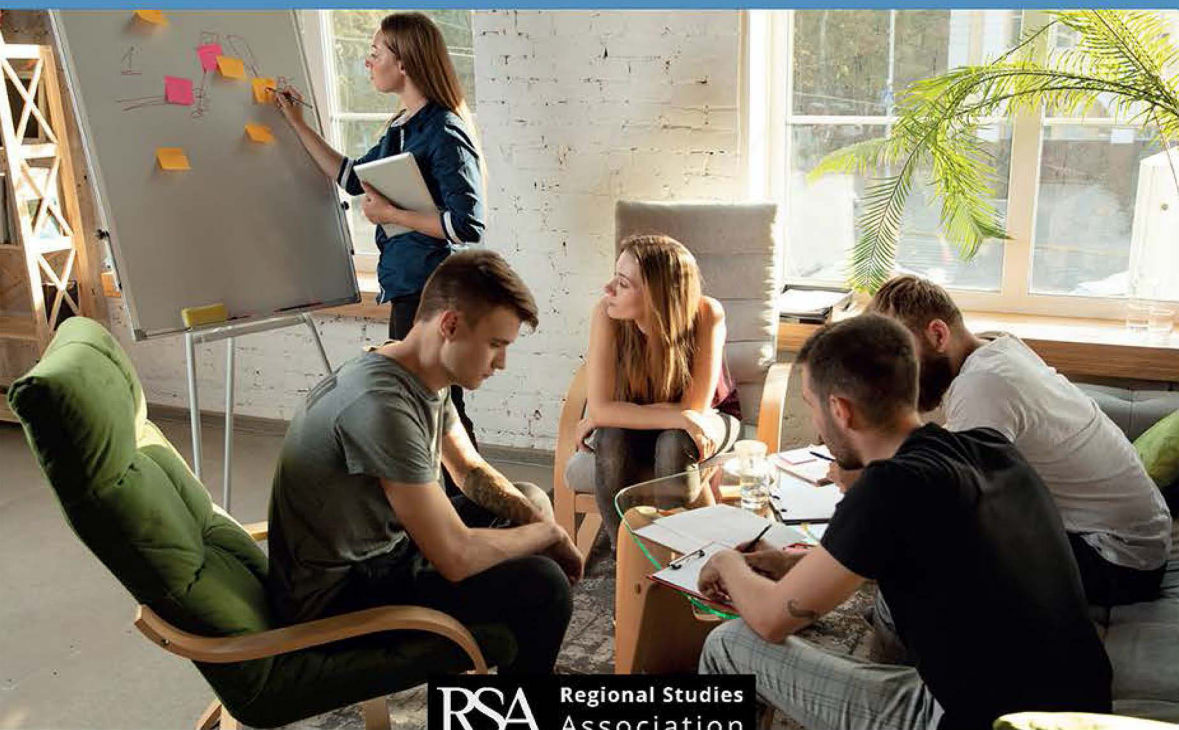# THE COVID-19 PANDEMIC AND THE FUTURE OF WORKING SPACES

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EDITED BY
ILARIA MARIOTTI,
MINA DI MARINO
AND PAVEL BEDNÁŘ

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ROUTLEDGE

The COVID-19 Pandemic and the Future of Working Spaces

This edited volume presents a compendium of emerging and innovative studies on the proliferation of new working spaces (NeWSps), both formal and informal (such as coworking spaces, maker spaces, fab labs, public libraries, and coffee shops), and their role during and following the COVID-19 pandemic in urban and regional development and planning.

This book presents an original, interdisciplinary approach to NeWSps through three features: (i) situating the debate in the context of the COVID-19 pandemic, which has transformed NeWSp business models and the everyday work life of their owners and users; (ii) repositioning and rethinking the debate on NeWSps in the context of socioeconomics and planning and comparing conditions between before and during the COVID-19 pandemic; and (iii) providing new directions for urban and regional development and resilience to the COVID-19 pandemic, considering new ways of working and living.

The 17 chapters are co-authored by both leading international scholars who have studied the proliferation of NeWSps in the last decade and young, talented researchers, resulting in a total of 55 co-authors from different disciplines (48 of whom are currently involved in the COST Action CA18214 'The Geography of New Working Spaces and Impact on the Periphery' 2019–2023: www.new-working-spaces.eu).

Selected comparative studies among several European countries (Western and Eastern Europe) and from the US and Lebanon are presented. The book contributes to the understanding of multi-disciplinary theoretical and practical implications of NeWSps for our society, economy, and urban/regional planning in conditions following the COVID-19 pandemic.

Ilaria Mariotti is an associate professor of urban and regional economics in the Department of Architecture and Urban Studies at the Politecnico di Milano, Italy.

Mina Di Marino is an associate professor in the Department of Urban and Regional Planning, Norwegian University of Life Sciences, Norway.

Pavel Bednář is an assistant professor and head of the Department of Regional Development, Public Sector Administration and Law, Faculty of Management and Economics, Tomas Bata University in Zlín, Czech Republic.

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The COVID-19 Pandemic and the Future of Working Spaces

Edited by Ilaria Mariotti,
Mina Di Marino and Pavel Bednář

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Contents

Figures

Tables

Contributors

Mina Akhavan is currently a postdoctoral research fellow and adjunct professor in the Politecnico di Milano Department of Architecture and Urban Studies (Italy), where she received her PhD in spatial planning and urban development (2015). She has been involved in several national and international research projects. She is a member of the management committee (MC for Italy) and group leader of the European Cost Action 18214 'The Geography of New Working Spaces and the Impact on the Periphery' (2019–2023).

Luca Alfieri is a PhD student in economics and junior research fellow in the School of Economics and Business Administration, University of Tartu, Estonia. He has previously studied in Parma (Italy), Strasbourg (France), Verona (Italy), and Kiel (Germany). His PhD concerns macroeconomic applications using big data and machine learning methods. Moreover, he is interested in international trade, monetary economics, Asian economics, and digitization of the economy.

Priscilla Ananian is a professor of urban planning and urban studies at the University of Quebec in Montreal, Canada, and director of the Living Environment Observatory (OMV). Her academic and practical background has taken her to Brazil, Belgium, and Canada. Her research focuses on new workplaces such as coworking spaces and innovation districts and improving their insertion into urban neighbourhoods through collaborative urban planning with local communities.

Thérèse Bajada is a resident scholar at the Institute for Climate Change and Sustainable Development at the University of Malta. She holds a PhD in transport studies from UCL, England. Before joining academia, she worked for six years with Transport Malta on national and EU-related projects. Her research interests revolve around transport policy.

Mariachiara Barzotto is an associate professor in International Management at the University of Bath School of Management, England. Prior to this, she worked as an assistant professor at Newcastle University Business School and Essex Business School, England. She held a post- doctoral Marie Skłodowska-Curie Research Fellowship at Birmingham Business School,

University of Birmingham, England. She earned her doctorate in Business at the Advanced School of Economics, Ca' Foscari University, Venice, Italy, and was a visiting PhD student and research collaborator at Cass Business School, City, University London, England.

Pavel Bednář is an assistant professor and head of the Department of Regional Development, Public Sector Administration and Law, Faculty of Management and Economics, Tomas Bata University in Zlín, Czech Republic. He is a vice chair in COST Action 18214 'The Geography of New Working Spaces and the Impact on the Periphery' (2019–2023) and a principal investigator in the project INTER-COST – INTER-EXCELLENCE LTC20047 'Regional development and public policy under creative economy: Mapping, knowledge sharing and management of New Working Spaces in the Czech Republic' (2020–2023).

Eva Belvončíková is a senior researcher in the Department of Public Administration and Regional Development at the University of Economics in Bratislava, Slovakia. Her research focuses on the cultural and creative economies, mainly cultural and creative industries and, more recently, coworking spaces.

Étienne Bou Abdo graduated in architecture (Holy Spirit University of Kaslik, Lebanon, 2017). In 2019, he was admitted to the research master's in planning and sustainability at the University of Tours, France. During the programme, he did a research internship within UMR CITERES on the subject of 'nomadic' workers who frequent collaborative new workspaces. He is now pursuing his research within the framework of a PhD in urban planning.

Aleid E. Brouwer is a professor of purposeful entrepreneurship at NHL Stenden University of Applied Sciences in Leeuwarden and also an affiliate in the Department of Spatial Sciences at the University of Groningen, both in the Netherlands. Her research focuses on social entrepreneurship, co-location, startups, and effects of the digital transformation.

Vieri Calogero is a PhD candidate in economics at the University of Siena, Italy, and research fellow at c.MET05 inter-University Centre for Applied Economics in Italy. He is co-founder and former president of Impact Hub Florence, a network of collaborative spaces working on social innovation. He holds a degree in development economics from the University of Florence, Italy, and his research interests focus on development, innovation, and urban economics.

Seyed Hossein Chavoshi serves as associate professor of GIScience in the Department of Geomatics at the Norwegian University of Life Sciences. He received his PhD in GIScience from Ghent University, Belgium. His research interests mainly involve developing spatiotemporal analytics, modelling, and visualization techniques to study and understand movement/

mobility. His research contributes to solving important urban problems where the knowledge and understanding of movement/mobility patterns and trends in a dynamic and complex context are inevitable.

Zuzana Crhová is an assistant professor in the Department of Finance and Accounting, Faculty of Management and Economics, Tomas Bata University in Zlín, Czech Republic. She holds a PhD in finance and her research focuses on knowledge sharing and its impact on the performance of organizations. She has been involved in research projects addressing issues of increasing company performance through human resource management.

Vitalija Danivska is a lecturer at Breda University of Applied Sciences, Netherlands. With a background in real estate economics, she is particularly interested in the real estate business and corporate facilities management. In 2018, she obtained her doctorate with a thesis studying the 'Workplace-as-a-Service' concept. She is currently interested in understanding the changing workplace environment and the management of urban workspace. She is also a co-editor of the 'Transdisciplinary Workplace Research and Management' book series.

Lukáš Danko is an assistant professor and secretary in the Department of Regional Development, Public Sector Administration and Law, Tomas Bata University in Zlín, Czech Republic. With a background in economics, he has a range of interests in cultural and creative industries, clusters, and public policies towards smart governance. His participation in numerous applied research projects is supplemented with expertise from a university-led coworking centre and strategic documents in local development.

Christophe Demazière is a professor in urban planning at the University of Tours, France. He also chaired the French-speaking Association of Planning Schools and Research (2012–2017). His research deals with urban and regional development issues in France and Europe, including small and medium-sized towns, strategic spatial planning, and metropolitan governance. He recently co-edited *The Right to the City: Dialogues in Urban Planning* (with C. Silver and R. Freestone, Routledge 2018) and *La Gouvernance des Métropoles* (with X. Desjardins and O. Sykes, PUCA 2020).

Mina Di Marino is an associate professor in the Department of Urban and Regional Planning, Norwegian University of Life Sciences. She holds a master's degree in architecture and doctorate in urban, regional, and environmental planning from the Politecnico di Milano, Italy. Her research focuses on the multi-locality of living and working as well as ecology in planning. She is the science communications manager of COST Action CA18214 'The Geography of New Working Spaces and the Impact on the Periphery' (2019–2023).

Nicola Francesco Dotti is a senior researcher in economic geography and policy studies at the Vrije Universiteit Brussel, Belgium. He holds a PhD from

the Politecnico di Milano, Italy, and previously worked at the EU Commission and Université Libre de Bruxelles, Belgium. His main research interests include EU Cohesion Policy, regional research policy, policy learning, and European studies. In 2018, he edited a volume entitled *Knowledge, Policymaking and Learning for European Cities and Regions*.

Linda El Sahli, a Lebanese architect, earned her bachelor's degree from Effat University, Jeddah, Saudi Arabia and a master of architecture – built environment from the Politecnico di Milano, Italy. She has more than five years of architectural design experience in residential, commercial, and hospitality projects and is a LEED Green certified architect and AIA associate member.

Anita Fuzi has developed significant academic and professional expertise in coworking spaces since 2013. In her present role at Cushman and Wakefield's Flexible Workspace team, she advises landlords, investors, and operators on the viability of flexible workspace solutions in different markets. She previously worked on innovation, business creation, and education projects with various organizations, and has held researcher positions in Hungary, Austria, and the UK. She holds a PhD in management with a specific focus on coworking spaces from Cardiff Metropolitan University, Wales.

Alessandro Gerosa is a lecturer in marketing at the University of Birmingham; at the time of writing, he was postdoctoral researcher in cultural sociology at the Università di Milano, Italy. His research interests include contemporary consumption patterns and taste, the creative and sharing economies, and digital cultures and methods. He has published articles in *Consumption Markets and Culture*, the *International Journal of Cultural Policy*, and *Space and Culture* and has contributed to internationally edited books.

Bianca Herlo is a researcher and lecturer in design at Berlin University of the Arts, Germany. She is head of the research group 'Inequality and Digital Sovereignty' at the Weizenbaum Institute for the Networked Society, the German Internet Institute. Her research focuses on questions of social and digital participation and the social responsibility of design in the context of the digital transformation.

Ying Hua is an associate professor in the Department of Design and Environmental Analysis at Cornell University, United States, and is director of the Cornell China Center. She leads the International Workplace Studies Program (IWSP) with both research and consulting work. Her research addresses design and management challenges across multiple phases of the project life cycle, with a particular interest in future work and workplaces in the US, Japan, and China. She has recently been experimenting with learning methods in cross-disciplinary and cross-cultural settings for higher education.

Tapio Kaasalainen is a university instructor in renovation at Tampere University School of Architecture, Finland. He completed his doctorate in architecture

in 2021 with a thesis focusing on the adaptation potential of the apartment building stock to support ageing at home. In addition to teaching, he currently conducts research on the circular economy in the built environment and the ability of housing to respond to residents' changing needs.

Judit Kálmán is a research fellow at the Center for Economic and Regional Studies of the Hungarian Academy of Sciences. Her research focuses on the political economy of public economics and finance, the welfare state, public policy evaluation and impact assessments, development policy, social policy, and well-being research.

Ayman Kassem is an interior architect with a PhD. He studied at the Lebanese University and did his doctoral studies at Politecnico di Milano, Italy, where he participated in the laboratory 'The contemporary museum. Architecture, city, interiors, exhibition design'. Since 2019, he has been a professor at the Lebanese University. His fields of interest are performative and performance theories, interiors, and exhibitions. In 2020, he joined the ongoing EU COST Action Project 'The Geography of New Working Spaces and the Impact on the Periphery' (2019–2023).

Milan la Fleur is a master's student in banking and finance at Utrecht University, Netherlands. He holds a bachelor's degree in economics and business economics from the same department. During his bachelor's work he earned a minor in economics and geography, which also provided the topic for his bachelor's thesis.

Bastian Lange is an adjunct professor at the University of Leipzig, Germany. He has taught as a guest professor at Humboldt University Berlin (2011–2012) and the University of Vechta, Germany (2018–2019) and was trained as a human geographer and urban planner. In 2008 he founded the independent research and consultation firm Multiplicities in Berlin. For 15 years, Multiplicities has supported politics, business, and creative scenes in Europe on ways to create sustainable urban regions. Multiplicities advises municipalities, cities, federal states, and EU programmes on the development of innovative places with collaborative participation processes.

Divya Leducq is an associate professor in urban planning at the University of Tours, France, and was delegated a CNRS researcher for 2020–2022. She recently defended her accreditation to supervise research devoted to the 'productive city' and the 'green city', corresponding to the two main aspects of her research. Since 2017, she has led three programmes on coworking spaces and the city for UMR CITERES and results have been published in the *Revue d'économie régionale et urbaine*, *Géographie, économie et société* and *Cybergéo*.

Karolina Małochleb is a PhD student in socioeconomic geography and spatial economy at Jagiellonian University, Kraków, Poland. A graduate in spatial economy and regional development studies with a specialization in the use

of geographic information technology (GIS) in space management, she is also a National Science Centre grantee with PRELUDIUM BIS 1 grant no. 2019/35/O/HS4/00861 'Local impact of collaborative spaces'.

Irene Manzini Ceinar is an urban designer with a background in architecture and urban planning. She studied architecture at the Politecnico di Milano, Italy, and at the Bartlett School of Architecture, UCL, England. She is currently an ESRC-funded PhD student at the Bartlett School. Her research focuses on community-led coworking spaces and their role in local socioeconomic development. She has held teaching positions at the Bartlett School, the Politecnico, and the London South Bank University, England.

Ilaria Mariotti is an associate professor of urban and regional economics in the Department of Architecture and Urban Studies (DAStU) at the Politecnico di Milano, Italy. She achieved a M.Sc. degree in Regional Studies at the University of Reading (UK), a Ph.D in Economic Geography at the University of Groningen (NL), and a Ph.D in Transport Economics at the Università degli Studi di Genova (IT). She is chair of COST Action CA18214 focused on new workspaces and she is the principal investigator for DAStU-Politecnico di Milano of the Horizon 2020-MSCA–ITN-2020 (Marie Skłodowska-Curie Innovative Training Networks) «CORAL» (2021–2024) about collaborative workspaces in rural and peripheral areas.

Jana Matošková is an assistant professor in the Department of Management and Marketing, Faculty of Management and Economics, Tomas Bata University, Zlín, Czech Republic. She is responsible for leading courses dealing with human resource management, managerial skills and methods, and coaching. Her research mainly focuses on studies in human resource management, managerial work, and knowledge sharing by applying qualitative methods.

Grzegorz Micek is an associate professor at the Institute of Geography and Spatial Management at Jagiellonian University, Kraków, Poland. His two main strands of research are the impact of various dimensions of proximity on collaboration and knowledge interactions and miscellaneous forms of influence of large companies and new industries on the local economic environment. He is a member of COST Action 18214 'The Geography of New Working Spaces and the Impact on the Periphery' (2019–2023).

Alessandra Migliore is a PhD candidate at the Politecnico di Milano, Italy. She is working on an interdisciplinary research project within the Department of Architecture, Built Environment, and Construction Engineering and the Department of Management Engineering. Her research focuses on the impact of the COVID-19 pandemic on work locations, workspace design, and worker performance in university settings, with a special interest in socially sustainable requirements. She is also involved in consultation activities within the Real Estate Center (REC) at the Politecnico di Milano.

Bruno Moriset is an associate professor in the Department of Geography and Planning at the University Jean Moulin of Lyon, France. His research focuses on the geographic dimension of information technology and the digital economy and their relation with planning and regional development. He has conducted research on the geography of call centres and data centres, telecommunication networks and planning, teleworking, telecentres, and coworking spaces, and the development of the digital economy in rural areas.

Suvi Nenonen has worked on research related to the workplace since 2005, after defending her doctoral thesis 'Nature of the Workplace for Knowledge Creation' at Helsinki University of Technology, Finland. She is an adjunct professor at the University of Tampere and Turku, Finland. She has also worked at University Properties of Finland Ltd and developed new learning, work, and research environments. She is currently involved in a project on learning environments at the University of Helsinki.

Tiiu Paas is professor in the Faculty of Economics and Business Administration, University of Tartu, Estonia. Her recent research covers topics on the adjustment of people amid increasing uncertainties (e.g. the COVID-19 pandemic) in labour markets and the development of new ways of working. In 2009 she received the Estonian National Science Award in social science for research related to human capital diversity, labour mobility, regional disparities, and spatial interactions.

Carolina Pacchi is an associate professor in urban policies at the Politecnico di Milano, Italy, and coordinates the MSc programme in urban planning and policy design. She has done research on the transformation of urban governance in European cities, forms of local grassroots activism, and the transformation of workspaces and their impacts on territories in Italy and Europe. She has been involved in a number of EU-funded research projects on governance in urban, environmental, and local development policies.

Ivana Pais is full professor in economic sociology at Università Cattolica del Sacro Cuore, Italy. Her research interests focus on the platform economy and digital labour. She is the principal investigator of the SWIRL project (Slash Workers and Industrial ReLations: www.swirlproject.eu/) and the WePlat project (Welfare systems in the age of platforms: drivers of change for users, providers and policy makers). She recently published: D. Stark & I. Pais (2020). 'Algorithmic management in the platform economy', *Sociologica*, 14(3), pp. 47–72.

Sofie Pelsmakers is an associate professor in sustainable housing design at Tampere University, Finland. Trained as an architect with specialty in low-energy housing design and transformations, her research focuses on how these living environments work in reality and over time (spatially, technically, environmentally, and satisfactorily for users). Central to this are current

and anticipated societal and environmental challenges and the resilience of people and living environments to respond and adapt to these changes, now and in the future.

Jenni Poutanen, an architect, is a university instructor in architectural design in the School of Architecture at Tampere University, Finland. Along with her teaching and research activities, she is working on a PhD in learning spaces in higher education and the changing campus environment. With a special interest in user-centric design and the adaptability of facilities, she is currently working on research projects related to changing environments for leisure services, knowledge work, and areas of innovation.

Marco Pütz is a geographer and research group leader at the Swiss Federal Research Institute WSL. He works on urban and regional development, spatial planning, environmental governance, and adaptation to climate change. He teaches at the University of Zurich, Switzerland.

Oliver Rafaj is an assistant professor in the Department of Public Administration and Regional Development at the University of Economics, Bratislava, Slovakia. His research relates to the economic development of cities, especially with the roles of human capital and the business environment. In the field of regional development, he has worked in the private, public, and civil sectors. He has worked on several analyses in the field of international, national, regional, and local strategic planning.

Bernadine Satariano is a senior lecturer in geography. She holds undergraduate and master's degrees in geography from the University of Malta and a PhD in health geography from Durham University, England. Her main area of interest is the importance of place (natural and built) for human health and well-being. Her empirical interests include social determinants of health, health inequalities, children's geographies, therapeutic landscapes, and socioeconomic environments.

Mi Hyun Seong is a master's student on the islands and sustainability track in the Faculty of Spatial Sciences at the University of Groningen, Netherlands. Prior to this, she earned her bachelor's degree in geography at Sangmyung University, Seoul, South Korea. She is interested in digitization and regional development, especially in areas experiencing depopulation.

Anastasia Sinitsyna is a PhD candidate and junior research fellow in the School of Economics and Business Administration and Center for Migration Studies (CMUS) at the University of Tartu, Estonia. Her research interests relate to the labour market integration of migrants and new means of social integration for immigrants. She has a background in statistical analysis and econometrics as primary research methods.

Lenka Smékalová is a senior lecturer in the Department of Regional Development, Public Sector Administration and Law, Faculty of Management and

Economics, Tomas Bata University in Zlín, Czech Republic. Her research focuses on issues of the European Union's Cohesion Policy, new workspaces, project management, and behavioural economics.

Martijn Smit is an assistant professor in economic geography at Utrecht University, Netherlands. He specializes in agglomeration effects and labour markets, including telecommuting and the economic development of peripheral areas.

Chiara Tagliaro is an architect by training. She earned her doctorate with a thesis on key performance indicators for strategic design, management, and use of the workplace. She is a postdoctoral researcher in the Real Estate Center (REC) of the Politecnico di Milano, Italy. She investigates new ways of working and their impacts on people and the built environment with the aim of developing new strategies and innovative technologies and driving workers, organizations, and cities towards a more sustainable future.

Jacques Teller is a professor of urban planning at the University of Liège, Belgium, where he leads the Local Environment Management and Analysis (LEMA) research group. He is a member of the Scientific Council of the Lab Research Environment (Vinci, Paritech) and the Efficacity Research Institute in France. His research typically combines urban governance issues with modelling of urbanization and densification dynamics, addressing the impacts of urbanization on energy consumption, heritage management, housing provision, and demand for transport.

Elisabete Tomaz is an integrated researcher at DINÂMIA'CET_ISCTE, Centre for Socioeconomic and Territorial Studies, Portugal. She currently collaborates in several local, national, and European projects on creativity, culture, and innovation in planning and development. She has also been a guest professor in urban studies and delivered lectures in other courses. She holds a PhD in sociology from the School of Sociology and Public Policy at ISCTE. She is a management committee member of COST Action CA18214 'The Geography of New Working Spaces and the Impact on the Periphery' (2019–2023).

Hans Westlund is a professor in urban and regional studies at the KTH Royal Institute of Technology, Stockholm, Sweden, and professor in entrepreneurship at Jönköping University, Jönköping, Sweden. He is also a fellow of the Western Regional Science Association and has been visiting professor at Tokyo University, the Agroparistech in Paris, and the Chinese Academy of Science, Beijing. His book *In the Post-Urban World* (with Tigran Haas) was appointed Routledge Book of the Year 2018. Since 2019, he has been a member of the Swedish Prime Minister's National Innovation Council.

Yasmine Willi is a human geographer who works at the Swiss Federal Institute for Forest, Snow and Landscape Research WSL. Her research focuses on regional governance and regional development processes, policy design and implementation, and public decision-making processes. Her work has

recently focused on the potential of sufficiency policies to advance sustainable transformations in rural regions of Switzerland.

Yaoyi Zhou is an assistant professor of interior design in the School of Architecture and Design at Virginia Tech, United States. His research interests focus on emerging design concepts and impacts on building occupants' social interaction and other behavioural outcomes. His research has been published in periodicals such as the *Journal of Facilities Management*, *Journal of Corporate Real Estate*, *Facilities*, and *Cornell Real Estate Review*. He also serves as a board member of the Transdisciplinary Workplace Research (TWR) network.

Acknowledgements

Foreword

This volume emerged from a shared intellectual effort in understanding the phenomenon of new workspaces. The term 'new workspaces' encompasses a wide range of places that enable working in a shared environment such as coworking spaces but also hackerspaces and makerspaces for independent and self-employed workers, remotely working employees or small businesses. The COST-Action researcher network 'The Geography of New Working Spaces and the Impact on the Periphery (CA18214)' brings together scholars from across Europe but also beyond who are interested in interrogating the changes in the socio-spatial organization of work from different disciplinary backgrounds. For the past three years the network has stimulated scholarly discussions, encouraged and coordinated mutual research projects, and facilitated the wider publication of this scholarship.

The aim of this volume is to explore, understand, and explain the specific consequences of the COVID-19 pandemic on new workspaces and discusses their role in urban and regional development and planning. It presents original, theoretically informed empirical research from Europe, Lebanon, and the US and different geographic contexts with a particular focus on new workspaces in various 'peripheries'. The COVID-19 pandemic has hit new workspaces at the very heart because they thrive on the benefits of physical proximity and the potentialities of serendipitous social contact. While many spaces were able to adapt to new hygienic rules and social distancing measures and could continue their operation, many spaces had to suspend their business temporarily due to enforced closures or even close because of the significant drop in membership and additional sources of income from events. The volume offers an in-depth view on new workspaces during the pandemic, and discusses the immediate and long-term effects and how it transforms the demography, geography, and spatiality of new workspaces.

An outcome of the COVID-19 pandemic is how it changes the social norm of working in an office for many professional and managerial workers. The sudden move towards home-based workstyles for millions of employees worldwide will shift the times and spaces of work for many more workers in the long term, not just freelancers and self-employed ones. That shift contains an enormous potential for the emergence of new workspaces, and it will have lasting

effects on the spatial patterns of work in cities and the office model in inner cities. People will increasingly conduct their work from multiple places – home, coffee shops, new workspaces at which some of these spaces will be organized as places of work while others need to be constantly adapted – creating 'plural workscapes' (Felstead et al., 2005) rather than from one workstation in an office building. The pandemic thus creates a similar situation for the development of new workspaces to that created by the financial and economic crisis of 2007 and 2008 and its aftermath. When many workers lost their employment due to the crisis, they turned towards independent types of work to organize and manage their own labour in an uncertain economic environment. This accelerated the growth of new workspaces in cities as those catered to the specific social and spatial needs of the rising numbers of independent workers.

Yet the pandemic also acts as a magnifying glass in augmenting existing problems in new workspaces and research gaps in the existing scholarship. For example, the question whether new workspaces (re-)produce social and economic inequalities has not been addressed much so far. Yet it becomes more crucial as we see a wider differentiation and commercialization of new workspaces when access to the resourcefulness of these shared work environments has become important for many independent and remote workers.

Also, how geographies are formative and generative of differentiated transformations in the spatial organization of work and in workplaces is little researched and explained. Here, this timely edited collection brings together geographically sensitive research which recognizes differentiated spatial developments and advances the need for multi-scalar perspectives. The COVID-19 pandemic has intensified the ongoing spread of new workspaces into wider geographies outside dense inner-city areas and towards suburban areas, small and medium-sized cities, and rural areas. This challenges the prevailing understanding of new workspaces as an urban phenomenon and opens new research questions on, for example, workplace mobility for an increasing number of workers and new workspaces as a driver of more equal spatial development of regions.

<div style="text-align: right">

Janet Merkel
Berlin, December 2021
University of Kassel, TU Berlin

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Reference

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Introduction

The effects of the COVID-19 pandemic on the future of working spaces

Ilaria Mariotti, Mina Di Marino, and Pavel Bednář

In the last decade, several disciplines have explored new forms of workspaces and practices, including urban and regional economics, management, economic geography, human geography, urban and regional planning, architecture, and real estate. The studies have tackled this growing phenomenon from various perspectives (e.g., corporate real estate, public and private organizations and local governance of cities, and urban and regional development). More recently, the COVID-19 pandemic has changed our working habits, perhaps irreversibly. Florida et al. (2021) stated that the fear instilled by the pandemic has affected where people live, work, travel, and commute. Social distancing and hygiene restrictions have affected (i) work lifestyles worldwide; (ii) the geography of work; (iii) new models of workspaces; and (iv) a variety of remote working practices.

Since the beginning of the COVID-19 pandemic, around 40% of workers have teleworked full-time (Eurofund, 2020). More recent data from the Joint Research Centre stated that about 25% of employees are engaged in sectors where teleworking is possible (IT and communication, knowledge-intensive business services, education, real estate, arts, and recreation). Before COVID-19, this was only 15% (European Commission, 2020), although there were several local differences in Europe. In Finland, Sweden, and the Netherlands, around 30% of employees worked remotely from home (permanently or at least sometimes). This was between 15% and 25% in France, Belgium, and Portugal, whereas 10% of workers teleworked in the rest of Europe (European Commission, 2020).

New ways of working and physical environment can significantly affect productivity, quality of life, worker well-being, and innovation activities. Nevertheless, this cultural shift and adaptation to the home work environment have been considered among the main implications of teleworking, in addition to isolation and difficulty managing work-life balance (European Commission, 2020). Thus, under the pandemic, remote workers and coworkers are using new working spaces and practices. 'COVID-19 may signify the possibility of a spatial trend that may be accelerating in the post-COVID-19 era' (Hu, 2020, p. 280).

Indeed, when home (first place) is not the most efficient place for work, and offices (second place) cannot host workers because of social distancing

measures, the shared 'third place' (Oldenburg, 1999) seems to represent a valuable alternative for teleworkers (Mariotti et al., 2021c; Di Marino & Lapintie, 2015) since it offers 1) access to adequate technology; 2) reduced risks of isolation; 3) reduced costs for employees (for example, by providing access to less expensive habitats or reducing commuting costs); 4) improved job satisfaction and well-being; 5) enhanced work-life balance; 6) better knowledge production and sharing (Bednář & Danko, 2020); and 7) possible increased profits for coworkers (Šviráková et al., 2015).

Prior to the COVID-19 pandemic, there was a proliferation of new working spaces (NeWSp) such as (i) collaborative and creative working spaces (coworking spaces and smart work centres); (ii) makerspaces and other technical spaces (fab labs, open workshops); (iii) other new working spaces (hackerspaces, living labs, and corporate labs); and (iv) coffee shops and public libraries that provide formal and informal spaces for working. In this context, NeWSps have changed their business models to be more attractive for teleworkers (Mariotti et al., 2021a, Di Marino & Lapintie, 2018; Šviráková et al., 2015). In addition to private investors (such as large and medium-small corporations and independent operators), municipalities and other public organizations (e.g., public libraries, universities, and schools) have supported the opening of several coworking spaces (CS) and/or hybrid spaces to accommodate employees and students (see the cases in Italy studied in Mariotti et al., 2021b, and Finland in Di Marino et al., 2021; Manzini Ceinar & Mariotti, 2021).

Furthermore, during the pandemic, the geography of work has changed as large cities have experienced the 'exit' of knowledge workers, who mainly started working from first or second homes (privately owned or long-term rented summer cottages, rural homes, and apartments in peripheral and rural areas), thereby reducing daily commuting to the second or third place in city centres. Recent studies underline that suburban or semi-peripheral areas gained workers and will probably maintain their attractiveness in the medium-long term (Florida et al., 2021; Mariotti et al., 2021a, 2021c), since remote working has become more recognized as a feasible practice advocated by both employees and employers.

Aim of the book

This book aims to provide a new understanding of the following issues and possible interdependencies: (i) the social and economic consequences of lockdowns on NeWSp business models, as well as possible development strategies for NeWSps during and after the COVID-19 pandemic; (ii) new socio-spatial relationships and strategies for communication and interaction, such as knowledge exchange, sharing and production, training and mediation of workers to sustain or increase economic performance and competitiveness during and after the COVID-19 pandemic; (iii) rethinking social relationships to sustain NeWSp values, practices, and engagement activities, as well as the work-life balance of NeWSp users; (iv) economic impacts of the COVID-19 pandemic on all sectors of the economy,

and specifically on remote workers and teleworkers, as well as the renewed role that NeWSps can play in this scenario; (v) rethinking the role of NeWSps in urban and regional development and planning, including peripheries and rural areas during and after COVID-19, thus fostering the socioeconomic growth of these areas to decrease geographical inequality and regional and urban divergence, as well as reducing commuting towards urban areas, thereby decreasing congestion and air pollution; (vi) the development of new types of NeWSps, also publicly funded, to meet the needs of remote workers/teleworkers and their companies; and (vii) framing tailored policy tools and governance actions for NeWSps to face expected upcoming phases of the pandemic, and, if necessary, also a new wave of flu viruses.

There is scant literature on these aspects among interdisciplinary debate. There is, however, a need for new/extended knowledge of the effects of COVID-19 on NeWSps and scenarios in the post-pandemic period. The current debate overwhelmingly favours the core and metropolitan areas. A more comprehensive understanding of the phenomenon covering their counterparts – peripheral and rural areas – is still missing, along with the broader framework of new ways of working.

Description of the book

The future of NeWSps is examined through an original and interdisciplinary approach, exploring their role during and following the COVID-19 pandemic in urban and regional development and planning. This is done by (i) situating debate in the context of the COVID-19 pandemic, which has transformed NeWSp business models and the everyday work life of owners and users (enforced physical and social distancing and limited movement and mobility); (ii) repositioning and rethinking the debate on NeWSps in the context of socioeconomics and planning, and comparing conditions before and during the COVID-19 pandemic; (iii) providing new directions for urban and regional development and resilience to the COVID-19 pandemic and its economic impacts, considering new ways of (remote) working and living; (iv) drawing on the expertise of both leading international scholars who have studies the proliferation of NeWSps in the last decade, and young, talented researchers, resulting in a total of 55 co-authors (48 of whom are currently involved in the COST Action CA18214);[1] (v) presenting selected comparative case studies among several countries involved in CA18214, i.e. European countries – showing their diversity based on their horizontal position in Europe (core and peripheral countries) and previous economic development trajectory (Western and Eastern Europe), reflecting a hierarchical spatial diffusion of innovations – and also case studies in the US and Lebanon; and (vi) providing and combining multiple theoretical and analytical approaches to NeWSps from different disciplines (such as urban and regional economics; management; economic geography; human geography; urban, regional, and environmental planning; architecture; and real estate).

This edited volume contributes to the understanding of theoretical and practical implications of NeWSps for societies, economies, and urban and regional planning in conditions following the COVID-19 pandemic, considering the growth and use of emerging workplaces and people's new work lives. Within this context, this book presents a compendium of emerging innovative studies on the proliferation of NeWSps.

The book is organized into three parts. 'Part 1: Socioeconomic Impacts of the COVID-19 Pandemic on NeWSps and New Development Scenarios' provides a critical overview of the social and economic impacts of lockdowns on NeWSps (business models, industries, investments, management, and real-estate market), along with possible scenarios of NeWSp development strategies amid the COVID-19 pandemic. In addition, it includes studies on both new strategies for collaboration, communication, and interaction (including ICT, Web 2.0 media, and hybrid spaces), and new knowledge exchange, sharing and production, and worker training and mediation to sustain or increase the economic performance and competitiveness of NeWSp under the new pandemic conditions. 'Part 2: The Role of NeWSps in Urban and Regional Development and the Policy and Planning Debate During the COVID-19 Pandemic' aims to explore how knowledge about NeWSps and their production is developed, shared, and used in policies, urban and regional development, and planning. Cities and regions, including both dispersed urban and rural areas, have been affected by the COVID-19 pandemic. NeWSps can become important components of the work structure and part of the new network of workspaces in cities and regions. Respecting such preconditions, NeWSps can represent both temporary or permanent alternatives to traditional offices and home offices by responding to different people's habits with various work contracts (more or less flexible). Hence, there is a call for further research on the adaptation of NeWSps (including the various actors, stakeholders, communities, and users) to current and post-pandemic conditions and related planning practices and policy effects in urban and regional development. 'Part 3: NeWSps and the Work Lives of Coworkers and Remote Workers Under the COVID-19 Pandemic' focuses on the conceptualization and development of NeWSp and their role in satisfying the need for remote working and workers (such as gender and family issues), before and during the COVID-19 pandemic. This part aims to explore (i) how people have had to adjust to remote working environments (what they are, how they are arranged); (ii) the strengths and challenges that users have experienced (e.g., ways of socializing, meeting, and commuting); and (iii) the main implications of new trends for achieving work-life balance. The cases present empirical data from surveys and interviews with NeWSp users and managers. The studies explore the challenges and opportunities NeWSp remote workers and remote working environments are experiencing during the COVID-19 pandemic.

An overview of the topics covered in each part is presented in the introductions to Parts 1 (p. 7), 2 (p. 81), and 3 (p. 149).

Note

1 www.new-working-spaces.eu

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Part 1

Socioeconomic impacts of the COVID–19 pandemic on new working spaces and future development scenarios

Pavel Bednář, Mina Di Marino, and Ilaria Mariotti

Part 1 discusses the social and economic impacts of the COVID-19 pandemic on NeWSps, specifically on their business models, management, and related real-estate market. The chapters in this part examine issues in managing NeWSps and pose several research questions for future development strategies due to the COVID-19 pandemic. The studies in this section encompass prospective models of coworker collaboration, communication, knowledge sharing and production, training, and mediation for successful longevity on the market in new and unusual pandemic conditions (Mariotti et al., 2021). The chapters contribute to understanding interdependencies between socioeconomic structure and communities before and during the COVID-19 pandemic in multiple socio-spatial hierarchies – urban and regional peripheries, managers, and coworkers. The empirical studies in Part 1 offer geographical variety, from specific cases to a comparative perspective in the space-time continuum.

Chapter 1, by Alessandro Gerosa and Irene Manzini Ceinar, reveals how the NeWSp phenomenon was discussed by its players and stakeholders during the COVID-19 pandemic in 2020. The authors identify three phases of their discussion of NeWSps in the given period. The chapter presents a typology and the frequency of online communication regarding NeWSp topics. The results highlight the changes in the frequency of topics in online communication, with the first phase dominated by business and finance, the second phase turning to the COVID-19 pandemic itself, and the third phase featuring acceptance of the pandemic as a new reality, with discussion dominated by the issues of new business models for NeWSp operations in relation to remote working.

In Chapter 2, Lukáš Danko, Pavel Bednář, Ilaria Mariotti, and Oliver Rafaj highlight strategies that NeWSp managers have developed and implemented to support knowledge sharing during the COVID-19 pandemic. They make a unique comparison of such strategies before and during the pandemic using panel data from NeWSps interviewed among the selected EU countries. The

results stress the key role of NeWSp managers in implementing newly developed tools for knowledge sharing for the resilience of NeWSps during the COVID-19 pandemic, such as gamification and hybrid forms of sharing to sustain and enhance knowledge exchange among coworkers and collaborative communities. However, several limitations to such hybrid forms have appeared in relation to corporate employees at NeWSps.

In Chapter 3, Grzegorz Micek, Pavel Bednář, Oliver Rafaj, Eva Belvončíková, Tiiu Paas, Luca Alfieri, Karolina Małochleb, and Jana Matošková analyze activities of independently run NeWSps. These are the most vulnerable to leaving the NeWSp market due to COVID-19 pandemic measures because of their limited financial resources for enhancing their economic resilience to such unexpected events. Discussing the changes in NeWSp internal-personal, external-personal, and virtual activities in a space-time comparative perspective of Central European and Baltic capitals, the authors highlight differences in strategies for NeWSp activities, employing both quantitative and qualitative approaches. The differences are shown by both forced national restrictions during the COVID-19 pandemic in 2020 and early 2021 and predominant types of activities before the COVID-19 pandemic.

Chapter 4, by Linda El Sahli, Mina Akhavan, and Ayman Kassem, contributes to the issue of coworking spaces (CSs) in countries not only tackling COVID-19 outbreaks, but simultaneously dealing with political instability and anthropogenic disasters in a diverse multicultural environment such as the capital of Lebanon. Interviews conducted in March 2020 and 2021 reveal immediate and long-term consequences and challenges for NeWSp business models due to the COVID-19 pandemic combined with the anthropogenic disaster. This has resulted in ad hoc lease contracts for locally embedded coworkers and medium- or long-term contracts for foreign-led non-government organizations (NGOs) due to the continuous 'dollarization' of the local economy.

Chapter 5, by Chiara Tagliaro, Yaoyi Zhou, and Ying Hua, opens a discussion on relationships between for-profit and non-profit NeWSps and communities in the different spatially hierarchical levels in peripheral small and medium-sized cities affected by the COVID-19 pandemic. A small university city in the US is selected as a case study to document and summarize the relationships for future research. The chapter suggests the relational matrix between time and levels of resilience in the different spatially hierarchical levels of interactions between NeWSps and the community.

In sum, Part 1 advocates an idea of the transition from the predominant role of face-to-face contact to online or hybrid strategies to build internal and external community ties to maintain the sustainability of NeWSps and their presence on the market. Such NeWSp communication strategies and the flexibility of their business models during the waves of pandemic restrictions provide evidence of the strong resilience of NeWSps to certain adverse external effects with limited public subsidies. This part therefore reflects on the changes to NeWSps in various related socioeconomic hierarchies and the role of NeWSps as emerging collaboration platforms in shaping prospective

scenarios of urban development and knowledge production in different places, becoming a driver of the change.

Reference

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1 New working spaces and COVID-19

Analyzing the debate through Twitter

Alessandro Gerosa and Irene Manzini Ceinar

Introduction

Coworking spaces are a relatively new phenomenon reflecting a broader change in the contemporary economy from predominantly traditional offices to a more fluid way of working based on networks and collaborations, wherein competitiveness and digitalization are key factors for the market. In 2015, Gandini stated that the coworking phenomenon in the context of the knowledge labour market is expected to become 'the new model of work in the context of the collaborative and sharing economy' (Gandini, 2015).

Nowadays social media, and new communication systems in general, are shaping our society (Valentine & Skelton, 2008) and broader working culture. Therefore, it is important to consider 'online reality' and subjective perception through social networks while investigating social science issues. New technologies and social networks are tied to new working spaces, and coworking spaces specifically (hereafter CSs). Indeed in 2020, COVID-19 twisted both the work culture and spatial perception in general, including the work environment (Kuebart & Stabler, 2020; Brinks & Ibert, 2020; Florida et al., 2021).

The relationship between CSs and COVID-19 has been examined by several scholars, as illustrated in the next section of this chapter. However, beyond some international surveys such as the *Deskmag* survey and the *coworker.com* survey, there is limited knowledge about users' perception and subjectivity regarding coworking in 2020.

This chapter seeks to fill this gap by analyzing the social debate on CSs in 2020 by looking at how coworking managers, coworkers, and other stakeholders (i.e. members of the media, researchers, etc.) discuss these topics on Twitter. The study employs digital ethnography, analyzing social media posts on Twitter, a platform in which influential actors and stakeholders play an important role in setting cultural agendas and informal norms through their online discussions and posts (Chadwick, 2013; Neuman et al., 2014; Hemsley et al., 2020). Users use hashtags (Bruns & Burgess, 2011; Small, 2011) or provide topical context (Golder & Huberman, 2006; Marwick & Boyd, 2011), so the analysis of hashtags, keywords, and their mutual interactions unveils how cultural meaning is shaped (and reshaped) within social media (Blaszka et al., 2012; Cunha et al., 2011; Cui et al., 2012).

The main research question guiding the analysis is (1) *How did people perceive and debate the CSs situation during the COVID-19 pandemic and express it via Twitter?*

To address the main question, we defined two sub-questions aimed at disentangling the topic, which are (1a) *What are the main trends that CSs experienced in 2020, based on the existing literature, due to COVID-19 restrictions?* and (1b) *Is the 'web perception' overlapping with the real dynamics occurring in CSs during 2020?*

Based on these research questions, this chapter is organized into three main parts. The introduction is followed by a section devoted to a close investigation of the existing literature on CSs in 2020. The second section illustrates the method used to analyze the 'web perception' of CSs through Twitter and specialized magazines. In the third section, the main findings gathered from the digital analysis are presented with a focus on the main topics of the debate and their development over time. Lastly, the conclusion discusses the results of the overlap between the literature review and a digital analysis based on an ethnographic method; this is also done in comparative terms.

Trends experienced by coworking spaces in 2020

Among the different types of open workspaces worldwide, CSs (which represent one of the most well-known and predominant types) are flourishing and their number has grown significantly worldwide, from approximately 14 spaces in 2007 (Orel & Bennis, 2021) to 8,900 in 2015, to approximately 11,790 spaces worldwide by 2017 (GCUC & Emergent Research, 2017). Over 26,000 were predicted by the end of 2020 (Statista.com, 2020; Manzini Ceinar & Mariotti, 2021), with a forecast 2.6 million members (Deskmag, 2019). However, those numbers must be adjusted and resized due to the COVID-19 pandemic, which severely affected the coworking economy. Indeed, in 2020, the impact of COVID-19 transformed the work culture and also the spatial perception of the work environment, accelerating processes and dynamics that were already in place before COVID-19 (Avdikos & Merkel, 2020; Manzini Ceinar et al., 2021).

Social distancing, together with the uncomfortable feeling of being in indoor spaces, has changed how people work and perceive their surrounding work environment, raising the need to reshape individuals' work methods (Hu, 2020; Manzini Ceinar & Mariotti, 2021) and working spaces. This perspective turns an emergency into an opportunity to accelerate and advance innovative work dynamics, where companies have more flexibility to choose between the 'hybrid model' and 'Virtual First' (Kosner, 2020; Hu, 2020).

Since March 2020, the relationship between CSs and COVID-19 has been examined by several scholars discussing mainly the following: (i) the taxonomy of CSs (Orel & Bennis, 2021); (ii) new forms of working modalities and urban spatial transformation (Manzini Ceinar et al., 2021); (iii) the use of CSs in 2020, along with how users experienced those spaces (Manzini Ceinar & Mariotti, 2021); (iv) work-life balance and new business models of CSs (Mariotti et al., 2021b); and (v) travel behaviour and preferred location (Mariotti et al., 2021a).

The existing literature reflects different trends and perspectives about CSs depending on the different phases of the pandemic. Phase I coincides with the lockdown phase experienced by most countries worldwide between March and June 2020, phase II corresponds to summer 2020, while phase III corresponds to fall 2020.

In phase I of the COVID-19 pandemic, the literature reported negative hopes about CSs. Surveys and reports highlighted concerns regarding open-plan offices that would now require huge dimensions to allow social distancing and greater investment of effort and resources to institute enhanced cleaning practices for daily sanitization (Coworker.com, 2020; European SocialWorkplaces survey, 2020). Additionally, scholars raised concerns about teleworking from a fixed location (e.g. CSs) and 'less-trip chaining' (de Abreu e Silva & Melo, 2018). In terms of location, it was hypothesized that coworking would decline and multi-location strategies increase (JLL Research Report, 2020; Manzini Ceinar et al., 2021). This was supported by the work-from-home transition during phase I and the lockdown, which, occurring over just three weeks, affected several companies worldwide which explored 'dual-hub solutions' and 'back-up office strategies' to relocate employees to more convenient locations.

However, positive aspects also emerged towards the end of phase I. A JLL study in May 2020 forecast that traditional office environments would continue to evolve and lose importance in favour of flexible workspaces such as CSs due to the opportunity to choose more efficient and flexible ways of working. Moreover, despite the benefits of metropolitan areas in terms of transport accessibility and urbanization economies (Florida, 2002), embracing new widespread work practices would be a good strategy to revamp suburban areas (Manzini Ceinar & Mariotti, 2021), reduce commuting, and downsize the capacity of companies (Hrehovà et al., 2021). This has been followed by other emerging trends, such as the use of public CSs in urban areas to de-densify public services such as primary schools and public administration offices (Mariotti et al., 2021b).

The recent Coworking Europe Survey (Deskmag, 2021) reveals that due to the pandemic, CSs lost on average one fifth of their leasable desk supplies compared to the first three months of 2020. Their capacity fell sharply, particularly in major urban areas. Overall, membership numbers at the end of 2020 were about a quarter lower than at the beginning of 2020.

In terms of use, the number of daily users on weekdays declined significantly since the beginning of the pandemic. In January 2020, 60% of members in Europe used their CS daily. By October–November, the number had dropped to 40% (Deskmag, 2021). Moreover, before the pandemic, individual members choosing and paying for CSs themselves were less likely to use them every day than members whose companies opted for a CS. Today, the latter attend their CS less frequently and presumably work more at home (Momoli & Pliakogianni, 2021). Overall, it should be noted that the average contractual occupancy rate for all CSs remained stable compared to the beginning of 2020. In January 2020, it was around 100%, as it was at the end of 2020.

Perceiving coworking spaces in 2020: methods

Since the beginning of the pandemic, the vast amount of information on CSs was also shared by companies, users, and trade magazines (i.e. *Coworking Insights* or *Coworker Global*) on social media, influencing the general view of CSs. To analyze this debate, this study relies on digital methods and digital ethnography in particular. Digital ethnography is a method inspired by the digital methods approach (Rogers, 2013) that aims to 'map the practises through which Internet users and digital device structure social formations around a focal object' (Caliandro, 2018). The focus of this chapter is the debate around CSs conducted online, considered 'meta-fieldwork', i.e. a temporary informational artefact resulting from the act of 'following' a keyword or topic (Airoldi, 2018).

This method can be adapted to various online spaces, including social networks (Caliandro & Gandini, 2016; Semenzin & Bainotti, 2020; Bainotti et al., 2020). The choice of the platform(s) is not casual or neutral. The researcher must always 'follow the medium' (Rogers, 2013). Every platform has its own digital and technological infrastructure, leading to specific modes of production and organization of the data and meta-data. The digital ethnographer needs to choose the most suitable platform based on the object of analysis. In terms of CSs, several authors have investigated those spaces in relation to social media, such as Twitter (see Table 1.1).

Table 1.1 Studies analyzing coworking spaces and social media.

Authors	*Topic*	*Methodology*
Hemsley et al., 2020	Intersection between new working spaces, social media, and physical mobility of users.	Data collected from Twitter's streaming API using an open-source tool kit.
Uda, 2021	Users' experience of CSs during COVID-19.	Online text data from Twitter and a content analysis using NVivo software.
Manfredini & Saloriani, 2021	Physical and digital proximity of both new working spaces and their users.	Social network analysis with Gephi using DMI-TCAT software and geo-localizing the followers of 11 cases studies.
Reuschke et al., 2021	Locating creativity in the city using Twitter data.	Location analysis of tweets from creatives. Use of geodatabase of 'Points-of-Interest' and Census of Population residence and workplace locations to match tweets with types of places.
De Falco et al., 2021	Users' perception of COVID-19 in the Italian context.	Social network analysis of Twitter data combined with geo-location.

Source: Authors' elaboration.

For location patterns specifically, Reuschke et al. (2021) used Twitter together with census data to locate creative economies in urban contexts, while Manfredini and Soloriani related the physical proximity of new working spaces to the digital proximity of their users, relying on both DMI-TCAT and Twitter to extract information. A recent publication by Uda (2021) investigated users' experience of CSs during COVID-19, extracting the online text data from Twitter and conducting a content analysis.

Based on the existing literature and the experimental nature of this study, Twitter emerged as the social network best suited to studying the online debate around a certain topic among members of connected communities of professionals. For data collection, this study used the Twitter API v2 for academic research. Indeed, in 2020 Twitter inaugurated a special product track for academic researchers that allows access to the full Twitter archive for approved, non-commercial projects. The API v2 was accessed through the search tweets Python library (Gonzales et al., 2020), querying for all tweets containing the words 'coworking' or 'co-working' posted from 1 January 2020 to 31 January 2021. This query led to collection of the initial dataset consisting of 359,302 tweets. The next step was to select only tweets written in English that had received at least one like and one retweet. This strategy was followed to ensure language consistency and that even voices with the minimum recognition would be analyzed, excluding as well at least some potential noise produced by bots. The resulting final dataset contained 39,070 tweets. Data analysis, which combined qualitative and quantitative approaches, was carried out using R, and the data visualization relied on RAWGraphs 2.0 (Mauri et al., 2017).

Findings: Twitter debate on coworking spaces in 2020

Before delving into the most significant empirical results, it is useful to observe some descriptive features of our debate. The distribution of the tweets over time does not highlight any unexpected gaps or peaks. In general, the first trimester (January, February, March 2020) had the highest number of tweets, with February – when the debate on COVID-19 related to CSs was still nearly absent – as the month with the most tweets (4,366). Instead, the months with the lowest number of tweets on CSs (below 2,600) were April, May, November, and December 2020 and January 2021.

An analysis of the most prolific authors tweeting on the topic was also useful for insights into who was animating the debate. This may therefore be considered an indirect proxy of the quality of the debate using digital methods techniques. A rich and varied set of voices contributed to the debate. The fifteen most prolific users published a total of 3,982 tweets, equal to 10.2% of the entire dataset. The most prolific user shared 773 tweets, while the fifteenth user shared 113, showing no disproportionate influence on the dataset.

A qualitative inspection of the profiles of this user subset revealed a diverse set of voices. They include 2 websites of CS-specialized news, 4 communities or organizers of specialized conferences on CSs, 3 platforms or websites providing

services to CSs, 3 CSs, 1 business space, 1 incubator, and 1 professional. Thus, the range of entities mirrors the most relevant players in the coworking scenario. Additionally, they represent important players: 10 out of 15 users have more than 1,000 followers, and the top three have, respectively, 9,110, 6,521, and 9,694 followers. Only the fourteenth most prolific user appears to be an outlier with 39 followers, being a new specialized information website. To analyze the debate, we used the metadata directly provided by Twitter API v2 and context annotations. Although Twitter does not release precise information about the methods used for the inquiry, simply stating that 'annotations are inferred based on the Tweet text and result in domain and/or entity labels' (developer.twitter. com, 2021), it has the typical features of a supervised machine-learning classification of topics (Kotsiantis, 2007). Such models analyze and classify the content of a string of text from among a set of topics predetermined by the researcher through machine learning techniques, training the algorithm to distinguish and classify the text into the correct topics.

Thus, to analyze the debate in the Twitter sphere, we considered all the topics − 'entities' in Twitter jargon − with a frequency higher than 400. To gain more analytical depth, a second level of entities associated with the first was also included.

In fact, every tweet may have more than one entity attributed to it. By linking the first-level topic with second-level topics, it is possible to obtain a more detailed outline of the topics debated in the dataset. Of the dataset, 18,113 tweets were not classified by the algorithm because they were not attributable to an entity. From the classification analysis of other tweets, a series of thematic debate categories emerge.

The first topic is 'business and finance', which appears as the most discussed (5,270 tweets). The most frequent sub-topic by far is 'startups' (2,107), followed by 'personal finance' (647), 'entrepreneurship' (647), 'technology' (373), and 'small business' (322). The predominance of business and finance is hardly a surprise. However, it is significant that the most frequent sub-topic is startups, which can also be paired with the less frequent (although similar) sub-topic of small business. This confirms that the potential role of firms as CS customers gained a lot of relevance in the 2020 debate.

The second most frequent topic can be identified in a series of entities related to the pandemics and its effects. The most prominent is 'COVID-19', which was identified in 3,199 tweets. Most (2,488) do not have a second, related sub-topic; the only exceptions are the 482 tweets also related to business and finance. COVID-19 is followed by 'remote working' (3,114 tweets), confirming its relevance in relation to CSs in 2020 in the professional debate. The direct link between remote working and the pandemic is confirmed by the fact that a large portion of tweets (2,557) are also associated with the COVID-19 topic. Lastly, the sub-topic of the 'future of work' can also be ascribed to this overall theme, with 755 tweets.

The third topic consists of 'drinks' (1,553) and 'food' (761). Upon more thorough inspection, they mark both the relevance of community and social

features of coworking spaces and the growing relevance of hybrid workspaces, i.e. cafés, pubs, and 'third spaces' in general that also present themselves as new (co)working spaces.

These three topics are followed by a set of topics related to the debate on CSs but of minor relevance for our discussion: 'technology', 'home and family' (which confirms the dimension of domestic work during the pandemic), 'services' (related to social networks in particular), and 'travel'.

To further interpret the topics, we analyzed the most frequent hashtags in the dataset by comparing the most frequent ones in the whole dataset and in the three most relevant entities. The hashtags are shown in Table 1.2. For the analysis, hashtags with a very close meaning or wording were unified. For each column, the first 20 hashtags are reported and the hashtags that are unique to an entity are highlighted in bold.

Looking at the overall frequency, #startups and #remoteworking, which can also be associated with the #flexibleworkpace hashtag, emerge as the most relevant hashtags in the debate, confirming the importance of these trends. Another relevant trend is the growth of office spaces within CSs, which is demonstrated by the fact that #officespace appears as much as #workspace. The #futureofwork hashtag is relevant both in the overall list and in the 'business and finance' and 'remote working' topics, confirming how the debate in these two fields keeps a close eye on future scenarios. The frequency of #realestate and #cre (acronym for corporate real estate) confirms the interest that transformations involving startups and office spaces within coworking spaces has for these economic sectors.

Looking at the individual entities, it is interesting that beyond the sub-topics mentioned above, the business and finance sector shows relatively little attention for the world of freelancers, confirming that the focus of the debate possibly overshadowed traditional CS customers. The COVID-19 topic features many specific hashtags related more prominently to the pandemic that do not appear elsewhere. In the remote working topic, the #digitalnomads hashtag appears which is absent elsewhere.

Up to this point, the analysis focused on the contents of the debate in the Twitter sphere. However, to inspect the debate in relation to the pandemic, a diachronic analysis was critical for looking at the single entities in their development over time. Figure 1.1 reports the development of the topics by month, while Figure 1.2 shows the most frequent topics by trimester. Their combined analysis highlights the birth and development of individual topics as well as their salience during the different phases.

Figure 1.1 shows that the most significant results regard the 'remote working' and 'future of work' topics. The former seems completely absent from the debate on CSs before March, the latter before June. They enter the debate and immediately acquire greater relevance, remote working specifically. This is in line with the scientific literature analyzed in the previous section, highlighting that the debate on location factors, working from home, and multi-location strategies emerged during the phase I lockdown early in 2020.

Table 1.2 Most frequent hashtags for main entities.

total dataset		business		covid19		remote working	
hashtag	frequency	hashtag	frequency	hashtag	frequency	hashtag	frequency
#startup[s]	3180	#startup[s]	1908	#covid[_][19] [coronavirus]	1013	#remotework[ing]	1524
#remotework[ing]	2338	#entrepreneur[s]	1128	#flex[iblework]space	233	#w[ork][ing]f[rom]h[ome]	1083
#workspace	1972	#business	615	#startup[s]	189	#covid[19][coronavirus]	425
#entrepreneur	1948	#workspace	470	#workspace	151	#flex[iblework]space	297
#flex[iblework] space	1894	#officespace	446	#officespace	136	#futureofwork	230
#officespace	1861	#realestate	444	#stay[safe][home]	127	#entrepreneur[s]	204
#covid[_][19] [coronavirus]	1766	#futureofwork	441	#business	121	#digitalnomad	187
#business	1598	#flex[iblework] space	425	#cre	104	#business	168
#office	1586	#office	412	#office	104	#homeoffice	153
#futureofwork	1578	#smallbusiness	338	#entrepreneur[s]	100	#workspace	152
#community	1515	#community	334	#realestate	90	#startup[s]	148
#w[ork][ing]f[rom] h[ome]	1407	#freelancer[s]	293	#socialdistancing	90	#office	143
#cowork	1301	#entrepreneurship	280	#community	86	#officespace	143
#workplace	806	#workplace	247	#workingfromhome	76	#freelancer[s]	109
#realestate	756	#innovation	213	#workplace	73	#remoteoffice	93
#cre	670	#technology	204	#lockdown	69	#remotejobs	92
#smallbusiness	665	#cre	196	#work	52	#remoteworker	91
#digitalnomad	587	#virtualoffice	193	#pandemic	51	#community	86
#work	577	#tech	192	#coworkinglife	44	#workplace	84
#virtualoffice	551	#work	160	#coworkingcommunity	42	#flexibleworking	83

Source: Authors' elaboration.
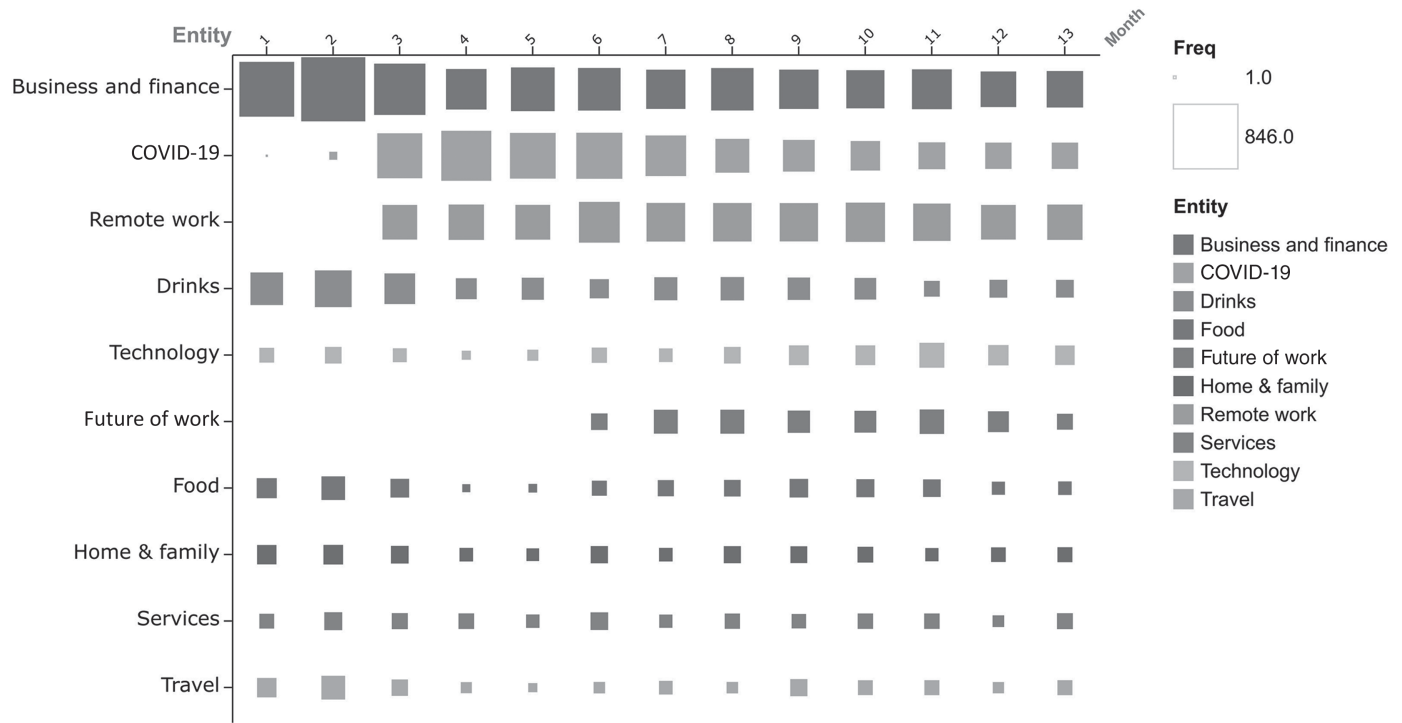
Figure 1.1 Topics by month.

Source: Authors' elaboration.
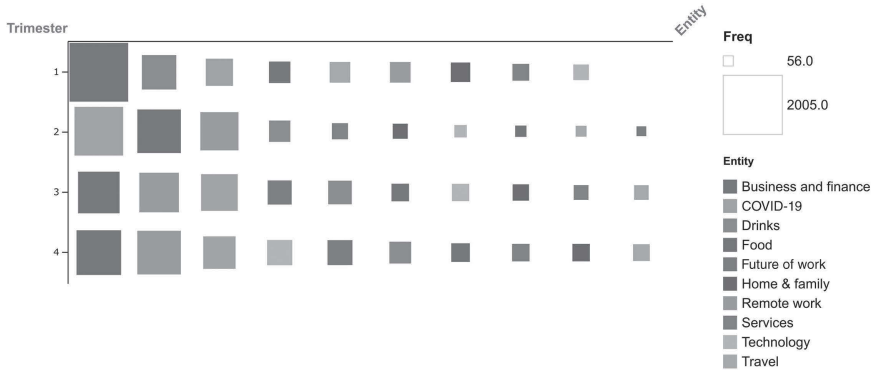
Figure 1.2 Most frequent topics by trimester.
Source: Authors' elaboration.

Remote working started to be debated in correspondence with phase I of the COVID-19 pandemic in March, while the reason for the rise of the future of work topic in June is less straightforward. One hypothesis, which should nevertheless be corroborated by other data, relates to the substantial drop in new COVID-19 cases in most European countries between the end of May and the beginning of June. This could have fostered development of the debate beyond present matters (COVID-19 and remote working) towards speculation on the future of the sector.

Figure 1.2 instead focuses on the predominance of the topics in the debate. The first trimester provides a glimpse of the structure of the debate before the pandemic. Excluding the COVID-19 theme which surged in March, business and finance is by far the first topic, followed by drinks, food, and travel. The surge of the pandemic in Western countries caused a sharp renewal of this topical hierarchy in the debate. In the second trimester, COVID-19 became the most debated topic, followed by business (whose relevance is reduced), and remote working. Traveling almost disappears, while drinks and food also lose importance. The third and fourth trimesters show a more settled context under the 'new normal'. After the phase I lockdown measures in most Western countries, the debate directly regarding COVID-19 and lockdown measures progressively loses relevance. The debate shifts towards other topics regarding the future of CSs: business and remote working topics become the most discussed (nearly equal in importance) and the future of work gains relevance, together with technology (particularly in the fourth trimester). This process aligns with the numbers and scientific literature. In fact, remote working in the fourth trimester was embraced by most CS users. In October, November, and December 2020, the number of members in Europe attending their CS dropped to 40% compared to January 2020 (Deskmag, 2021). Moreover, new

remote working modes for both companies (Hrehovà et al., 2021) and free-lancers (Manzini Ceinar et al., 2021) emerged.

Conclusions

This chapter summarizes the main topics of the debate on the coworking environment during the COVID-19 pandemic and its development during different phases through a literature review and digital ethnography of the debate on Twitter.

From an empirical point of view, the results from the literature review and digital ethnography are consistent and suggest that after the first trimester of 2020 (January, February, and March; see Graph 2), when the debate focused on the direct impact of the COVID-19 pandemic on CSs and the possibility of an abrupt crisis in the entire ecosystem, this risk seemed less and less concrete over time. Interestingly, this is in line with data on the average contractual occupancy rate, which remained stable. In phase II, the debate rapidly shifted to the opportunities for CSs that opened due to the pandemic given the spread of remote working and the role that CSs could play in the future of work. From this point of view, the COVID-19 pandemic can be seen as a blueprint for accelerating the shift of the work culture towards a more flexible way of working. This is due to the fact that what was previously considered an exception could potentially become the new normal, even though large companies such as Google are more likely to bring employees back to the office (Kelly, 2021).

From a methodological point of view, this chapter contributes to the existing literature by advancing a novel framework that could be explored further. It highlights how the data gathered through digital methods can potentially enhance and enrich the framework deriving from the review of the scientific literature, creating synergies and strengthening the accuracy of the analysis.

Furthermore, this chapter opened a discussion about the use of data collected from social media in qualitative research complementary to traditional sources such as official data, reports, censuses, etc. The positive aspect of this method is the enormous amount of data that is constantly available, although one limitation is that data is subjective and cannot be checked in terms of reliability. In addition, some restrictions raised by Twitter highlight the fact that results based on a social media dataset need to be evaluated carefully (Manfredini & Saloriani, 2021).

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2 Changes in knowledge strategies under the COVID-19 pandemic

A tale of European coworking spaces

Lukáš Danko, Pavel Bednář, Ilaria Mariotti, and Oliver Rafaj

Introduction

Knowledge is generally considered a resource for organizations to gain a competitive advantage in their development and strategy for remaining on the market. Organizations usually aim to preserve and use tacit knowledge based on experience, insight, and understanding (Gascoigne & Thornton, 2014). Tacit knowledge is more difficult to transfer than explicit knowledge, which is more formal and codified. Knowledge transfer therefore plays a vital role, primarily in coworking spaces (henceforth CSs) and similar organizations that have a higher fluctuation of coworkers and members. Specifically, its function is enhanced with the rise of remote working when physical interaction is limited. To progress with this transfer, organizations create a knowledge-sharing culture that encourages mutual interaction in communities. The process of knowledge sharing differs from one organization to another. One common feature of such sharing, though, is combining experience and understanding of personal knowledge and supporting the efficient distribution of knowledge in CSs, primarily for increased productivity (Salis & Williams, 2010). Nevertheless, knowledge-sharing strategies depend on an organizational culture and knowledge management strategies that are rapidly changing in CSs.

Currently, knowledge strategies are shifting due to the COVID-19 pandemic, which has pushed organizations into systemic changes to meet social distancing, physical isolation, and workplace restrictions (Ceinar & Mariotti, 2021; Mariotti et al., 2021). These changes call on knowledge management to cope with the pandemic, creating favourable conditions for knowledge management in workspaces such as CSs, which have limited options for maintaining knowledge-intensive environments (Ahmed et al., 2020).

Within this context, the present chapter addresses a research gap by exploring whether and how the collaborative communities represented by CSs tried to maintain viable knowledge strategies even during the COVID-19 pandemic. This goal is achieved through an analysis of selected European CSs practicing knowledge sharing and R&D activities. The methodology consists of semi-structured interviews with CSs managers in two time periods: 2017 and 2021. We first conducted 19 in-depth interviews in selected countries

(Austria, Czech Republic, Denmark, Estonia, Finland, Germany, and Slovakia) in 2017, the results of which were published in Bednář and Danko (2020). Seven out of 19 CSs managers were subsequently interviewed based on their availability in 2021. The second round of interviews focused on interaction strategies during the COVID-19 pandemic, looking explicitly at knowledge-sharing practices. The interviews were coded and categorized as input for grounded theory to conceptualize knowledge strategies in CSs. Fulfilling the aim of the chapter, we find answers to the research questions regarding changes between pre-pandemic and pandemic mechanisms to maintain viable knowledge strategies:

RQ1: Which changes in approaches to knowledge strategies have emerged in CSs coping with COVID-19 pandemic measures?

RQ2: Have the principles of collaborative communities been reinvented to maintain viable knowledge strategies and if so, how?

In sum, the rationale of the research is to first stress the differences and similarities in knowledge strategies that CS managers have developed and implemented regularly during the pandemic. The second objective is to show how the managers have reinvented practices to keep collaborative communities and knowledge transfer viable in the (post-) COVID-19 world. We recognize that these strategies may be unique based on the size and structure of CSs, following their intrinsic flexibility and knowledge-intensive interactions.

The chapter is structured as follows. The introduction is followed by an overview of CSs and their communities before and during the COVID-19 pandemic, focusing on the role achieved by virtual communication to face the pandemic. Section 3 describes the data and methods used to explore the changes in knowledge strategies adopted during the COVID-19 pandemic. The results of the interviews are described in Section 4, and answers to the research questions are provided. The final section discusses the main results, benefits, and limitations of the study and proposes further research.

Literature review

CSs are flexible, membership-based workplaces charging monthly/daily rent through which individuals gain the right to enter and work in the space and participate in the social and professional community. Every CS member performs separately, being assigned to a desk or office space that occupies a physical space shared with other regular or temporary users (Raffaele & Connell, 2016). The CS model of shared workspace has gained popularity among different groups of professionals for its provision of affordable office space and its ability to establish a community of freelancers and small firms (Ceinar et al., 2021). It builds specific work behaviour – 'working-alone-together' – as conceptualized

by Spinuzzi (2012). CS communities typically create social and spatial proximity between freelancers and small firms, while the work behaviour reflects their time-space coexistence. Such proximity usually grows into social interactions through joint activities. Frequent interactions can create a collaborative setting among coworkers, even though their economic activities and expertise might differ through community management initiatives (Dandoy, 2021). Coworkers' mutual trust and shared values enhanced by social interactions are essential for CS communities to avoid or mitigate an over-competitive environment. Such values were summarized by Kwiatkowski and Buczynski (2011, p. 19), who identified the following: (i) collaboration (the willingness to cooperate with others to create shared values); (ii) community (intangible benefits, shared purpose); (iii) sustainability; (iv) openness (free sharing of ideas, information, and people); (v) accessibility (financial and physical access, diversity). If adequately developed, such values can serve as the basis for a profitable business model that may intensify personal and business relationships, along with a high level of autonomy that serves innovations and creativity (Bouncken et al., 2018). Independent, innovative activities are attributed to collaborative communities as identified by Adler et al. (2008), who advocate community as the organization of enabling interdependence.

Furthermore, Adler et al. (2008) state that collaborative communities reflect interdependent and interactive social features and collegiality. Accordingly, the CS concept creates and sustains interactions in the place and community and enhances social relationships above all (traditional office space). In their analysis of the role of proximity in CSs in Italy, Mariotti and Akhavan (2020) found that the sense of community is founded on social proximity (trust, friendship, and collaboration) and institutional proximity (sharing the same lifestyle, political ideas). Moreover, community members share notions of collective identity and may exploit a 'community spirit' of understanding and belonging (Rovai, 2002). Davies and Tollervey (2013) stated that each coworker can learn from others through simultaneous observations and social interaction, educational or training activities (explicit knowledge transfer), and social activities (tacit knowledge transfer) offered by an organization. Thus, CSs as collaborative communities means managing knowledge assets to connect not only social, but also organizational and cognitive proximities. Knowledge assets in collaborative communities indicate competencies essential for preserving, sharing, and reusing knowledge strategies (Bolisani & Bratianu, 2017). Links between the CS model and knowledge strategies are reflected in recognizing knowledge as a strategic asset of collaborative communities and their knowledge sharing.

The COVID-19 pandemic and its impact on CSs: confinement vs face-to-face contact

CS users may not have fully exploited all the positive effects and dynamic interactions of CSs either before or during the COVID-19 pandemic. For example,

a lack of trust among users may have led to social isolation. However, it is assumed that CSs should increase knowledge and the exchange of ideas. Since most CSs use information and communication technologies (ICT) for collaboration between themselves and their users, some authors have explored the role of virtual CS platforms. Hofediz et al. (2020) examined if and how ICT can support the positive effects and dynamics of CSs between freelancers and entrepreneurs who have already worked in CSs by identifying the requirements for a complimentary virtual coworking platform. In addition, Hofediz et al. (2020) found that such platforms could increase social proximity, motivation, and knowledge sharing. Research by Mossa (2021) emphasizes that the rationale behind the rise and success of CSs may emblematically infer that physical co-presence and co-location still matter, despite being made potentially redundant by digital technologies.

The role of knowledge management in virtual CSs is to digitize the experience and skills of coworkers to avoid losing them when they move on with their careers. The results in Intezari et al. (2017) stress the role of digital knowledge sharing in onboarding to help newcomers access tacit knowledge. An open environment for knowledge sharing in the virtual world depends on mutual trust and a willingness to share tacit knowledge with others, which could be more problematic with the rise of remote working. As Hofediz et al. (2020) mentioned, virtual communities in CSs use ICT to support social proximity, motivation, and knowledge sharing.

Knowledge sharing can be systematically developed by implementing knowledge strategies. Knowledge strategies should also be built on positive features in virtual communities to deal with the impact of the pandemic, which limits physical contact in knowledge sharing. The pandemic has forced most CSs to behave like virtual CSs. CSs could use the online space to support the learning process using formal and informal practices in learning communities. Informal practices play a vital role in gamification, which applies gaming elements to non-game contexts in communities (Swacha, 2015). Managers can experiment with gaming elements in knowledge-sharing practices to make them more appealing for coworkers, particularly in virtual communities.

On the contrary, Fosslien and Duffy (2020) present the limitations of frequent online activities, which are physically demanding and draining and lead to 'Zoom fatigue', in which participants find it difficult to focus and process the information presented on screens. Hence, we state that previous studies have provided limited research on knowledge strategies in changing the nature of CSs to mitigate the effects of the COVID-19 pandemic. This chapter therefore addresses this gap, revealing knowledge strategies reinvented due to recent challenges for CSs. Such reinvention is treated here as a unique example of Castells's (2000) interpretation of creative destruction in which 'the space of flows' concept, led by systemic changes (government-led COVID-19 measures) and spontaneous changes (the voluntary practice of social distancing), resulted in remote working.

Data and methods

To fulfil the main goal of this chapter, the research was developed as follows. The first step in the data-collection process was to identify and contact the 19 CSs with which in-depth semi-structured interviews were conducted in 2017 (Bednář & Danko, 2020). The selection of CSs included in the first study was based on their community-organization-space nexus, highlighting similarities and differences in knowledge strategies. Six of the 19 CSs in the original sample were forced to cease operations, limiting the possible CSs managers to thirteen (seven of them agreed to participate). The managers were then invited (from March to May 2021) to participate in a qualitative survey on the changes in knowledge strategies that arose during the COVID-19 pandemic. Concerning the various restrictions and country or regional mechanisms to deal with the pandemic, the sample reflects the diversity of respondents and their expertise, from two groups of EU countries. The first group consists of four Central European countries: two of the EU 15 – Austria and Germany – and two that joined the EU in 2004 – the Czech Republic and Slovakia. The second group is represented by two Nordic countries, Finland and Sweden. Because of this, the sample investigated in Bednář and Danko (2020) was more diverse with respect to countries participating in the study; that study contained Austria, the Czech Republic, Denmark, Estonia, Finland, Latvia, Poland, Slovakia, and Sweden.

A semi-structured questionnaire was used to collect primary data from the CSs investigated in this study. The first block of the survey focused on the current state of the art of CSs and changes in their structural features, new demands, and key changes in their activities during the pandemic. The second block of the survey was devoted to changes in knowledge strategies in collaborative communities, community management, member engagement, and the challenges CSs face in knowledge transfer. The selection of managers surveyed respects a gender-balanced sample to avoid bias in judgment and transfer of the results. We also discussed the selection of respondents based on their relevance for purposive sampling to address volunteer bias and decision-making errors in the subsequent analysis.

We employed grounded theory to address paradigms focusing on an interpretational approach that allows researchers to understand the hows and whys of a given phenomenon (Creswell & Poth, 2018). This step allows researchers to hold on to explanations and subsequently compare selected explanations with emerging primary data, alternating with revision of the claims. Empirical analysis conducted using this theory emphasizes the selection of an abductive approach concerning data collection, engagement in data analysis, and creation and linking of themes arising from the data (Charmaz, 2014). We therefore proceeded with simultaneous data collection and ongoing analysis, which started with the pre-test on gathering primary data and followed with investigation for emerging explanations. The abductive approach to studying the

knowledge strategies of CSs is aimed at specifying preconceived theories concerning CS management (Creswell & Poth, 2018). In addition, the study was designed through an interpretational approach to detect and examine dynamic processes resulting from connotations and engagements in challenging knowledge strategies (Charmaz, 2014).

Empirical analysis

Challenges concerning knowledge strategies before and during COVID-19 (RQ1)

Based on a generalization of the collected responses, all respondents agreed that the COVID-19 pandemic had resulted in both physical and non-physical structural changes in CSs. Before the pandemic, CSs were primarily devoted to on-site networking activities with physical contact that relied on the engagement of coworkers in their communities or cities. These activities were heavily limited by restrictions since managers had to implement immediate changes that affected the organization of the space to cope with the pandemic. Furthermore, these changes mainly affected walk-ins and temporary memberships, which were greatly limited in the first and second waves of the pandemic.

Nevertheless, some CSs had to close for a certain time, which led to completely remote working for coworkers, and therefore only virtual contact with communities. This was especially the case in the first wave of the pandemic in March–May 2020. In contrast, the second wave of the pandemic (November 2020–February 2021) provided some autonomy for managers to design places to support on-site dynamics and the growth of communities in CSs to some extent (limited) which is documented by the following CSs responses.

> We had to completely shut down the place in the first wave and move [to] virtual space completely for almost two months. Only occasional visits were allowed if it was necessary.
>
> CS manager, Finland

In non-physical changes, all managers had to face challenges concerning the demands of current and prospective CS users. Both waves of the pandemic altered the need for modern and reliable audio-visual media for efficient communication and knowledge flow within CSs and beyond. This demand was apparent in the pre-pandemic period as well. In both pandemic waves, such conditions resulted in pressure on both technical infrastructure and personnel, who were short-handed to meet the criteria for efficient CS administration. These changes required an immediate shift from physical to virtual activities and not every CS had enough expertise in virtual operations, which is exemplified by a response from the Estonian CS manager, to name just one.

On the other hand, these demands allowed for increased participation in previously limited events in local and regional communities. Four out of seven respondents stressed the stronger engagement of participants outside CS communities (even foreigners) that allowed for novel approaches to knowledge flow. The variety of participants was given by the availability of online content that was mostly free of charge or at minimal cost. This led to a greater diversity of participants engaging in CS activities that moved to a virtual space without financial constraints to engage in knowledge-sharing practices.

> Virtual events helped to connect with communities outside of coworking space. These communities (foreign) would hardly attend physical events because of financial and time constraints.
>
> CS manager, Slovakia

Furthermore, the pandemic has stimulated the rise of remote working in general, while managers registered higher interest from uncommon potential users worn out by constantly working from home. Five out of seven managers described how CSs became an attractive option for remote workers not necessarily associated with creative industries, since these had been the critical users of CSs in the past (Pacchi & Mariotti, 2021). More importantly, the growing attractiveness of CSs by potential users helped to fill spaces in unoccupied places. Higher interest was registered among corporate employees, particularly in services placed in the home office. At the same time, they expressed interest in both walk-ins and permanent places, depending on their availability at CSs (four out of seven respondents). Three respondents pointed out variety, which had already contributed to knowledge flow at CSs, but primarily with creative entrepreneurs. On the contrary, they emphasized their concerns about the engagement of corporate employees since their activities and opportunities are limited due to corporate processes and restrictions.

> Our coworking became attractive for people who were fed up with home-office. We have new members for both temporary and permanent remote workers or employed by corporate companies in IT, finance, and consulting. This brings more variety to our community.
>
> CS manager, the Czech Republic

Changes in knowledge management and collaborative communities due to COVID-19 (RQ2)

The pandemic has affected the CS model of how knowledge sharing is being addressed in collaborative communities. All respondents agreed as to the challenges that the first wave created with regard to social distancing and difficulties organizing face-to-face interaction at CSs. Thus, most activities were moved to the virtual space. However, not all the CSs were ready to conduct such creative destruction in advance considering their infrastructure readiness and

human resource capabilities. The rise of remote working also caused a saturation of events, i.e. webinars, courses, training, conferences, and online discussions. Three CSs managers revealed that they hesitated with going fully online during the first wave due to the saturation of events.

> Everybody was getting tired of virtual events with watching the screen constantly. We tried to focus on quality over quantity as the interest in virtual events was slowly drifting away.
>
> CS manager, Austria

CS managers therefore decided to implement knowledge management on a smaller scale with informal internal events. This was explicitly the case for introducing new members in CS communities using virtual events. These events took the form of time-restricted meetings to avoid engaging members for more than an hour. Three managers stated that informal newsletters, including weekly tasks for CS members, were established as a viable way to share knowledge and information. Knowledge management in a virtual space needed to be developed in small steps because most members were used to engaging in face-to-face contact and online events happen to be exhausting, resulting in 'Zoom fatigue' syndrome. Stakeholder engagement was carried out through unique online quizzes, exit games, gamification, and interactive courses to keep participants active and interested. Such activities also helped to introduce newcomers and include them in collaborative communities. All the respondents underlined that with more autonomy to organize CSs during the pandemic, they proceeded with on-site activities with fewer participants to engage in sharing events. These smaller constraints allowed CSs to design spaces and events to support collaborative communities and their physical events. Virtual learning events gradually moved to the physical space, and members could share what they had learned and developed with remote working.

> Games and quizzes helped to maintain our community informally. Everybody was looking forward to completing a challenge that was set for every week. It was challenging but rewarding in the end.
>
> CS manager, Estonia

Nevertheless, not all CSs were inclined towards regular physical events, since the number of coworkers and social distancing was a limiting factor during the second wave of the pandemic. Knowledge management had to be organized in a hybrid form, merging online sharing events with physical events at CSs. This aspect creates a challenge for managers to effectively combine diverse expertise and prerequisites for knowledge strategies in collaborative communities. Besides, this was identified particularly for onboarding remote workers in services (IT, finance, consulting) and corporate employees designing knowledge-sharing

activities with creative entrepreneurs. The pandemic severely affected the role of CSs in stimulating creativity compared to the pre-pandemic period when collaborative communities were able to inspire each other and collaborate on developing creative ideas. This aspect was partially covered by informal online events with gamification features to engage and establish creativity together. Thus, the role of managers was to support joint activities that were essential for maintaining the flow of knowledge in seemingly unrelated activities compared to formal events.

> Newcomers bring new creative ideas to our community; I believe this has the potential to support out of ordinary projects and activities in our space. Remote workers have different expertise and skills worth sharing in our creative space.
>
> CS manager, the Czech Republic

Formal events were pursued later when restrictions were partially lifted, allowing managers to offer training schools and courses as activities complementary to virtual events. These were followed by business breakfasts and discussion panels to build on community networking to find intersections among different stakeholders. CS managers emphasized a focus on creative industries, since they currently attract unconventional economic activities in CSs, which might generate difficulties in developing critical mass at CSs. Alternatively, they revealed that critical mass could potentially deliver new business opportunities, particularly linking diverse stakeholders and actors (remote workers) by combining their expertise and nurturing a creative ecosystem at CSs. The additional benefits of the vibrant communities of CSs are reflected in access to new, previously hindered markets. The survey results revealed that knowledge sharing in vibrant communities would eventually lead to reinventing knowledge strategies concerning efficiency in hybrid events (formal and informal) and skills development in communities to seize opportunities generated by these collaborations.

> Interestingly, the pandemic opened new business opportunities for our coworking based on mutual activities and ideas in troubling times. It is not sure how it turns out, but it was a positive feature we did not expect at all.
>
> CS manager, Austria

The respondents pointed out that these events need to be carefully planned to avoid saturation, particularly in virtual events. The events, on the contrary, provided an opportunity to connect with communities outside CSs. This opportunity was essential for managers operating in international associations or platforms, wherein online events led to cost reductions by avoiding travel and attending sharing events. The reinvention of knowledge strategies

codes

site dynamics
Zoom fatigue
worn-out
diverse stakeholders
aligning needs

networking
business breakfasts
coffee meetings
onboarding
business opportunities

engagement
informal newsletters

quizzes
games
webinars

audiovisual media

vacant places

distancing

cost reduction
time management

categories

(integration of codes to groups)

changing demand

knowledge sharing

gamification

physical changes

concepts

(groups to theoretical concepts)

virtual CS

collaborative
communities

cognitive proximity

social proximity

Figure 2.1 Codes to categories to concepts in changing knowledge strategies.

Source: Prepared by the authors.

was identified in sustaining the community with novel approaches to sharing knowledge through gamification. Virtual events were complemented with on-site activities for sharing in diverse communities, combining the tacit knowledge of freelancers and microfirms, remote workers, and corporate employees depending on their flexibility. The results of inductive reasoning using the systematic methodology of grounded theory from codes to categories to concepts are presented in Figure 2.1.

Discussion and conclusions

This chapter provided an overview of the changing nature of knowledge strategies in CSs due to the COVID-19 pandemic. Furthermore, it addressed the dynamics of on-site and virtual approaches for success in knowledge flow during periods of restrictions, affecting bottom-up initiatives in collaborative communities (Bouncken et al., 2021). We correspondingly identified the pitfalls of virtual coworking communities and how communities coped with changes concerning face-to-face contact, which is often mentioned as a vital feature of CSs. Thus, the main aim was to present the reinvention of knowledge strategies based on a continual study of selected European CSs before and during the COVID-19 pandemic. The results confirm changes in

knowledge strategies, contributing to research on collaborative communities at CSs by Kwiatkowski and Buczynski (2011), which concerns new settings that nurture hybrid forms of collaboration. Hybrid forms of collaboration indicate the need for physical contact, despite strong virtual ties, to sustain cognitive and social proximity in communities as discussed in Davies and Tollervey (2013). Additionally, hybrid forms challenge community management with a more complex task, building mutual trust and common ground for collaboration and exploiting social proximity, as mentioned by Mariotti and Akhavan (2020). New partnerships and a variety of stakeholders in CSs might create new business opportunities, mainly through knowledge-sharing practices facilitating intersections in economic and noneconomic activities in communities. Nonetheless, these unique partnerships in CSs might negatively affect the community spirit when different activities and know-how move communities further from a collective identity and sense of belonging, which supports Rovai's (2002) findings.

We assume that CS managers test knowledge strategies to minimize negative aspects and turn them into opportunities for collaboration. To reduce the adverse effects of losing a collective identity, CSs managers can aim for gamification and informal events to help with knowledge flow using game-design elements, primarily in virtual events. The events may be complemented with in-person workshops and panel discussions, as noted in Swacha (2015). In the pre-pandemic period, CSs were mainly focused on creative industry entrepreneurs and their knowledge-sharing activities (Bednář & Danko, 2020). However, they have gradually shifted towards a more diverse group of coworkers such as consultants, IT specialists, and financial specialists employed in organizations external to CSs. We assume that this shift intensifies business relationships between stakeholders and helps to seize new market opportunities for creative industry entrepreneurs in collaborative communities.

Furthermore, the results emphasize the role of structural organization in CSs, which should address business relationships carefully to avoid boosting competition at the expanse of collaboration (Bouncken et al., 2018). This process was also recognized in the pre-pandemic period; however, a greater variety of stakeholders implies a further competitive nature in communities. We develop findings by Adler et al. (2008) on collaborative communities, particularly by recognizing activities developing complex knowledge management to align (synthesize) differences in the know-how (expertise) of CSs and newcomers through discussion panels to mitigate competitive rivalry. Our results contribute to the view on community management by Dandoy (2021), while during the COVID-19 pandemic activities have shifted to conflict prevention and professional support for addressing direct competition between current and new members.

Compared to the previous study conducted by Bednář and Danko (2020), the COVID-19 pandemic is changing communities with regard to their hybridization (Adler et al., 2008). This can be attributed to the changing work principles of remote workers and corporate employees that blend with

creative entrepreneurs at CSs (Pacchi & Mariotti, 2021). Aligning different stakeholders in CSs indicates the need to design and implement comprehensive analytical tools to map demand, development opportunities, activities, and stakeholder well-being (Dandoy, 2021). Thus, more frequent one-on-one meetings are necessary to deal with differences among stakeholders, cluster needs, and opportunities for more efficient knowledge strategies at CSs. Furthermore, we recognize that the pandemic has altered knowledge strategies in the sense of hybrid working possibilities, connecting on-site and remote workers (members and non-members), which supports the resource-based collaboration identified by Capdevila (2017). We conclude that the changing nature of knowledge strategies during the pandemic is based on structural features of CSs, CS size, and the number of stakeholders involved in the collaborative community.

The limitations of this chapter concern the incomplete sample, which did not include all the CSs that participated in the previous research focused on knowledge strategies in 2017, since we managed to interview only 8 out of 16 CSs. The interviews in 2017 were conducted face to face, while the second survey in 2021 was carried out via online video calls. More interviews may yield deeper insight into physical and non-physical changes at CSs due to the pandemic. Additionally, more interviews could help deal with CSs and their stakeholders. Further research should deal with distinct differences on a broader sample to classify mechanisms for coping with the pandemic. In addition, additional studies could focus on various stakeholders in CS communities, revealing how knowledge strategies have been affected by changing demand and the rise of remote working.

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3 Independently operated coworking spaces and the effects of the COVID-19 pandemic

Grzegorz Micek, Pavel Bednář, Oliver Rafaj, Eva Belvončíková, Tiiu Paas, Luca Alfieri, Karolina Małochleb, and Jana Matošková

Introduction

The emergence of coworking spaces (CSs) in urban areas has attracted numerous social sciences and humanities studies. However, there is a lack of research on the effects of the COVID-19 pandemic on functioning CSs (Ceinar & Mariotti, 2021; Rossi & Mariotti, 2021). An abrupt change has been observed in implementing COVID-19 measures such as social distancing and hygiene measures and limiting physical interactions. These are core elements of life at CSs (Bouncken & Reuschl, 2016; Merkel, 2015). Physical interactions lead to knowledge sharing and innovation (Capdevila, 2015; Bouncken & Reuschl, 2016), supporting urban buzz. In CSs, knowledge may be transferred and acquired during informal meetings and various group events.

CSs enable face-to-face interactions (Spinuzzi, 2012) that lead to planned or serendipitous chats creating urban buzz (Capdevila, 2015). Buzz refers to a 'thick web of information, knowledge, and inspiration that circulates between a cluster's actors' (Bathelt, 2008). Buzz is typical for urban settings (Storper & Venables, 2004) with a high density of individuals. The same applies to CSs where a 'micro-local buzz' occurs (Capdevila, 2015). 'Buzz' has also been used to describe the setting of significant events, e.g. international trade fairs (Bathelt & Schuldt, 2008; Schuldt & Bathelt, 2011). However, in this respect, global buzz is more likely established between future partners (Bathelt & Schuldt, 2008), which constitutes knowledge interactions and helps to acquire information.

We concentrate our analysis on CSs that share common norms and focus on collaboration (Brown, 2017). Coworking spaces (predominantly corporate CSs) that are only theoretically engaged in collaboration (Micek, 2020) are excluded. Social interaction and knowledge sharing in corporate CSs are limited due to hierarchical relationships and organizational routines compared to independently run coworking spaces. On the other hand, independent CSs institutionalize social and professional offerings such as events, workshops, or networking services (Bouncken et al., 2018). Capdevila (2015) has argued

that CSs host events that represent 'temporary clusters' (Bathelt et al., 2004; Bathelt & Schuldt, 2008) where 'external actors can participate and share external knowledge'. Following Capdevila (2015), we treat events as a beneficial milieu for generating buzz and, consequently, knowledge clusters (Pinch et al., 2003). In this research, events are understood as social practices that boost buzz on various micro-local scales and enhance social relationships. Thus, we argue that events form temporary micro-clusters, facilitate social interaction, and enable knowledge creation. Before the pandemic, the knowledge clusters established at CSs were mainly based on in-person meetings, whereas during the COVID-19 pandemic, the transition to more temporary virtual clusters may have been observed.

This chapter mainly addresses three research gaps that need to be filled. Firstly, although we acknowledge the traditional understanding of CSs as settings of community building, we go beyond this perspective and study events as a typical element of CS life that enhance knowledge relationships established during buzz. Secondly, we employ quantitative social media analysis, which is not common when analyzing CS operations. Thirdly, despite a few cases (Mayerhoffer, 2020; Belvončíková & Némethová, 2021), the CSs in the selected study area (capital cities of Central and Eastern Europe) have not been explored in depth.

This chapter also addresses the question of how the scale and scope of events organized by and in CSs changed between the pre-pandemic and pandemic periods. It is assumed that in-person events decreased, consequently being replaced by virtual events. Therefore, we study CSs operating in person and their scale and scope of events in both the pre-pandemic (from March 2019 to February 2020) and pandemic (from March 2020 to February 2021) periods. Since large cities attract the vast majority of CSs due to localization and urbanization economies, the chapter focuses on CSs operating in four capital cities in Central and Eastern Europe (CEE).

According to previous studies, CSs do not constitute a homogeneous group. Orel and Kubátová (2019) distinguish two types of CSs: (i) independently run CSs that focus on freelancers and micro-firms as their target group; and (ii) franchise-based CSs. Following Fiorentino's (2019) typology, the first type of CSs may be identified as 'social and start-up incubators' since they are supposed to increase the entrepreneurial and creative spirit of local communities.

With regard to the geographical scope of activity and the position of the CS provider (Bouncken & Reuschl, 2016), CSs could be divided into three categories:

i   International CSs, which predominantly consist of open-corporate CSs (Bouncken et al., 2018) and are led by international coworking brands, where some are global operators – ImpactHub, Regus, HubHub, or WeWork – and a few operate internationally – WorkLand-Vabaduse (Estonia, Latvia, and Lithuania).

ii   Nationwide corporate CSs, e.g. ClockWork (Poland).
iii   Independently run (individual) CSs (Bouncken et al., 2018).

This chapter focuses on the third type, independently run (IR) CSs. We argue that such CSs do not receive support from their international owners and rely only on their own financial resources. On the other hand, IR CSs enhance the cooperative environment more considerably than internationally operated CSs since they primarily focus on providing flexible office space. In addition, formal and informal relationships between IR CSs and local communities should be more extensively developed compared to corporate CSs. One reason for investigating independently led CSs lies in their weaker economic performance. Therefore, IR CSs may suffer from pandemic measures more than corporate CSs. The COVID-19 pandemic has been a substantial shock for the organization of IR workspaces. Many of them have had to leave non-core activities to sustain themselves on the market.

The metropolitan areas of Bratislava, Prague, Tallinn, and Warsaw

The case study presented here focuses on major metropolitan areas specifically represented by several capitals in selected peripheral EU countries: Bratislava (Slovakia), Prague (Czech Republic), Tallinn (Estonia), and Warsaw (Poland). All these capitals have proved their role as global cities, being considered internationally recognized hubs in the network of advanced producer services and headquarters of transnational corporations (Taylor, 2010; GaWC, 2020). Specifically, the first group of the selected metropolitan areas consists of two 'Alpha –' global cities (Prague and Warsaw), Bratislava occupies the second group as a 'Beta –' global city, and the third group consists of Tallinn, ranked on the 'Sufficiency' level of global cities. This prerequisite gives the selected capitals a competitive edge for CSs development due to agglomeration economies and both Marshall–Arrow–Romer and Jacobs knowledge spillover. The role of the respective metropolitan areas in the formation of these global cities is further supported by their dominance in the respective national economies. Their power is measured by the city's percentage of GDP based on national statistical data. All capitals have a higher share of GDP than their share of the total population (see the following): Tallinn, 54.4%; Bratislava, 28.5%; Prague, 27.7%; and Warsaw, 17.6%.

The second factor of the preferred location of CSs in the respective metropolitan areas – localization and urbanization economies – is supported by the population size of these cities and their share of the countries' total population. The capitals occupy two city size categories by population. The first category contains large cities with more than one million inhabitants – Warsaw (1.791 million) and Prague (1.398 million); and the second – medium-sized cities – includes Bratislava (441,000)), and Tallinn (438,000), all as of 2020.

An analysis of the selected capitals' share of their countries' total population resulted in their division into two categories. The first category, with a percentage of total population up to 15%, comprises Warsaw (4.7%), Bratislava (8.1%), and Prague (13.1%).

On the contrary, the second category, with a share of total population above 15%, includes Tallinn (32.9%). The value of the outlier, Estonia, is related to its total population: 1.3 million as of 2020. It is ranked as one of the smallest countries in the EU by population size. However, all the capitals selected are the most prominent cities in their respective countries in terms of population. The findings may lead to the conclusion that the chosen capitals respect Zipf's empirical law on the rank-size distribution of cities.

These cities show a time lag in the development of CSs compared to Western Europe or the Nordic countries. A study of the development of CSs in the selected metropolitan areas revealed that the longest-operating CS in these cities is located in Warsaw (established in 2008; Smętkowski et al., 2019), followed by Prague (established in 2009; Mayerhoffer, 2020), and Bratislava (established in 2010). On the contrary, IR CSs commenced activity in Tallinn between 2016 and 2017, followed by Warsaw, where the first CS started operations in 2015.

Methods

We used mixed methods that combined both qualitative and quantitative data. Firstly, we produced a primary database consisting of the essential characteristics (location, size, year of establishment, type of ownership) of CSs operating in selected CEE capitals. Secondly, in-depth online interviews with managers or owners of CSs consisting of open- and closed-ended questions were carried out. All IR CSs in the respective capitals were asked to conduct interviews. This approach was used because a substantial share of CSs were closed while doing the research. We conducted 18 online interviews that lasted between 30 and 90 minutes. They represent almost half (43%) of the total number of IR CSs open between January and March 2021 in the cities studied. The goal of the interviews was to identify the scale of CS operations during the pandemic, particularly in terms of organized events. Next, to analyze the impacts of COVID-19 on events organized by CSs, inductive coding was done manually using ATLAS.ti software. Coding was done line by line to identify what sorts of events were influenced and how. Descriptive coding to summarize extracts using keywords was applied. The relevant codes were then grouped into three main categories based on the type of event mentioned: social events, educational events, and in-person events. Axial coding to find relationships and links between codes and categories was also applied. Finally, we studied the effects of the COVID-19 pandemic on the quantity of educational/social and in-person/virtual events.

Thirdly, to test the results of the qualitative analysis, the scale and scope of events organized by CSs in the pre-pandemic and pandemic periods was

studied. The Facebook news produced by these CSs was summarized in the secondary database. The following variables were collected in the database to conduct subsequent social media analysis:

i   The number of internal in-person events that occurred on CS premises;
ii The number of external in-person events that occurred off CS premises but were (co-)organized by the CSs;
iii The number of virtual events.

To perform social media analysis, we began by calculating the total number of each event per category before and during the pandemic. Five types of events were then identified in this respect: educational, training-oriented, leisure-oriented, community-oriented, and other.

COVID-19-related restrictions

To identify countries with the weakest and strongest COVID-19-related restrictions, we used the Government Stringency Index (GSI; Our World Data, 2021) constructed by the Oxford Coronavirus Government Response Tracker (2021). This index is composed of the mean score of nine different metrics with values between 0 and 100. In case of variations in policies among subnational units, the index considers the most stringent among the administrative units. The average GSI (between 1 January 2020 and 15 February 2021) for Estonia is the lowest (41.4), which means that restrictions were the weakest in this country in our study. This score is lower than for Poland (53.2), the Czech Republic (50.8), and Slovakia (51.6). This difference is even more evident when considering only the second wave of COVID-19, when the average GSI of Estonia is 36.3, and the other three countries reached around 59 on average.

For the vast majority of the pandemic period in Estonia and to a lesser extent in Poland, CSs were open with restrictions applied to the number of desks and users. They also introduced safety precautions (physical distancing, masks, and hand cleaning). In the remaining two countries, CSs were closed for a more extended period in late autumn 2020 and winter 2020/2021.

CSs in the study area: an overview

In CEE countries, CSs are claimed to be primarily concentrated in the capital cities. However, such findings are related to the settlement system in any given country, as in Estonia. In the other countries involved in the study, the total number of CSs in capitals is significantly lower.

Independently operated CSs constitute a significant share of coworking spaces in three out of the four capitals. As the largest city, Warsaw has the most corporate CSs (Smętkowski et al., 2019). However, during the pandemic, the operations of CSs were substantially limited. The number of CSs

decreased during the pandemic by 65–75% except for Tallinn, where new CSs opened.

Effects of the COVID-19 pandemic on IR CSs events: a qualitative perspective

A network view of relationships between the various behaviours of IR CSs was used to present the data graphically (see Figure 3.1). Code nodes were automatically assigned a colour according to their groundedness and density. The groundedness of a code (i.e. the number of associated quotations, the first number in brackets in the node) increases the yellow tone of the node colour. Density (i.e. the number of links to other codes, the second number in brackets) increases the blue tone. The main sub-categories of events that were influenced by COVID-19 are highlighted with blue circles in Figure 3.1.

The results show that CSs often cancelled the events they planned to do or usually did. This was mainly the case for in-person events, relating not only to social events but also to educational events (Figure 3.2). 'The number of physical events organized in and through space has significantly decreased. We had to stop organizing weekly workshops and meetings for space members. Events such as chill arts, where people from the neighbourhood could come, also decreased significantly' (R42, M, Poland). Only one CS reported growth in in-person events (R12, Czech Republic). This same CS indicated growth in educational events, and another CS (R22, Slovakia) believed that the number of educational events was the same as before the pandemic.

With regard to informal virtual events, the impact of COVID-19 is somewhat inconclusive and depends on the characteristics of the CSs. Some CSs reported growth, some a drop, and some no change in informal virtual events (Figure 3.2). One CS (R22, Slovakia) mentioned that the impact on educational events was only temporary, since they were afraid that training via the internet would lack the necessary quality. However, they decided to try it after a while, and they are used to it now. Likewise, some CSs did not perceive the pandemic as entirely negative. For instance, one CS reported that they had time to prepare new educational activities.

Urban buzz in CSs

Until March 2020, IR CSs took advantage of local buzz and even attempted to go out and build relationships with local communities. 'Before the pandemic, we organized various events very often. Anyone from outside could come to the events – they were open and accessible to everyone' (R46, W, Poland). One of the Slovakian CS (R25, W, Slovakia) representatives revealed that 'before the
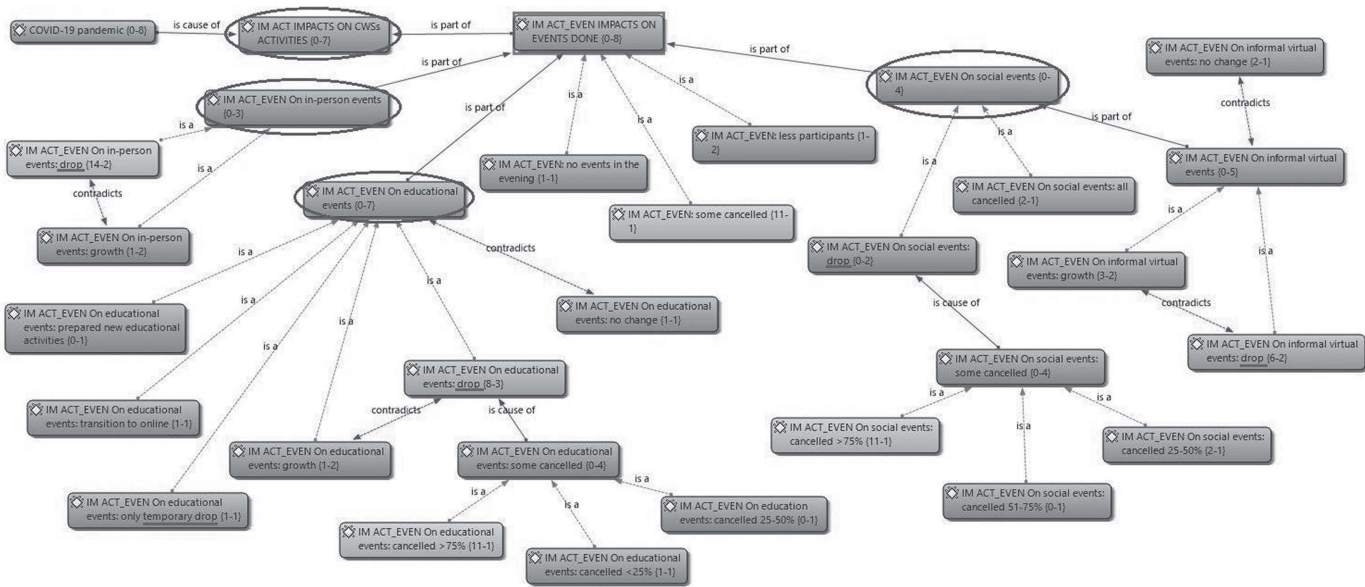
Figure 3.1 Network of relationships between the various attitudes of IR CSs towards the effects of the COVID-19 pandemic in selected CEE capitals.

Source: Authors.
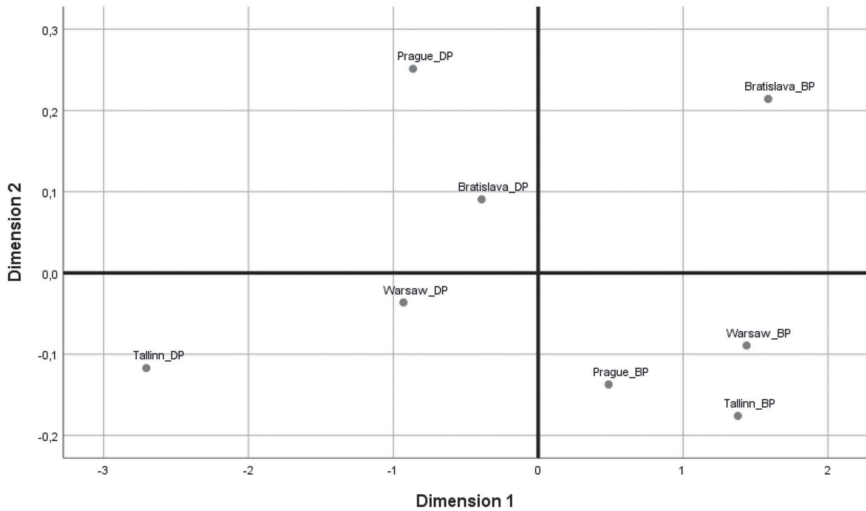
Figure 3.2 Perceptual map of stimuli coordinates versus principal component scores for selected CEE capitals based on event categories before and during the COVID-19 pandemic.

Source: Personal research.

Note: BP = Before the pandemic; DP = During the pandemic.

pandemic, collective breakfasts or evenings under the lamp had been made . . ., but such events have been radically limited.'

During the pandemic, CS managers had to cope with maintaining an internal community while operating at a distance. 'The CS's challenge was the community part: how to keep the community alive' (R32, Estonia). The scale of knowledge interactions decreased due to the reduced number of users and, in some cases, the temporary closure of CSs. In CSs that were open, the problem with the fluctuation of people arose: 'It destroys the atmosphere of coworking very much if people who had known each other changed. There was a community, and now there are 50% of new faces. Moreover, it is also banned to do community events to get to know each other, and everybody wears a mask' (R22, W, Slovakia). In sum, the urban buzz generated in CSs before the pandemic decreased and was only partly transferred to the virtual realm.

Effects of the COVID-19 pandemic on changes in IR CSs events: a quantitative perspective

Inconclusive information gathered in the interviews about the changes in the number of events was subsequently supplemented by quantitative research on

how the COVID-19 pandemic affected daily operations at IR CSs. The period from March 2019 to February 2021 was observed, with a division into two parts: (i) before the pandemic (from March 2019 to February 2020) and (ii) during the pandemic (from March 2020 to February 2021).

We analyzed 112 IR CSs operating in the second half of 2020 in the four CEE capitals studied. The distribution of IR CSs was as follows: 64 in Warsaw, 31 in Prague, 12 in Bratislava, and 5 in Tallinn.

Moreover, we observed the influence of effects of the COVID-19 pandemic on the existence of CSs, specifically:

1 Decrease in CSs open in most of the observed CEE capitals;
2 Increase in CSs not organizing any event posted on Facebook in every observed city.

After the pandemic began, the number of operating CSs decreased in all cities except Tallinn. For instance, Bratislava registered a drop in open CSs of 50%, whereas Warsaw and Prague registered a drop of 44% and 32%, respectively. In addition, since the outbreak of COVID-19, a decrease was also seen in the amount of event information on Facebook profile pages.

Due to variations in restrictions during the pandemic, we investigated CS activities by combining qualitative and quantitative research approaches,

Table 3.1 Overall characteristics of IR CSs and types of events on IR CS Facebook profile pages in selected CEE capitals before and during the COVID-19 pandemic (2020–2021).

Indicators/cities	Bratislava	Prague	Tallinn	Warsaw	Total
Number of interviewed IR CSs (Jan–April 2021)	5	5	2	6	18
Number of opened IR CSs during the COVID-19 pandemic (Jan–February 2021)	6	21	5	36	68
Number of IR CSs (March–May 2020)	12	41	9	58	120
Share of IR CSs (March–May 2020)	70.6%	75.6%	70.0%	44.6%	56.6%
Estimated share of CSs in capitals per total number of CSs in the country (March–May 2020)	31.1%	36.5%	62.5%	44.1%	40.9%

Indicators/cities	Bratislava	Prague	Tallinn★	Warsaw	Total
Events before the pandemic					
Total number of events	551	131	91	347	1,120
Share of internal in-person events	90.7%	71.8%	83.5%	85.3%	86.3%
Share of external in-person events	8.2%	10.7%	14.3%	13.0%	11.0%
Share of virtual events	1.1%	17.0%	2.2%	1.7%	3.3%

(Continued)

Table 3.1 (Continued)

Indicators/cities	Bratislava	Prague	Tallinn★	Warsaw	Total
Events during the pandemic					
Total number of events	118	141	137	197	593
Share of internal in-person events	62.7%	58.2%	29.2%	53.8%	50.9%
Share of external in-person events	4.2%	0.0%	0.7%	4.6%	2.5%
Share of virtual events	33.1%	41.8%	70.1%	41.0%	46.0%

Source: Personal research.

Note: ★ Data for Tallinn were collected both from Facebook profile pages and interviews with IR CS managers.

analyzing Facebook profiles and interviews. More specifically, the analysis focused on the event information posted on CS Facebook profile pages. The collected events were grouped into three categories:

1   Internal in-person activities that occurred at CSs;
2   External in-person activities that occurred outside CSs;
3   Virtual activities.

Detailed information about the analyzed events and indicators in the two periods is provided in Table 3.1.

Examining the categories of events between the two periods shows similar differences for all the cities investigated. The differences can be summarized as follows:

  i   Drop in internal in-person events;
 ii   Drop in external in-person events;
iii   Increase in virtual events.

Along with the outbreak of the COVID-19 pandemic, Warsaw registered a drop in internal in-person events of 64%; Prague, 13%; Bratislava, 85%; and Tallinn, 47%. For external in-person events, Warsaw registered a drop of 80%; Bratislava, 89%; Tallinn, 92%; and Prague, 100% during the pandemic period. In contrast to the decline in all types of in-person events, an increase in virtual events was revealed. However, the findings document substantial differences between the selected cities.

The largest increase in virtual events occurred in Tallinn (+3,800%). Recognizable increases also occurred in Warsaw (+1,267%) and Bratislava (+550%), in contrast to the slight increase documented in Prague (+157%). The respective changes between the percentage of event categories in the selected cities before and during the pandemic are summarized in Figure 3.2 using the metric multidimensional scaling procedure (ALSCAL). This reduces the number of

dimensions – the three event categories – into a two-dimensional space. In this case, the procedure was based on a similarity matrix measured by Euclidean distance. The quality of the resulting perceptual map was confirmed by goodness-of-fit measure, provided here by Kruskal's STRESS (standardized residuals sum of squares) < 0.01, which proved a perfect fit between the distances derived in the ALSCAL solution and the original Euclidean distances in the similarity matrix. Interpreting (labelling) the dimensions in the mapping of external preference within the metric multidimensional scaling procedure is not straightforward. However, by examining the changes between the percentage of event categories in the input matrix (Figure 3.2) and the co-ordinates of the CEE capitals before and during the pandemic in the perceptual map, we assume that Dimension 1 is mainly defined by the share of virtual events and Dimension 2 is primarily defined by the share of internal in-person events and the share of external in-person events. Furthermore, the range of principal component scores in Dimension 1 (from –3 to 2) shows that the share of virtual events contributes to differences among cities more than the range of principal component scores in Dimension 2 (from -0.2 to 0.3). These findings support the idea that virtual events are important for adapting business models of IR CSs during the pandemic to sustain their activities and at least temporary urban buzz.

The differences between the selected cities stem from two reasons. The first is the different number of IR CSs across the cities. The second reason lies in a different approach to communication. For example, CSs in Prague organized online events even before the pandemic to some extent, while IR CSs in other cities did not organize such events on a large scale before the pandemic. The situation following the outbreak of COVID-19 could have forced them to focus on organizing virtual types of events.

Concluding remarks

In the period of disarray due to the pandemic, IR CSs had to meet the challenge to survive. Hence, their core activities were limited, and events were no longer the core of their operations. We conclude that the pandemic and resulting constraints have forced IR CSs to change their business model. Before the pandemic, CSs served as permanent physical knowledge clusters by organizing in-person events to support knowledge transfer and knowledge spillover. Our qualitative and quantitative research revealed that the pandemic has caused CSs to shift towards organizing and participating in temporary virtual knowledge clusters. Although the number of virtual events during the period under study grew, the increase was relatively limited.

It is well known that before the pandemic, CSs contributed to local and sectoral urban buzz (Capdevila, 2015), but this buzz decreased substantially during the pandemic. Moreover, it has not been replaced by a similar buzz emerging in the virtual space during events. Even though temporary virtual

knowledge clusters of similar industries developed for some events organized by CSs, the number of events dropped significantly as revealed by both qualitative and quantitative research.

The most important limitation of the study lies in the spatial scale of buzz, which was not investigated here. From what has been analyzed at trade fairs (Bathelt & Schuldt, 2008; Schuldt & Bathelt, 2011), future research should focus on the impact of urban buzz on the innovative and economic performance of CSs.

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4 A look into Beirut's coworking scene

Exploring the pre- and post-pandemic conditions

Linda El Sahli, Mina Akhavan, and Ayman Kassem

Motivation and background studies: coworking spaces before COVID versus the pandemic era

Biased literature: a lack of empirical research on the Middle East

Technological advances, broadband, and an increasing dependency on high-speed internet continue to re-shape the nature of work and workplaces and therefore our societies. With the rise of teleworking, smart-working, and remote working (see Chapter 1), it seems that apart from home offices, various types of 'new spaces for work' (see Akhavan, 2021; Micek et al., 2020) are gaining legitimacy among workers; so-called coworking spaces (CSs) are one of the most popular. In their traditional form, privately owned and managed CSs are simply considered membership-based (monthly/daily rent), shared open-plan office environments where unaffiliated professionals and members of organizations 'work alone together' (Spinuzzi, 2012). They use and share physical and cognitive infrastructure and resources based on their needs (Capdevila, 2014).

The advantages of CSs go beyond cost savings and simple office or infrastructure provision; they offer values such as (i) collaboration, (ii) community, (iii) sustainability, (iv) openness, and (v) accessibility (Fuzi et al., 2014). The coworking model provides a sort of flexibility, which is very convenient at times when socioeconomic and cultural conditions are constantly changing. Both CSs and coworkers themselves benefit from this degree of flexibility in the way they handle their time, space, money, and work. Different types of new space for work such as CSs are freed of the rigid mechanisms of traditional working spaces.

We underline here that simple physical proximity and spatial co-location alone is not sufficient to create interaction, collaboration, and knowledge spillover (Parrino, 2015). The presence of other forms of proximity – social, cognitive, institutional, and organizational – is therefore essential (see Mariotti & Akhavan, 2020). Moreover, 'community making' in CSs does not refer merely to the internal workplace (Spinuzzi et al., 2019); it also concerns the sense of community between coworkers and residents in the neighbourhood (Akhavan & Mariotti, 2018). Another important element is the social aspect of

CSs in terms of face-to-face contact, mutual trust, and networking, which is essential for workers in creative industries and those with uncertain social and economic conditions such as freelancers, early-stage entrepreneurs, and young startups (see Waters-Lynch & Potts, 2017).

The literature on new spaces for work in general, and CSs in particular, is growing quickly (see Akhavan, 2021). Thus far, however, the publications are mainly based on empirical findings and theoretical insights from cases in the West (Europe and North America). Only a few publications are available from the Eastern world on CSs in the Philippines, studied by Tintiangko and Soriano (2020), and Shenzhen, China, explored by Luo and Chan (2020). Some perspectives from India were discussed by Bhattacharyya and Nair (2019).

Emergence and spread: pre-pandemic flourishing of coworking spaces

CSs have proliferated rapidly worldwide since the first official space was founded in the US in 2005. Prior to the COVID-19 pandemic, 26,000 CSs and 2.6 million users were estimated for 2020. The compound annual growth rate (CAGR) of the number of CSs in the period 2005–2020 was 76.4%, while the CAGR for the number of users (coworkers) in the years 2010–2020 was 55.4%. These numbers demonstrate the growing popularity of CSs on a global scale. Although the phenomenon of CSs started in North America, CSs have spread to other regions of the world, regardless of their socioeconomic structure. The data show that in 2019, the United States and the United Kingdom recorded a similar share of CSs (19% and 18%, respectively), while countries in the Asia Pacific (APAC) and EMEA regions (Europe, Middle East, Africa) held the highest share of CSs, with 35% and 21%, respectively (Statista, nd.).

The Global Coworking Survey (Deskmag, 2019) reports that CSs in Asia are mainly located in mega-cities with more than 1 million inhabitants, following the advantages of the urbanization and agglomeration economies. CSs in Asian cities are larger in size and capacity with respect to other parts of the world; the average size of CSs in Asia is 916 m², followed by North America and Europe with 845 m² and 760 m², respectively. Moreover, 28% of CSs in Asia have more than 200 members, compared to 18% in Europe and 16% in North America. On the contrary, Europe is by far the most specialized in small spaces (less than 50 members). In Asia, more than 88% of spaces are for profit (private CSs); only 4% are government-based (public CSs) and 7% are non-profit.

Coworking spaces during the COVID-19 pandemic: the future of coworking?

On 30 January 2020, the World Health Organization officially declared the outbreak of COVID-19 to be a global health emergency. Since then, the pandemic has had a tremendous effect on societies and individuals' ways of living and working (see Chapter 1). The immediate impacts of the COVID-19

pandemic in countries that imposed lockdowns or serious restrictions were rather similar. The outcomes of a survey by *Coworker.com*[1] conducted in mid-March 2020 show that 71.6% of spaces witnessed a significant drop in the number of their coworkers since the outbreak. More specifically, the spaces experienced event cancellations (71%), meeting/conference room cancellations (about 66%), membership cancellations (34.7%), changing member behaviour (24.2%), space closures (20.2%), and sick members (8.7%).

During the pandemic, many companies were forced to apply remote working policies. However, it is not always possible to work from home or use informal third places (such as cafés) due to data and network security. In this case, CSs can provide a possible solution. As pointed out by Maria Nakamura, Business Innovation Manager of Arcc Spaces,[2] with spaces in the Asian Pacific Region, 'SMEs and enterprises consider flexible workplace options due to flexible leasing terms. In flexible workplaces, businesses are able to take advantage of splitting their teams across multiple small private rooms, as opposed to occupying one large, combined space.'

Within this context, this book chapter follows a two-fold aim:

i   To fill the gap in the literature on CSs in Asia, and more specifically in the Middle East. For the first time, this contribution presents the proliferation of CSs in one of the region's largest cities: Beirut. The emergence of such workplaces is then discussed as a tool for urban regeneration and attracting a new class of creative workers to the neighbourhood.
ii   To explore the immediate and one-year impacts of the COVID-19 pandemic on CSs in Beirut and the strategies that have been applied to face the crisis.

This chapter therefore discusses the citywide spread of CSs (their agglomerations and clustering) and then analyzes this more in detail on the neighbourhood scale (Beirut Digital District). This study involved various forms of data collection during 2020 and 2021: desk research, urban plans, fieldwork, and on-site visits. Primary data was collected through a survey: an online questionnaire and semi-structured interviews with the managers in two phases – March 2020 and March 2021. A mix of qualitative (maps and urban plans) and quantitative (descriptive statistics) methods were applied to the different data.

A tale of a city in the heart of the Middle East: Beirut and its rising coworking spaces

Exploring the proliferation of CSs in the city

After Lebanon gained independence from France in 1943, a period known as the Golden Age followed from the 1950s until the mid-1970s; the capital city of Beirut was considered the hub of economic, social, intellectual, and cultural life in the Middle East. All this changed, however, with the start of the civil

war in April 1975, which lasted 15 years and split Beirut into East (Muslims) and West (Christians). A demarcation line – 'the Green Line' – was formed, separating the two sides. Most of the buildings along the line were severely damaged or destroyed during the war. Since the end of the war in 1990, a number of buildings have been rebuilt. The neighbourhood selected for further analysis is Beirut Digital District (BDD), which lies on Beirut's Green Line. It hosts some important CSs, making it a relevant case for the aim of this study.

The current population of the city of Beirut is estimated to be about 361,000, while Greater Beirut as the urban agglomeration comprising the city of Beirut and adjacent municipalities has a population of around 2.2 million,[3] which makes it the third-largest city (after Amman and Tel Aviv) in the Levant.[4] The GDP of Lebanon (current US$) was estimated to be $33 billion in 2020 (a decrease of 20% from 2019),[5] with a per-capita GDP amounting to about $5,500. However, due to the liquidity crisis, the ongoing economic and political crisis, the COVID-19 recession, and the port explosion on 4 August 2020, the situation has escalated tragically. Beirut's GDP contraction, which surpasses the IMF's latest forecast of a 12% drop in GDP, is due to the ongoing and worsening economic and political crisis in Lebanon.

The emergence of CSs in Beirut is very recent. One of the first, AltCity, was founded in 2011, amid the national crisis brought on by protests and political reforms. Even in this situation, AltCity was able to survive, and the team has managed to keep the goal of becoming a key player in the Lebanese startup scene firmly in their minds (Knight, 2014). Nevertheless, the road has been more difficult for many other CSs such as Innovation Factory Beirut and AR_KA, with recent political events forcing their closure.

We identified 13 active CSs in the city of Beirut (as of January 2020). An additional 4 CSs (Foundersbei, The Koozpace, Berytech Mar Roukoz, Regus Dbayeh-Le Mall) are located in Greater Beirut. All spaces are privately owned and managed. In most cases, the building was transformed into a CS from a different function, for instance, an industrial base, a sewing workshop, a church, residential building, etc. Few spaces were designed and built precisely as CSs.

As shown in the map in Figure 4.1, CSs in Beirut are mainly located in the central part of the city (Serail neighbourhood, port district, and Basta Faouka neighbourhood in Bachoura District), followed by south-western neighbourhoods (Mathaf in Mazraa District, Sioufi and Mar Mitn in Achrafieh District). The CSs located in the most expensive areas of Beirut close to the historical centre are mainly part of international firms, branches of Servcorp and Regus. CSs also tend to be located in Bachoura District, which is known to have been badly damaged by the civil war, with the majority of it not rebuilt or renovated like other areas that were given higher priority, such as Beirut Souks and the historical centre.

The location pattern of CS in Beirut city is similar to some determinants outlined in the literature (Mariotti et al., 2017, 2021; Di Marino & Mariotti, 2020): (i) proximity to dense services and business activities related to the urbanization and agglomeration economies; (ii) proximity to universities and research centres

1 AUB - American University of Beirut
2 Lebanese American University
3 Modern University for Business & Science
4 Global University
5 Beirut Arab University

6 Arab Open University
7 American University of Culture & Education
8 University Saint- Joseph of Beirut
9 LAU Medical Center
10 American University of Science & Technology

A Downtown Beirut , Beirut Souks, Martyrs'
   Square and Historical Center

B Sassine Square , and ABC Achrafieh

Figure 4.1 Location of CSs in the city of Beirut close to the main business districts and universities (as of 2020). Each red dot represents a CS.

Source: Prepared by the author.
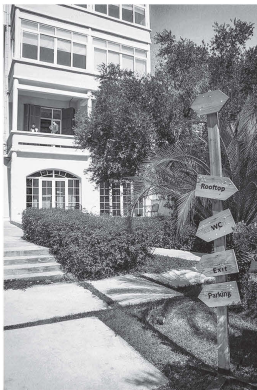
Figure 4.2 Panels (1) and (2) show BDD in the Bachoura district, while panels (3) and (4) show Antwork in the Spears District. Both cases reuse renovated historical buildings.

Source: © 2021 moustaabdulwahed.

associated with a skilled workforce and business opportunities; (iii) reputation of the district; (iv) multifunctionality of the areas (mixed land use and provision of public and private services), in particular for the Mathah district (hosting Regus, Berytech, and KAPA), the Beirut central and Azariyah Districts (hosting Regus, Servcorp), Ashrafieh (hosting Fabrika), Spears District (hosting Antwork), Hamra (hosting The Olive Grove); and (v) deprived/abandoned (but also developing and central) urban neighbourhoods. Bachoura District, which hosts two major CSs – Beirut Digital District (BDD) and Berytech – is undergoing socio-spatial rehabilitation. It is worth noting that both BDD and Antwork have renovated and reused damaged historical buildings, as shown in Figure 4.2.

Zooming in on the neighbourhood scale: Beirut Digital District (BDD)

Bachoura District is known as a remnant of the 15-year civil war and it remained practically untouched until the development of BDD. However, there are many historical landmarks in the district that lend it historical importance, such as the Muslim cemetery of 1892, Saint Vincent de Paul Church, and the iconic Beirut Dome, also known as 'the egg', from the 1960s. BDD took a very strategic decision to establish itself in Bachoura, since it is in the centre of Beirut and highly accessible. Looking at previous land use in the area, we see that it mostly consisted of residential or commercial/residential complexes. Moreover, Bachoura is situated within walking distance of major landmarks and shopping areas and within a 15-minute drive from major educational and health centres.

BDD is a cluster of specialized spaces designed to create a hub for the digital and creative industries. It hosts three CSs, two eateries to increase the efficiency of office spaces and keeps employees closer to work during breaks, two furnished social lounges with gaming areas to relax and socialize, and a fitness area with free access to daily fitness classes. Such services help coworkers to relieve stress and enhance their well-being. BDD is a one-stop-shop for time-consuming governmental paperwork for businesses, which, along with many other services and facilities, makes it a go-to place for coworkers.

In March 2020 during the start of the COVID outbreak, we conducted semi-structured interviews with two managers of the three coworking spaces in BDD. According to the managers, there are numerous benefits to having the CSs within this central business district, and the entire BDD community became a part of the revitalization of the neighbourhood. In fact, the BBD project increased the attractiveness of the area. It was responsible for the urban revitalization of the Bachoura district, using land that had been abandoned for many years and refurbishing some existing underutilized buildings. It introduced a new architectural language in the district and changed its character.

Since BDD has accelerated the process of change in Bachoura's social class, it can be argued that this project has prepared the base for future mass gentrification. One very visual representation of this phenomenon is the mural painted by a foreign artist as instructed by BDD to show the vision of a new Bachoura: a vision representing technology and innovation. Unlike other urban art, however, the mural was not painted by someone from the district. Hence, it shows an enforced yet positive vision, which is nevertheless a vision of a developing neighbourhood, attracting young people to move forward and innovate. Bachoura cannot represent the Green Line and the painful past forever. Instead, the concern should be to prevent any displacement of the district's past residents, while ensuring that new buildings do not replace historical buildings or erase the traces of memory.

The COVID-19 pandemic and the 2020 Beirut explosion: immediate impacts on coworking spaces

Empirical findings of the survey with CS managers conducted in March 2020

As with many countries worldwide, Lebanon's economy and its capital were hit by the COVID-19 pandemic. The CSs in Beirut were closed for several months during the lockdowns, and with the government encouraging businesses to reopen, most CSs had reopened as of June 2020. Nonetheless, a lot had changed and forced measures were taken in terms of space capacity and design, since social distancing is still a matter of concern. To explore the immediate effects of the pandemic on CSs in Lebanon, an online questionnaire was sent to all the CS managers in March 2020; 11 responded for an 85% response rate. The following provides descriptive statistics regarding the answers to the five main questions.

i   The first question was about the 'immediate consequences of the pandemic restriction on the CS'. Almost half of spaces (40%) reported cancelled events; roughly one third (30%) had cancellations of meeting room bookings; and very few (15%) responded that both training courses and memberships (desks and offices) had been cancelled. Notably, none of the CSs suffered from all the given consequences at once.

ii The managers were also asked about the 'means used to maintain contact with their CS community'. Of these, 20% said that they used social interactions; 15% used tools, channels, or online services (such as virtual events) to maintain contact with the community; 10% used both the promotion of community activities and training courses/webinars. Furthermore, when the managers were asked to provide a rating from 1–10 (1 being nothing or none to 10 being very much) as to how much contact the CSs were able to maintain with their community, the majority gave a rating of 6–7, which is relatively high.

iii Regarding the question about 'whether there were any short-term strategies between the coworking spaces and their landlords', a few of the CS managers refrained from answering. However, most CS managers confirmed that they had never had any problems in that respect; there was leniency with payments because of the given situation and a considerable discount. Nevertheless, one case stands out in BDD: two of the three CSs are run by the property owners themselves, ZRE, so this question was not applicable in their case.

iv Managers were asked about 'measures that need to be put in place in CSs to contrast the economic effects of the economic crisis'. Nearly 70% selected optional 'rent suspensions', and more than 30% chose 'ease loans' as a practical measure. The comment was made that it would be great if certain public

policies were in place for CSs and startups; for example, free or reduced internet fees, waived legal consultations for starting businesses (for CS members), tax breaks, and reduced utility fees. In the end, CSs help support the local economy, so it would be great if the government and *public* policies supported such places.

v   As for the question about 'feasible actions to be considered before the end of the year (2020)', some managers (about 35%) answered 'reshaping their spaces and supply'; a few (about 20%) selected the three options of 'online reconversion of several services', 'no changes needed, as the situation will get back to normal', and 'other actions'. Others instead responded, 'I do not know but I think there would be more opportunities'. Notably, none of the spaces intended to close temporarily or permanently, nor were any reductions of employees mentioned by the CS managers.

2020 Beirut explosion: immediate response

The devastating explosion at the Port of Beirut on 4 August 2020 occurred amid a severe economic crisis and the coronavirus pandemic. It destroyed vast areas of the capital, leaving hundreds of thousands of homeless people and stoking anger about the authorities' negligence and corruption (Houssari, 2020). The blast added to a pool of setbacks and challenges, both operational and psychological, for those determined to succeed in Beirut. Despite mounting challenges and the tragedy that impacted the entire country, Lebanese entrepreneurs are still determined to move forward, shift their strategies, and adapt their business models based on the ongoing crisis, after addressing immediate needs. Alfanar, a philanthropic organization, is likewise attempting to address entanglements in gathering the extent of needs to alleviate hunger, a responsibility that began towards the end of 2019 and has drastically expanded since the Beirut port explosion (BDD, 2020). Other organizations have shifted their business models and strategy as a result of the blast. LiveLove Beirut, an initiative established to highlight the beauty and wonders of Lebanon, quickly changed their main goal, and the team has been working vigorously to raise funds for relief efforts.

The NGO LiveLove Beirut formed the Beirut Relief Coalition (BRC) after the explosion. The coalition brings together non-profit organizations and initiatives to streamline rebuilding and rehabilitation efforts. 'With BRC, we aim to unite all forces and work hand in hand to rebuild Beirut in the most efficient and transparent way possible,' says Edward Bitar, founder of LiveLove Beirut. 'BDD has become ground zero – offering us offices, logistics and warehouses. We have created a disaster management and response plan, with specialized teams working in our call center, dispatching requests for help, organizing and distributing supplies and donations from our warehouse, assessing damages on the ground, and beginning the reconstruction process' (BDD, 2020).

Combating the pandemic: what has happened to coworking spaces in Beirut after a year of severe crisis?

Empirical findings of the survey with CS managers conducted in March 2021

In March 2021, after nearly a year since the start of the pandemic, we followed up with a second survey sent to the CS managers. Thirty percent of CSs were fully open, while 70% were open for essential activities only. The questionnaire included four sets of questions that tackled four main aspects regarding the impact of the pandemic:

1   Changes in the services provided
2   Changes in the profile and entire community of coworkers
3   Financial difficulties and governmental support
4   Design and spatial management issues

The survey included an online questionnaire *paired with* phone call interviews in which nine managers participated. We identify and summarize the findings here.

a   Many of the impacts discussed are actually confused with the impact of the current political and financial crisis. Since 2019, a major economic crisis has exploded – the largest in the history of Lebanon – including severe devaluation of the local currency, which has dropped by 80%. This crisis has inflated many impacts shared with the pandemic in terms of financial difficulties. For instance, both the financial crisis and the pandemic have pushed many businesses to downsize, leaving their original big offices and moving to CSs which are financially more convenient due to the flexibility in rental plans. On the other hand, utilities and maintenance, which were never considered a major cost, have now become a big problem. The Lebanese economy is 'dollarized' since almost everything is imported using USD, and because of the devaluation of the Lebanese currency with respect to the American dollar, everything has become much more expensive.

b   The common dilemma among most CSs relates to rental contracts for offices and desks. Managers stated that many clients were already paying their medium- or long-term rentals, but now due to the pandemic, they are paying without being able to come and use their spaces due to lock-downs and curfews. The financial crisis has also added to this dilemma, because most rental contracts with clients were already made in USD following the previous official exchange rate to LBP. However, due to the shortage of USD in the country, austerity/governmental restrictions on the use of foreign currencies, and severe devaluation of the LBP compared to the American dollar (if the client decides to pay in LBP), everything must be rethought. Rent suspensions, flexible rental packages, and daily passes are among the main solutions offered in this regard.

c   Considering the dilemma of rentals and payments, we noted an excep-
tional case in which one of the CSs stated that the majority of their clients
are foreign NGOs with long-term rental contracts, a status that provided
a stable income in USD, which made this space more relaxed when facing
the pandemic and the financial crisis.

d   In spatial terms, the size of the spaces played an important role during the
pandemic. CSs with big open floor plans were easily able to implement
distancing between desks, lounges, cubicles, etc. Some of the CSs used
flexible open floors and were already using mobile partitions, cubicles, and
configurable furniture that could accommodate privacy and distancing.
Those with smaller spaces had to re-organize the furniture layout, reduce
the number of activities per day, or organize their hours to avoid groups of
more than six people.

e   For the managers, 'community' was regarded as a crucial element. It was
clearly stated that the coworking community has been missed a lot dur-
ing the pandemic. The managers nostalgically described and recalled pre-
COVID times, with all the events that used to bring coworkers together,
such as happy Fridays, holiday celebrations, aperitifs, and lunch gather-
ings. This is an aspect that attached coworkers to their CS and managerial
staff. Now during the pandemic, the managers are trying to maintain ties
with their communities by means of online events, group chats, webi-
nars, online workshops, live sessions, organized tournaments, and online
competitions.

f   All CSs – which are all private – confirmed that they did not obtain
any governmental support to counter the economic effects of the crisis.
Despite all the difficulties, however, almost all managers answered that they
are optimistic about the future of coworking spaces in Lebanon.

g   Finally, with regard to coworker profiles, the majority of CSs noticed an
increase in the number of freelancers, students, independent professionals,
medium-sized enterprises, and downsizing businesses.

Conclusion and future research: the future of coworking in Lebanon?

In this chapter, the proliferation of CSs in Beirut was discussed on both the
city and neighbourhood scales. Despite the political instability, the cowork-
ing culture seems to be expanding and growing popular as they show diverse
mechanisms of survival and success. Zooming in on the neighbourhood scale,
we presented the recent BDD project, which was developed in a deprived
district. BDD has generally increased the attractiveness of the area. The project
is basically an innovation district which calls for the concentration of creative
activities in one place; it has certainly been responsible for the urban revitali-
zation of the Bachoura District. The decision to include CSs in new project
development in the BDD shows that it has been successful in attracting young
people to an abandoned/marginalized neighbourhood. Lebanon lacks laws and

legal strategies to protect the heritage of Beirut, which may lead to the loss of its history and its people being displaced. However, CSs in BDD serve the city's youth in the best way possible. The urban regeneration potential of CSs includes the reuse of vacant buildings, contributing to recycling idle urban assets and therefore contributing to fulfilling a circular economy.

Following one of the core aims of this chapter – to explore the effects of the COVID-19 pandemic on CSs – we presented the findings of two surveys conducted at the beginning of the outbreak (March 2020) and one year later (March 2021). From our extensive research, we can conclude that the coworking phenomenon has a promising and growing future in Lebanon, as an example case from the Middle East. In fact, the sociocultural concept of working patterns and working spaces is changing in this region. The current cultural change has also been pushed by the COVID-19 pandemic, which includes a massive shift towards remote working now occurring all over the world.

Moving beyond Beirut, this study calls for more empirical research on other cities in the Eastern world. From a methodological point of view, apart from some limited comparative studies (Akhavan et al., 2020; Parrino, 2015), most publications are based on individual contexts. More comparative studies are therefore needed to investigate and understand the spatial and cultural factors involved in creating the different types of CSs offered to varied coworker profiles.

Notes

1 The survey: 'How coworking spaces are navigating COVID-19' – 14,000 CSs in 172 countries worldwide, available at: www.coworker.com/mag/survey-how-coworking-spaces-are-navigating-covid-19
2 See: www.constructionplusasia.com/my/maria-nakamura/
3 In Beirut, no formal census or population count has been taken since the 1930s; the World Population Review has estimated the population for 2021. Available at: https://worldpopulationreview.com/world-cities/beirut-population.
4 The Levant comprises Lebanon, Syria, Iraq, Palestine, and Jordan.
5 According to the World Bank national accounts data, available at: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=LB

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5 Community bonds in new working spaces of a small town

Chiara Tagliaro, Yaoyi Zhou, and Ying Hua

Background

The COVID-19 pandemic has created dramatic changes in people's ways of living and working. Flexible working arrangements have become widespread and encourage more distributed work practices in countries where they were formerly less common. In the US, the abandonment of densely populated areas for less dense areas has been increasingly common since the COVID-19 outbreak. After nearly a year of remote work because of the pandemic, 31% of Americans, also including young people, prefer to live in rural areas and 17% in towns (Gallup, 2021), looking for nature, a relaxed pace of life, and a comfortable community atmosphere. This chapter explores how new working spaces (NWSs), including coworking spaces, maker spaces, and incubators in small towns have been impacted by COVID-19 and it discusses their future after the crisis.

Coworking spaces (CSs) in small towns

A growing number of scholars argue that CSs can become an important economic factor in rural regions (Avdikos & Merkel, 2020; Manzini Ceinar & Mariotti, 2021; Mariotti et al., 2021). Despite the limited awareness of the term 'coworking', notably by rural communities (Engstler et al., 2020), the percentage of CSs in towns with fewer than 50,000 inhabitants increased from 9% in 2012 to 16% in 2019. The concentration of CSs in inner cities is common, especially in Europe, whereas in the US, two thirds of CSs are in cities with fewer than a million residents, suburban areas, and rural areas. About 65% of American coworkers are settled in towns and peripheral areas (Deskmag, 2019).

CSs have been studied primarily in urban locations and less is known about how they function in sparse regions and small towns (Fuzi, 2015; Micek et al., 2020). To date, CSs have been identified and studied predominantly as an urban phenomenon (Merkel, 2015; Shearmur, 2017). Most of the coworking spaces surveyed by Deskmag (2019) are in cities with more than a million inhabitants. Several of the few available studies about NWSs in non-urban areas are in

languages other than English (e.g. Salgueiro et al., 2017; Krauss, 2019; Flipo, 2020), suggesting that this phenomenon is still under-explored in the US.

Although CSs are important for a small town's economy, previous studies have shown that they tend to struggle with attractiveness, insufficient local market demand, financial balance, workload, ability to hire staff, and community engagement (Deskmag, 2019, p. 529). Authors advocating public policies to support the development of shared workspaces and hubs in remote areas (e.g. Avdikos & Merkel, 2019; Engstler et al., 2020) list a number of priorities. These include acknowledging diversity in shared workspaces; fostering their contribution to local economic growth by means of skills development and networking opportunities; recognizing their function as community infrastructures that create the social fabric within rural areas; and building the capacities of facilitators and agents.

Although most research focuses on CSs, other NWSs follow similar dynamics. It is worth investigating the struggles and needs of NWSs in lower density areas to outline long-term perspectives for their development. Moreover, many NWSs were severely affected by the pandemic and social distancing measures intervened on daily practices. Studying NWSs in small towns in America may be helpful since it exemplifies a phenomenon that is becoming more significant.

Coworking and community

Definitions of 'coworking' stress community as the key factor in creating value, which is fostered by sharing, interaction, collaboration, coopetition, and 'organizationality' (Bouncken & Reuschl, 2018; Blagoev et al., 2019). One key aspect of a community is the organization of events, which may also be open to the public and are useful for increasing the revenue of the space (Mariotti & Akhavan, 2020). The composition of CSs tends to be more consciously determined in metropolitan areas than in rural and small towns, where they develop 'mostly on the basis of personal relationships and networks of the operators or the initial users' (Knapp & Sawy, 2021, p. 124). CS managers and staff play a fundamental role in co-building a sense of community and creating attachment to the space as they promote relationships of trust and friendship, foster domestic feelings, and generate new business opportunities (Pais, 2012). However, considering alternative community types such as Gemeinschaft, Gesellschaft, and Collaborative (Adler & Heckscher, 2007, building on Tönnies, 2011), most CSs are characterized as Gesellschaft communities; that is, members focus on their own businesses, providing each other only with emotional support and not usually coworking on a common objective (Spinuzzi et al., 2019).

Few studies have specifically looked into the community component in small-town and rural NWSs. The most prominent example is Garrett et al. (2017) who investigated how a sense of community was created by working in a North American suburban town. The authors argue that a sense of community in CSs boosts motivation to help, emotional investment in the future

of the space and its reputation, and a willingness to ensure its survival, which is especially salient given financial challenges. However, their study addresses the community from the perspective of CS members and their motivation to choose coworking over other locations for work. There are no studies on the sense of community as a means to grow the business and make it more resilient from the managers' point of view.

Moreover, it is worth examining how communities have reacted to the pandemic. NWSs have been challenged by COVID-19, since the number of people working at CSs dropped on a global scale (-71.67% average), with a consequent loss of membership and contract renewals and a reduction in new memberships (Coworker.com, 2020). The newest data collected during the pandemic mostly regard CSs business models, changes in demand, rent renegotiations, and estimates on survival rates. Nevertheless, with COVID-19, CS managers needed to keep their communities connected more than ever with virtual events, home-delivery services, and support for remote work (Manzini Ceinar & Mariotti, 2021). Not all CSs though had the possibility to develop such services, which highlighted their fragility. This chapter investigates the community dimension of NWSs and its potential in times of crisis.

Aim and approach

This chapter focuses on the short- and long-term effects of the pandemic on NWSs in an American college town. By exploring how these spaces reacted to the pandemic and how community bonds evolved within and around them, this chapter draws attention to NWSs outside metropolitan cities and discusses potential strategies for NWSs to recover in the post-pandemic world.

We take Ithaca, NY, as an interesting case because it is a small town (about 30,000 inhabitants according to the 2019 census) located in an area whose economy is mostly based on agriculture and farming. Ithaca is also a typical college town since it benefits from higher education institutions such as Cornell University and Ithaca College, which make it an attractive place for young people who want to establish their work lives as university employees or entrepreneurs in the Finger Lakes region. Technology companies such as Singlebrook, a custom web development agency founded in Ithaca nearly a decade ago, took advantage of the proximity to the universities and the talented workforce they attracted to an otherwise isolated part of upstate New York. Over the past several years, Ithaca has seen numerous coworking spaces open for business. The university's closure due to the pandemic marked a devastating impact for Ithaca's economy, with 9,500 jobs lost in April 2020 alone (Stalnecker, 2021). Therefore, a severe impact was expected on local NWSs, which is analyzed in the following sections by investigating all the existing spaces.

Firstly, five NWSs in Ithaca were identified by word of mouth, including three coworking spaces, one incubator and one maker space (see Table 5.1). The latter two were run by the same person, so four interviewees (managers and/or owners) were involved in the investigation, and a total of eight phone interviews were

Table 5.1 Interviews.

Code	A	B	C	D	E
Gender	Male	Male	Female	Male (same as E)	Male (same as D)
Role of interviewee	Owner and manager	Owner and manager	Manager	Manager	Founder and board member
Type of space	Coworking	Coworking	Coworking	Incubator	Maker space
Governance	Private	Private	Cooperative	University-led	Non-profit
Space tenure	Owned	Leased from private landlord	Leased form private landlord	Paid by university to private landlord	Leased
Capacity	20–25	10–12	10–12	About 70	10–15
Number of members (usual)	10 (5–7 at the same time)	5–10	6–10	45 companies (from 1 to 50 people each)	75
Mission	Boosting entrepreneurial spirit and **creative activities**	Fostering environmental and social **justice**	Supporting the **cooperative** community CoLab focusing on **digital design**	**Retaining talent** to make an impact in the town	Encouraging **creative endeavors** of common people (not for business)
Date of creation	2019	2015	2010	2014	2010
Active 2020	Yes	Yes	Until March	Yes	Yes
Active 2021	Yes	To be defined	No	Yes	Yes

Source: Authors.

conducted in two rounds. The first was held in April–May 2020 and the second in March–April 2021. Each interview lasted approximately 30 to 60 minutes, following a semi-structured guide to cover specific topics of interest for this study: (a) the impacts of COVID-19 on the business and its community; (b) the short-term effects of the pandemic and ability to react to the lockdown; (c) long-term perspectives for NWSs in small rural towns. The interviews were video-recorded or transcribed on paper (depending on the interviewee's permission) and subsequently analyzed according to the Consensual Qualitative Research (CQR) approach (Hill et al., 2005). A critical interpretation of the results is presented in the next section. Domains and core ideas were coded by the authors' consensus followed by cross-analysis to identify common themes across participants.

Results and discussion

Overview of the cases

All the spaces are relatively small with a capacity of 10 to 25 people. Only the incubator hosts up to about 70 people at a time. The coworking spaces in the sample are typically for profit. Their managers and owners were busy with other jobs and managed the coworking spaces as a side job. However, the incubator and maker space are non-profit initiatives, and operated by a dedicated staff hired by Cornell University (the incubator) and a nominated board (the maker space). All the spaces were active until the beginning of the pandemic. Space C was forced to shut down after March 2020 because it could not sustain the lease and it remained closed throughout 2021, although its cooperative was still active. Space B was open throughout the pandemic, but its owner was wondering whether it would still be feasible to run the business. As expected, the pandemic has affected the operation of NWSs in Ithaca. The interview results showed the importance of the community on different levels to help these spaces survive.

Internal community

One general domain emerging from the interview results regarded internal community, which is the most common in previous literature on coworking. This showed more issues than benefits related to both the short-term and long-term strategies of NWSs, showing them to be rather 'flexible'. None of the managers mentioned that their spaces were based on a strong internal community before the pandemic. This might depend on the scope of the space, as well as on the retention and stability of its members. The previous literature suggests that rural coworking spaces differ from metropolitan ones because their composition tends to be less consciously determined (Knapp & Sawy, 2021), and similar results were found in the NWSs in Ithaca. Nevertheless, the idea that the development of rural CSs was mostly based on personal

Table 5.2 Domains, core ideas, and themes emerging from the interviews.

Domains	Core ideas	Themes
Internal community	Composition of the NWS is varied and rotates 'Transient population – artists, software engineers, etc. . . . 75% of people where there only to use the space, 25% were interacting with the cooperative. . . . Relationships were temporary' [INT-1C] 'The community . . . is varied' [INT-1D] Turnover is high and impacts returns 'The greatest challenge was turnover of coworkers' [INT-1C] 'It's hard to make the numbers work in our town' [INT-1B] Diversity reflects openness and flexibility 'Some [of the members] are working remotely for larger organizations and non-profits (for example in LA). Most of them are from Ithaca and their companies are not!' [INT-1B] 'It is domain agnostic' [INT-1D] 'There is no selection criteria' [INT-1E] 'Occasionally a few people rent out the meeting rooms on an as-needed basis' [INT-1B] People leaving Ithaca shows disengagement ' "It was small between 6 and 10 members. They were solopreneurs or visiting professors at Cornell. They went back home' [INT-1C] 'One of the 2 managers decided to drop out, also because he has a family with 3 children' [INT-2A]	Ties related to the use of the space Poor stability Gesellschaft community
Local community	Healthy competition 'Ithaca is a very collaborative space in general, so the coworking community is the same' [INT-1C] 'Every coworking space here has its own specificities' [INT-1C] NWSs are community activators 'We are a hub of the entrepreneurs' community in Ithaca [and] the region. There is a lot of commitment' [INT-1D] 'The space is participating in various Ithaca events, like the Festival, Friday markets, etc.' [INT-1E] 'We are part of the "Guide to Being Local" . . .. We contribute to some auctions in town for fundraising. We provide space for some events. . . . In terms of community impact, we are active as an incubator mostly for non-profits. In the past we provided a free space for people marginalized in the community (people of color, LGBT, etc.)' [INT-1B] 'The people who attend the workshops are from the community at large' [INT-2A]	Ties generate from belonging to the town Good stability but hindered by COVID-19 Traits of Gemeinschaft community

(Continued)

Table 5.2 (Continued)

Domains	Core ideas	Themes
	NWSs support the local economy	
	'We support local businesses as well as some coffee spaces, so we have the espresso–cappuccino machine and free coffee for the coworkers. We have also snacks from local makers. . . . Most of the workshops are taught by local artists and makers' [INT-1A]	
	'Some people around donated money to help companies and businesses in town. We put together a committee to understand what businesses deserve them as "anchors" (i.e. the historical businesses that define the identity of the town and the area)' [INT-2E]	
	'Cornell is very sensitive to supporting the [local] community. We are not gonna turn around and beg our landlord for rent reduction. The cleaning company, as well, is just a little company. We are still cleaning the space 3 times a week just to support it' [INT-1D]	
	The pandemic hit community bonds	
	'We don't do the big events that we used to do' [INT-2E]	
	'The community of the town is losing contact (not just entrepreneurial) with the space. The evening events do not exist anymore . . . they were very social evenings. People were coming also from the surrounding towns (e.g. Binghamton)' [INT-2D]	
Extended community	A sense of belonging binds a wider community	Ties generate from embracing a social model
	'In the broad coworking and cooperative community there is a lot of solidarity. . . . I always felt that the door was open to visit other coworking spaces [when I am travelling]' [INT-1C]	
	'Personally, when I used to travel around, I would always spend some time and visit similar activities' [INT-2D]	Became an opportunity with COVID-19
	Developing plans	
	'We collaborate with many other coops and labor organizations' [INT-1C]	
	'Within the Southern Tier Alliance we support each other by sharing our events and we invite everybody. Geography is irrelevant nowadays. We'll keep doing this in the future for informational/educational events, they'll be hybrid. [However] The social part needs to be in person' [INT-2D]	Collaborative community
	Future prospects for collaboration	
	'Usually there are consortiums in Upstate New York. I see more collaboration in terms of content than of funding' [INT-1D]	
	'There would be advantage for small [NWSs] to partner with other small ones' [INT-2A]	
	'Municipalities and townships are creating spaces for collaborative working in their public halls. The way they are building out their open spaces is increasing and encouraging this phenomenon' [INT-2A]	

'A lot of people in Ithaca have connection and go to work in NYC, so it's interesting to have an additional space there, and offer the opportunity to NYC to have a more remote space here' [INT-1A]
'Wework, Impacthub, and others are different [but] I think they could support smaller coworking spaces' [INT-1C]

Transverse Managers' community	NWSs in town are unaware of each other	Ties generate from facing similar challenges
	'I don't know about other coworking spaces here. I am not in contact with them' [INT-2C]	
	'Honestly, I felt like I would love to have a stronger relationship with the other local coworking spaces. It feels weird to be in a town with 3 coworking spaces and we are not talking to one another. . . . But I guess it's out of busy-ness. We are all too busy and focused on our own stuff to find the time to meet each other' [INT-1B]	Became more relevant with COVID-19
	Who is not connected struggles the most	Potential for collaborative community
	'We have kept in touch mostly by email. We have been thinking about scheduling some videocall zoom but haven't done it yet!' [INT-1A]	
	'We are keeping email contact once every couple of weeks with the members. . . . We are not really doing virtual events' [INT-1B]	
	Virtual connections are crucial	
	'[We would meet] at least twice a month, when we used to have our breakfasts, now we do them virtually' [INT-1D]	
	'All of our member companies became virtual. Some of them are wondering whether to stay virtual forever. Our relationship to the company changed in the sense that we are in contact with the leaders but not with all the staff, much less than before. Probably new employees there don't even have the idea that we exist' [INT-2D]	
	Future prospects for NWSs in small rural towns	
	'People moved from Brooklyn to Ithaca because they wanted to be safer. There should be some opportunities for peripheral and rural areas' [INT-2C]	
	'There has been a flight out the city. Ithaca is beautiful. I don't know how long this will last, but there is much less housing for sale, there is nothing for sale on the lake. . . . Upstate New York is seeing a lot of incoming people. This has the potential to make a vibrant community' [INT-2D]	
	'In NYC coworkers don't care as much if there is a big structure behind. Instead in Ithaca it's important the community. The local business model supports this community atmosphere but after the pandemic it might become more valuable to partner with one another' [INT-1A]	

relationships (Knapp & Sawy, 2021) was not found in the current study. Conversely, NWSs in Ithaca accommodated members that rotated often and were mostly interested in renting hot desks. An ever-changing member population was a common challenge, not only for community building but also for maintaining stable revenue, even before the pandemic.

Member profiles in all the spaces varied in terms of industry, company size (solopreneurs or small groups), educational background (including affiliates of Cornell University and externals), and need to access the space. Even though each space is characterized by a recognizable mission, member enrolment was not too selective and mostly involved a self-selection process. This was especially common during the pandemic, when 'people who were risk averse dropped and the people who are there now are more relaxed' [INT-2A]. This self-selection process resonates with the findings of Garrett et al. (2017). However, in the cases here, it was driven by personal choices, values, and concerns about work and life, rather than by a desire for an internal community.

The pandemic undoubtedly affected all the spaces with a drastic drop in membership due to several reasons, including people leaving Ithaca. Clearly the sense of ownership recognized in the study by Garrett et al. (2017) was not found in the current study. Garrett et al. (2017) observed that members also frequented the CS after abrupt changes in the work situation, which demonstrated members' commitment and connection to the space. In Ithaca, on the other hand, members typically did not pay their membership fees during COVID-19, which may be interpreted as a sign of an uncommitted relationship with the space. The internal communities of NWSs in Ithaca resemble the Gesellschaft community type (Spinuzzi et al., 2019), meaning that they focus more on individual goals and business interests.

Local community

In contrast to their weak internal bonds, the spaces in Ithaca showed deep connections to the local community. Reciprocal respect created a balanced ecosystem. Since only a few NWSs exist in Ithaca, competition did not appear aggressive. NWSs in Ithaca tend to attract and develop their own niche, despite partial overlap in the member profile. With its specific mission, the spaces were deeply embedded in the town or the region as community activators, for instance by participating in local groups and events including food festivals and farmers' markets. Participation might entail the presence of NWSs as both co-organizers and space providers. Each space characterized its activities and atmosphere in such a way that they appeared unique when compared to others.

There seems to be support from citizens to promote the spaces, while the spaces serve the local community. Partnerships with local businesses were common both on an occasional and a regular basis, which is in line with the survey results showing that 66% of CSs worldwide have partnerships with purpose-driven organizations and 45% with local service companies (Deskmag, 2019, p. 579). Fruitful collaborations were established to provide comfort products daily and to organize workshops.

On one hand, the pandemic fostered these interactions and reciprocal help. For instance, some groups remained active at Spaces D and E following the start of the pandemic, continuing throughout spring 2021 to produce COVID-related equipment. 'One group is doing personal protective equipment, so they are working there. They are doing a phenomenal job to support the community. We raised thousands of dollars to equip hospitals and we are still working there for this' [INT-1E]. In particular, even though Space E lost a few members because of COVID-19, they organized fund-raising campaigns to prevent other local businesses from shutting down. The initiative was very visible thanks to the sponsorship by the maker space and the entire community participated. Space D, run by Cornell, decided to keep the cleaning service active during COVID just to support the service provider's business. Such initiatives recall Tönnies's (2011) Gemeinschaft community, which in previous studies (Spinuzzi et al., 2019) has been considered extraneous to the realm of CSs. Despite positive interactions, only the maker space and the incubator showed an ability for NWSs to help the local community, which was based on their unique governance and business models. Coworking spaces that operate as private businesses and have a relatively less open attitude benefitted less from their presence in the local environment.

On the other hand, the pandemic hindered social gatherings and thus hampered community building among members. The events organized by the spaces were usually open to everybody before the pandemic and served as opportunities for Ithaca residents at large to come together and share experiences. The spaces worked well as motivators for local citizens to take action and support initiatives in town up until the outbreak. However, during the pandemic, even spaces that saw more participation by town representatives lamented the looser community bonds.

Extended community

A third community domain on a larger scale was also recognized. Regional and international ties, which some of the spaces have, are important resources because they develop plans for the future. For those spaces, the system of NWSs worldwide was perceived as a welcoming and inclusive informal community, ready to open their doors to colleagues for sharing space and knowledge. A sense of belonging to a relatively well-established, extended community of like-minded people was acknowledgeable in the interviews. This community, although dispersed geographically, experiences a common 'social model', which might contribute to its thriving in the future.

> Coworking will have more space both for entrepreneurs and employees that will want to work with likeminded people.
>
> [INT-2A]

> The movement to coworking space is a natural societal evolution. . . . Coworking is a business model but also a social model.
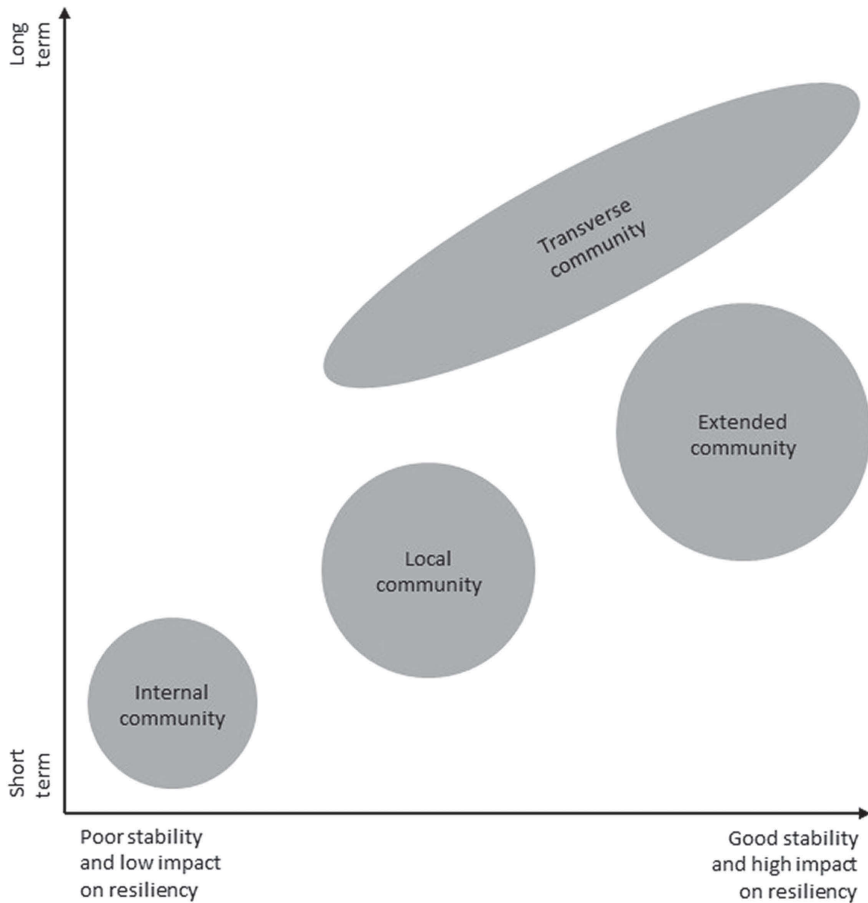>
> [INT-2B]

Figure 5.1 Four levels of community in NWSs.

Part of the strength of these spaces was precisely their connection with wider networks. Space C was shut down but the cooperative behind it was still active thanks to connections with other similar organizations. This kept the perspective of a better future for Space C open and encouraged the managers to engage in new visions of coworking and co-living. Larger incubator networks in the region, such as those connected to Space D, functioned as a binder, even more so during the pandemic. The need for stronger mutual support, even across territories, has grown in the past year, but it was also perceived previously as an enriching perspective. 'Over the years we had a lot of conversations about how to network with similar activities in the area' [INT-2D]. This had not yet been realized, but expectations for future development of the NWS ecosystem in Ithaca were positive and relied on stronger collaborations among different organizations. Sharing contents and creating a stronger network seemed more feasible among NWSs of similar size. However, for larger

and entrepreneurial-led CSs, there could be benefits in partnering with smaller spaces. According to the interviewees, there are multiple ways that large networked and entrepreneurial-led CSs could support the entire NWSs ecosystem. (1) Coworking giants and large networks could boost coworking as a concept and make it more popular; this would also happen thanks to public shared spaces. (2) Giants could offer shared memberships with a number of affiliates, delocalized over vast territories, with benefits on both sides. (3) Large coworking spaces could offer a lot of courses and support activities, which could be useful if they were accessible to smaller coworking spaces that do not have the same opportunities.

Potential of a transverse managers' community during and beyond the crisis

The good relationship that all the spaces have with the local community and with the extended NWS community at large, do not correspond to relationships of mutual assistance between one NWS and another. When the managers were asked whether they knew how the other spaces in town were doing and how they were dealing with the pandemic, all interviewees seemed to be totally unaware of it. This most likely did not depend on the fear of competition or disinterest, but just on the space managers'/owners' lack of focus. It is not surprising then, that even some space managers left Ithaca or left their jobs to take care of family during COVID-19. The owner of Space A lives most of the time in Huston (TX) and Brooklyn. The owner and manager of Space B moved to Hawaii during the pandemic and managed the space remotely with the help of a cleaning person. This likely occurred because many of these people manage CSs as a side job.

For this reason, the quality of bonds and communication within the NWS ecosystem on a larger scale was especially crucial during the pandemic. The most severe effects were suffered by those that did not manage to organize online events and keep regular connections, except email exchanges, with both internal members and local people. Conversely, the most structured spaces, such as Space D, could count on staff to organize online activities and share them on local and regional networks. Although this strategy cannot become a long-term mode because it depletes the internal community and the role of the space, it is considered positive for 'survival' in the short term, and enables prospects for future collaboration and content sharing.

There is an optimistic vibe when future perspectives for the success of NWS models in a small town like Ithaca are discussed. The increasing attractiveness of rural areas due to the pandemic and the initiatives undertaken by townships to promote shared creative spaces are likely to open the road to promising developments. Besides the internal community dimension, partnerships among similar businesses on different scales are reported to be critical for 'mutual help and support' [INT-1C], which indicates the potential for a collaborative community to be established. As long as the community dimension can be strengthened on different levels, coworking will experience positive momentum.

Conclusions and implications

The aim of this study was to examine the community dimension of NWSs and its potential during a time of crisis. By investigating the impacts of the COVID-19 pandemic on NWSs in a small town, this chapter showed the role played by multiple communities to stabilize the NWS business and support resilience. This study complements the limited literature on small town NWSs and advances knowledge on the community of these spaces.

Four levels of community emerged from analysis: internal, local, extended, and transverse communities of NWS managers (see Figure 5.1). All seem to be relevant to the growth of future NWS models with short- and long-term effects on business resilience in the post-pandemic world. The internal community, which consists of ties that only depend on the shared use of space, was the least stable in the cases studied and did not provide much support to the NWSs during the COVID-19 crisis. The local community showed some elements of the so-called Gemeinschaft community. Since its ties are generated from belonging to the town, they appeared more stable in times of crisis. The extended community was perceived on a cross-territorial level and emerged from embracing a social model. During the pandemic, it showed potential in becoming a collaborative community. Finally, the managers' community showed transverse spatial boundaries and was motivated by the fact that managers shared similar challenges. This community still requires empowerment, but its professional expertise became more relevant during the pandemic and would benefit from developing a truly collaborative community for rural NWSs to thrive.

This chapter introduced further complexity in the community dimension of NWSs. This can have an impact on how small-town NWS managers deal with different levels of community. One line of future research could stem from testing the conceptual model outlined here by enlarging the sample size. Moreover, the attribution of the Gemeinschaft, Gesellschaft, and Collaborative types to the different community levels is only a hypothesis that requires in-depth investigation. However, this initial discussion can support the capacity building of operators and hopefully will strengthen their ability to interact more with their internal members, local communities, the global and cross-territorial ecosystem of NWSs, and other peer operators. The public sector or public-private institutions should contribute to this process by facilitating the creation of NWS networks across cities and territories in order to maximize the success of NWSs outside large cities and following the pandemic.

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Part 2

The role of new working spaces in urban and regional development and the policy and planning debate during the COVID-19 pandemic

Mina Di Marino, Ilaria Mariotti, and Pavel Bednář

Despite myriad scientific studies on NeWSps in our cities and urban regions, there is still very little recognition of the key role that NeWSps can play in urban and regional development. Prior to COVID-19, policymakers and official practitioners in city and regional planning departments had not yet addressed the complexity of the phenomenon and its impacts on the living and work environments. Considering the issues before and during the pandemic, the studies in this section reflect on the challenges that NeWSps have faced and may handle in the future by examining a variety of urban, rural, and regional contexts. The primary focus is on (i) integrating city core and periphery development to increase competitiveness, resilience, and synergy by including the peripheries in regional, national, European, and global networks; (ii) fostering the socioeconomic growth and convergence of core and peripheral areas; (iii) reducing commuting by developing more sustainable transportation; (iv) developing new forms of regeneration and innovation between or within all hierarchical levels of planning; and (iv) improving sustainable goals such as networks of accessible workplaces and creating local multifunctional hubs in peripheral areas.

In Chapter 6, Carolina Pacchi, Nicola Francesco Dotti, and Mariachiara Barzotto begin by exploring whether European policymakers have even acknowledged NeWSps. The chapter examines the different business models of new working spaces based on public and private initiatives that are discussed in the literature. The chapter highlights the importance after the pandemic of having targeted European policies on new working spaces and discusses the role of policy makers in identifying customized policies on new forms of work across European cities and peripheries. In Chapter 7, Bastian Lange, Bianca Herlo, Yasmine Willi, and Marco Pütz present knowledge about the concept

of regional sovereignty to discuss the regional capacity of Germany and Switzerland to govern NeWSps during and after the pandemic. The chapter stresses the effects of the digital transformation in regional development, along with the potential role of new working spaces in rural areas. These informal collaborative spaces and practices can be acknowledged within current rural policies and sovereignty as based on flexible procedural spatial configurations. In Chapter 8, Divya Leducq, Christophe Demazière, Étienne Bou Abdo, and Priscilla Ananian focus on the impacts of COVID-19 for the new working and mobility patterns of people moving from the core to the periphery of the Paris mega city–region. The chapter recognizes coworking spaces (CSs) as a relevant asset in the vast metropolitan region for attracting newcomers from the capital (see, for example, new residential and workplace location preferences). Chapter 9, co-authored by Elisabete Tomaz, Bruno Moriset, and Jacques Teller, focuses on a comparative analysis of the impacts of COVID-19 on rural coworking in Portugal, France, and Belgium. Despite the severe implications of COVID-19 in rural areas, the hybrid coworking examined has shown a high degree of resilience and provided a new opportunity for working remotely.

Part 2 ends with Chapter 10, by Thérèse Bajada, Bernadine Satariano, and Seyed Hossein Chavoshi, who refer to the chrono-urbanism approach (15-, 20-, or 30-minute city concept) which gained greater momentum under the pandemic. The chapter suggests policy packages that combine CSs and chrono-urbanism to address sustainable mobility in a very car-dependent society, using Malta as a case study. During the pandemic, several modes of sustainable transport such as buses were not encouraged for safety reasons. CSs can support strategies for new sustainable mobility in Malta (walking and biking, as well as buses) and using shared spaces for working.

Part 2 shows that the COVID-19 pandemic has accelerated the attractiveness of megacity peripheries and rural areas for remote workers and talents. A relatively high number of workers have expressed a willingness to continue working remotely after the pandemic (European Commission, 2020). Part 2 therefore calls for a new understanding of the effects of NeWSps in regional and urban planning and a profound revision of European and local policies when developing strategies, measures, and incentives for the *new normal* after the pandemic.

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6 New working spaces

Policy perspectives before and after the COVID-19 pandemic

Carolina Pacchi, Nicola Francesco Dotti, and Mariachiara Barzotto

Introduction

Coworking spaces (CSs) emerged in the US in the mid-2000s as part of a broader evolution of (urban) working spaces, moving beyond the traditional idea of large (Fordist) manufacturing plants. This internally diversified phenomenon includes various forms of new, shared working spaces such as incubators, makerspaces, and fabrication laboratories (fab labs). This diversity, which is part of the richness and potential of new working spaces, makes them difficult to define (Akhavan, 2020) and this unclear conceptualization has implications for interventions aimed at supporting or promoting them (Avdikos & Merkel, 2020). However, the potential for creating jobs, supporting start-ups and new forms of work organizations (as explained in the other chapters of this volume) has attracted policy interests to counteract deindustrialization processes in advanced economies. The emergence of the post-Fordist economy in developed countries left many brownfields, both large ones on the urban fringes and smaller ones in the consolidated urban fabric, presenting critical challenges for urban transformations. At the same time, policymakers had to face job losses and growing socioeconomic polarization within cities. In this perspective, the new forms of working spaces combine economic, social, and urban aspects.

This chapter maps the debate of new working spaces (particularly CSs) on the level of European policy making. It explores how new working spaces have been interpreted by the European Commission and how this debate has evolved from its origins up to the recent COVID-19 period. For these purposes, two different ideas of CSs will be presented and discussed: CSs as innovation drivers boosting economic development; and as opportunities for territorial regeneration, such as brownfield redevelopment or local hubs promoting social cohesion. Specific attention is devoted to identifying the evolution of policies supporting these spaces with a focus on place-based and urban planning measures before and during the COVID-19 pandemic. This chapter empirically investigates this debate analyzing EU policy reports and case studies. Finally, remarks and suggestions for policy learning are presented.

The remainder of the chapter is structured as follows. In Section 2, a (short) historical review of the emergence of new working spaces in advanced

economies is presented. Section 3 presents a conceptualization of new working spaces for policy design, with a focus on CSs as drivers of economic development and urban regeneration. Section 4 reflects on the effects of the COVID-19 pandemic on CSs. Finally, Section 5 concludes by delineating remarks and suggestions for policy learning.

The evolution of new working spaces in cities undergoing deindustrialization

From a long-term perspective, CSs form part of the continuing evolution in the organization of workspaces, moving beyond the large (Fordist) manufacturing plants to introduce new, flexible forms of (shared) working spaces. This evolution has changed and is still changing the urban landscape and collective imagery of working spaces (Aerts et al., 2007; Caiazza, 2014; Grimaldi & Grandi, 2005; Mian et al., 2016; Smith & Zhang, 2012; Theodorakopoulos et al., 2014). In the Europe-centred policy-oriented perspective chosen for this chapter, three main periods can be identified, from the first 'incubator' in the US, to the diffusion of 'business innovation centres' in Europe, to the most recent CSs. This concise overview presents a framework to conceptualize policy interventions for CSs.

The starting point can be identified in the well-known case of the Batavia Industrial Center by Joseph Mancuso in New York, USA, which is considered the first known business 'incubator'. This first example was mainly a profit-oriented real-estate project for newly established companies. Its success spread from Northern America to Europe and was also replicated several times by governments and universities. Mancuso's fundamental intuition was to provide equipped office space (and eventually production space) to newly established companies. However, this initial real-estate perspective was quickly integrated with the benefits for early-stage entrepreneurs of being located in the same place, sharing experiences, tacit knowledge, and potential business networks among colleagues and with potential venture capitalists. This experience was viewed as successful due to the integration between 'hard' factors (working spaces) and 'soft' factors such as business networking, knowledge exchange, and informal contacts.

The second milestone was the European Programme for Business Innovation Centres (BIC), launched in 1984 (cf. European Commission, 2002). This programme was the first policy programme explicitly aimed at the spread of new working spaces. At the time, BICs became the first recognized channel for establishing new companies using public support. Nonetheless, importing this model from the US, European policymakers had to adapt the legal and business settings to the European context. Without going into the details of this programme, the expansion of BICs across Europe made these new forms of working spaces a primary channel for new companies, spreading this model across the continent. The strong emphasis on soft factors such as business networking, entrepreneurship training (i.e. accelerator programmes), and knowledge exchange (Theodorakopoulos et al., 2014) became a factor of success for many new companies.

The third phase can be identified after 2000, when incubators, BICs, and other forms of flexible workspaces were already well established as cities deindustrialized. However, growing scepticism emerged, with questions related to the effective use of public funds for such expensive real-estate initiatives (Mian et al., 2016). While the 'soft' factors emerged as key elements, the tangible elements of these new working spaces were too expensive, often undermining the economic profitability of such initiatives. This weakness led to questions about the financial returns of BICs and incubators where the revitalization of brownfields was justified in the context of the urban/built environment, but not in 'economic' terms, since freelancers, start-ups, and new companies hardly used these new spaces.

In this third phase, CSs have emerged as a flexible compromise between 'traditional' incubators, where the real-estate aspect was predominant, and the 'intangible' accelerator programme focused on promoting entrepreneurship without providing office space (Aaboen, 2009; Aernoudt, 2004; Albert et al., 2003). While incubators were seen as expensive/unprofitable real-estate initiatives, the accelerator programmes were viewed as 'just' training, sometimes associated with venture capital funding or business angel initiatives (Bøllingtoft, 2012). Thus, while incubators were too expensive and mainly focused on real-estate, the accelerator programmes were seen as 'too light' and unable to solve the demand for (physical) working spaces for newly established companies. Between these two extremes, CSs provide flexible working spaces on smaller scales compared with incubators while maintaining the 'soft' elements.

In this perspective, CSs can be seen as local mediators between multiple needs (cf. Dotti & Lupova-Henry, 2020). Like incubators, CSs offer professional work areas endowed with the necessary business equipment such as desks, Wi-Fi/Internet connection, cafés, lounges, and meeting rooms. In contrast to incubators, the organization of CSs with flexible desks and offices may change daily, optimizing physical spaces and potentially boosting the 'soft' elements such as intensifying informal contacts and providing workshops, upskilling courses, and professional/social networking. These soft opportunities facilitate knowledge exchange, collaboration, and joint leisure activities (Gandini, 2015; Bouncken, 2017 in Bouncken et al., 2020), representing critical aspects in boosting entrepreneurship and creativity (Bouncken & Aslam, 2019) in people and organizations. On the other hand, CSs answer the need for offices not offered by the accelerator programmes. With regard to the office market, CSs allow short-term renting, potentially reducing this cost for start-ups and freelancers who might have difficulty meeting a critical mass to rent their own office spaces. These elements are particularly relevant in central urban areas where real-estate market pressure is higher than in peripheral/suburban areas. At the same time, the concentration of a highly skilled workforce facilitates the emergence of new entrepreneurs (freelancers, start-ups, or other forms). Nonetheless, vague terminology and unclear notions undermine the possibility for policymakers to identify a field for intervention (cf. European Commission, 2002).

Conceptualizing new working spaces for policy design

The distinction among incubators/BICs, accelerator programmes, and CSs opens a theoretical issue between public and private initiatives. The first incubator in New York was a purely private initiative, BICs were a publicly promoted initiative, and hybrid organizations like universities have also created these new forms of working spaces. According to Grimaldi and Grandi (2005), the distinction between public and private initiatives can be misleading, since most initiatives have hybrid forms, often adapting to the national legal framework. Along these lines, the following distinction between public and private incubators can help better describe this issue.

> The *main objective of public incubators was to reduce the costs of doing business* by offering a set of services ranging from the provision of space, infrastructures and facilities, to more elaborate services, as well as by offering access to technical and managerial expertise, assistance in business plan development, etc. The main source of profit for public incubators is the fees for the services they provide and the public funding from local, national and international schemes. . . . Private incubators can make money in several ways, including charging service fees, as well as taking a percentage of revenues from incubated companies or liquidity events of incubates. *The purpose of for-profit incubators is quickly to create new ventures and in return to take a portion of equity in the new venture as fees*.
> (Grimaldi & Grandi, 2005, pp. 112–113, emphasis added)

In Grimaldi and Grandi's framework, two models can be identified. In Model 1, working spaces have a business model based on the returns generated by user fees, while Model 2, in contrast, profits from '(re-)selling' the hosted businesses. While other classifications do exist (cf. Aerts et al., 2007; Bergek & Norrman, 2008; Bruneel et al., 2012), this taxonomy has been broadly accepted in the literature because it goes beyond the formal/legal definitions between public and private organizations, which may be affected by differences in the various national legal systems. For policymakers, this distinction is crucial because Model 1 working spaces can offer flexible, often affordable offices in central (i.e. congested) urban areas. In contrast, Model 2 seems more adapted to riskier business initiatives, thus involving more private investors.

The distinction between these business models contributes to conceptualizing CSs as local mediators working between user demands and investor expectations (Dotti & Lupova-Henry, 2020). As incubators, CSs can adopt different ownerships; they can be public, private, or hybrid. Looking at CSs in Helsinki, Kojo and Nenonen (2016) identified a typology of spaces according to two dimensions: the business model (profit vs non-profit strategies); and the level of user access to the places (public, semi-public, or private). The authors describe six types of CSs: public/non-profit spaces (public offices, free of charge); semi-public/non-profit (collaboration hubs); private/non-profit (incubators); public/profit (third places); semi-public/profit (coworking hotels); and private/profit (shared studios).

CS members can be heterogeneous. These spaces attract freelancers, start-ups, and scale-up companies (Talent Garden, 2020). Start-ups are developing their business idea and usually participate in accelerators or incubator pro-grammes (often organized by the CSs) while looking for investors or business angels. Conversely, scale-ups are companies that have already passed the start-up stage and are validating their product on the market, facing the challenging phase of growing to become well-established SMEs. As Talent Garden (2020) highlights, CSs represent a flexible, collaborative, safe environment for scale-ups that want to minimize risk. Scale-ups may grow fast, and CSs can provide a space for the team at a variable cost. At the same time, CSs are places where employees can learn and upskill, be exposed and connected to international communities, and improve their brand image.

From this brief review, we observe that for local policymakers, the challenge runs from offering affordable working spaces to boosting innovation and economic growth, for which they often have limited possibilities for intervention. Especially in central urban areas, the demand for affordable working spaces is crucial for 'protecting' or 'sheltering' emerging businesses such as freelancers, start-ups, and scale-ups (Pacchi, 2018; Pacchi & Mariotti, 2021). For these emerging businesses, a central location is needed to survive during the most critical phase of the business life cycle. On the contrary, Model 2 working spaces have the highest potential for growth in deprived suburbs and regions where a riskier approach may open the possibility for a substantial socioeconomic upgrade.

Public policies aimed at supporting and strengthening urban social cohesion and local community-building have been at the heart of several localized policy experiments across Europe in the past thirty years (Vinci, 2020). Major structural phenomena such as deindustrialization and overseas migration have occurred, but the impacts on local social cohesion have been very non-uniform across European cities. In the past thirty years, European and national policy responses to the local effects of such trends have been proposed and experimented in the form of 'area-based' and, more recently, 'place-based' interventions (Andersson & Musterd, 2005; Briata et al., 2009; Barca, 2009). Such policies have generally been based on integrated approaches, matching the focus on renewing decayed physical spaces with policy measures to enhance intangible resources such as social capital and collective efficacy and to foster economic development and employment. The rationale of these integrated approaches has been tied to triggering synergy between the different policy measures and minimizing mismatches and missed opportunities.

Many experiments in new working spaces stem from similar perspectives on the role of urban spaces and the ways to make them lively, accessible, and welcoming. In order to understand and interpret policies supporting new workspaces, we organize the variety of urban regeneration policies tested across European cities in this phase along two axes (see Table 6.1):

- one that connects the two polarities of *top-down* (local or supra-local authority-led urban regeneration) and *bottom-up* (social innovation-based and community-driven regeneration projects);

Table 6.1 Type of policy interventions aimed at urban regeneration. (Prepared by the authors)

	Infrastructure interventions	Projects in the social sphere
Top–down (local or supra–local authority-led urban regeneration)	to fill according to the interventions analyzed	to fill according to the projects analyzed
Bottom–up (social innovation-based and community-driven regeneration projects)	to fill according to the interventions analyzed	to fill according to the projects analyzed

Source: Authors.

- another that highlights the tension between infrastructure interventions to upgrade and refurbish physical assets and *initiatives and projects in the social sphere*, aimed at strengthening social cohesion.

Support for and fostering new working spaces, including CSs in particular, falls within the same categories. In most cases, CSs are a bottom-up phenomenon, emerging from market dynamics, local social dynamics, or both with mixed forms (Akhavan, 2020). These hybrid origins represent a challenge for existing planning processes and regulations concerning office space (Babb et al., 2018; Leducq & Ananian, 2019). While only a small fraction of local and regional authorities have instituted direct support policies, many have indirectly supported and fostered the spread of CSs. This indirect support has been achieved through local development policies targeting youth, entrepreneurship, urban regeneration, and social cohesion. Empirical evidence from different cities confirms that CSs can contribute to local social cohesion and neighbourhood regeneration while also supporting freelancers and other individual workers (Akhavan & Mariotti, 2018). Thus, CSs can be seen as mediators between different policy domains, which both influence urban development and are influenced by the surrounding context (Mariotti et al., 2017).

Within this policy mix, EU funds and programmes, and the EU Cohesion Policy in particular, have played a significant role in providing continuity in experimentation and funding opportunities for local and regional policymakers across Europe. Starting with the seminal URBAN Programme in the late 1990s (Pike et al., 2006) continuity can be seen up to the 2014–20 programming period, in which the EU Cohesion Policy devoted 5% of its budget for urban and metropolitan areas. The result was national and regional operational programmes focusing on employability and entrepreneurship, for which CSs became a crucial tool. In some cases, individual cities promoted policies for CSs to foster urban regeneration and strengthen the local innovation milieu, with specific attention for the social innovation ecosystem (Avdikos & Merkel, 2020). This is the case of Milan, Italy, which has proposed policies on both the supply and demand sides (Pacchi, 2018), that is, measures aimed at CS

managers to improve their infrastructure and equipment, and measures aimed at workers to settle at certified CSs. More recently, the City of Milan has invested significantly in the strategic perspective of the '15-minute city' and in measures to strengthen neighbourhood liveability, which entail the promotion and diffusion of CSs locally as a means to contribute to reorganizing work patterns (Comune di Milano, 2020).

Reflections on the effects of the pandemic on CSs

The European labour market has been impacted significantly by the COVID-19 pandemic and the lockdowns implemented to guarantee social distancing is the most common, visible, and impactful measure across countries (Bourdin et al., 2020). These lockdowns have changed the work-life balance, driving teleworking in its various forms (from home-working to flexible teleworking). This shift has affected and is still creating huge impacts on the residential choices of millions of concerned workers across developed countries in Europe and North America (Manzini Ceinar et al., 2020; Sostero et al., 2020). While around 5% of the working population in Europe worked remotely before the pandemic, during the subsequent lockdowns in different European countries, the share of the remote-working population rose significantly, up to 60% in specific segments of the job market, educational profiles, and demographics (Manzini Ceinar et al., 2020; Sostero et al., 2020).

Moreover, in the post-COVID socioeconomic environment, Florida and colleagues (2021) foresee the emergence of two main scenarios. The first is the 'youthification' of cities via the presence of young, educated people attracted by economic opportunities, dense labour markets, social connections, and the related amenities that cities will still provide after the end of the pandemic. The second is the relocation of highly educated households (particularly those with young children) to the suburbs, moving closer to semi-remote working modes in more family-friendly settings, given the more extensive availability of local amenities. In this setting, intermediate cities such as smaller tech hubs and university towns may look more appealing to the latter demographic group because they maintain a cosmopolitan culture and present a safer environment due to the lack of crowding (Florida et al., 2021).

In this critical situation, several governments have had to intervene to preserve and support economic activities while facing the health crisis. Although an exhaustive overview of all policies implemented across the world lies beyond the scope of this work, some examples may be relevant for the case of CSs (see Bonzanni et al., 2020a, 2020b, 2020c). These flexible forms of working are likely impacting the work-area market, though its implications are still unclear. In this perspective, countries like Germany, Luxembourg, Poland, Spain, and the UK have suspended sanctions for unpaid rent. Since many businesses were finding it difficult to pay their lease agreement, this suspension was needed to preserve the existence of such economic activities.

Belgium introduced the possibility of teleworking for all non-essential jobs. This removed legal physical constraints, opening opportunities for teleworking. While CSs had previously been concentrated in large metropolitan areas like Brussels and Antwerp, it opened the possibility to redefine this geography in favour of more peripheral/rural areas, reducing the congestion in and pressure on dense urban areas. In a city-region like Brussels, about half of jobs are held by people living in the rest of Belgium and commuting daily (Adam et al., 2017; BISA, 2018; De Witte & Macharis, 2010). These measures are likely to have an indirect influence on CSs.

These measures for teleworking imply a redefinition of the geography of working spaces. While many businesses seem unlikely to survive while paying high rents in central urban areas, teleworking presents the opportunity to relocate to less expensive areas. However, this has implications for firms that are no longer able to benefit from accessing the 'local buzz' that comes with being clustered with other firms (Bathelt et al., 2004). In this context, CSs can offer flexible forms of working organization while being located in different areas.

For the post-pandemic recovery, it is worth mentioning that CSs do not seem to be considered by the Recovery and Resilience Plans, the most prominent policy promoted by the EU to recover from the pandemic and address other societal challenges like climate change. An overview of the plans adopted up to August 2021 shows no specific attention for CSs or, in general, new forms of working spaces. While digitization and flexible forms jobs are crucial, specific measures for CSs have not been adopted. In the Italian Recovery Plan, for example, co-working, together with smart-working, is only mentioned in relation to general aims to reduce intergenerational inequalities, and not as the object of specific, targeted policy measures (Next Generation Italia, 2021).

Beyond interventions by the EU, most policies seem to cover top-down, economy-oriented measures. Urban renovation and local impacts are expected to follow from this, changing the urban working landscape and pushing communities to re-organize. However, national policymakers were not able to address structural urban changes while facing the immediate COVID-19 crisis. By definition, urban renewal has a longer-term perspective, whereas the COVID-19 pandemic imposed urgent needs. Nonetheless, the digital technologies used for teleworking were already available before this crisis, and CSs were already showing the possibility for new, flexible forms of work organization. While independent workers, micro-entrepreneurs, and start-ups were already using CSs, this crisis has raised the interest of large organizations such as multinational enterprises, public organizations, and large companies that need solutions for flexible forms of work, such as employees working partially at home and partially on business premises.

Finally, the pandemic has presented the opportunity and need for new policies. Starting from a national, economy-oriented policy, CSs might arise as a possible solution to permanent teleworking, even after the pandemic. This shift is likely to have implications for the urban work landscape, although it seems too early to draw conclusions.

Conclusions: further directions for policy research

Although we are still in the midst of uncertainty due to the long tail of the pandemic, we have seen that it is possible to envisage different future scenarios in terms of work-life organization across different areas (Florida et al., 2021). Due to their local assets and service provisions, these different spatial and territorial configurations will have particular effects for new working spaces and CSs in particular (Manzini Ceinar et al., 2020). Policymakers can play a crucial role in supporting CSs and, in turn, fostering local employment and long-term place sustainability. While the main national and supra-national recovery plans and projects do not seem to address the possible role of new workspaces – thereby overlooking significant potential – local policy experiments appear to be better able to include such spaces in their strategies, though with very localized, contextual experiments.

Direct policies promoting shared workspaces should be implemented to target territorial contexts differently, since CSs in suburbs will undertake different functions compared to those in cities. More specifically, they represent a different response to various societal, labour, and real-estate needs. In support of direct policies, indirect ones are required to nourish the (re) generation of urban and suburban areas by boosting the excellent quality education, healthcare, and transport networks that can foster the generation of the 'live-work neighbourhoods' extensively encouraged by urban planners (Florida et al., 2021).

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7   New working spaces in rural areas

Designing a research agenda for regional sovereignty in post–pandemic times

*Bastian Lange, Bianca Herlo, Yasmine Willi,
and Marco Pütz*

Introduction

In Switzerland and Germany, as in many other European countries, rural development has been significantly challenged by various crises in the last decade. At the same time, digitization policies and smart country initiatives are aiming to reduce regional disparities. However, people and institutions are occupied with ongoing regional changes and adaptation processes, even more so during the COVID-19 pandemic (Rose-Redwood et al., 2020; Willi et al., 2020). In particular, small businesses, social enterprises, and new civic initiatives have had ongoing difficulties coping with legitimized top-down forms of regional development and top-down crisis regulations. Furthermore, the recent effects of political regulations during the pandemic have paradoxically challenged the social networks of new working environments. On the one hand, the effects of social distancing have largely limited or even restricted face-to-face encounters and social interaction. On the other hand, less dense rural areas could cope more easily and more effectively design new spaces and working environments due to small businesses, personal networks, and existing social trust among regional users and established collaborators.

Consequently, ongoing transformations challenge the ability of regions to shape their development and the way in which they do so. Especially in rural areas, regions are no longer able – or perhaps were never able – to govern and manage their development independent of external forces and international trends. In short, regional sovereignty is at stake when discussing rural development during the pandemic. This article therefore uses the debate on regional sovereignty to discuss the future of new working spaces in rural areas in the post-pandemic period.

We relate new working arrangements to questions of regional sovereignty in the context of rural policies. We investigate sovereignty between the debate on collaborative governance on the one hand and the transformative capacity of local working space initiatives, the global dominance of the digital realm, and social infrastructure on the other. Based on this asymmetric relationship, we first propose conceptual elements of how to analyze regional sovereignty

during the pandemic by considering the recent role of new working spaces and expectations/assumptions about them.

In the following sections, our interest lies in discussing how regional sovereignty can be conceptualized to better understand the relationship between new working spaces and regional development. In doing so, we perceive new working spaces as a recent phenomenon that plays a growing role as social infrastructure aside from its role as tech-based digital infrastructure aimed at supporting regional development.

New working practices in rural areas and their regional effects

Defining new working spaces

New working and coworking spaces have long been considered an urban phenomenon (Lange & Wellmann, 2009), although the movement has spread to the countryside in recent years (Bähr et al., 2020). Thanks to the digital transformation, people increasingly have the option of deciding where they want to work, flexibly and on an ad-hoc basis. New places of work in rural areas are benefitting from this development (Koster et al., 2020). At the same time, urban business models cannot be easily transferred to rural communities. One of the reasons is lower demand due to the lack of agglomeration and urbanization economies. Nevertheless, coworking has found market opportunities and niches to develop in rural areas as well (Bähr et al., 2020). Different founders, target groups, and business models make it possible for each region to have the right characteristics to ensure economic operation in the long term. The functions and uses of new working spaces also cover a much wider range than in the city. They not only provide infrastructure that is shared by several people, they also act as basic services by integrating offerings such as cultural events, post offices, day-care centres, or village shops. This enriches the quality of life locally and contributes to sustainable regional development (Fuzi, 2015).

The users of rural coworking spaces are also far more heterogeneous than those in cities (Bähr et al., 2020). In the countryside, it is not only representatives of the original milieu of the cultural and creative industries who come together; instead, coworking spaces here reflect the breadth of society. Their target groups, according to Bähr et al. (2020), range from academics to craftsmen to local people and teachers.

Five types of new working spaces

By screening recent debates on new coworking spaces, we identified five generic types of new (co-)working spaces, considering publicly funded coworking networks and their policy documents in Germany (e.g. Bähr et al., 2020; BMEL, 2021) and Switzerland. The two countries are very comparable

due to the distinct geographical patterns in both countries, their decentralized spatial structures, very heterogeneous socioeconomic rural development, strong federal- or canton/state-level policies, and similar trends during the pandemic to use new work options in decentralized spaces away from city agglomerations. Summarizing the findings of Bähr et al. (2020) and BMEL (2021), we present the following typology of new coworking spaces in peripheral regions.

Classic Coworking: According to BMEL (2021), a social environment is the scarcest resource in the countryside. Rural coworking spaces therefore hold clear advantages over private home offices. Communities are the real glue and elementary building blocks for long-term successful coworking spaces. With their clear focus on basic infrastructure, classic spaces can usually support themselves without subsidies after a start-up phase and can also cover their costs with a small floor area. Due to weaker demand in some places, rural coworking spaces require less space on average than their urban counterparts; they are usually less than 500 square metres in size.

Commuter Port: New work locations along popular commuting routes address the needs of businesses and employees. Since many metropolitan areas are struggling with challenges such as traffic congestion, driving bans, and skyrocketing residential and commercial rents, working in the periphery is of interest. As a result, more and more families, young professionals, and people just starting their careers are moving to the outskirts of major cities where they can live more cheaply and possibly closer to nature. However, this often means that they must commute daily to reach their place of work. To counteract this, commuter havens are being built in the suburbs of major cities, for example, Ammersee Denkerhaus in Dießen near Munich (Germany). The equipment and premises of commuter ports are basically comparable to classic coworking spaces, but the business model of commuter ports differs in that it focuses more on corporate customers with larger space requirements for several users.

Bottom Hub: Idea-driven, private initiatives for collaborative work are springing up all over rural areas. Deriving from the bottom-up principle, these are known as 'bottom hubs'. A manageable group of no more than eight people who regularly use the coworking space, low turnover, independently operated community management, and comparatively small premises of around 150 square metres are characteristic features of bottom hubs. One of these bottom hubs is Tokunft Hus in Bücken in Lower Saxony (Germany). The equipment is based on what is offered at classic coworking spaces, which the founders are often familiar with from their own use. They are regularly on site and form the communicational centre: community management in an honorary capacity. Bottom hubs share the values of coworking: openness, collaboration, sustainability, community, and accessibility. They develop a space for regular open events as well as other offers for the environment.

Retreat Spaces: When coworking alone does not promise a viable business model, an additional hotel function is considered an option for staying longer. In this way, retreat operators often generate two thirds of their turnover and

create the personnel basis for further offers. These retreats – such as cobaas in Preetz, Schleswig-Holstein – attract mainly urban-based target groups and companies from larger city agglomerations. Due to increasingly decentralized work organization, there is a new need for meeting places close to nature for project work outside classic offices. Many teams and their knowledge workers prefer spaces they can rent temporarily to concentrate on new concepts, strategies, and team building. Retreats also target freelancers, students, and company founders. The duration of the stay can range from a few days to several weeks.

Workation: The combination of work and leisure is referred to as a 'workation'. People from the digital industry are taking advantage of the offer and spending a limited amount of time in workation spaces; from long weekends to extended parental leave, the duration varies greatly. Attractive vacation regions can thus develop new target groups beyond package and individual tourism. The target groups are familiar with the coworking landscape and are discerning; balky Internet and poor equipment are quickly acknowledged with a critical assessment. In contrast to the remote retreat spaces, workation offers are found in tourist hotspots all over the world, and increasingly also in Germany, such as 'Project Bay' on the island of Rügen or the sailing area 'Coworking Schlei'. At these vacation spots with well-developed infrastructure, overnight accommodations are available in abundance, which is why, in contrast to retreat spaces, they are not always part of the business model.

The potential role of new working spaces for regional development

New working spaces have gained momentum during the pandemic, supporting economic and infrastructure development in rural regions. Much is known about the complexity of regional economic transitions (Turok et al., 2018), the role of technology transfer (Leydesdorff et al., 2002), and the role of entrepreneurship (Baumgartner et al., 2013) in regional development. However, the recent euphoria surrounding the potential positive effects of new working spaces for rural areas may be too simplistic and not valid for every region.

We observe that new working spaces are increasingly spreading in rural areas. Moreover, interest is growing among policymakers to promote new working spaces in rural areas as a means to increase the attractiveness of their location and living conditions (SECO, 2018). The promotion of economic development in rural areas, e.g. the digital village initiative in Bavaria, focuses on the spread of information and communication technologies, especially the provision of ultra-high broadband. New working spaces in rural areas are often promoted with the high quality of nature and landscape amenities. These policy campaigns implicitly suggest that new working spaces improve living and working conditions and reduce car traffic and commutes to bigger cities. However, it is still not clear what the socioeconomic implications of new working spaces are for rural areas, since related research has focused mainly on urban areas.

New working spaces contribute to the transformation of rural economies and societies. These transformations imply risks and opportunities, as well

as positive and negative effects. The degree to which rural economies might benefit from new working spaces remains an open and controversial debate (Gandini, 2015). According to the scholarly literature and debates in practice, we identified five socioeconomic implications of new working spaces in rural areas.

1 Digital skills and access to digital infrastructure: New working spaces provide access to digital technologies (e.g. high-speed Internet, computer equipment, 3D printers), which is essential for developing and mastering digital skills and building resilient rural communities that are attractive for people and businesses (Roberts et al., 2017; SECO, 2018). Further potential is hidden and depends on the characteristics of new working spaces, such as user policies, access for the local population, services and training, and events and networking opportunities. The lack of digital skills and training may exclude the rural population from fully exploiting the opportunities of digital progress (Philip et al., 2017). In addition, the lack of qualified experts in rural areas prevents knowledge-intensive businesses from settling in these areas. Other scholars explicitly highlight the potential of new working spaces to facilitate the acquisition of digital skills by offering adequate training and education (Spinuzzi, 2012).

2 Economic potential: On the one hand, new working spaces can create new opportunities for businesses, improve accessibility to products and services, increase the attractiveness of places to live and work, and enhance the quality of life. On the other hand, new working spaces require new technological infrastructure and skilled personnel; they challenge established business models in agriculture, forestry, tourism, and hydropower, and question traditional rural society in general. New working spaces can increase production in rural areas.

3 Community building: Studies have indicated that new working spaces have the potential to contribute to community building in rural areas beyond their immediate tenants and thereby increase the attractiveness of the location (Fuzi, 2015). After all, some new working spaces hold regular events for local entrepreneurs, advising start-ups and facilitating collaboration among local businesses.

4 Public services: New working spaces offer the potential to provide additional services beyond the business and working place. These public services include social services (childcare, school, and education), community services (seminars, facilities for local associations and initiatives, sports classes), and classic public services (e.g. postal and medical services). For instance, in the US, some retail companies offer medical self-screening tests, which can be performed independent of one's family doctor, thus contributing to alleviating the lack of medical care in rural areas (e.g. Pursuant Health, one-stop health self-screening kiosks located in US Walmart pharmacies). In Switzerland, schools in mountain areas are successfully addressing declining pupil numbers with

innovative approaches based on digital infrastructure and knowhow, as shown by gd-Schule in the canton of Valais.

5   Place attachment and place identity: New working spaces shape the identity of places and are, of course, shaped by the identity of the place. Exactly how these processes work is the object of ongoing research (Moscovitz, 2020; Zimmerbauer, 2011). Optimistically speaking, new working spaces have the potential to positively affect the perception of rural areas and improve people's place attachment or place identity.

Other implications of new working spaces include mobility (e.g. potential reduction of commuting and out-migration to urban places) and spatial planning (e.g. potential to re-use or to intensify the use of abandoned buildings and infrastructure). These implications show the potential and services, which can increase quality of life and make rural areas more attractive, diverse places for working and living.

New working spaces, regional sovereignty, and governance

Within the discourse on regional development, the scholarly debate regarding the sovereignty of places and spaces is usually associated with terms such as 'territorial sovereignty' or 'regional sovereignty' (Agnew, 2020). Sovereignty is inherently characterized by a spatial or geographical element. In policy studies and political geography, sovereignty is traditionally tied to state authority. We conceive nation states as sovereign states within specific borders, or we think of autonomous regions as sovereign political entities with specific judicial regions and sociocultural traditions (e.g. the Basque Country in Spain, Aosta Valley in Italy, Hong Kong in PRC).

Using first-hand observations of trends in pandemic-induced changing working practices, we discuss how a refined notion of regional sovereignty can be applied to the COVID-19 pandemic. With a newly framed concept of regional sovereignty, we can precisely classify the relationships between governance capacities in rural areas and new working arrangements and practices. This will contribute to a better understanding of the role of new and spatially relevant working patterns and their future performance. In doing so, we do not limit ourselves by focusing on sovereignty performed as infrastructural sovereignty and driven by technology (ICT, digitization). By extending (regional) sovereignty beyond its traditional political (Grimm, 2015) and technological (Couture & Toupin, 2019) discourse, we are interested in looking at the ways in which cities and regions practice sovereignty.

In this respect, local and regional sovereignty is about agency; empowerment and practices that foster self-determination and possibilities to act, due to the ever-changing importance of interaction between individuals, the political public, and governance (Ritzi & Zierold, 2019). More precisely, we do not conceptualize sovereignty with regard to aspects of control and (state) power

within a specific territory. We frame sovereignty as a concept that emphasizes the capacity to act, self-governance, and the enabling of actors and communities to make decisions for the collective interest. Accordingly, our interest lies in researching local and regional practices (forms, expressions) of self-organization, civic engagement, or local initiatives to deal with contemporary challenges. Understanding the 'operation' of sovereignty helps to propose ways to design sovereignty and shift sovereignty regimes. In this perspective, sovereignty as a concept is never territorially bound or fixed; rather, it is dynamic and fluid and needs to be built repeatedly.

Regional sovereignty is consequently a result of various governance arrangements that emerge over time and determine participation and self-determination. When we look at governance concepts, a basic component is the engagement of intermediaries between civil society, market, and politics. Intermediaries represent a very heterogeneous group composed of specific structures and logic with exceedingly diverse representatives (Kooiman, 2003). Therefore, general binding control and organizational solutions for all intermediaries do not appear to make much sense. The occupational biographies of freelancers and coworking/remote workers often reveal highly risky living conditions, even more so during the pandemic. This can also be assumed for intermediaries in view of the very broad demands made regarding their commitment. The small-scale, heterogeneous nature of these actors is based on a high degree of self-direction and self-responsibility. Because activities in flexible, informal networks seem to grow more relevant, questions about the management of control, goal achievement, and leadership in structurally unstable situations are emerging. Behind this lies the question of self-organization, collaborative governance, and self-determination as well as infrastructure and digital technologies that influence societal change.

New working practices and digital sovereignty

To address the potential of collaborative governance and intermediaries as catalysts for societal change in peripheral regions, we also consider the impact of the digital transformation on practices of self-organization, working, and networking. Possibilities for self-organization and participation have changed dramatically in recent decades, and socio-technical changes are transforming intermediaries and their everyday practices (Nitschke & Schweiger, 2021). On the one hand, the expansion of globalized ICT is a basic component that allows for new working practices and spaces, expanding the range and effectiveness of communication, collaboration, and engagement. Being digitally connected, however, does not necessarily convert into savvy use of digital technologies (Ragnedda, 2018).

Although information, access, and networking – the main promises of the networked society – still determine the ways we frame digital opportunities for collaboration and new work, questions of privacy, security, and data ownership have been reinforced in critical consideration (Couture & Toupin, 2019).

Urban coworking and new working spaces have long been considered the forerunners of a new working culture (Lange & Wellmann, 2009). They have been perceived as important constituents in the startup ecosystem and of digital collaboration and participation. Along with this assumption, the entanglements of new working and the digital transformation have long been dominated by technological optimism. However, research shows that individuals, communities, and regions that are socially and economically marginalized benefit less from the digital transformation and hardly participate digitally. This potentially leads to greater disadvantages and inequalities (Ragnedda, 2018; Eubanks, 2018). Against this backdrop, a new understanding of regional sovereignty with regard to digital sovereignty, since it has become a central issue in policy discourses on digital issues (Pohle & Thiel, 2021), might help address regional capacities to govern new working space development in the (post-)pandemic period.

In the last two decades, the term 'digital sovereignty' has been used as a normative concept to relate numerous forms of autonomy, self-determination, and independence to digital infrastructure and data (Couture & Toupin, 2019). Three main conceptual frames of digital sovereignty can be found in the literature. The first and main one deals with the state's function to protect the privacy rights of its citizens and defend democratic procedures from manipulation and disinformation from outside (Couture & Toupin, 2019). Second, digital sovereignty is framed in terms of power relationships between the public and private sectors, with an increasing focus on dealing with the de facto market dominance of digital mega-platforms, since corporate sovereignty undermines democratic decision-making processes (Pohle & Thiel, 2020). The third frame of digital sovereignty considers digital self-determination and autonomy through collective and collaborative governance (Couture & Toupin, 2019), as is seen in new working spaces. The focus here lies on critical digital literacy to assert control over technologies and digital infrastructure. Understanding digital sovereignty from this democratic self-determination point of view means looking at the concept as a constantly developing process.

Previous arguments on a wider notion of sovereignty stress the importance of designing for digital participation and inclusion, since digital sovereignty is framed as a process, a practice that requires constant deliberation, re-negotiation of rights, and assessment of risks, opportunities, and capabilities (Pierri & Herlo, 2021). A balanced view of the effects of digitization in collaborative governance and regional sovereignty may be a key factor in advancing participation, democratic self-determination, and empowerment within peripheral areas.

As a conclusion to this section, we can state that digital sovereignty as a concept and design practice helps to address the challenges regarding the incremental power of digital technologies, not only as challenges, but also as potential drivers in peripheral areas. With all areas involved in digital technologies and the digital transformation, individuals, communities, and regions face manifold chances for their self-determination. Collaborative ecosystems experience an upswing; new creative, sharing, and digital economies evolve and boost digital

collaboration not only in urban agglomerations but also, as we have outlined, in peripheral areas. These new evolving working practices and their cooperation with the private sector and civil society need a closer look with respect to questions of ownership, trust, and privacy regarding digital technologies in the post-pandemic period.

The potential effects of new working spaces in rural areas

Advancing digital sovereignty as a design practice will lend support to the practitioner's role in countering a deterministic technology-driven perspective of societal challenges, especially in times of crisis. This is more important for digital-driven working spaces, where remote work based on sound working conditions and trustworthy digital infrastructures should be practiced. Questions about digital rights and the skill sets and literacy that people need to understand and control their data arise through the lens of digital sovereignty.

For new working practices to adequately address those questions, we agree with Ragnedda (2018) that critical digital literacy is needed, also with regard to the growing digital divide, which has become evident, especially during the COVID-19 pandemic (van Deursen, 2020). The literature on the digital divide highlights that while the first and second levels of the digital divide address inequalities in access and use of the Internet, the third level refers to the tangible outcomes generated online that also carry social or economic value (van Deursen & Helsper, 2015).

New working spaces as potential drivers for rural development foster nonstandard forms of work and collaborative governance in a networked society, but also an emerging global precariat. This has uncertain impacts on workers' social status and their basic rights, for example, social security. Against the backdrop of the current COVID-19 pandemic, the very question arises: How can individuals, communities, and regions respond to quickly changing digital landscapes and situations amid a crisis and benefit from the digital economy without falling into unintended inequalities and social consequences?

Reducing regional inequalities is a strategy to increase regional sovereignty. Therefore, to contextualize the role of new working spaces in the debate on growing digital inequality (Helsper & Eynon, 2013) and regional sovereignty (Agnew, 2020), regionalized social inequalities should be analyzed. The COVID-19 pandemic has enforced existing inequalities (Van Deursen, 2020). Those who were already relatively advantaged – members of flexible workspaces – have been more likely to take advantage of the information and communication opportunities provided by ICT. The crisis has also increased the varied landscape of (digital) inequalities, not only on a global level, but also regionally, where new nodes as working spaces have increased the socioeconomic and digital divides. Ragnedda's analysis of the digital divide shows that skills and knowledge, as well as sociocultural and sociopolitical backgrounds, determine the way individuals can transform the digital experiences of their peer group into (regionally) relevant social outcomes (Ragnedda, 2018).

Debating questions of regional development and sovereignty is thus increasingly intertwined with questions of technical infrastructure, competencies, and opportunities to create benefits for the regional population at large (Barkan, 2015). It is even more important to identify drivers of digital access, participation, and skills in rural areas, and to design ways in which communities can take the initiative in tackling societal inequalities (Moscovitz, 2020). Otherwise, the fame of recent new working spaces is only as drivers for increased 'rural gentrification' (Smith, 2011).

The potential of collaborative informal practices

Following the idea of a more inclusive and integrated view of new coworkers and recent 'avant-garde' work possibilities in rural areas, their physical existence alone does not allow their impact for peripheral areas to be fully grasped. A closer look at their practices of collaborative commons, such as the sharing of makerspace infrastructure, shows that sharing and exchanging local knowledge creates new working ecologies in the broader rural areas around new working spaces. As a consequence, these practices and social exchange with the local population, local companies, and the local state, lead to an increased fostering of digital participation in local and regional communities. Accordingly, this might require rethinking and reconceptualizing the role of emerging bottom-up collaboration that illustrates a different take on how digital sovereignty can be grasped in rural areas.

Since the pandemic in 2020 and following the counter reaction to relocate work to peripheral working spaces to overcome either working from home or working in dense agglomerations, positive discourse on a more balanced core-periphery dichotomy has been observed. Among socioeconomic opportunities for rural areas, these shifting geographies also dynamize the question of how sovereignty and the emergence of new sovereignty practices is crucial for a better understanding of new forms of (post-)pandemic driven regionalization. As for new users in these working spaces, analyzing regional (trans)formations or the emergence of new options for rural regions uncovers the role and strategies of individual and collective private and public actors, organizations, and institutions regarding gains in distinct forms of regional sovereignty (see the case study on the governance of regional economic development in northwest England).

In the debate about new regionalism and the resurgence of regions, the social construction of these spatial units is often emphasized. With its fragmented complexity, regions are always in a state of evolution, even more so when federal- and canton-specific forms of regional oriented policies to fight the pandemic have made local and regional self-organization more dynamic (e.g. volunteer work, temporary changes in public spaces and infrastructure for vaccination).

While we perceive regions as fluid and relational, they can also be perceived as 'soft spaces', i.e. non-statutory or informal spaces or processes (Allmendinger

et al., 2015). At the same time, they are embedded in territorial boundaries and institutions as well as in scalar relationships with both local communities and the nation state (Jonas, 2011). Arguing on the regional scale, for example, in the case of innovative systems for a green economy (Droste et al., 2016), helps to link the goals and politics of sustainability with regions between territory and network. Networks and territories, as well as places and scales, are connected in regions through political practice (Goodwin, 2013).

From a collaborative governance perspective, this line of thinking leads to new working spaces being considered as integrated and relational nodes in a wider context, and unpacks their role of connection or disconnection to existing actors (local state) and temporary users (co-workers); new working spaces, thus, as new institutions. Since many new working spaces seem to be frequented and used by external temporary users, questions arise as to what extent they stabilize a (weak) level of regional sovereignty in rural areas or if they can further dynamize their potential in other ongoing regional economic activities.

Categories for analyzing local sovereignty practices in rural areas

In light of a new evaluation of rural areas from the point of view interrelating new working spaces and COVID-19, we argue for closer attention and reflection on how regional sovereignty can be conceptualized and grasped to analyze processes, practices, and procedures for performing sovereignty.

Therefore, as a summary, we propose three categories for analyzing local sovereignty practices. These categories are in line with our reading of the literature concerning shifting geographies of sovereignty.

1   As well as a practice-based view of 'doing' sovereignty, it is interesting to shed light on a procedural view – with observable practices – to show and reconstruct the procedural steps that have led to various – at least temporary – formations and configurations of new governance arrangements apart from those formalized and institutionalized in rural areas. Especially within the context of the pandemic, it is insightful when flexible arrangements have been invented or adapted from pre-COVID times, e.g. when neighbouring practices, collaborative initiatives, support coalitions, and public–private arrangements filled a systemic lack, not just before COVID-19, but especially during the pandemic. This is even more relevant for rural areas.
2   Along these lines, a wider spatial or geographical frame will be key when referring to subjective views on 'doing' space (spacing). Following Bourdieu's notion of practice and spacing processes (Löw, 2008) – in the sense of how symbols, goods, and spatial bodies are arranged in time and space – we take the recent pandemic as a starting point and ask how relevant goods and infrastructures have been reconfigured and re-arranged according to new hygiene requirements. Space is then understood as socially

constructed and mediated through signs and symbols and communicated within various medialized infrastructures. A multiplicity of spatial arenas of negotiation opens and weakens the idea of a container-like 'dominant official' notion of space and opens new situational spaces of engagement in various shifting spatial contexts.

3   A key dimension of the 'national' sovereignty discourse introduced is its stable notion of scale. It is not only the pandemic but also new digital bottom-up collaborations that have pointed – of course with different motivation – to shifting and flexible arrangements for growing urgencies. Social issues, new collaborative networks and their agendas not only occur on stable, static scales (global); they also point to shifting and rather mobile spatial arrangements on non-hierarchical scales. We therefore present a third heuristic component: that of flexible spatial arrangements and geographies. While the explanatory dimension for understanding and framing 'sovereignty' has been grounded on hierarchical scale-oriented stable notions of rather fixed 'container' space, we have introduced 'sovereignty' as based on flexible procedural spatial configurations.

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8 Digital nomads and coworking spaces

Reshaped perspectives? The Paris mega city-region after COVID-19

Divya Leducq, Christophe Demazière, Étienne Bou Abdo, and Priscilla Ananian

Introduction

In metropolitan city-regions, the core has traditionally been chosen by the so-called creative class as providing the most opportunities for working, living, and education and leisure (Musterd, 2004; Florida, 2014; Zhao et al., 2017; Mariotti et al., 2021a, 2021b). However, the evolution of work in the knowledge economy and advances in ICT sectors could lead to increasing dispersion of 'digital nomads' (Aroles et al., 2020) to the 'periphery' of metropolitan city-regions. In the case of one leading European metropolitan region, the Paris mega city-region, we examine the extent to which coworking spaces (CSs) play a positive role in such dynamics, especially in the context of the COVID-19 pandemic (Florida et al., 2021).

Firstly, we highlight the residential and work travel mobility patterns of members of the creative class in the Paris mega region. We show that continuously rising housing prices and the search for a better quality of life have gradually undermined the decade-long polarizing dominance of the metropolitan core on the labour market. Select parts of the mega-region periphery are being chosen more and more nowadays since they provide a better quality of life while still being well connected to the core by various transport means. With the recent COVID-19 pandemic, which showed the limits of living in a very dense built environment, one may witness a growth in teleworking and further dispersion of the population outside the metropolitan core (Leducq, 2021).

Next, we consider the decentralization patterns of coworking spaces (CSs) from the core of the Paris mega region to its periphery. Since 2010, CSs in the Loire Valley region have appeared in large urban poles like Orléans and Tours. Thus, the location of CSs tends to follow the residential migration of the creative class outside the core of the Paris mega city-region, and not the general movement of other professions (e.g. employees, civil servants). Most of the time, and especially in the pandemic era, the latter continue to travel to work every day, which is why they settle in the immediate vicinity of the Île-de-France. However, a more detailed analysis of CSs in the Loire Valley shows that in recent years there has been a spread of CSs to smaller urban settlements. Amid the COVID-19 pandemic, such CSs have grown in attractiveness. Therefore, it can be hypothesized

that in the future, an increasing number of people will telework from CSs, which would reduce daily commutes to the core of the Paris mega region. Such people could enjoy a better quality of life while remaining productive.

The aim of this chapter is to show that the attraction of the Paris mega-region, mainly for the northern Loire Valley region, is in continuous movement as amplified by the COVID-19 crisis. This is due to both teleworking, which favours relocation to better living environments, and the offer of CSs, which tends to respond to the demands of newcomers from the capital. The question then is how public policy may encourage the residential settlement of well-educated professionals in small or mid-sized towns in the Paris mega city-region. After presenting our methods in the next section, we analyze the essential role of commuting and residential migration in the economic and spatial development of the Paris mega region. We then examine the dynamics of teleworking in the context of the pandemic and its potential implications for working populations. Finally, we report on the spatial diffusion of CSs from the core to the periphery of the Paris mega city-region, and how this could be an asset for making teleworking a more widespread practice.

Methods

This chapter is based on a study that combines several complementary approaches, both quantitative and qualitative. Firstly, as secondary data collection, a review and analysis of recent work on the residential location of knowledge workers and the spread of CSs in the periphery of the Paris mega city-region was performed. The results were mapped using GIS analysis (Figure 8.1 and Figure 8.2). The portraits of inhabitants leaving Paris for the
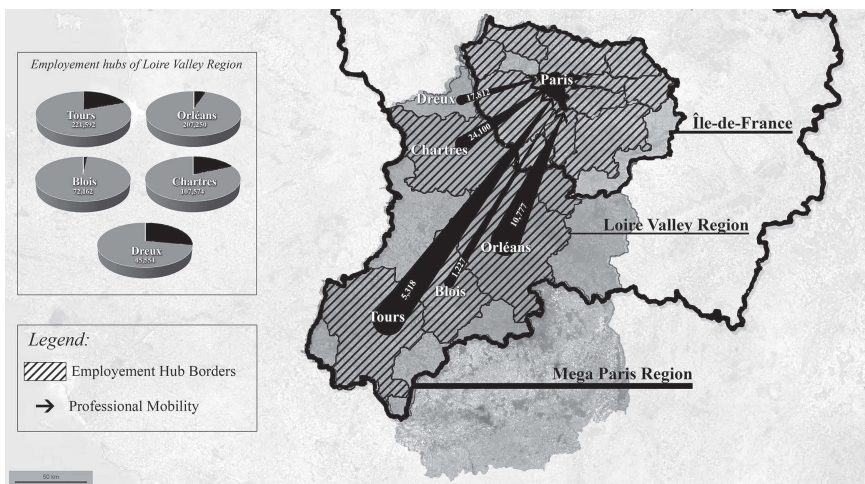
Figure 8.1 Commuting flows within Paris mega–region.

Source: Bou Abdo et al. (2021).
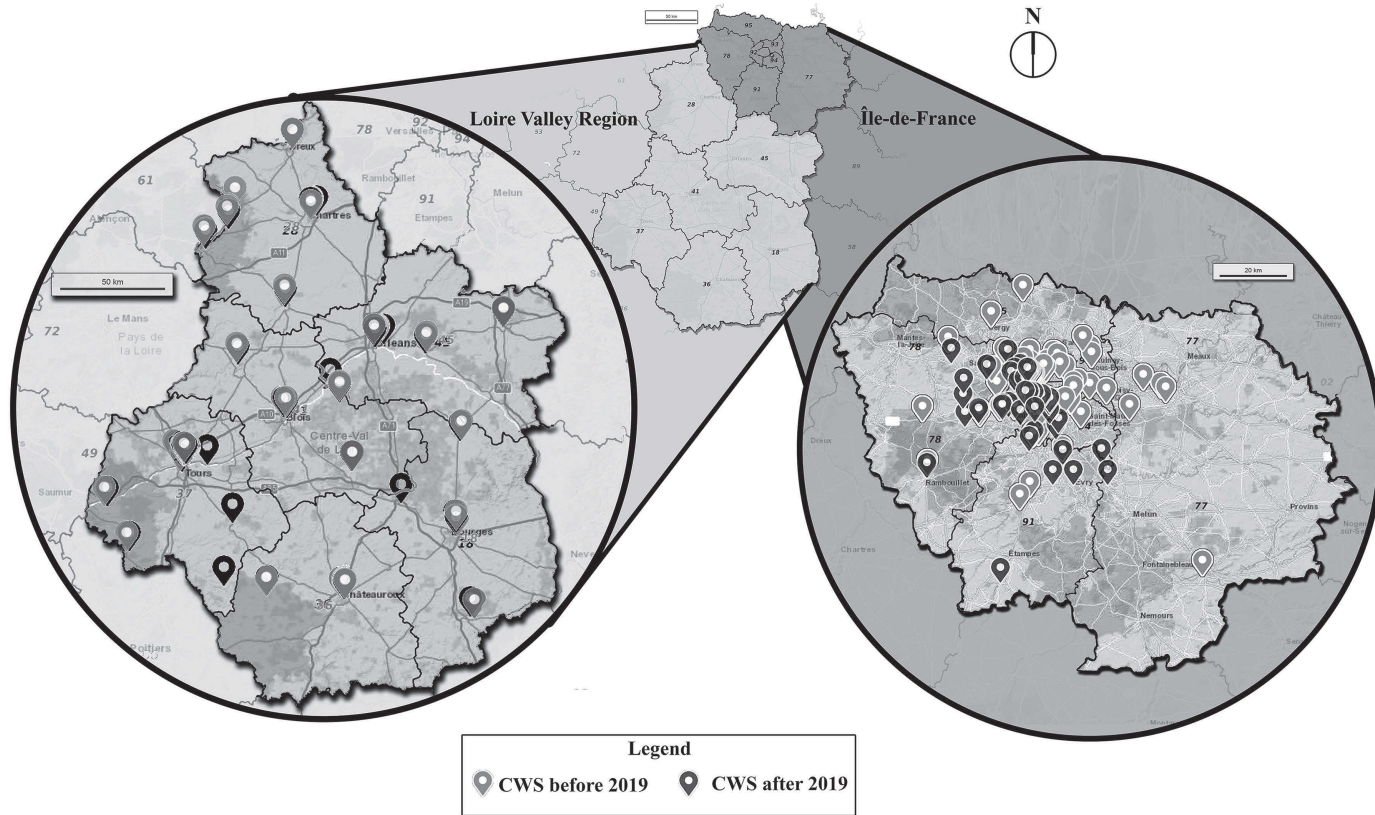
Figure 8.2 Location of coworking spaces: Paris region and Loire Valley region.

Source: Bou Abdo et al. (2021).

Loire Valley region are outcomes of this desk research (Institut Paris Région, 2021). Secondly, as primary data collection, the authors conducted semi-structured interviews between January and April 2021 with the managers of 22 CSs in the Loire Valley region that provide some input for the last part of this chapter, perspectives. Two questions were addressed: 'How have the CSs been impacted by the health crisis?' and 'Under what conditions can they take advantage, in the coming years, of the boom in teleworking generated by the COVID crisis?'

The Paris mega city–region: growth based on intense work travel migration

As with London, New York, and Tokyo, the Paris metropolitan region is a major node in the global network of trade in goods, people, and capital (Halbert, 2008). Within this mega city-region, Paris is a small city (2.2 million inhabitants compared to 9 million for London), but it is the heart of the most populated region in Europe: Île-de-France. This region is responsible for a large part of France's economic performance, providing 30.7% of GDP in 2018, 22% of national employment, but above all, 43% of company executive jobs. Twenty percent of jobs in the Île-de-France correspond to the creative class, which indicates a strong inclination towards the knowledge economy and digital innovation (Demazière & Leducq, 2022, forthcoming).

Unlike other European countries, such as Germany or Italy, France is characterized by the long-standing primacy of its capital, which is reinforced in terms of the knowledge economy. This overperformance has profound effects over a vast territory, which is difficult to define because the limits of the Paris mega city-region vary according to the indicators used. It is now accepted that the economic influence of Paris extends well beyond the Île-de-France region. Twelve departments in neighbouring regions are closely tied to the heart of the Paris mega city-region, which offers around 7 million jobs and is easily accessible thanks to dense transport networks. The Paris mega city-region, also known as the Paris Basin (*Bassin Parisien*), is a vast functional area that represents 17% of the national surface area, 31% of the active population, and more than 40% of the GDP in 2018 (Demazière & Leducq, 2022, forthcoming). In terms of territorial organization, this mega city-region is monocentric (Halbert, 2008). It is characterized by the increasingly rare presence of large cities the closer one gets to the central agglomeration. Thus, with the exception of Creil (100,000 inhabitants), there are only so-called 'medium-sized' towns such as Evreux, Chartres, or Montargis within a 100-km radius from Paris. Cities with 100,000 to 300,000 inhabitants, such as Orléans, Rouen, or Amiens, are located more than 150 km from Paris, or even 200 km in the case of Tours or Caen.

The metropolitanization of the Paris mega city-region can be understood at first glance as the concentration of the qualified population, employment, and wealth, both material and immaterial in Paris and its surroundings

Table 8.1 From the core to the periphery: different perimeters of the Paris mega city-region.

Type of perimeter		Area (sq. km)	Population (2017)	Population density (pop/sq. km)	Number of jobs (2017)
Institutional	Paris municipality	105	2,175,601	20,720	1,817,650
	Greater Paris Métropole	814	7,057,905	8,670	3,932,599
	Île-de-France region	12,012	12,174,880	1,013	6,390,000
Statistical	Paris built area	2,853	10,785,092	3,780	5,340,764
	Paris employment zone★	653	6,692,700	10,249	3,829,900
	Paris catchment area★★	17,175	13,024,518	758	–
	Parisian Basin★★★	90,447	19,140,000	211	8,800,000

Source: Authors

(Demazière & Leducq, 2022, forthcoming). It also occurs through diffusion in more distant spaces, thanks to transport networks that allow working populations to travel on a daily basis (Faguer et al., 2010). Thus, urban or rural areas located 50, 100, or even 150 kilometres from Paris benefit from the constant development of mobility, ensuring the dissociation of places of residence and work, consumption, and leisure. At the heart of the mega city-region, the Paris employment zone attracts 1.1 million people every day who do not live there, compared to the 400,000 who travel the opposite way. The majority of these exchanges take place within the Île-de-France region. However, 200,000 daily trips are also made between Paris and the province, and as many between other employment areas in the Île-de-France and the province (Louchart et al., 2017). The functional ties between Paris and territories outside the Île-de-France are intense and growing stronger.

Over the last few decades, residential sprawl has benefited Paris less than the fringes of the mega city-region. Between 1975 and 2009, the Paris employment zone saw employment and population increases of 0.1% per year on average, much less than national trends (+0.6% and +0.5%, respectively). Apart from Paris, other employment areas of the Île-de-France have generally enjoyed strong simultaneous growth in employment and population (op. cit.). If we consider the territories around the Île-de-France, they also show very favourable figures in terms of employment and population growth.

In Figure 8.1, 'employment hub borders' refers to a group of municipalities in which most of the active population resides and works. A catchment area is composed of a pole, defined on the basis of population density, total population, and employment criteria, and a ring of municipalities in which at least 15% of the working population works in the pole. The Mega Paris Region is composed of the Île-de-France and twelve neighbouring departments which maintain close ties with the Île-de-France through home-work flows, residential migration, head office-establishment relations, and links between principals and subcontractors.

To account for the dynamics within the mega city-region, two types of migration are considered here: commuting and residential migration. With regard to commuting, more and more people are coming from farther away (Figure 8.1). The Paris urban area extends far beyond the boundaries of the Île-de-France. Thus, in demographic terms, the Chartres and Dreux employment areas are among the most dynamic: between 2008 and 2013, the population there increased by 0.6% and 0.4% per year, respectively, essentially due to migration (Gascard & Lu, 2019). This population increase is accompanied by a smaller increase in the number of working people (0.3% per year in Chartres and 0.1% in Dreux), which means more commuting to the Île-de-France for new working residents.

Figure 8.1 also shows that from Orléans to Tours, the Loire axis, which is home to half the population of the Centre-Val de Loire region, is also integrated into the vast labour market of the Paris mega city-region. It is also worth noting that Vendôme, a small town located 150 kilometres from Paris, has benefited from seven daily return trips to Paris since 1990, thanks to the opening of a high-speed rail line (TGV). The number of commuters there is growing strongly and almost half are executives (Leducq et al., 2019).

Within the Île-de-France, residential migration from the heart of the region to the periphery also occurs (Beaufils, 2016). In Paris, the housing stock is composed mainly of small units. It allows young people to study or start their professional career while enjoying amenities that are unique in France. However, as soon as couples form and families grow, the small number of large dwellings and their cost do not allow most households to continue residing in the capital. The desire for a more spacious home, to live in a house or become a homeowner then leads to movement away from the heart of the conurbation. Within the Île-de-France, 72% of houses are located in the outer suburbs (Seine-et-Marne, Essonne, Yvelines, and Val-d'Oise departments).

One study focused on Île-de-France households that move in order to become homeowners (Louchart & Beaufils, 2018). When they do not have children, six out of ten households buy their homes, most often a small one, in Paris or the outer suburbs (Hauts-de-Seine, Seine-Saint-Denis, Val-de-Marne). Households with children, on the other hand, mostly buy in the outer suburbs and occupy larger homes. Due to the continuous increase in property prices, particularly since the 2000s, home ownership in Île-de-France is increasingly affecting wealthier categories of households: 37% of mobile home-owner households in the Île-de-France are executives, compared to 16% in the provinces (Louchart & Beaufils, 2018). We also note that the Île-de-France region is concentrating increasing numbers of households of graduates with above-average incomes. Between 1973 and 2013, the proportion of managers rose from 13% to 24% in the Île-de-France, compared to 6.4% to 13% in mainland France (Le Goff, 2020).

Because of the continuous increase in land and property values, some households even leave the Île-de-France to settle in one of the eight neighbouring departments and develop a home ownership project there (Louchart et al., 2017). Many continue to work in the heart of the Paris mega city-region,

resulting in long commutes, as shown by the portrait of Valentin (Box 1), unless teleworking is possible for a large part of the week, as in the case of Raphaël.

The socio-professional status of commuters shows heterogeneity in the territories of the periphery of the Paris mega city-region. For example, the share of executives among commuters working in the Paris employment zone is only 33% in Dreux and 48% in Chartres, both medium-sized towns 100 kilometres from Paris. However, it is as high as 80% for the agglomerations of Orleans and Tours, two large cities which have, among many assets, a rich cultural scene, real business opportunities, and much lower property prices than Paris, all of which attract the creative class (Leducq & Demazière, 2021). While working populations in these urban centres on the periphery experienced the COVID-19 crisis and related confinement without too much difficulty, the situation has been quite different in the heart of the region (Brajon, 2020). Indeed, the small size of housing was not well received by many households residing in Paris or the inner suburbs due to forced teleworking from home. Conversely, in the periphery, additional home area has proved to be invaluable for a good standard of living, especially for households with children.

Telework in the Paris mega city-region, during the lockdowns and after

In comparison with other European countries, teleworking arrived late in France. This situation changed gradually, as the percentage of teleworkers (among the entire French workforce) grew from 8% to 17% between 2002 and 2016 (Mettling, 2015). The proportion is much higher in the Paris mega city-region, given its orientation in the knowledge economy (Demazière & Leducq, 2022, forthcoming). For Shearmur (2016), 'with access, regardless of location, to tools and information, the idea that the knowledge worker needs to sit in an office is increasingly outdated as he or she increasingly works at a distance from the company premises'. Among explanatory factors, the rise of project-based work in companies is leading to a boom in assignments lasting a few months, an accumulation of part-time jobs, etc. But freelancers, gig-economy players, intermittent workers somehow considered precarious are not precarious in reality, because they are able to continuously manage their entry and exit from the market (Conseil national du numérique, 2016).

Moreover, since the 1990s, ICT has become increasingly widespread and has increased mobility through computers, smartphones, and easy access to the Internet. Whereas fixed workplaces on company premises were previously essential places for coordinating tasks and communicating, the creative class worker now has a choice with regard to workplace(s). With regard to the residential sprawl of the Île-de-France region, which we mentioned earlier, it is increasingly possible to work outside company premises, at least part of the time. The first alternative to the traditional workplace was the home. However, the limits of this form of teleworking are well known, whether it is the resulting social isolation or the difficulty of reconciling work and personal life.

During the first French confinement (March to May 2020), the share of teleworkers in the Île-de-France more than doubled among the employed population, reaching 39%, compared to 18% before this period (Brajon, 2020). Teleworking has been applied in a variety of ways, ranging from one to five days a week. Teleworking was most often done at home, but it strongly depended on the sector of activity and the socio–professional position of the individuals (Eurofound, 2020). Some companies were already adept at this form of organization, such as in the information and communication sectors, where almost half of the workforce had experimented with teleworking before 2020. On the other hand, teleworking was a complete novelty for 27% of the Île-de-France workforce. The number of teleworkers increased, with two thirds of teachers teleworking for the first time, 50% of people in the finance and insurance sector, 40% in scientific and technical activities, and 30% in administrative services (Brajon, 2020). The increase in teleworking was most noticeable among managers: 75% teleworked, compared to 40% before confinement (and not every day). In terms of post-COVID perspectives, 18% of Île-de-France workers who were already teleworking were asked about their wishes after the confinement. While 36% wanted to keep the same amount of time spent teleworking, 60% wished to increase it (and 4% to decrease it).

Beyond the COVID-19 lockdown periods, which in France have totalled six months, the rise of teleworking may have a real impact on the mobility of workers in the Paris mega city-region (Leducq, 2021). In May 2020, at the end of the first COVID lockdown, 39% of teleworkers surveyed expected to reduce the number of weekly trips to and from work. More generally, the distance to work in the Paris mega city-region favours teleworking. Individuals who teleworked before 2020 had a significantly longer average commute time than those who did not telework. For these heavy commuters, the experience of the pandemic has revealed some benefits of teleworking: better work-life balance, improved living conditions, etc. Nevertheless, the disadvantages of teleworking cannot be ignored: isolation, loss of reference points, lack of motivation, cramped and non-functional accommodations, more complex marital/parental life, etc.

In addition to working from home, the growth in demographics of nomadic workers a year after the first confinement could encourage the development of coworking spaces. The experience of the first confinement was far from perfect for all teleworkers (Leducq, 2021). Since many people involved in the labour market in the mega city-region would like to continue teleworking at least a few days per week, this creates a potentially huge demand for CSs.

Coworking in the periphery of the Paris mega city-region during and after the pandemic

In France, the first CS was established in Paris in 2008 and 13 years later, the Île-de-France region is at the top of the list of regions in terms of the number of CSs, due to the centrality of the capital region for creative, intellectual, or

innovative activities. We studied CSs in the southwestern periphery of the Paris mega city-region, investigating the potential for growth in the numbers of digital nomads or location-independent workers. Since coworking falls within the sociology of knowledge work as a new organizational method different from the classic work-from-home scenario (Flipo & Lejoux, 2020), we hypothesize that the CS model has the potential to hold urban leverage for peripheries adapting to the digital economy. However, it remains to be seen whether teleworking in CSs can be developed outside the core of the Paris metropolitan region.

According to Gascard and Lu (2019), the departments of the 'Grande Couronne' that have benefitted most from residential migration from the core are Yvelines and Essonne, in the south-west of the Île-de-France. Both departments connect the Paris mega city-region to the Loire Valley area. This zone combines contemporary business districts such as Paris Saclay with tourist and cultural attractions such as Château de Versailles, les Châteaux de la Loire, etc. The urban fabric thins out as we cross from the Île-de-France region to the Loire Valley. The following area regroups different types of urban localities ranging from cities like Orléans and Tours (each has 300,000 inhabitants) to medium-sized towns like Chartres and Dreux, or small towns like Vendôme. Within the mega city-region, the Loire valley has traditionally been a place where certain populations have been drawn away from the Île-de-France (Leducq & Demazière, 2021).

Bourdin (2017) makes the presence of numerous third places a specific feature of metropolitan cores. Nevertheless, in many countries, there has been an increase in the number of collaborative workspaces migrating from metropolitan areas to peripheral territories (Akhavan et al., 2018). In 2019, 279 CSs existed in Greater Paris, and 15 were found in the western departments of the Île-de-France (Val d'Oise, Essonne) (Lévy-Waitz et al., 2019). As shown in Figure 8.2, all the CSs that existed before 2019 still existed after 2019, and in 2021, 40 more CSs have been set up in the western part of the Île-de-France region. The regional government has launched a plan to reach 3,000 CSs in the coming years, with most of the newly planned spaces in rural and suburban areas. This development is supposed to enhance working conditions, creating an alternative to long-distance commuting and reducing greenhouse gas emissions, as well as providing a better balance between personal and professional life.

Falling outside the Île-de-France but still part of the Paris mega city-region, the Loire Valley region is also experiencing notable coworking dynamics. The number of CSs rose from 22 in 2018 to 32 in 2019, with 37 in 2020 and 46 in 2021. Figure 8.2 shows the spatial distribution of CSs within the regional urban hierarchy. With three CSs established by 2012, Tours is the regional cradle of coworking. Two CSs were then created and established in Orléans between 2013 and 2015. In 2021, the majority of CSs will still be located in Tours and Orléans, the central municipalities of the region's two largest urban areas. These conurbations cannot be described as metropolises, but their proximity to the Parisian metropolis means they receive the activities and population leaving

the Île-de-France. Within the Loire Valley, they are distinguished from other urban centres (small or medium-sized towns) by their mass and population density, the large number of production and research structures, and a certain social diversity, i.e. variables that favour the birth and development of CSs. These areas are attractive to Parisian households in the creative class and business leaders. In the end, there is preferential development of CSs in the largest cities on the outskirts of the Paris mega city-region, reflecting approaches that favour innovation and business creation.

More recently, there has been a gradual shift of coworking to the less dense periphery of the mega city-region. As shown in Figure 8.2, CSs have appeared since 2019 in medium-sized cities such as Chartres, small towns such as Châteaudun or Nogent-le-Rotrou, or villages such as Preuilly-sur-Claise or Montlouis-sur-Loire. During the pandemic, the contribution of these new CSs to the development of the mega city-region has been real, reducing the frequency of long commutes while providing an alternative to the home office.

Before the COVID-19 health crisis, France had more than 1,200 CSs (Lévy-Waitz et al., 2019). In 2020, coworking slowed due to confinements, curfews, and social distancing rules. In the Loire Valley, however, our surveys show that the direct effects of the pandemic were variable (Leducq, 2021). In some cases, the CSs were forced to close their public areas, resulting in a drop in attendance of up to 90%. Other CSs, which were able to remain open or which implemented hygiene protocols from spring 2020, experienced an increase in attendance. One CS in Nogent-le-Rotrou was even very successful, because it provided an infrastructure for Parisians to move to the countryside. Generally speaking, rural CSs are emerging as winners from the crisis, with attendance up 25% compared to before COVID. In medium and large cities, students – perceived as vulnerable – have become a specific target for CSs. In Tours, for example, free places are offered to ease their isolation.

On the outskirts of the Paris mega city-region, the demand for access to CSs could experience permanent growth. Many teleworkers who have felt very isolated by working from home want to find a suitable working environment without having to return to their company premises every day. By attending a CS close to their home, they can save on travel time, which will benefit their quality of life. In response to this demand, service companies of all sizes, from SMEs to large groups, have approached CSs for shared office space (Leducq, 2021). This allows them to rationalize their own office space and thus reduce property costs.

As a result, CSs appear as a third space, an ideal in-between place to work even after the health crisis has passed. However, in order to satisfy new executive clients, CS managers will need to design private spaces to ensure the privacy of conversations or business meals. CSs will need to provide high-range working facilities, for example ergonomic seating, or high-quality video-conferencing rooms. To retain employees in labour-scarce sectors (e.g., IT developers, HR consultants), companies could also require high-quality standards for teleworkers who are based at both CSs and headquarters. Some CSs could also reaffirm

their values of solidarity and mutual aid by welcoming workers recognized as having a disability or students with digital insecurity.

Conclusion

Coworking responds to a growing demand from the creative class to work in a different way and in a different place than on company premises or at home (Shearmur, 2016; Akhavan et al., 2018). In France, CSs are present not only in the heart of metropolitan regions, but also in metropolitan peripheral areas, as in other countries (Mariotti et al., 2021b, for Norway). CSs meet different but complementary needs in dense urban areas and the countryside. On the scale of the Paris mega city-region, the COVID-19 pandemic reveals that CSs in the periphery offer knowledge workers an alternative to long-distance commuting. For households living in flats in the dense urban areas of the Paris mega city-region, the three confinements that France experienced between March 2020 and May 2021 show the need for nature and more spacious private amenities. The residential sprawl of Paris is currently expanding towards the peripheral areas of the south-west of the Île-de-France region. Some people are even taking advantage of their outbuildings to set up 'infrastructure'-type CSs where office space is shared with other local residents (Leducq, 2021). Further afield, 100 kilometres from the heart of the mega city-region, some Parisians who chose to leave the capital during the first confinement eventually stayed in the countryside to settle in their second home permanently. CSs then provide them with the high-speed Internet connection they need for exchange with their business partners or clients. All in all, CSs can support the residential attractiveness of the periphery of this vast metropolitan region with a global reach.

However, the periphery of the Paris mega city-region is diverse. It comprises small towns in the Île-de-France region that are well connected to core employment poles, a few large cities in the neighbouring Loire Valley region that are increasingly integrated into the labour market of knowledge economy executives, or medium-sized towns in the immediate vicinity of the Île-de-France region. Not all of these territories will benefit from the health crisis and the rise of teleworking, however. Indeed, Western France and the Atlantic coastline from Brittany to the Basque Country in particular are even more attractive to wealthy households working as knowledge economy executives. A form of seaside coworking has emerged that allows the functions of work, family life, and personal leisure to coexist (Leducq, 2021). These choices are sometimes made by companies. In sectors with labour shortages such as computer developers or specialized consultants, the possibility of teleworking and therefore of choosing a living environment is an argument for hiring. Thus, there is a risk that the rising demand of digital nomads and thus the creation of CSs will take the form of leapfrog development, jumping over the periphery of the Paris mega city-region and occurring farther from cities.

Local governments in the Paris mega city-region should therefore support CSs to benefit from the current strong development of teleworking. Among

many examples is the city of Cergy (Val d'Oise), where the mayor is calling for tax incentives for companies that reserve spaces in CSs for their employees. In another example, the City of Paris has set itself the goal of reducing the number of commutes to and from work by 30% by 2030, in particular through telecommuting and the creation of CSs located near homes. In France's second largest metropolitan area, Lyon, the village of Val d'Oingt (4,000 inhabitants) decided to renovate a municipal building and purchase equipment for the upcoming opening of a CS. The municipality responded to the demand of a group of 35 people who wanted to cowork in the village and no longer travel daily to Lyon, which is 40 kilometres away. Thus, as these few examples show, the development potential of CSs in the periphery of mega city-regions deserves to be considered by French spatial planning policies, from the national to the municipal levels.

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9 Rural coworking spaces in the COVID-19 era

A window of opportunity?

Elisabete Tomaz, Bruno Moriset, and Jacques Teller

Introduction

Coworking spaces (CSs) were long viewed as an inherently urban phenomenon, given that the vast majority of creative and knowledge workers are concentrated in large and medium-sized cities (Merkel, 2015; Moriset, 2014). Today, CSs have become increasingly widespread in rural communities and small cities. Therefore, policy-makers tend to view these new workspaces as a tool to stimulate entrepreneurship and the creative economy outside traditional economic sectors in rural areas (Roberts & Townsend, 2016). In addition, CSs can provide 'hard and soft infrastructure' (Fuzi, 2015) to newly arrived creative entrepreneurs, employees, and people willing to stay in their community instead of commuting or moving to large urban agglomerations.

Etymologically speaking, coworking refers to the physical proximity of workers (Spinuzzi, 2012), generating social interactions and stimulating innovation and creativity. In spring 2020, when lockdown measures were adopted throughout Europe as an answer to the COVID-19 pandemic, many workers were confined at home and all public venues were closed. CSs therefore seemed to have lost their primary rationale. Even outside 'full lockdown' periods, they had to deal with social distancing measures that questioned the community interaction model at their core, with a loss of revenue. At the same time, new opportunities have arisen for rural CSs: the burst of digital services and remote working (or teleworking)[1] and the renewed attractiveness of the countryside in terms of quality of life.

Advances in digital technologies at the end of the twentieth century had already generated optimistic visions for the development of rural communities, especially concerning the possibilities of remote working and access to broader markets for rural businesses (Moriset et al., 2012; Salemink et al., 2017). However, actual achievements did not meet past expectations. Despite efforts in the last decade to reduce the digital divide in Europe, it still persists (Negreiro, 2015), and the 'rural penalty', as Malecki (2003) suggests, remains significant, with few job opportunities, remote basic services, dependence on private cars, inadequate telecommunications, and scarcity of social and business contacts.

The pandemic has reinvigorated this debate. 'The COVID-19 crisis is accelerating the use and diffusion of digital tools. Confinement measures are fomenting

remote working practices, remote learning and e-services. This is particularly important in rural areas where distances and commuting times tend to be longer. All this could promote the attractiveness of rural areas' (OECD, 2020, p. 4).

In reality, the pandemic has drawn attention to the advantages of living in rural areas, notably the affordability of single homes with larger indoor spaces and access to private outdoor areas, while urban dwellers were confined to tiny apartments during the first wave of lockdowns. Besides this, remote working, which had been increasing timidly for decades, was pushed to unprecedented levels by government measures aimed at slowing the spread of the virus (Eurofound, 2020). Most observers consider that the current wave of remote working will last to some degree (Baert et al., 2020). Indeed, it has proved effective on a large scale, and a number of employees 'wish to consolidate the practice of remote working after the end of the lockdown and with more continuity' (Massimo, 2020, p. 47).

Admittedly, these changes may not fully benefit CSs because rural dwellers often have large houses suitable for remote working; however, they still risk social and business isolation. Precisely for this reason, CSs can offer self-employed and small businesses a more professional workplace, with adequate meeting rooms and video conferencing facilities. Such work environments, separated from family life, could increase the acceptance of remote working by employers and employees.

Taking a comparative approach, this paper analyzes the situation and short-term impacts of the pandemic on CSs located in rural areas of France, Portugal, and Belgium, accounting for their particular circumstances. Section 2 details our methodological approach. Section 3 describes the main features of the sample considering the location, organization, and functions of selected CSs. Section 4 summarizes the situation experienced by CSs during the first year of the pandemic in the three countries. The main factors explaining the resilience of rural CSs are discussed in Section 5, while perspectives and planning policies are addressed in Section 6.

Methods

This paper focuses on CSs located in NUTS level 3 sub-regions (France's *Départements*, Belgium's *arrondissements*, and Portugal's *subregiões*) classified by Eurostat (2018) as predominantly rural. It evaluates and compares the characteristics and evolution of CSs in rural areas in the three countries, with special regard for the impact of COVID-19, pointing out explanatory factors in relation to their contexts and the challenges they face when compared to CSs located in large cities.

The choice of the three countries under study results from the growing interest among scholars, policy-makers, and stakeholders in understanding new labour trends in a variety of contexts and, particularly, the multifaceted reality of rural territories within the EU. Furthermore, the authors have been

involved in the debate on these issues for several years, namely participating in the COST Action CA18214 'The Geography of New Working Spaces and the Impact on the Periphery'.

The identification of French CSs was based on regional networks of third places, notably in Nouvelle Aquitaine, Occitanie, and the *département* of Ardèche. Third places that did not offer coworking facilities were disregarded. In Belgium, 15 CSs matching the rural criteria were selected from the Wallonia Coworking Network and contacted by email. Seven of them answered our request for an interview. In Portugal, rural CSs were identified through desk research and interviews requested with managers by email. Based on the availability of CSs managers to be interviewed, our selection process may have biased our sampling, since fully closed CSs may have remained out of touch of our requests. Given the geographic scattering of the sample, aside from the circumstances of COVID-19, all interviews were conducted by telephone or video conference between 7 January and 18 March 2021. In the end, the authors conducted a total of 48 semi-structured interviews with CSs managers in France (30), Portugal (11), and Belgium (7). Of these, 8 are located in municipalities of less than 1,000 inhabitants. The others are located in municipalities of 1,000 to 7,500 (14), 7,500 to 20,000 (12), and more than 20,000 (14) inhabitants.

The interviews addressed the following issues: (i) legal ownership, property characteristics, functions, and digital accessibility; (ii) the situation before and after the pandemic outbreak (number of users, financial issues, etc.); (iii) CS actions in different stages of the pandemic (restrictions, events, etc.); (iv) COVID-19-related government support measures; and (v) prospects for CSs and the local community.

A qualitative content analysis was carried out to rigorously and systematically compare the information collected through interviews. With the aforementioned research aims and issues, the data was analyzed inductively and classified according to codes to find the relevant categories (and subcategories) of analysis: demographic and geographic characteristics and classification of CSs location; CSs features; government lockdown measures; the situation of CSs before and during the crisis; and foresight.

Description of the sample

Geography and local dynamics

Natural beauty, nice weather, a rich cultural heritage, and low property costs may be attractive for knowledge workers and various kinds of 'digital nomads' (Orel, 2019). Portugal and the French regions surveyed, notably Ardèche and the South-West, are endowed with such positive stereotypes. In Belgium, the overall population density contributes to sustained urbanization of the countryside, especially in the vicinity of motorways. Creative workers are also attracted

to rural areas because of lower housing prices, the availability of large houses, and easy access to major urban centres.

The distance to large cities (Lyon and Toulouse in France, Liège and Brussels in Belgium, Lisbon and Porto in Portugal) appears to be an important factor in the development of these spaces. In seven cases, the travel time to the closest major city is short enough to allow daily commuting from the rural locality.

> The accessibility and short distance from Lisbon, allowed the coming of young professionals looking for a different and more collaborative lifestyle.
> (PT31)

Thirteen municipalities in our sample witnessed demographic growth, while two thirds of them showed a declining (23) or stagnant (12) population. In France and Portugal, this is the result of a century-long process of rural devitalization and ageing.

In declining rural communities, the presence of CSs is a matter of local economic development and revitalization policies. On the other hand, in municipalities with strong demographic and economic dynamics, it is rather an issue of mixed-use planning and development. In turn, small towns located close to major cities fear they may become dormitory cities endowed with few local jobs and the majority of the labour force subject to a long commute.

Most of the rural CSs surveyed were created in 2018 and 2019 after a period of slow development (Figure 9.1), following the trend observed in large cities. Peghaire (2019) reports that in 2019, 62% of all French CSs were less than three years old, and 21% were less than a year old. Two thirds of the CSs surveyed opened between 2018 and March 2021. The implementation of subsidy programmes aimed at creating third places in peripheral areas may have fuelled this recent growth in the three countries.

A subsidized sector

According to *Deskmag*, only 43% of CSs generate a direct profit (Foertsch, 2019). Ten interviewees spontaneously said that rural CSs are not profitable because the community of potential users is small, so they charge low rental fees, or because their main goal is not to earn a profit, for example, when they are promoted by public entities. In France, for instance, CSs in main cities charge €210 per month for unlimited access to the open space (add €100 in Paris) (Peghaire, 2019), while in the rural CSs surveyed, the usual figures are around €100–120 per month.

Of the 48 spaces surveyed, 21 spaces are managed under the umbrella of non-profit organizations, 13 are run by private companies, and 14 are directly managed by local municipalities. Rural CSs usually have to apply for public funding or find complementary sources of revenue. Public funding for CSs, in money or in kind, is the tangible expression of planning, revitalization, and
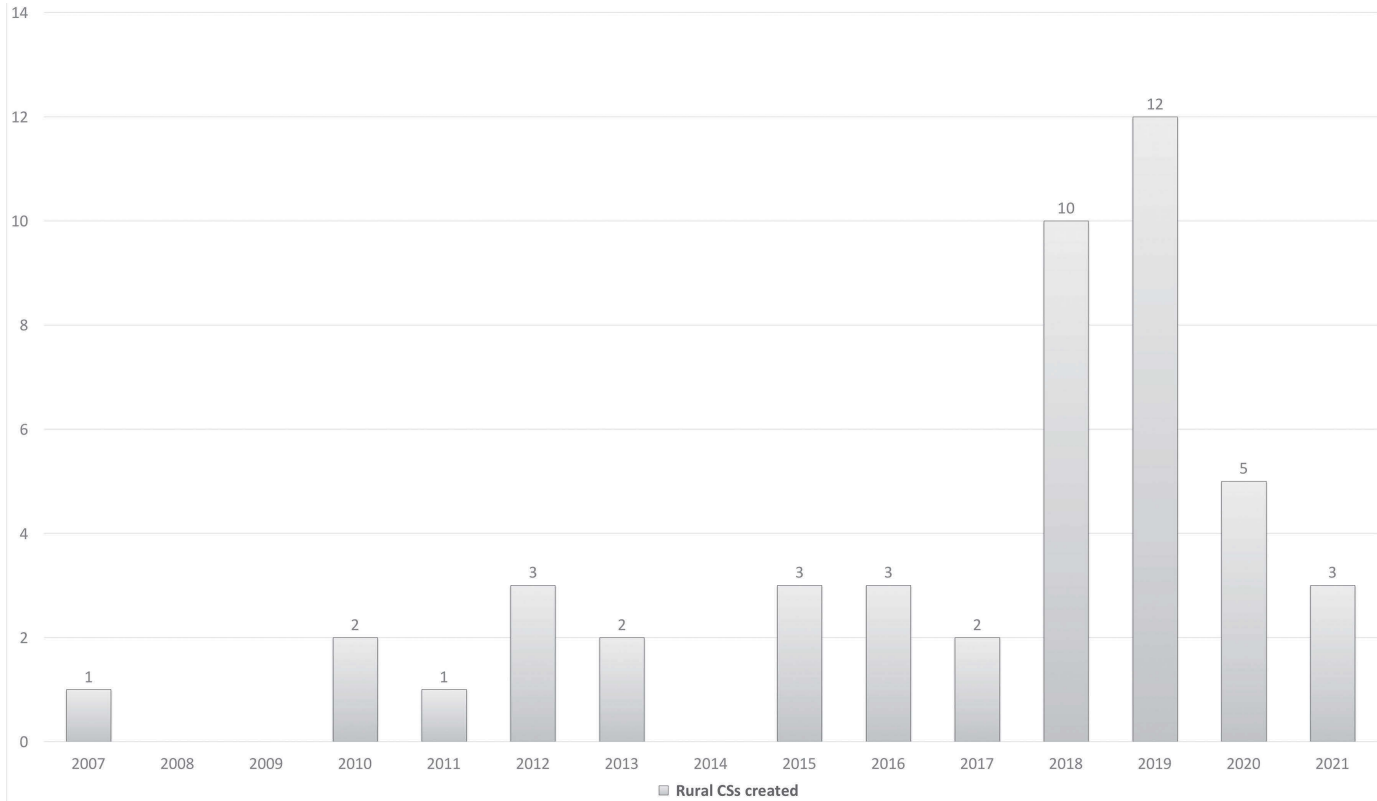
Figure 9.1 Years in which the 48 CSs surveyed were created.

Source: Authors.

economic development policies promoted by the different government levels in each country and the European Union (for example, through the LEADER programme). Some private spaces do not receive any public funding. One of the interviewees even criticized CS managers who 'hunt' for subsidies.

Direct subsidies aside, rural CSs subsist thanks to low or non-existent real-estate costs. Globally, property costs make up 40% of overall CSs costs and removing them from the equation is critical to the business model of rural CSs (Levy-Waitz, 2018). Most of the CSs surveyed pay a modest rental fee or are hosted for free; 12 spaces are owned and managed by the municipality, and 7 are provided by local authorities to non-profit organizations for free or for a symbolic rental fee.

Rural CSs are often located in reconverted buildings, a testimony of the long demographic and economic decline of rural areas. Among the 48 CSs surveyed, 9 former factories (mainly textile mills), 6 closed administrative buildings (post office, bank, gendarmerie, public baths), 5 shops, 4 former schools, 1 church, and 1 convent were identified. In some ways, rural communities mimic on a smaller scale the urban revitalization policies developed in the former industrial neighbourhoods of large cities in view of accelerating the transition towards a knowledge economy.

Hybrid and creative spaces

CSs belong to the wider category of 'third places', which can host a wide array of activities (Oldenburg, 1989) such as makerspaces or fabrication laboratories (fab labs), digital public access points, small exhibition and art venues, cafés, and restaurants.

In rural areas, the diversification of CSs is required by the low density of knowledge workers and firms in the digital industries. This makes it possible to densify occupancy, increase the number of events, and raise revenues. Only 18 out of 48 spaces surveyed are 'pure play' coworking facilities. Aside from this, 10 CSs include a fab lab, 10 are community technology centres, and 4 act as incubator and business centres. Fourteen of these spaces are used to host various cultural activities: circus arts school, theatre, artist residences, art exhibitions, video studios, live music performances, etc.

This broad spectrum of services meets the expectations of local authorities, which regard CSs as much needed hubs of economic and social development. This explains the involvement of some rural municipalities in their development and support. Community technology centres and fab labs are dedicated to the digital empowerment of citizens and firms through training sessions and mentoring. These services, proposed to local authorities and companies, are in themselves a business opportunity for CSs managers and their tenants.

Rural CSs facing the pandemic

Closures due to lockdowns

The three countries faced three waves of COVID-19 at similar times and with more or less similar responses in terms of lockdowns and restrictions. In the

middle of March 2020, the governments of Belgium, Portugal, and France imposed severe lockdowns, with all public venues closed and mandatory remote working. The lockdowns were gradually relaxed at the end of April. The second wave, in October–November, led to a new, though less severe, lockdown in France and Belgium and some restrictions in Portugal (schools and shops remained open). From January to March 2021, the three countries adopted new lockdown measures and/or maintained existing ones.

The lockdowns in spring and fall 2020 were very different. The first lockdown was very strict. Out of the 48 spaces surveyed, two thirds had to close at some point during the lockdown, and 20 were closed completely (Table 9.2). Seven spaces did not close since they had not yet opened when the pandemic began. Like other places open to the public, spaces serving as community technology centres had to close. A number of CSs remained open to their regular subscribers, such as self-employed workers, micro-firms, and non-profit organizations that could not operate from home. Arguably, these private enterprises, which do not receive the general public, could not legally be closed. At the beginning of the pandemic, confusion often reigned, and some CSs had to operate within legal loopholes.

> We are legally open, but we have to deal with governmental rules, and avoid to communicate the attendance on social networks, which makes it difficult to attract new users.
>
> (BE43)

The second lockdown was much less severe, and the vast majority of CSs surveyed remained open, following their respective governments' guidelines and measures. Only one space had not opened again since the first lockdown.

	First lockdown		Second lockdown	
Never close anyway	6		29	
Some closure at some time	32		8	
Including: full closure		20		2
remained open to regular users		6		6
re-opened with measures against Covid-19		4		
Postponed the opening	4			
Unknown, does not apply	3		11	
Created after first lockdown	3			
Total	**48**		**48**	

Figure 9.2 CSs responses to lockdown measures in 2020.

Source: Authors.

A sustained flow of events that encourage business and social interaction is usually cited as an important source of added value with CSs. Even if some spaces remained open, nearly all in-person collective events were cancelled. Community managers tried to 'keep contact' with the community by virtual means such as Messenger or video conferences: online meetings, webinars, workshops, and aperitifs. In some cases, community management efforts were hampered by the nature and legal status of CSs: 'We may be open, but not to the general public, and as long as we comply with the rules of physical distancing and hygiene' (PT41).

Financial problems and government aid

Of the 34 usable responses, only 10 people reported financial losses directly related to COVID-19, five of which were from private CSs. One space acknowledged a growth in revenue (Table 9.3). Loss of revenue was related to the decrease in paid attendance: 18 spaces acknowledged some loss in the number of users. Three mentioned a drop in revenue from meeting room rentals, and one mentioned the cancellation of weekly public events.

A majority of spaces did not have financial losses because rental fees are a very small or non-existing share of their operating budget, as mentioned above. These are public (11) or strongly subsidized spaces (6). Some non-profit associations do not pay any staff. It may be said that the much 'socialized' or self-organized business model of rural CSs make them more resilient to the crisis than urban, business-oriented ones. The diversification of activities also played a role in the resilience of these spaces. Like other businesses, some CSs received specific COVID-19 government aid, such as unemployment benefits or solidarity funds (France). Eight out of 12 CSs that received such aid are private companies. Some spaces did not receive any help, but some of their tenants or users did, which can be seen as indirect assistance to CSs. In most cases, the public nature of the space and the importance of subsidies explain why no aid was mentioned.

Financial problem			Covid-19 specific aid		
Some financial loss	10		No aid	26	
No problem	23		Some aid	12	
Including:		6	Including:		5
relies on subsidy			subsidy extension		
public space		11	unemployment benefit		4
Financial benefit	1		solidarity fund		2
No data	14		No data	10	
Total	**48**		**Total**	**48**	

Figure 9.3 Financial issues during the COVID-19 pandemic.

Source: Authors.

Resilience of rural CSs during the pandemic

Rural CSs were obviously not immune to the COVID-19 crisis. One of the interviewees mentioned the lost year, while another said they had to start over from scratch: 'We have to rebuild the collective and events' (FR2). Ten managers acknowledged that the pandemic has slowed their development. One said, 'COVID has hampered our communication effort' (FR18). Nevertheless, strong resilience is the dominant feeling.

This resilience cannot be solely attributed to the umbrella of public subsidies and assistance or public ownership. Many rural CSs seized opportunities from the specific conditions created by the pandemic, notably in France and Portugal.

The rush of Parisians to the countryside at the beginning of the crisis was a phenomenon specific to France, especially since the concentration of service jobs suitable for remote working in a mega-city is rather unique. An analysis of mobile telephone data revealed that in the aftermath of the first lockdown in March 2020, about 1.5 million people had left Paris, and other major cities to a lesser extent, taking refuge in family homes or secondary residences (Untersinger, 2020). Some extreme measures adopted in France in this period – for example, prohibiting travel farther than 1 km from home and the closure of several green public spaces – probably also played a role in this occurrence.

In Portugal, many Lisbon residents fled to their vacation or family homes and some digital nomads preferred to extend their stay instead of returning to their country of origin. In Belgium, a rush to the countryside was not seen because residential migration towards rural areas is rooted in long-term dynamics that COVID-19 did not alter. In addition, such movement was somewhat penalized by regional or national divides: many holiday homes are owned by Dutch-speaking people who could not legally travel to these places.

The 'house factor' proved important. Rural houses are on average larger than apartments in Paris, Brussels, or Lisbon, and are more suitable for remote working. During the pandemic, the demand for social contact at CSs has been counterbalanced by the fear of becoming infected. Six managers said that people preferred to work at home. By contrast, nine managers mentioned some kind of 'home-working fatigue' as a favourable factor for CSs, resulting from a combination of issues such as noise, social isolation, the feeling of routine, and the lack of adequate bandwidth.

When the first lockdown restrictions were lifted in summer 2020, the three countries returned to a misleading 'new normal' (accommodations, restaurants, and other services opened). Still, restrictions on international travel led residents to opt for domestic destinations. In France, large cities were ignored, but 2020 proved a record high year for rural tourism (Sagot, 2020). CSs also benefited from this phenomenon. Seven managers witnessed an increase in the attendance of non-regular users during holidays, mainly people seeking to escape the issue of working at home (especially people with children).

The digital divide: a driver for rural CSs?

Though it has long been considered a serious planning issue (Salemink et al., 2017), uneven access to fast internet connections in rural areas was brutally exposed during the pandemic, given the vital need for fast remote connections for daily activities, especially video conferences for work and school tasks (Merrefield, 2020).

The old idea that a good connection available at a telecentre – today's CSs – may benefit rural individuals and businesses was somehow revived during the pandemic. Major towns in French, Walloon, and Portuguese rural regions are now generally well connected, often with fibre optics, but a number of small villages and isolated settlements only benefit from ADSL technology or even have no broadband access at all (EC, 2020). Our interviews revealed at least five cases in which broadband access served as motivation to visit the CS, notably by owners of secondary residences with no internet connection. Conversely, the presence of a CS was an argument used by managers, relayed by local and regional authorities, for lobbying communication companies for better internet connections. Once again, the existence of a CS may be seen as a driver for connection and revitalization by some municipalities, which explains their involvement in supporting part of their costs.

Perspectives and outlook

The majority of managers interviewed (19 out of 31 usable answers) have a positive outlook on the future, compared to three who foresee negative events and seven who emphasized uncertainty. Many managers pointed out that the role of CSs in the local economy will increase, and they revealed their optimism in planning short- and medium-term projects. At least six CS managers plan to expand their current space. In Portugal, two interviewees expect to create new spaces in nearby mountain villages. In Belgium, one expects to develop as an international cultural hub. Some are planning marketing communication strategies to attract new users, and others are looking to diversify.

> Third places will grow everywhere.
>
> (FR6)

> We will open another space in the city centre and another in a mountain village.
>
> (PT39)

Drivers of optimism

Many managers predict that the post-COVID-19 economic and social context will be favourable for their activities if the negative effects of the pandemic do not continue (lockdowns and economic downturn).

The generalization of remote working is regarded as the main driver of success in the near future. One expected effect is the increase in CS attendance by salaried workers who cannot or do not want to work permanently at home and are reluctant to resume commuting long distances to their regular offices.

> The demand by remote workers and digital nomads has increased.
>
> (PT37)

> We will emerge from COVID stronger. We have good feedback from salaried users who have negotiated remote working work arrangements with their employers.
>
> (FR22)

The increased political and media attention on remote working and digital technologies may provide rural CSs with additional support from public authorities and private partners. Their development will benefit from a better understanding of the coworking concept and its advantages from local policy-makers.

> We will make more use of the telework topic in our internal and external communication.
>
> (FR5)

> The buzz on telework might help us to persuade the 'communauté de communes' to support the enlargement of the space. It could be a marketing argument to involve a partner in our extension project.
>
> (FR7)

Some public authorities are already seizing this opportunity. On 29 April 2020, the Portuguese government confirmed that it will support the creation of a network of coworking spaces managed by municipalities in inland areas to boost these territories, increase attractiveness of remote areas for both people and companies, reduce travel needs, and improve the quality of life.

More in general, the growing importance of information technologies (IT) should reinforce the role of rural CSs. In the medium term, micro-firms and self-employed workers in digital industries should flourish again, positively affecting CS attendance. In the same vein, the need for IT services targeting the general public, i.e. training sessions, should remain high, raising the interest of CSs as community technology centres.

> The need for digital mediation will increase.
>
> (FR9)

Conclusion

When compared to the situation in large urban agglomerations, the development of CSs in rural areas is more recent and progressive. It has occurred in

diverse conditions in terms of municipality size and development process, yet it presents quite similar patterns in the three countries studied. Given their acknowledged role in local socioeconomic development, the spaces are often subsidized, either directly or indirectly, by local and regional authorities. Rural CSs host a variety of professionals, businesses, and activities that foster employment and attract or retain a skilled workforce that contributes to the diversification and dynamization of local contexts.

The rural areas of the three countries present different conditions for the development of CSs. Portugal offers several public incentives to support the incubation of companies and startups in rural and inner areas and France has benefited from the development of tourism. In Belgium, rural areas are usually well connected to larger cities and attract an important share of workers enjoying a break from long-distance commuting during the pandemic. The socializing and networking functions of CSs were therefore decisive in maintaining and developing their customer base.

In France, rural regions witnessed a real surge in remote workers during the first year of the pandemic. The same could not be assessed in the case of Portugal or Belgium, at least not to the same degree. Workers who moved from large urban agglomerations did not always have adequate connections and facilities for remote work in their homes. In this case, the technical facilities offered by CSs played a key role in their attractiveness.

Even within each country there are differences that determine the resilience of these spaces. In Portugal, the location – along the coast or inland – influences attractiveness and accessibility. It explains the development of very specific formulas, such as CSs deliberately developed in connection with surfing activities.

In all three countries, the availability of public support largely explains the remarkable resilience of rural CSs during the COVID-19 period. With low operating costs in terms of salaries, real estate, or maintenance, they have managed to maintain some of their core activities thanks to the sharing of space and staff between different functions. Arguably, one of the main difficulties related to the reduction of the activities of coworkers themselves rather than to restrictions related to COVID-19, especially after the first lockdown.

Most of the CSs managers interviewed appeared optimistic about the future after the pandemic. As some said in the interviews, if their activities could be maintained throughout the crisis, they can only thrive once the threat has passed. Furthermore, the number of digital nomads is expected to grow in the coming years. Remote work is also predicted to remain at a fairly high level, since workers have experienced the benefits of working away from large urban areas during the COVID-19 period, and many companies are rethinking work arrangements to cut real-estate costs.

When communication, training activities, and social/business events resume, these should boost CS attendance. Even when they have sufficient space and adequate IT facilities at home, which is not always the case, some remote workers may decide to work at CSs some days each week to break social isolation and keep personal life and work separate. The community aspect of CSs

is expected to play a crucial role in this regard, both internally as a place for socializing and externally as a magnet of public life in a largely residential rural environment.

Can these potential drivers of success lead to the long-term, significant revival of rural areas? This is debatable. COVID-19 has amplified an old media and political narrative of 'back to the countryside'. There are plenty of anecdotes about 'creative' entrepreneurial newcomers, but while the real magnitude of the phenomenon is unknown, it is probably small. Several interviewees mentioned a real-estate boom driven by the arrival of former urban dwellers, but the reported cases of increased attractiveness – notably in France and Portugal – rely on local idiosyncrasies and must not be generalized to all rural areas. The digital divide between large cities and rural areas is likely to remain structural and significant in the near future (Cowie et al., 2020).

Therefore, rural CSs should not try to mimic urban CSs, but rather develop their own model based on their intrinsic qualities, i.e. their hybrid character and role as a hub of economic and social innovation, which legitimizes their support by local authorities and communities.

Note

1 In this article, the words are used interchangeably.

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10 Presenting coworking spaces and chrono-urbanism as a policy package for sustainable mobility in post-pandemic Malta

Thérèse Bajada, Bernadine Satariano, and Seyed Hossein Chavoshi

Introduction

This chapter proposes a policy package that includes coworking spaces (CSs) combined with chrono-urbanism – the concept in which people access urban services and amenities mostly by walking or cycling in an urban area within a given time (Moreno et al., 2021) – in the COVID-19 pandemic and beyond, with a special focus on Malta. Malta is an archipelago comprising three islands: Malta, Gozo, and Comino. Its total land area is 316 km². The archipelago consists of six districts and 68 local councils. The population density of Malta is one of the highest in the EU (1867 persons/km²) (National Statistics Office, 2019). The population of Malta had grown stable by 2010, but as of 2013, it started to increase with immigrants and expats working mostly in the technological, financial, and building industries, reaching half a million. With respect to mobility in Malta, cars are favoured over alternate forms of transportation, namely due to a car-oriented culture and infrastructure investments that prioritize them.

For this chapter, CSs are defined as membership-based workspaces in which diverse groups of entrepreneurs and other non-traditional workers work together in shared, communal spaces (Howell & Bingham, 2019). The concept of CSs in Malta is relatively new, starting around 2015 and based on a bottom-up free-market approach with grassroots initiatives (Capdevila, 2017) from local and foreign entrepreneurs.

Accessibility to CSs and their geographic proximity highly influence mobility patterns (Mariotti & Akhavan, 2020). There are two important approaches to choosing the right strategic location for a CS. From an entrepreneurial point of view, the CS needs to be located in a high catchment area to maintain and receive a large number of customers, whereas from a mobility perspective, accessibility to the CS is key. The aim of this chapter is to explore how coworking spaces and chrono-urbanism can be part of a policy package that can be used to encourage sustainable mobility in a car-dependent society, Malta. It adopts a mixed methods approach that includes quantitative analysis from an online questionnaire, analysis of narratives from semi-structured interviews, and reviews and evaluations of mobility-related policies.

This chapter proceeds with the background to the case study, Malta, together with literature on how the pandemic has influenced work and what is being done to rebound in the post-pandemic period. This description is followed by the research methods, detailing how the research was conducted. The analysis is divided into three parts: travel behaviour before and during the partial lockdown, narratives from local councils, and policy review and evaluation. The discussion ties the findings in with the existing literature and is followed by the conclusion.

Background

The population in Malta is mostly clustered into two districts, the Northern Harbour and Southern Harbour. These districts also host the major employment locations in Malta, including the capital city, Valletta. The CSs are mainly located in the Northern Harbour, the Southern Harbour, and the Northern District (Figure 10.1).

The first case of COVID-19 in Malta was confirmed on 7 March 2020 (Baldacchino, 2020). The partial lockdown started on 12 March 2020, with schools and shops shut down and all non-essential public gatherings cancelled. Some workers were urged to shift to online operations and delivery services (Baldacchino, 2020) and 88% of employees engaged in teleworking (Malta Business Bureau, 2021).
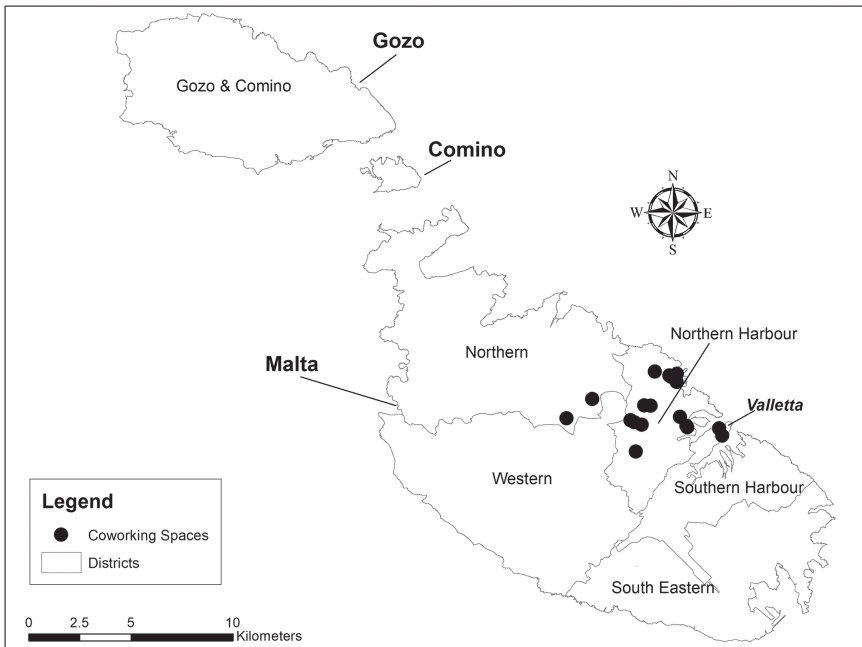
Figure 10.1 Map of Malta showing the districts and the locations of the CSs.
Source: Authors, 2021.

This practice became the norm worldwide (Shibayama et al., 2021). As a result of the restrictions, the traffic volume dropped and public spaces became deserted (Baldacchino, 2020). Following the lockdown, the government introduced a series of measures in June 2020 to revive the economy. For instance, Controlled Vehicular Access (CVA) fees to enter the capital city, Valletta, were waived (Farrugia, 2020).

The pandemic has impacted the principles of CSs, which involve engendering a sense of community amongst workers who use such premises (Manzini Ceinar & Mariotti, 2021). For example, CSs have provided online social services to their communities to support them while working remotely (Manzini Ceinar & Mariotti, 2021).

This outbreak is one of the most disruptive events of the twenty-first century. It has changed not only workflow dynamics but also travel behaviour and transport modes (Beck & Hensher, 2020). Due to social distancing, public transport has had to follow strict health guidelines. Accordingly, the number of passengers using public transport has declined, with some becoming active commuters by either walking or biking, and others preferring their personal cars to travel (Eisenmann et al., 2021).

For cities to rebound after the pandemic, several researchers and activists have proposed the timed-city concept (Moreno et al., 2021). This is a simple concept originally advocated in the early 1960s in which the streets are given back to the people (Jacobs, 1961) rather than used solely for motorized transport. In 2016, the idea became formalized as a time concept known as 'chrono-urbanism' (Moreno et al., 2021) in which people can reach their destinations in 15, 20, or 30 minutes by engaging in sustainable mobility, including active travel. This concept has been implemented in big cities such as Barcelona (Gearey, 2019) and Melbourne (Victoria State Government, 2019) and is also being considered for implementation in other cities such as Paris, Milan, Madrid, Edinburgh, and Seattle.

Research methodology

This chapter suggests policy packages that combine quick wins such as CSs and chrono-urbanism to achieve sustainable mobility. We applied a mixed-methods approach combining primary and secondary data. The primary data involved questionnaires distributed online during the partial lockdown (20 March to 20 April 2020). We obtained 973 valid responses, which were used to identify occupations, where people travel under normal circumstances, and how travel behaviour changed with the partial lockdown. We adopted the national classification for the type of occupation (National Statistics Office, 2021). Cluster analysis (CA) was used to identify demographic profiles in relation to occupation and travel behaviour. Participants who were unemployed or held basic employment titles (e.g. cleaners) were excluded in order to analyze participants who could potentially make use of CSs with their current employment, including students. As a result, the population sample decreased to $n = 919$.

Another primary dataset consisted of semi-structured interviews conducted with seven local councils, equivalent to 10% of local councils in Malta. Due to social distancing, these interviews were carried out by telephone or communicated via

email. The local councils were anonymized using the code LC*n*. The questions asked in the semi-structured interviews included opinions about the 20-minute city, whether the participants were familiar with CSs, what measures would help the 20-minute city and associated barriers and benefits, and how CSs and the timed-city concept could contribute to the community's well-being.

Secondary data primarily included a review of two national transport documents, the strategy (Transport Malta, 2016a) and the masterplan (Transport Malta, 2016b), labelled T1 and T2, respectively. Both included the ex-ante pandemic scenario and were prepared without prior knowledge about the pandemic, yet their vision is long term and goes beyond the pandemic timeline. Additionally, we reviewed legislation targeting alternative mobility during the pandemic, namely A.L. 86.2021 (Government of Malta, 2021b), Standards and Guidance for Transport Service Providers and for Passengers using Transport Services (Government of Malta, 2021a), and Taxi and Cab Owners and Drivers (Government of Malta, 2020), labelled L1, L2, and L3, respectively. The aim of all this legislation was specifically to control and reduce the spread of infection.

The documents were analyzed using Bardach's (2012) evaluative criteria, namely: efficiency, fairness, community, process values, and problem solution. Efficiency refers to benefits that the public would enjoy with implementation of the policy. For example, if applied to alternative mobility, there would be an increase in use, which in turn provides accessibility with reduced or no pollution. Fairness refers to a policy that is just. It reflects the availability of more mobility options that contribute to reduced emissions and healthier urban lifestyles. Community regards emphasizing safety, security, and equal opportunities, for example, promoting the use of alternative modes of transport (e.g. active travel increasing the sense of safety and reducing pollution). Process value refers to stakeholder involvement, such as consulting stakeholders on alternative mobility. Problem solution refers to policies that solve the target problem to an acceptable degree; that is, increasing the use of alternative mobility.

These criteria were essentially designed to be used as guidelines to evaluate policies. By assessing policy documents with respect to these basic but fundamental criteria and searching for references of sustainable mobility (in this case transport modes alternative to cars), we were able to observe possible weaknesses (e.g. a policy that does not address fairness) in the official documents. Taking the National Transport Strategy as an example, and using the criteria 'efficiency', the analysis involved reviewing the document and searching for objectives that targeted the use of sustainable modes of transport that can increase accessibility and reduce air pollution.

Travel behaviour before and during the partial lockdown

The results of the questionnaire indicate that 78% of participants owned a vehicle. Personal cars were the main mode of transport (72%), followed by bus (16%); 7% walked, 3% used a motorbike, 2% used the ferry, and 1% used a bicycle. Before COVID-19, the participants travelled mostly to the Northern Harbour District.

Ninety-nine percent of participants stated that their lifestyle had changed with the partial lockdown. In fact, 76% of participants mostly stayed inside and teleworked. Participants with children also had to homeschool them. With regard to occupation, 37% of the population sample were students and 36% professionals, followed by clerks (16%), technicians and associate professionals (4%), legislators and senior officials (4%), and service workers and shop/market salespeople (3%).

Pearson's chi-squared (X^2) test was used to identify the relationship between occupation (the dependent variable) and the independent variables: gender, age, dependants, district of residence, work district, education district, vehicle ownership, and primary mode of transport. All these associations were statistically significant at the 95% confidence interval.

Following the tests of association, cluster analysis (CA) was performed to profile the participants in relation to their occupation (Table 10.1).

Table 10.1 Cluster groups of the participants showing proportion and description of classes.

Variables		Cluster 1	Cluster 2	Combined
		705 (76.7)	214 (23.3)	919 (100)
Gender	Male	191 (71.5)	76 (28.5)	267 (100)
	Female	514 (78.8)	138 (21.2)	652 (100)
Age	18–29	387 (86.4)	61 (13.6)	448 (100)
	30–39	156 (77.2)	46 (22.8)	202 (100)
	40–49	108 (63.2)	63 (36.8)	171 (100)
	50–59	38 (50.7)	37 (49.3)	75 (100)
	60+	16 (69.6)	7 (30.4)	23 (100)
Dependants	No	462 (81.3)	106 (18.7)	568 (100)
	Children	157 (69.5)	69 (30.5)	226 (100)
	Elderly	44 (66.7)	22 (33.3)	66 (100)
	Other	9 (100.0)	0 (0)	9 (100)
	More than one	33 (66.0)	17 (34.0)	50 (100)
Occupation	Legislators and senior officials	21 (63.6)	12 (36.4)	33 (100)
	Professionals	242 (74.2)	84 (25.8)	326 (100)
	Technicians and associate professionals	24 (60)	16 (40)	40 (100)
	Clerks	97 (64.2)	54 (35.8)	151 (100)
	Service workers and shop and market sales workers	23 (76.7)	7 (23.3)	30 (100)
	Student	298 (87.9)	41 (12.1)	339 (100)
Work district	Northern Harbour	273 (70.7)	113 (29.3)	386 (100)
	Southern Harbour	81 (78.6)	22 (21.4)	103 (100)
	Western	39 (62.9)	23 (37.1)	62 (100)
	South Eastern	11 (91.7)	1 (8.3)	12 (100)
	Northern	34 (79.1)	9 (20.9)	43 (100)
	Gozo & Comino	5 (45.5)	6 (54.5)	11 (100)

(*Continued*)

Table 10.1 (Continued)

Variables		Cluster 1	Cluster 2	Combined
District travelled to mostly (e.g. for errands, work, and education)	Northern Harbour	544 (78.0)	153 (22.0)	697 (100)
	Southern Harbour	75 (76.5)	23 (23.5)	98 (100)
	Western	32 (64.0)	18 (36.0)	50 (100)
	South Eastern	12 (80.0)	3 (20.0)	15 (100)
	Northern	37 (77.1)	11 (22.9)	48 (100)
	Gozo & Comino	5 (45.5)	6 (54.5)	11 (100)
Vehicle ownership	Yes	531 (74.5)	182 (25.5)	713 (100)
	No	174 (84.5)	32 (15.5)	206 (100)
Mostly used mode of transport	Bus	128 (87.7)	18 (12.3)	146 (100)
	Bicycle	3 (37.5)	5 (62.5)	8 (100)
	Walk	47 (75.8)	15 (24.2)	62 (100)
	Car	500 (75.4)	163 (24.6)	663 (100)
	Motorbike	15 (57.7)	11 (42.3)	26 (100)
	Other	12 (85.7)	2 (14.3)	14 (100)

Source: Authors.
Note: Values in parentheses are %

Cluster 1: women engaged in alternative mobility

Cluster 1 consists of 76.7% of all participants (Table 10.1) and represents 78.8% of female participants; 86.4% of cluster 1 is between 18 and 29 years old. All have 'other' types of dependents, e.g. pets, and 81.3% have no dependents. Cluster 1 is characterized by students (87.8%); 76.7% are service workers and shop and market sales workers, and 74.2% are professionals. The work district and the district travelled to mostly, e.g. for errands, work, and education, was in both cases the South Eastern (91.7% and 80%, respectively). In cluster 1, the majority (84.5%) did not own a vehicle and 87.7% used the bus.

Cluster 2: male professionals who work in Gozo and Comino and cycle

Cluster 2 covers 23.3% of all participants (Table 10.1). Men dominated this cluster (28.5%), and 49.3% were between 50 and 59 years old. In contrast to cluster 1, 34% had more than one dependant and 40% were technicians and associate professionals, followed by 36.4% legislators and senior officials, and 35.8% clerks. The work district for cluster 2 was Gozo and Comino (54.4%), similar to the district that was travelled to most. Table 10.1 shows that in cluster 2, 25.5% owned a vehicle and 62.5% went by bicycle.

The CA yielded an understanding of the typical travel behaviour of the participants and established their profile before COVID-19. By exploring the views of the local councils, we studied the possibility of creating policy packages that support sustainable mobility, such as the combination of CSs with chrono-urbanism. Equally important was an evaluation of the local councils' awareness of these two concepts.

Narratives from the local councils

Views regarding the 20-minute city

Most of local council participants agreed that the 20-minute city would be an effective concept in Malta given the short distances across each town or village.

> The concept of the 20 minutes city works in Malta, since we have short distances and our localities are small.
>
> (LC5)

LC1 pointed out that this concept would decrease traffic volume, encourage walkability or biking, and be highly beneficial for small businesses. However, LC1 also stated that its attempts to reduce traffic volume in the central area was not appreciated by all inhabitants. The general consensus is that it is hard to change the mindset of local inhabitants and businesses.

> When [we] tested out a similar concept the businesses were in shock . . . It takes time in changing the mentality of the residents as well as the businesses.
>
> (LC1)

Measures that would encourage the uptake of the 20-minute city concept

The majority of local council participants admitted that the 20-minute-city approach would be a functional alternative only with improvements to the road system, the existence of efficient alternative modes of transport, and adequate encouragement and awareness about them.

> More road management, better public transport and more encouragement and awareness about cycling as in Malta we do not use much of this mode of transport.
>
> (LC2)

LC3 emphasized the fact that when towns include active travel and bus use, they support accessibility to amenities such as schools and supermarkets. In such cases, adoption of the 20-minute concept, which is based on proximity between the origin and the destination (e.g. work, errands, leisure), would be possible since people can reach their destinations easily in shorter distances and times.

One local council representative expressed that car-free zones could increase residential spaces in towns. This would consequently favour environmental conservation and support better community life. However, removing cars from the streets in central areas of towns would be challenging because of 'people's mentality' (LC7).

Barriers to the implementation of the 20-minute city concept

In the participants' view, there are a number of barriers which prevent the timed–city concept from being a suitable solution in Malta. LC4 stated that if public transport does not operate properly, the inhabitants would revert to using their personal cars, thus leading to failure of the concept (LC4).

It was also highlighted that inadequacy of the cycling network might discourage bicycle use as an alternative mode of transport.

> If there are a few bicycle lanes it may be a bit dangerous to use a bicycle on the road.
>
> (LC4)

Malta's hot summers may hinder people from making use of active transport. In addition, parents with young children prefer commuting to different destinations for extracurricular activities with their personal cars since the current transport system does not meet their expectations. Therefore, this group of people might find it very difficult to move around with this concept.

> One of the barriers can be our way of living . . . especially those family [sic] with small children, they need to take them to schools, various sports nurseries, museum, private lesson and much more.
>
> (LC5)

Expected benefits of the 20-minute city concept

If many local communities were to use this concept, there would be less pollution and less traffic, especially during rush hours, and commuting would be less stressful. This concept would encourage reduced car use and related congestion, enabling safer, walkable streets and encouraging inclusive societies.

> This concept will help, because for sure there will be less pollution. Less traffic jams, more inclusive society. I think from such initiative all generations will gain, especially the elderly.
>
> (LC5)

Plans to encourage use of alternative modes of transport

Although nearly half of participants do not have any plan to apply this approach to their towns, others have pointed out that they have attempted to encourage the use of alternative mobility by introducing bike-sharing stations, providing facilities such as bike storage, signs that estimate the walking/biking travel time to different destinations, and plans to create attractive walking trails from central areas to open

areas in nature. LC4 and LC7, however, observe that changing people's mentality still remains a long process.

Workplaces that could enhance the 20-minute city

Workplaces with parking problems would greatly benefit from this concept. These are often located in areas with high concentrations of offices and working spaces, so distributing working spaces in more localized areas would be an alternative solution.

> Yes, as there are a lot of workplaces around Malta that the locality that they are situated in poses a lot of parking and traffic problems. So, putting into practice this concept will benefit them.
>
> (LC6)

LC1 stated that this approach might make the local economy healthier, with businesses cooperating better and succeeding more.

Awareness of CSs

Although half of participants had never heard of CSs, all understood the concept: 'I think it is when a group of people work together in one common area' (LC4). The majority of participants acknowledged the benefits of this idea, particularly for government-based purposes, to boost cooperation and interaction.

The contribution of CSs to community well-being in the 20-minute city concept

The majority of participants noticed that combining the idea of CSs with the timed-city concept can greatly contribute to a community's well-being. They added that the introduction of CSs can increase local social interaction, improve mobility, and change lifestyles.

> More social interaction, more networking, calmer, focused and motivated, and if their mode of transport is by walk or bicycle, they also feel healthy and fit.
>
> (LC4)

This idea could result in social change, thus creating healthier communities. Moreover, this process helps to cultivate the coworking culture.

> And coworking will share not only the spaces, but also experiences and I believe that this will help to have more flexible employers and employees.
>
> (LC5)

After studying the local councils' awareness and views regarding CSs and chrono-urbanism, we assessed the policy documents in favour of alternative modes of transport. It is important to note that none of the policy documents referred to CSs or the timed-city concept.

Policy review and evaluation

In line with the scope of this chapter, this concise review relates specifically to land-based mobility alternatives to personal cars.

Review

The National Transport Strategy (2016a) and Transport Master Plan (2016b)

The strategy, T1, is a document with an inclusive vision and strategic goals. The strategic goal associated with the use of alternative modes of transport to the car is to 'support social development and inclusion', 'provide accessibility and mobility', and 'work towards public health'. The strategic direction has eight guiding principles, of which principle 2 ('Creating Modal Shift') is directly related to the use of modes of transport alternative to cars.

As the masterplan, T2 reflects T1 and includes more operational objectives and associated measures such as providing alternatives to cars, improving the service quality of public transport, improving seamless intermodal mobility, and developing transport hubs to encourage intermodality. The timeline for T2 and T1 is 2025 and 2050, respectively, extending well into the post-pandemic scenario.

Legislation and guidelines during the partial lockdown

L1 contained mobility between Malta and Gozo for those working or visiting family members, or for medical reasons. L2 included guidelines for face masks aboard vehicles and restrictions regarding passenger numbers. Furthermore, passengers were encouraged to pay their fares using the bus card. Air

Table 10.2 Evaluation of policy documents using five evaluative criteria as adapted from Bardach (2012).

Evaluative Criteria	T1	T2	L1	L2	L3
Efficiency	Addressed	Addressed	N.A.	N.A.	N.A.
Fairness	Addressed	Addressed	N.A.	N.A.	N.A.
Community	Addressed	Addressed	N.A.	N.A.	N.A.
Process value	Addressed	Addressed	N.A.	N.A.	N.A.
Problem solution	Addressed	Addressed	N.A.	N.A.	N.A.

Source: Authors.

conditioning was to remain running with the bus systems fumigated every night.

Evaluation

The following matrix (Table 10.2) applies Bardach's (2012) evaluative criteria to the documents reviewed. The evaluation includes the term 'addressed' in cases in which the specific policies directly refer to the aspects related to the criteria and the term 'N.A.' for 'not addressed' in cases in which the documents do not refer to the criteria.

As can be seen in Table 10.2, T1 and T2 addressed the criteria, but L1, L2, and L3 did not. This is because the context and aims of the legislation and guidelines were different from those of the transport strategy and masterplan.

The review and evaluation of the policy documents showed that the long-term vision to engage in sustainable mobility is available, yet it does not refer to chrono-urbanism or its integration with CSs. Furthermore, legislation that targets pandemic-related mobility issues does not emphasize the importance of sustainable mobility, instead focusing only on limiting contagion.

Discussion

Surprisingly, in a car-oriented society such as Malta, we found that prior to the pandemic, the two population clusters that emerged from this research engaged in alternative modes of transport (cluster 1, bus; cluster 2, cycling). The findings show that women used the bus more than men. Moreover, Gozo, mostly rural with a lower population than Malta, instills a sense of safety and encourages people to cycle.

The use of alternative modes of transport is, however, not yet the norm in Malta. The National Malta Transport Strategy (Transport Malta, 2016a) and Masterplan (Transport Malta, 2016b) both have a vision and targets to introduce the use of alternative mobility. These were written four years before COVID-19, so they did not envisage a pandemic scenario, but their targets of engaging in active travel can be applied in a pandemic situation as well as beyond. As expected, the legislation and guidelines during the pandemic were focused on health and safety measures, namely to reduce contagion on public transport modes such as buses and taxis; however, they do not encourage alternative and sustainable mobility, which can promote healthy lifestyles even in a pandemic. Even worse, from a transport policy perspective, the CVA was removed. In contrast, foreign cities (e.g. Berlin, Seattle, and Bogotá) used the pandemic as an opportunity to engage in sustainable mobility (Moreno et al., 2021).

The responses from local council participants were promising. As administrative units, they were in favour of chrono-urbanism and combining it with CSs. It was observed, however, that the initiative for behavioural change has to come equally from both top-down and bottom-up. That is, governments

should facilitate the timed-city concept and support CSs, and small businesses and communities should take an active role in engaging in the use of alternative and sustainable mobility and using shared spaces for working. Such a change would be beneficial for advancing societies and economies with new ideas and innovation (Capdevila, 2015).

Conclusion

In this chapter, it is evident that even in a car-dependent country such as Malta, there are people and entities that support the use of greener and healthier modes of transport. Furthermore, the vision for sustainable mobility already exists; however, the pandemic could have been used as a natural experiment to engage in more active travel.

The concept of sustainable mobility is written in Malta's national transport vision. To enhance this vision and engage in its practice, we suggest that policy packages such as the combination of CSs and chrono-urbanism be used as small quick wins during the pandemic and beyond. During the pandemic, CSs can operate following health protocols, so people who telework and feel lonely due to a lack of social interaction can enjoy the company of others during their working day and improve their mental well-being. During this time, the road infrastructure can also be improved to accommodate more active commuters (i.e. walking and cycling). In the post-pandemic era, such proposed packages may contribute to cohesive communities and better lifestyles.

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Part 3

New working spaces and the work lives of coworkers and remote workers during the COVID-19 pandemic

Ilaria Mariotti, Mina Di Marino, and Pavel Bednář

Part 3 explores the effects of the COVID-19 pandemic on the rise of remote working and the renewed role of NeWSps in accommodating remote workers, teleworkers, and digital nomads. Specifically, the extent to which NeWSp models, which developed during the pandemic, satisfy the needs of remote workers (e.g. work-life balance) is discussed. The growth rate of remote working is heterogeneous, with southern European countries exhibiting a massive increase and northern Europe just a slight increase, since the latter had already significantly adopted remote working before the COVID-19 pandemic (Sostero et al., 2020; EC, 2020; ILO, 2020).

Chapter 11, by Anastasia Sinitsyna, Mina Di Marino, and Tiiu Paas, focuses on the rise of remote working and virtual coworking during the pandemic in two of the most digitized European countries and cities: Tallinn (Estonia) and Oslo (Norway). The authors find that the concept of virtual coworking relates to online community-building and complements remote working. However, virtual coworking and remote working practices can contribute to the evolution of hybrid forms of work and can both be considered sustainable ways of working in terms of resource consumption and commutes. In Chapter 12, Milan la Fleur, Martijn Smit, and Ivana Pais present the case of the Netherlands, exploring the motives and preferences of CS users during the pandemic and comparing the outcomes with studies conducted before the pandemic. Indeed, Dutch coworkers want to find a productive workplace outside the home, tending to focus intensely on CS layout and design. At the same time, their interest in professional networking is less pronounced. These results stress the importance of workplace reorganization due to the pandemic.

Chapter 13 takes us to Asia, a continent where the literature on NeWSps is scant. Mi Hyun Seong, Aleid E. Brouwer, Mariachiara Barzotto, and Ilaria Mariotti explore the case of Seoul, South Korea, which successfully eradicated COVID-19 at the earliest signs of the global outbreak, and where the

government had promoted teleworking before the pandemic. The authors describe the extent to which the pandemic has affected remote working and CSs, and underline that a large share of coworkers are employees working at larger firms who need to work remotely from main offices located in the inner city.

In Chapter 14, Aleid E. Brouwer, Hans Westlund, and Martijn Smit present challenges due to the pandemic for CS users, whose range has expanded with employees from all sorts of companies who need to balance remote working with their private lives at home. The situations in Sweden and the Netherlands are described, and it is underlined that workplace decisions may become a lifestyle choice during the pandemic rather than a requirement from work providers.

In Chapter 15, Chiara Tagliaro, Alessandra Migliore, Vitalija Danivska, Jenni Poutanen, Sofie Pelsmakers, Tapio Kaasalainen, and Suvi Nenonen discuss an emerging trend among scholars concerning the effects of COVID-19 on work and their location choice for conducting research. The cases of Italy and Finland are presented because they are characterized by different flexible work and workspace levels. A clear change in the type of academic work and spaces used by scholars during this period is found. The study therefore underlines that further research questions regarding innovative workspaces must be addressed to meet the needs of academics in these two countries.

In Chapter 16, Mina Akhavan, Anita Fuzi, and Vieri Calogero focus on CSs managed by women and characterized by strategies to support and meet the specific needs of women. The authors carry out semi-structured interviews with the managers of six coworking spaces in Europe, and explore the relationships between the managers and welfare policies (e.g. maternity leave, public family support, public childcare services, etc.). The analysis underlines that the interviewed spaces adopted similar strategies, and female workers and entrepreneurs have been attracted by the provided flexibility, professional environment, and support.

Concluding Part 3, Chapter 17, by Lenka Smékalová, Jana Matošková, Eva Belvončíková, Judit Kálmán, and Zuzana Crhová, enriches the debate about the importance of CS services for enhancing work-life balance, the determinants improving work-life balance, and the effects of COVID-19 on such services. Several managers of independently operated CSs in the Czech Republic, Hungary, and Slovakia were interviewed to reach this goal. The results show that the pandemic has impacted the services offered by CSs and severely hindered their role in connecting people.

The main outcomes of Part 3 show that NeWSps represent an innovative use of the workspace and a favorable work environment for remote workers. The evidence about the facilities and new services for users supplied by NeWSps should rely on tailored policy tools to support remote workers, families with young children, and women, for example, who have been affected most by the pandemic.

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11 Virtual coworking and remote working

Lessons and perspectives on the COVID-19 pandemic from Estonia and Norway

Anastasia Sinitsyna, Mina Di Marino, and Tiiu Paas

Introduction

In the last decade, scholars from several disciplines have investigated new ways of working and the implications for our cities and society. In the Nordic countries before the COVID-19 pandemic, people were increasingly choosing non-traditional workplaces, such as the home, coworking spaces (CSs), coffee shops, and public libraries in addition to the office (Koroma et al., 2014; Di Marino & Lapintie, 2018). This shift occurred due to the emergence of the knowledge-driven economy (Clarke, 2001), the growing flexibility of workspaces and practices, and the high degree of digitization (Hardill & Green, 2003; Felstead & Henseke, 2017). One of the key elements of non-traditional workplaces is their flexibility (e.g. in terms of time and space) and the opportunity for social and professional interaction. However, the COVID-19 pandemic has dramatically changed the ways of working, limiting most social contact. In response to unforeseen changes, virtual coworking spaces have emerged. Virtual coworking spaces (VCS) are an extension of coworking spaces into the virtual world where 'emerging collaborative activity' takes place online (Hofeditz et al., 2020). To date, very little academic research has been done in this area, although the topic is being debated on social media. One of the reasons behind this is that VCSs are a recent phenomenon. Thus, the aim of the study is twofold: (i) to clarify the concept of virtual coworking and reveal possible relationships with remote working practices; and (ii) to explore perspectives of the development of VCSs and remote working during and after the pandemic.

Previous studies have mainly focused on the concept of remote working, which is used by both employees and self-employed workers and occurs when work is fully or partially done outside the regular place of work (ILO, 2020). Before and during the COVID-19 pandemic, scholars have mainly analyzed the increase in remote working and its implications, such as virtual and physical locations, virtual presence, and social isolation (Koroma et al., 2014; Kong et al., 2019; Morrow, 2020).

We assume that remote working and coworking spaces (CSs), both virtual and physical, can support people's adjustment to global shifts and allow the integration of traditional and new work habits. In order to explore possible

relationships between VCSs and remote working, we conduct a comparative case study between Estonia and Norway. These two Nordic countries present a high degree of digitization (more than 90% of the population use the Internet regularly). In both countries, remote working has traditionally been accepted as a flexible way of working among several organizations, with some local variation between job sectors. However, during the pandemic, remote working has increased in both countries. In addition to a theoretical background on remote working, virtual coworking, and related concepts, this study presents a comparative analysis that focuses on six high-tech-oriented CSs located in Tallinn (Estonia) and Oslo (Norway) and semi-structured interviews with their managers. The study then discusses the main outcomes, including new ways of working, and concludes by suggesting further paths of research.

Theoretical background

The pandemic has forced CSs to consider whether to continue renting spaces or to replace (or complement) them with more flexible services and work practices, such as remote working and CSs using digital platforms. Coworkers expect to benefit from the coworking community and the advantages of particular services (for example, advice, start-up supervision, and legal consultation) (Spinuzzi, 2012; Leclercq-Vandelannoitte & Isaac, 2016). However, during the pandemic, these expectations have become intertwined with high standards of hygiene and social distancing measures. CSs are required to provide safe workplaces with good ventilation and other work conditions that reduce the threats of the pandemic. As a compromise between the advantages of CSs and their customers' requirements, the owners of coworking spaces have been encouraged to replicate coworking practices virtually (Holland & Brewster, 2021).

Prior to the COVID-19 pandemic, high levels of technology use and the rapid adoption of new ICT solutions produced a favourable environment for supporting virtual human relationships (Cappel & Windsor, 2000; Morris, 2008). High levels of digitization boosted both remote working and VCSs, which have similar drivers, such as the rapid growth of digitization and the growing spatial and temporal flexibility of work (Golden & Fromen, 2011).

VCSs and remote working have much in common. Both are new ways of working that are conducted virtually, providing alternatives to co-locational or traditional ways of working (Gerke, 2006). Neither remote working nor virtual coworking are limited to particular workplaces, and they may be done from non-traditional places (ILO, 2020) by both self-employed workers and employees. In this sense, virtual coworking and remote working, if done as a team, have some similarities. The principles of working and management in virtual reality differ from traditional co-locational work (Morris, 2008; Mikhailova, 2009). Initially, trust and recognition are issues when working online. Team members or coworkers often do not know each other and, hence, do not trust each other. A lack of trust significantly reduces knowledge spillover (Guinalíu & Jordán, 2016; Parker et al., 2020).

Furthermore, both remote working and virtual coworking are similar in terms of flexibility (time and space). VCSs (and physical CSs) provide users with 24-hour access to online platforms from any place. Remote workers benefit from the same advantages of unlimited access to online platforms and flexibility of place. Working online provides the substantial advantage of access to global knowledge and, hence, widens the audience, connecting people from across the globe (Maskell, 2014).

Nonetheless, remote working and virtual coworking present some negative side effects. Online communication typically requires more effort and is less intensive and spontaneous (Kraut et al., 2002). For management tasks, the efficiency of online work in terms of ease of collaboration and knowledge spillovers are not as successful as in a physical space (Kratzer et al., 2006). The absence of a physical space generates problems common to remote working and VCS. In particular, both virtual ways of working target non-verbal communication (Robelski et al., 2019), ignoring the importance of body language in effective social communication. Remote working and virtual coworking overlap in terms of challenges; in particular, both have imbalanced work-home loads (Vartiainen & Andriessen, 2006; Felstead & Henseke, 2017; Wang et al., 2021).

However, remote working and VCSs also have distinctive features. VCSs are recognized as a combination of CSs and remote working, combining the best practices of both (Hofeditz et al., 2020). Despite its practical importance, the concept of virtual coworking has not been developed in previous studies. There is a lack of common understanding about virtual coworking. Among coworking communities (e.g. coworkers), virtual coworking is defined as 'coming together to work online' (https://blog.coworkies.com/everything-about-virtual-coworking/). This can happen by facilitating work sessions, guest lectures, well-being sessions, and workout sessions between coworking members (https://remote-how.com/blog/what-is-a-virtual-coworking). In the concept of virtual coworking, social and communication functions (and dimensions) are highly emphasized. In contrast, the concept of remote working lacks the social aspects of communication, instead mainly referring to flexitime and flexispace (Hardill & Green, 2003; Charalampous et al., 2019). VCSs aim to provide a sense of community that in turn boosts productivity and knowledge sharing. Remote working prioritizes task-solving goals and does not aim for online community meetings (Ayache et al., 2021).

New paths for these new forms of working and their combination rely heavily on a variety of factors, including the level of digitization and digital skills, the structure of the economy, and legal regulations. The Nordic region of Europe relies on cultural and managerial practices indicating low power distances. As Morris (2008) pointed out, negative past experiences of cross-cultural misunderstanding have decreased the possibility of further implementing virtual practices. Thus, national cultural values and practices (Lim et al., 2004), as well organizational culture and leadership style (Nayani et al., 2018), create the conditions for the expansion or limitation of remote working and VCSs (Nenonen & Lindhal, 2017).

Tallinn and Oslo: the six coworking spaces and methods

The cities of Tallinn and Oslo were used as case studies for various reasons. Both cities are among the most digitally developed and urbanized areas in Estonia and Norway, with the highest concentration of IT, fintech, and creative industries. Therefore, the need to adapt to remote working as a response to the COVID-19 pandemic was not a shock for either Tallinn or Oslo. In addition, there is a high demand for flexible working places in both Tallinn and Oslo, since the share of freelancers and remote workers was significantly high and stable even before the pandemic; this share has increased during the pandemic. Furthermore, in both countries, there is a growing interest among academics, policymakers, and stakeholders in the growth of CSs as well as a good availability of quantitative and qualitative data.

Before the COVID-19 pandemic, 9% of people in Norway used to work remotely as a permanent solution and 27% did so when necessary (Nergaard et al., 2018). During the pandemic, the statistics have reported an overall share of 39%. For managers and professionals, the shares were 70% and 60%, respectively, compared to a share of around 16% for blue-collar workers (Holgersen et al., 2020). Similar patterns were found in Estonia. Due to the pandemic, the number of remote workers in Estonia has increased by approximately 200,000 people. During the pandemic, every fifth employed person has had experience working remotely, although remote working was used only partially. Around half of remote workers spent at least one day at their physical office, since Estonia has not experienced a complete lockdown. The prevalence of remote work is associated with high-skills occupations. While 42% of white-collar employees worked remotely, the 10% share for blue-collar workers was modest (Statistics Estonia, 2020).

In both cities, there is a predominance of high-tech-oriented CSs tied to the growing flexibility of several industries (e.g. business and finances, IT, creative sectors) as well as the high digitization of public and private organizations. On the one hand, Tallinn is an IT-industry centre that strongly supports an innovative ecosystem. Oslo, on the other hand, has solidified its status as one of the most investment-worthy medium-sized cities worldwide and can therefore be considered a technology and data platform which supports the expansion of start-up clusters and entrepreneurs, a supportive ecosystem, and access to funding (Oslo Business Region, 2017).

In total, six CSs were studied during the pandemic between January and February 2021: Spring Hub (tech), Workland (tech), and Lift 99 (tech) in Tallinn, along with the TheFactory (fintech and others), SoCentral (social innovation), and 657 Oslo (different creative industries) in Oslo. The reason for selecting these six CSs was that in addition to providing workspace, they act as incubators and/or communities, helping entrepreneurs grow their start-ups and hosting high-tech companies. The six CSs have several partnerships in ongoing projects both in Estonia and Norway and worldwide. In addition, high-tech CSs have a reasonable technical basis for the rapid transformation of physical activities in the virtual space. It is also important to mention that in addition to coworkers, these

CSs are also used by employees working remotely for their companies. Thus, location is not relevant for every customer.

The qualitative content analysis focused on six semi-structured interviews with the managers of the CSs. The aim was to understand their perspectives in interpreting virtual coworking and the interplay with remote working under the pandemic, as well as envisioning new ways of working after the pandemic. Five categories were selected: (i) understanding of virtual coworking; (ii) inter-play between virtual coworking and remote working; (iii) virtual coworking practices (in order to explore social and communication functions and dimensions); (iv) virtual coworking challenges (including difficulties in replicating a CS); and (v) future ways of working (e.g. the combination of new forms of work, flexibility, working from different locations). These categories were considered relevant topics for further exploration based on the theoretical background presented in this study and were thus selected deductively (Mayring, 2014). The contents were analyzed by coding the statements in texts (see Table 11.1).

Table 11.1 Selected content analysis of the semi-structured interviews with the managers.

Category	Code	Excerpts from interviews	Preliminary argumentations
REMOTE WORKING	**Rwdef1**	You can work from any part of the world, but you can work remotely without online connections and participating to the on-line meetings (Manager 1, January. 20, 2021 Oslo)	People can work individually and separately. The location does not matter.
VIRTUAL COWORKING	**VCdef1**	It is so hard to say for me what it means. I would say it is something like online activities that we provide. . . But this is only part of our coworking (Manager 2, January 12, 2021 Tallinn).	Virtual coworking is part of the coworking.
VIRTUAL COWORKING	**VCpr1**	Well, we use the same programs as we did before the pandemic. We have a Facebook group, sometimes we chat on Zoom or via Skype (Manager 3, 2021 Tallinn).	The use of platforms did not change during the pandemic.
VIRTUAL COWORKING	**VCch1**	We tried to replicate something that happened physically with some limitations (Manager 1, 2021 Oslo)	There were difficulties in replicating physical events.

(*Continued*)

Table 11.1 (Continued)

Category	Code	Excerpts from interviews	Preliminary argumentations
NEW WAYS OF WORKING	**NWW1**	Foreign customers work in our spaces remotely for their companies. . . And this trend will continue in future (Manager 4, 2021 Tallinn)	There are different ways of working remotely from coworking spaces.

List of codes used within the content analysis and number of examples for each code found

RWdef Definitions of remote working = 7
VCdef Definitions of virtual coworking = 7
VCpr Virtual coworking practices = 18
VCch Virtual coworking challenges = 27
NWW New ways of working = 15

Source: Authors.

The semi-structured interviews with the managers dealt with several topics, such as evolving concepts of virtual and remote working and the consequences of unexpected uncertainties for the CS (during and after the pandemic). The managers were also asked about the use and development of digital platforms under the COVID-19 pandemic, as well as the lessons from the pandemic and the future of work.

Results

Virtual coworking and relation to remote working

Even prior to the COVID-19 pandemic, remote working was an established concept and practice among the CS managers and users. The common understanding of remote working among managers is that people can work everywhere and anytime. Some consider remote working to be a lifestyle. Moreover, the advantage of working remotely during the pandemic is that people can connect with others worldwide. This has been a significant benefit for everyone according to some managers.

Furthermore, remote working can also be done individually and offline. This means that remote workers do not always use virtual tools or are not always forced to communicate with other people. As mentioned by some managers, remote workers might not be interested in building a network within the online community or coworking virtually.

Among the managers interviewed, there was some uncertainty in the definition of virtual coworking. Some were able to identify a virtual coworking space as an online coworking space, while other managers identified VCSs as a part of physical coworking. For other managers, virtual coworking is related to ways of connecting people. VCSs are based on new and prior skills in using

digital platforms (such as digital streaming systems and document sharing). The digital space helps to connect coworkers in their communities to new people and engage them in conversations on digital platforms. To this end, the managers recognized the importance of community and belonging to virtual members of the CS community. The location does not matter, but virtual (or online) coworking is part of CS activities. Thus, coworking is acknowledged as a broader definition that embraces both online and physical work in the spaces.

Unlike remote working, VCSs are grounded on more frequent digital communication and more established online activities. People are further connected: coworkers at least say hello to other coworkers on the digital platforms and they communicate more often with the CS community. This community feeling has evolved throughout the pandemic. In the beginning, managers pointed out that customers were deeply involved in online activities. They used VCSs as a platform for sharing the experience of living under the new pandemic conditions. However, with the increase in the number of online meetings, some customers could not tolerate the high intensity of social communications and declined to be involved in virtual community events.

Virtual coworking practices

During the pandemic, the main aim of the CS managers interviewed was to keep the community alive by reaching their CS members online and by communicating regularly with them. They focused on helping the start-ups hosted at the CS (e.g. lending support in organizing community meetings and conferences, pitching events, maintaining legal support). Furthermore, the managers did not perceive any technical difficulties moving from the physical to the virtual space, since coworkers had already experienced digital forms of working before the pandemic. In this sense, the six selected CSs did not invest in new digital platforms but rather developed existing platforms (Zoom, Google Meet, Facebook, Slack, and so on). The use of digital tools has formed the basis of these communities.

During the COVID-19 pandemic, online activities did not change drastically. The CSs continued to organize them as in previous years. However, both private (online dinner parties, as in the case of 657 Oslo) and open digital events were organized more often and needed more frequent advertisement. These digital events were arranged for socializing and receiving feedback and/or complaints from coworkers.

The managers also organized large workshops (involving between 100 and 300 participants, such as with SoCentral and Lift 99). The managers noticed an increasing number of participants in such events. In addition to regular CS users, there were also members who could not reach the CS due to long-distance travel or conflicts with meetings elsewhere. Some traditional services were transferred to digital forms since most members could not reach the CS (due to the restrictions on mobility and travel). For example, Lift 99 provided some online services such as advertisement and law advisory services. These

services were beneficial for the members and did not require any physical presence. The managers realized that these services worked more efficiently and quickly online, and they will probably offer them online even after the pandemic.

Virtual coworking challenges

Prior to the COVID-19 pandemic, the six CS communities mainly focused on connecting people in a physical space, such as meeting people at the coffee machine or spontaneously in shared spaces. Thus, the main challenge was to replicate this community in the virtual space. For example, the social and work dynamics that occur in the physical space cannot always happen in the online room. Coworkers might struggle to draw inspiration and vibes from home, while the open space of the CS is an essential source of inspiration. Some CSs tried to replicate some social dynamics by organizing 'coffee calls'. This was tested to support people working from home who feel isolated.

The six managers agreed that keeping members present and engaged in online meetings is demanding. The main challenges of large digital events were, firstly, organization and coordination despite advanced IT skills, and secondly, creating virtual ways of socializing and having fun. More staff energy was invested in engaging people. However, in several online meetings, for example, some managers noticed that some members shut off their cameras, while some were unable to attend entire meetings. This may be due to various reasons, such as the length of the meetings, overlap with other duties and the low degree of engagement in specific meeting topics. However, they also found that the workshop size influenced the degree of socialization in both the physical and virtual spaces.

Despite the advanced IT skills and use of digital platforms, adaptation to the VCS was different among members of the six CSs. Before the pandemic, some CS members had already adopted hybrid forms of coworking. For example, they already coworked online from the physical space (e.g. TheFactory and Spring Hub). However, during the pandemic, some CS users did not really rely on having so many online meetings, and so they returned to the physical space and held face-to-face meetings while respecting social distancing guidelines (e.g. Workland).

The CS managers were aware that some coworkers live in small apartments or shared flats, and it can be frustrating for them to work from home for such a prolonged time. Arranging a home office might require an extra room, as well as additional furniture and IT equipment, which some coworkers cannot afford. There are also coworkers with kids at home that sometimes worked from the office while complying with hygiene measures. This allowed them to separate their family and work duties and be more productive.

Referring to the short-term impacts of the COVID-19 pandemic on coworkers' habits and needs, the six managers did not notice a significant decrease in the number of members but instead changes to the work routine. In some

cases, coworkers decided to leave the space and work from home; new coworkers chose the CS for online meetings (see Lift 99 and TheFactory), while other customers returned to the CS after some time. Furthermore, according to the managers, it is difficult to predict the long-term impacts of virtual coworking. Among the positive impacts of virtual coworking, these new forms of coworking would create new networks across the country and worldwide, as well as expand their community.

New ways of working

The managers provided different outlooks about the future of work. The spatial layouts of the CSs may change in the future. Some CSs aim to provide better facilities to coworkers, such as smaller individual rooms and larger meeting rooms. The managers are aware that more people will work virtually after the pandemic. However, they will still work physically in the space, albeit less frequently. Probably coworkers would not work all week from home. They will likely use CSs to attend meetings and work with colleagues.

Likewise, some managers believe that social gatherings, workshops, and meetings will be arranged again in the physical space, though large, shared spaces (open landscapes) will be drastically reduced. Other work activities will be performed from home, from the cabin, or wherever people want. This flexible work still supports the organization of daily life and family duties with kids.

Some managers mentioned the need for a plan B. One of the ideas is to expand their business by opening other premises in other Norwegian cities which have been less affected by the pandemic. Some managers mentioned that it would be strategic to further network with other regions and partners. According to other managers, people have dramatically reduced travel, and flying especially, and they are aware that some work can be done from home. Moreover, work practices will probably change across all industries. Employees of large companies will probably not spend 8 hours at the traditional office but may prefer flexible ways of working and spaces such as CSs. Working remotely and coworking virtually are both considered sustainable ways of working in terms of resource consumption and commutes. Considering these scenarios, some managers have already adjusted membership fees to the new needs.

Discussion and conclusion

The results reveal that VCSs and remote working present some differences in terms of definition and work practices. Our study specifies that virtual coworking is associated with online community building and is considered an extension of physical coworking. In previous studies, such a combination of virtual platforms and physical spaces was recognized as important for users since it provides greater flexibility (Hofeditz et al., 2020). This study in Tallinn and Oslo confirms that virtual coworking provides a substantial advantage in access to global knowledge by connecting people across the world (Maskell, 2014).

Simultaneously, VCSs help to avoid unnecessary commutes (Morris, 2008). Scientific studies on this topic are still very limited, although there is an ongoing debate among coworking communities. Similar to CSs (Gerdenitsch et al., 2016), we found that social interaction and collaboration are of great importance for VCSs. However, the high intensity of virtual social communication reduces users' willingness to participate further in virtual meetings. As revealed previously (Ibell, 2016), user engagement in virtual events is considered one of the most crucial and inherent challenges for all virtual ways of working. Among other challenges of virtual coworking are difficulties in following workplace dynamics and balancing work and family duties, as well as working from small apartments (particularly for young people) or at home with kids around (Hyrkknen et al., 2012; Felstead & Henseke, 2017).

The results of our study suggest that after the pandemic, the future seems to belong to a wider hybrid form that combines remote work, VCSs, and CSs. This implies that remote working and VCSs can be complementary, including the aspect of socialization. This is an important finding, since during the pandemic, CSs have experienced a high risk of being closed, and potential competition with remote working might double this risk. However, since this was a qualitative study, the results naturally cannot be generalized to all contexts but rather used to find out where the key challenges in this combination are.

To conclude, new ways of working should be redesigned in response to different peoples' needs and habits after the pandemic (e.g. spending fewer hours at the office, working a few days from home, and avoiding daily commutes, as well as the need for socializing and working from different locations) (Holland & Brewster, 2021). Such hybrid forms that combine remote working, VCSs, and CSs may rapidly adapt to possible future waves of COVID-19 and increasing uncertainties of city life and society, which are generated by unexpected developments and events.

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12 Coworkers in the Netherlands during the COVID-19 pandemic

Milan la Fleur, Martijn Smit, and Ivana Pais

Introduction

Coworking spaces (CSs) are booming, with *Deskmag* counting an impressive number of 26,300 locations all around the world and an estimated 2,680,000 million coworkers (Statista, 2020). The movement is also said to have grown from the first recognized space in San Francisco (Merkel, 2015), but many subtypes of co-working spaces had existed long before, including incubators and (university) libraries as places of study.

Not only do the types and sizes of local CSs and communities vary, but the ways in which people view CSs and value them also differ around the globe (Fuzi, 2015; Mariotti et al., 2017; Vanichvatana, 2018). Different geographical landscapes affect user preferences and their attitudes towards coworking. These differences in preferences and the way such preferences change over time are of major importance in how CSs are shaped and their level of success (Seo et al., 2017).

In the literature, the relationship with regional attitudes and coworking preferences in different geographical and economic landscapes is rarely studied (some exceptions are discussed below). We do this for the Netherlands, which is in some regards different from the dominant narrative on CSs. In particular, the sense of community and social relationships do not seem to be crucial for Dutch coworking spaces (cf. Weijs-Perrée et al., 2019 for the Dutch case with Mariotti et al., 2017). However, the Netherlands is a very dense, polycentric country, at least morphologically speaking (Burger & Meijers, 2012), where part-time work and dual-earner households are the norm (van der Straaten & Rouwendal, 2005), which suggests great attachment to healthy work-life balances but also complicated commutes. It also suggests great potential for alternative ways of organizing daily work routines in space and time.

In particular, we look at users' reasons for working at CSs and the way in which they value different CS characteristics. Our results are not only important for CS managers and owners when designing attractive coworking spaces, but also for policymakers wishing to benefit from the rise of CSs.

Background

With the opening of the first coworking space, the Spiral Muse in San Francisco in 2005, a 'third way' of working was introduced. Gandini (2015) described this new way of working as the possibility of working in an environment halfway between the 'traditional' working life in a community-like environment, and an independent working life. These relatively new workspaces bring together workers from a wide range of professions, leading to a creative and dynamic atmosphere wherein a diverse group of workers can interact, share expertise, and cooperate (Capdevila, 2015; Fuzi, 2015; Spinuzzi, 2012; Weijs-Perrée et al., 2019).

Heterogeneity among CSs

The term 'coworking space' is quite broad and includes many different types of offices. Since almost no CSs are homogenous, there is no clear, unanimous demarcation for them. Different studies have tried to categorize coworking spaces into different groups. Whereas Capdevila (2015) identified three groups of CSs based on their sense of community, Kojo and Nenonen (2016) identified six groups based on the business model and users' level of access. Although the dividing line between different types of coworking spaces is rather vague, some claim that at least all CSs share the same core values: openness, communication, collaboration, accessibility, and sustainability (Fuzi et al., 2014; Han, 2013; Kwiatkowski & Buczynski, 2011).

   Not only is there a lot of heterogeneity between coworking spaces themselves, the group of people using CSs is also quite varied with regard to both sector and employment type. In most countries, the vast majority of CS users are freelancers and entrepreneurs, but people working for small and medium-sized enterprises (SMEs) or large firms and students also make use of coworking spaces (e.g. Orel, 2015; Fuzi, 2015; Weijs-Perrée et al., 2019). Parrino (2015) divided these users into three groups: freelancers in the strict sense, microbusinesses based in coworking spaces, and self-employed workers or employees working on behalf of a company based outside the CS.

Reasons for co-working

Several studies have touched upon the various reasons why workers have decided to work at a CS instead of working at a 'normal' office or from home. According to Brown (2017), these motives can be grouped into three categories:

- productivity (Bueno et al., 2018; Merkel, 2015) – there are fewer distractions than at home;
- professionalization (Bouncken et al., 2018; Brown, 2017) – towards clients and business partners;
- socialization – meeting people to avoid social isolation at home (Boboc et al., 2014), to use its creative atmosphere (Capdevila, 2013; Parrino, 2015), and to find support and inspiration within a community of peers (Garrett et al., 2017; Rus & Orel, 2015).

We used these categories to classify the motives identified in the coworking literature, selecting a series of recent empirical papers from different countries (see Appendix 3; all appendices are available online at http://martijnjsmit. nl/wp/coworking/). The only motive considered in all the papers is 'social interaction with other workers'; other recurring reasons are evenly distributed among the four categories of 'space outside home', 'opportunity to network', 'work-related conversations', and 'being part of a community'.

Preferences and office characteristics

Along with the decision to work in a coworking space, (future) coworkers need to decide which CS best suits their needs. As Remøy and Van der Voordt (2014) and Rothe et al. (2011) have shown, this decision is based on personal characteristics (age, family situation, gender, type of job) and personal preferences. It is impossible to meet everybody's needs and preferences without infringing on characteristics someone else dislikes. Different studies have investigated user preferences regarding coworking characteristics, which can be grouped into four different categories: work climate, interior design, building characteristics/location, and the type of lease contract (see online appendix 3, Table A3.2).

Work climate

The work climate includes all characteristics pertaining to work-related issues and the prevailing atmosphere around the coworkers. A higher level of productivity is also a key target. As Kim and de Dear (2013) argue, however, a lack of privacy or bad noise control at a CS could decrease productivity. Meeting new people is also a leading reason for coworking. Proximity to and, especially, the diversity of other workers are aspects that people prefer about working at a coworking space (Fuzi et al., 2014; Kim & de Dear, 2013). This networking process is stimulated by the creation of a community and the organization of events and workshops (Capdevila, 2015; Garrett et al., 2017; Waters-Lynch & Potts, 2017).

The building

Coworker preferences are, of course, not only related to work activities, but also to the appearance and organization of the workspace (Budie, 2016). Some coworkers prefer to have a fixed desk so they can customize their own spot, whereas others prefer to have a flexible spot so they can sit anywhere at any time (Fuzi, 2014; Parrino, 2015). The diversity of rooms can also influence users' decisions. By providing multiple types of rooms (e.g. concentration rooms, meeting rooms, and spaces to take a break), CSs attract more coworkers (Bouncken & Reuschl, 2018; Fuzi, 2014). A workspace that looks different from a traditional office is also an asset (Ross & Ressia, 2015). Different characteristics contribute to the right look and feel that coworkers prefer.

Characteristics such as the total size of the CS and the indoor climate (de Been & Beijer, 2014; Kim & de Dear, 2013), the presence of enough (day) light and windows (Kim & de Dear, 2013; Lee, 2018), and the interior design combined with the ergonomics and furniture (Balakrishnan et al., 2016; Fabbri & Charue-Duboc, 2014; Merkel, 2015) influence the decision of whether or not to work at a certain CS. Furthermore, some coworkers, especially those from the creative class, prefer to work at a unique location, which is due to their desire for 'authenticity' (Usai, 2019; Florida, 2002).

Location

The area where the coworking space is located can be a decisive factor in this decision. CS users not only look at the facilities, amenities, and attractiveness of the neighborhood, but also its accessibility (Weijs-Perrée et al., 2019; Zhou, 2019). For convenience, CSs should be relatively easy to access, by either public or private transport (i.e. car, bike, or foot).

Type of lease contract

Finally, the type of lease contract is an important aspect when choosing a coworking space (Fuzi, 2014; Spinuzzi, 2012). According to van de Koevering (2017), the type of lease contract is the most preferred characteristic in a coworking space, with the preference for no contract or a short lease.

The important characteristics of the spaces identified through multiple searches are 'virtual platform/community', 'networking events and workshops', 'proximity of coworkers' – all in the category 'working climate' – added to the flexibility of the lease contract. It is interesting to note that the location of the building is scarcely considered in the literature.

The Netherlands

One of the possible results of working alongside others is knowledge spillover; however, co-location alone does not automatically lead to interaction or innovation (Cabral & van Winden, 2016). Policy makers in the Netherlands have therefore attempted to leverage *related variety* – bringing together firms from different sectors that have certain common skills, ideas, or routines to foster knowledge spillover among CS users (Hamers, 2016, Sect. 4.2). In particular, government investment has gone towards so-called *broedplaatsen*, startup 'nurseries' (Cnossen & Olma, 2014) where startup companies can not only share services but also exchange ideas and information.

This matches the focus on work productivity that has been shown in literature on the Netherlands (Deijl, 2011). The studies also point out, however, that the role of managers is crucial: they have to work hard to achieve the necessary knowledge sharing (Cabral & van Winden, 2016; Parrino, 2015).

An opposite perspective also exists, wherein users are not pulled towards CSs but rather pushed away from other non-office work places, i.e. the home.

Figure 12.1 CSs in and around the city of Utrecht. Data gathered under the guidance of Veronique Schutjens and Martijn Smit by Casper Leerssen, Joey O'Dell, and six other students; situation as of June 2021. Each grey circle indicates a CS and the size of the circle corresponds to the number of spots offered; open circles represent CSs with an unknown number of spots.

Weijs–Perrée et al. (2019) point in this direction and see an important push factor in the Netherlands, where there is a large demand for space outside the home, since houses are generally small.

Dutch CSs are not only located in city centres. In fact, they are scattered all over the city, as shown in Figure 12.1. Although the city centre (to the right of the label 'Utrecht') has a large concentration, so does the industrial area on the northwest side of the city, which is partly functioning industrial real estate and partly in the process of being regenerated. Moreover, the fringes of the city are also well represented.

Methods and data

To empirically analyze and update Dutch motivations and preferences for CSs and to investigate what has happened during the pandemic, both quantitative and qualitative research approaches are used. We held semi–structured exploratory interviews with three coworkers (online appendix 1), allowing us to find out people's thoughts, the reasons underlying their decision-making process, and their preferences (Patton, 2002). These allowed us to construct an extensive questionnaire to identify the motives and preferences of coworkers in the Netherlands.

Table 12.1 Descriptors of the sample, n = 47.

Gender	Female	43%	Income	<€15k	0%
	Male	57%		€15k–€30k	32%
Education	Tertiary	89%		€30k–€50k	21%
	Other	11%		€50k–€80k	23%
Children	Yes	43%		>€80k	13%
	No	55%		No answer	11%
Employment	Employee	38%	Why CS?	My own decision	77%
	Self-employed	62%		My employer's decision	17%
				Other	6%

	Time spent at the CS				
Work week	0–20	20–30	30–40	40+	**n**
0–20	**100%**				**1**
20–30	33%	**67%**			**6**
30–40	50%	36%	**14%**		**28**
40+	67%	8%	8%	**17%**	**12**

Source: Authors.

In the questionnaire, which was based on our literature review, respondents were asked about their motives and preferences (see online appendix 2 for the survey). To reduce the effect of biased results, the preferences within the matrices were displayed in random order (Wiseman, 1972). Respondents were also asked about different sociodemographic characteristics (e.g. age, gender, educational level) and information about their current job.

Through an internet search,[1] 151 coworking spaces in the Netherlands were identified and approached via email. Managers were asked to distribute the survey among their coworkers. Along with distribution via email, social networks and online platforms were used to reach coworkers, both for interviews and to fill in the questionnaire. In total, 47 CS users from all over the Netherlands completed the survey. The characteristics of the sample are shown in Table 12.1. We note in particular the low share of workers without tertiary education (11%) and the high number of freelancers and other self-employed workers (62%), which is not high, however, compared to coworkers in other countries. Almost all responses came from cities, with Amsterdam and Utrecht both contributing 19%. Seats2Meet (19%) was the only major chain in the sample. The bottom panel of Table 12.1 shows the number of hours spent at the CS compared to the total number of hours worked per week. Part-time work is rather prevalent in the Netherlands, which is reflected here. Of those working at least 30 hours a week, only a very small portion spends all of their time at a CS, suggesting they also have access to an office, spend a lot of time with customers, or have a home with suitable facilities.

Results

Motivation

Dutch coworkers choose to work at a CS because they want to find a spot to work outside home, as well as a more productive workspace (compared to their homes, presumably). Figure 12.2 shows that networking and work–related conversations score considerably lower; social interactions fall in between.

User preferences for coworking spaces

We then explored which CS characteristics make users choose one CS over another. The highest-rated characteristics were the following:[2]

- Sufficient (day)light (4.349)
- Location of the coworking space (4.302)
- Windows (4.233)
- Comfortable indoor climate (4.209)
- Space/size (4.209)
- Accessibility (4.186)
- Concentration/noise control (4.140)
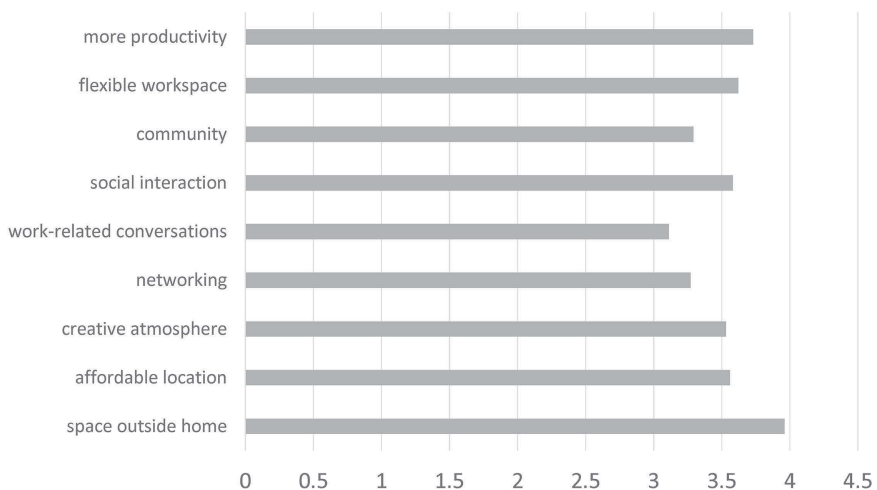
Figure 12.2 Reasons to work at a CS.

Source: Authors, 2021.

Although options also included the diversity of coworkers, for example, all factors chosen relate to the layout and design of the CS, aspects that were also ranked as important in an Indonesian study (Drestanti Inggar et al., 2018). We tested for a variation of preferences with respect to gender, age, income group, and employment situation, but the results were rather consistent. Nor was any difference seen by zooming in on those who spent all their time working at a CS (as in Table 12.1).

Impact of the pandemic

In the interviews, the respondents pointed to the importance of events at the CS, whether for networking, training, or simply social interaction. The lack of such events has therefore been a key problem during the pandemic; even where small isolated spaces can be opened, interaction suffers. The need for such interaction has, of course, only increased. In the surveys, all respondents mentioned that they miss contact with their colleagues most, particularly in social situations (parties, game nights, and the office dog are mentioned). The change of setting between the home and office also comes up in several surveys. On the positive side, several respondents replied in late May that they had already returned to work at the CS and that they missed nothing, although the number of people per square metre had presumably decreased, which they were happy with.

Conclusion

We investigated the preferences of Dutch coworkers during the pandemic, both those who use CSs for all of their working time, and those who spend only part of their working week there.

Compared to previous research, which highlighted the centrality of networking and events, our survey showed that the decision to work at a CS is rooted in a search for productivity and that for many, this seems to imply personal productivity, tied to a search for enough space to work outside the home. The characteristics of the physical space play an important role in their choice of which CS to use; daylight, windows, indoor climate, and an attractive area are important. We interpret this as a shift due to the pandemic: instead of the usual freelancers and creative class, more regular workers are suddenly unable to access their offices and have discovered CSs as a viable alternative. This expansion with different types of workers, and therefore different preferences and motivations, may change the CS landscape considerably in the post-pandemic world.

Appendix 1: Interviews

General info / Interviewee	Age	Gender	Job	Weekly working hours	Weekly co-working hours	Choice to work in co-working space?
M.V.	54	M	Freelancer, copywriter	55	16	Own choice
S.S.	37	F	Freelancer, project and event management	32	24	Own choice
K.G.	36	F	Freelancer, project management	30	Differs over time	Own choice

Motivations: motivations of the interviewees regarding their choice to choose to work in a co-working space

Interviewee / I was looking for . . .	M.vl.R.	G.B.	E.G.	M.V.	S.S.	K.G.
a place outside home	X	X	X	X	X	X
an affordable location	X			X	X	
a creative atmosphere	X		X		X	
opportunities to network		X	X		X	
work-related conversations (expertise)		X	X		X	
social interaction with other workers	X	X			X	X
being part of a community	X	X				
a flexible workplace	X		X			X
a more productive workplace			X	X	X	X

Characteristics: characteristics of co-working spaces that the interviewees mentioned

Interviewee / Characteristics	M.vl.R.	G.B.	E.G.	M.V.	S.S.	K.G.
Working climate						
Privacy		X		X	X	X
Concentration/noise control				X	X	
Proximity of co-workers	X	X	X		X	X

Interviewee Characteristics	M.vl.R.	G.B.	E.G.	M.V.	S.S.	K.G.
Diversity of tenants		X			X	X
Virtual platform/community	X	X	X	X	X	
Networking events and workshops	X	X	X	X		X
Interior design						
Space (size)	X	X	X	X	X	X
Ergonomics and comfort (furniture)	X	X	X	X	X	
Comfortable indoor climate						X
Sufficient (day)light	X		X	X	X	X
Windows			X	X		X
Interior aesthetics	X	X	X	X		X
The building/location						
Accessibility	X			X		X
Area wherein the co-working space is located	X	X		X		X
Uniqueness of co-working building				X		
Other characteristics						
Freedom in choice of working spot		X			X	X
Customizability of working spot		X		X		X
Diversity of rooms	X	X	X	X	X	X
Possibilities to relax		X	X		X	X
Flexible (lease) contract	X			X		

Benefits: benefits the interviewees received because of working in a co-working space

Interviewee Benefits	M.vl.R.	G.B.	E.G.	M.V.	S.S.	K.G.
Expanding network (work-related)	X	X	X		X	
Expanding network (social aspect)	X	X	X		X	X
New project opportunities		X			X	
Improvement of knowledge/expertise	X	X			X	
Job opportunities		X				
Increase in productivity				X	X	X
Higher level of concentration		X		X		X
Being less lonely	X	X	X		X	X
Higher level of creativity	X		X		X	

Ideas: ideas of the interviewees about improvement of (their current) co-working space(s)

- Co-working spaces should cooperate instead of competing. This will improve the quality of co-working spaces overall and consequently the working experience will also improve. – M.vl.R.
- More social attitude and more interaction within co-working spaces. People choose when they want to go to a co-working space; not only looking at the time but also to the people that are working at that moment. – M.vl.R.
- Co-working spaces should be as diverse as possible; a diverse set of co-workers, high diversity of rooms and diverse set of events organized. – G.B.

- More activity, events and workshops within the co-working space. This will lead to more interaction with other co-workers. – M.V.
- When possible, co-working spaces should be located in multifunctional buildings like in Shanghai where also other activities besides work are located in the same building. – S.S.
- More events and workshops should be organized but should not feel as mandatory while this will have an opposite effect. – K.G.

Appendix 2: Survey[3]

Information about you

Q1 What is your age?

o 0–20 years
o 20–30 years
o 30–40 years
o 40–50 years
o 50–60 years
o 60 years or older

Q2 What is your gender?

o Male
o Female
o Neutral/other

Q3 What is your highest level of education?

o Elementary school
o Secondary school
o Higher professional education (HBO)/academic education bachelor's degree
o Academic education master's degree/Ph.D.
o Prefer not to answer

Q4 Do you have children?

o Yes
o No
o Prefer not to answer

Q5 What is the country that you were born in?

Information about the job

Q6 What is the name of the co-working space you use most?

Q7 Which working situation applies to you?

o   Employed within a company
o   Freelance/self-employed/entrepreneur

Q8 Which type of organization applies to your job?

o   Non-profit organization
o   For-profit organization
o   Other (specify) -----------

Q9 How many hours per week do you work on average?

o   0–20 hours
o   20–30 hours
o   30–40 hours
o   40 hours or more

Q10 How many hours per week do you work on average at a co-working space?

o   0–20 hours
o   20–30 hours
o   30–40 hours
o   40 hours or more

Q11 Which places do you make use of 'normally' (when not in lockdown) for your current job? Select all that apply to your situation

o   Co-working space
o   Bar/restaurants
o   Normal office
o   Home
o   Other (specify) ----------

Q12 What is your personal annual income?

o   €0 – €15.000
o   €15.000 – €30.000
o   €30.000 – €50.000

o   €50.000 – €80.000
o   €80.000 or more
o   Prefer not to answer

Motivations of working in a co-working space

Q13 The choice to work in a co-working space is . . .

o   My own choice
o   A choice made by the company I work for
o   Other (specify) -----------

Q14 How important are the following reasons regarding the choice to
work in a co-working space?

	Not important at all	Fairly unimportant	Neutral	Important	Very important
I wanted to work in a place outside home	o	o	o	o	o
I was looking for an affordable location	o	o	o	o	o
I was looking for a creative atmosphere	o	o	o	o	o
I was looking for opportunities to network (social and/or work related)	o	o	o	o	o
I was looking for work-related conversations with other workers (expertise)	o	o	o	o	o
I was looking for social interaction with other co-workers	o	o	o	o	o
I wanted to be part of a community	o	o	o	o	o
I was looking for a flexible workplace	o	o	o	o	o
I was looking for a workplace where I can be more productive	o	o	o	o	o

Characteristics of co-working spaces

Q15 How important are the following characteristics regarding **working**
climate *of co-working spaces for you?*

	Not important at all	Fairly unimportant	Neutral	Important	Very important
Privacy	o	o	o	o	o
Concentration/noise control	o	o	o	o	o
Proximity of co-workers	o	o	o	o	o
Diversity of tenants/co-workers	o	o	o	o	o
Virtual platform for community	o	o	o	o	o
Networking events and workshops	o	o	o	o	o

Q16 How satisfied are you with the following characteristics regarding working climate *at the co-working spaces you work at?*

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
Privacy	o	o	o	o	o
Concentration/noise control	o	o	o	o	o
Proximity of co-workers	o	o	o	o	o
Diversity of tenants/co-workers	o	o	o	o	o
Virtual platform for community	o	o	o	o	o
Networking events and workshops	o	o	o	o	o

Q17 How important are the following characteristics regarding interior design *of co-working spaces for you?*

	Not important at all	Fairly unimportant	Neutral	Important	Very important
Space (size)	o	o	o	o	o
Ergonomics and comfort (furniture)	o	o	o	o	o
Comfortable indoor climate	o	o	o	o	o
Sufficient (day)light	o	o	o	o	o
Windows	o	o	o	o	o
Interior aesthetics	o	o	o	o	o

Q18 How satisfied are you with the following characteristics regarding interior design *at the co-working spaces you work at?*

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
Space (size)	o	o	o	o	o
Ergonomics and comfort (furniture)	o	o	o	o	o
Comfortable indoor climate	o	o	o	o	o
Sufficient (day)light	o	o	o	o	o
Windows	o	o	o	o	o
Interior aesthetics	o	o	o	o	o

Q19 How important are the following characteristics regarding the building/location *of co-working spaces for you?*

	Not important at all	Fairly unimportant	Neutral	Important	Very important
Accessibility	o	o	o	o	o
Area wherein the co-working space is located	o	o	o	o	o
Uniqueness of co-working building	o	o	o	o	o

Q20 How satisfied are you with the following characteristics regarding the building/location *at the co-working spaces you work at?*

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
Accessibility	o	o	o	o	o
Area wherein the co-working space is located	o	o	o	o	o
Uniqueness of co-working building	o	o	o	o	o

Q21 How important are the other characteristics of co-working spaces for you?

	Not important at all	Fairly unimportant	Neutral	Important	Very important
Freedom in choice of working spot	o	o	o	o	o
Personalization/customization of working spot	o	o	o	o	o
Diversity of rooms (concentration rooms, meeting rooms, collaborative spaces)	o	o	o	o	o
Possibilities to relax	o	o	o	o	o
Flexible (lease) contract	o	o	o	o	o

Q22 How satisfied are you with the other characteristics *at the co-working spaces you work at?*

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
Freedom in choice of working spot	o	o	o	o	o
Personalization/ customization of working spot	o	o	o	o	o
Diversity of rooms (concentration rooms, meeting rooms, collaborative spaces)	o	o	o	o	o
Possibilities to relax	o	o	o	o	o
Flexible (lease contract)	o	o	o	o	o

Satisfaction of co-working space

Q23 Are you happy with your current co-working space?

o   Not at all
o   No
o   Neutral

o   Yes
o   Definitely yes

Q24 Has your working experience improved since you started working in a co-working space?

o   Not at all
o   No
o   Neutral
o   Yes
o   Definitely yes

Q25 What should your co-working space improve to give you the best possible working experien____
Q26 What do you miss most about working in a co-working space during these weird times due to the coronavir____

Gift Card

Q27 If you want to enter the draw for the gift card, please drop your email bel____

Appendix 3: Literature

Table A3.1 Motivations to work in a co-working space in general

Categories	Country	Bizzarri (2014)	Brown (2017)	Deijl (2011)	Fuzi et al. (2014)	Garret et al. (2017)	Kim and de Dear (2013)	Merkel (2015)	Parrino (2015)	Spinuzzi (2012)	Weijs-Perrée et al. (2019)
		Italy	England	Nether-lands	Wales	Ann Arbor, Michigan	world-wide	world-wide	Milan, Barcelona	Austin, Milan, Serbia	Nether-lands
Productivity	Space outside home	×	×	×	×	×			×	×	×
	Productive workplace		×	×				×			
Professionalization	Affordable location	×		×				×		×	×
	Flexible workplace			×	×	×					×
	Opportunities to network	×	×	×	×			×	×	×	×
	Work-related conversations (expertise)	×	×	×		×		×	×	×	×
Socialization	Social interaction with other workers	×	×	×	×	×	×	×	×	×	×
	Being part of a community	×		×	×	×		×	×	×	×
	Creative atmosphere	×	×	×	×			×			×

Table A3.2 User preferences for specific co-working spaces.

	country	Bizzarri (2014)	Brown (2017)	Deijl (2011)	Fuzi et al. (2014)	Garret et al. (2017)	Kim and de Dear (2013)	Merkel (2015)	Parrino (2015)	Spinuzzi (2012)	Weijs-Perrée et al. (2019)
		Italy	England	Nether-lands	Wales	Ann Arbor, Michigan	world-wide	world-wide	Milan, Barcelona	Austin, Milan, Serbia	Nether-lands
Working Climate	Privacy			×	×	×	×				×
	Concentration / noise control			×		×	×				×
	Proximity of (co-) workers	×	×				×	×	×	×	×
	Diversity of tenants	×	×		×					×	×
	Virtual platform / community	×	×	×	×	×		×	×	×	×
	Networking events and workshops	×	×	×		×		×	×	×	×
	Possibilities to relax	×	×		×			×			×
Interior Design	Space (size)						×				
	Ergonomics and comfort (furniture)						×	×		×	
	Comfortable indoor climate						×				
	Sufficient (day)light						×	×			
	Windows						×				
	Interior aesthetics	×		×	×			×		×	×

Table A3.2 (Continued)

	country	Bizzarri (2014)	Brown (2017)	Deijl (2011)	Fuzi et al. (2014)	Garret et al. (2017)	Kim and de Dear (2013)	Merkel (2015)	Parrino (2015)	Spinuzzi (2012)	Weijs-Perrée et al. (2019)
		Italy	England	Nether-lands	Wales	Ann Arbor, Michigan	world-wide	world-wide	Milan, Barcelona	Austin, Milan, Serbia	Nether-lands
Building & Location	Freedom in choice of working spot		×		×						
	Customizability of working spot	×					×				
	Diversity of rooms	×	×		×			×		×	×
	Accessibility			×							×
	Area the co-working space is located	×		×						×	
	Uniqueness of co-working building										
The type of lease contract	Flexible contract	×	×	×	×			×		×	×

Notes

1 The search was done by La Fleur in April 2020. Surveys were then completed in May-June 2020. On *coworker.com*, a total of 268 CWS were listed as of May 2021, with up to half of these part of chains like Spaces and Tribes. A similar survey was sent to Italian respondents, but the response there was too biased towards employees to be of use.
2 In the questionnaire, most aspects appear twice: once for CWS in general, and once for the CWS where the respondent is currently working. The two are very correlated, and we show the highest of the two in this list.
3 The survey was available in both English and Dutch.

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13 Coworking spaces and COVID-19

A South Korean perspective

Mi Hyun Seong, Aleid E. Brouwer, Mariachiara Barzotto, and Ilaria Mariotti

Introduction

The Internet has significantly changed people's lives, and the ways and places in which we work. Information and communication technologies (ICTs) have favoured the high flexibility, multifunctionality, and hybridization of several new spaces for work, such as coworking spaces (CSs), public libraries, cafés, restaurants, hotels, and airport lounges (Di Marino & Lapintie, 2020; Bilandzic & Foth, 2013). CSs are designed explicitly as work locations for self-employed and freelance workers (who rent these new workplaces) and for more established companies, including affiliates of multinational companies. These working spaces are characterized by the 'sense of community' developed inside the space, which then spreads to the neighbourhood (Mariotti et al., 2017; Mariotti & Akhavan, 2020).

The number of CSs has grown worldwide since the late 2000s, parallel to the spread of the financial crisis. Such alternative workspaces have become examples of innovation in production and flexibility in work and workspaces. During the COVID-19 pandemic, the interest among practitioners in CSs and in hybrid spaces at large has accelerated. Indeed, in 2020–2021, a significant wave of workers has moved from traditional work in the office (second place) to remote working at home (first place) or an alternative workspace, called 'third place' (i.e. CSs) (Oldenburg, 1989). However, the literature has mainly focused on Western countries, while studies on Asia are less abundant.

Within this context, the present chapter fills this gap in the literature by describing the renewed role of CSs during the COVID-19 pandemic and exploring the CS model in Asia, which has followed a different trajectory in the literature on economic restructuring, urban knowledge economy, and social capital compared to Western society (Kojo & Nenonen, 2014; Wang & Loo, 2017). Moreover, Asian economies reacted differently to the pandemic. Governments responded to the pandemic by adopting centralized actions distinct from those used in Western countries (Fendos, 2020). For instance, to control the spread of the disease, South Korea adopted a rigorous contact-tracing programme comprising traditional shoe-leather epidemiology and new methods to track contacts by combining large databases (global positioning system, credit card transactions, and closed-circuit television) (Park et al., 2020).

Given the different approaches to the COVID-19 outbreak and the different use of CS in Western and Eastern societies (among others, freelancers and employees of small companies as main users in the former and location-independent lifestyle entrepreneurs in the latter), this chapter explores the aspects of the pandemic that affected the prevalence of teleworking and CSs in urban contexts such as Seoul, South Korea, where COVID-19 has been successfully combated and eradicated since the early signs of the global outbreak. Teleworking was promoted by the government in this country years before the pandemic hit. We investigated the CS situation in Seoul, mainly performing desktop research that reviewed scholarly works, national policy documents, Korean newspapers, and CS websites. For triangulation purposes, our findings were cross-referenced by discussing them with a South Korean CS manager and a South Korean researcher in this particular field.

This chapter is structured as follows. Section 2 presents a literature review on coworkers and CSs in Asia. Section 3 explains the methods used for data collection. Section 4 focuses on remote working in South Korea before and during the COVID-19 pandemic, while Section 5 illustrates the growth trends followed by CSs in Seoul, their geographical distribution within the urban area, and the impact of the COVID-19 pandemic on this metropolis. Section 6 concludes by highlighting the ability of CSs in Seoul to fulfil users' expectations during the recent health emergency (with cleaner, more COVID-19-secure environments and more accessible locations) and, accordingly, to enhance their proliferation mainly among employees working in larger firms beyond the pandemic itself.

Coworking spaces and co-workers in Asia

In many Western societies, coworking has been part of the work environment since the 1960s (Kojo & Nenonen, 2014), but it has only grown in the last decade (Butcher, 2016). This also happened in Southeast Asia. Indeed, flexible workspaces have emerged as an economic alternative to traditional offices in cities such as Hong Kong, Tokyo, and Singapore, which are renowned for their expensive real estate. Recent data about the location of flexible workspaces worldwide shows a predominance in Asia-Pacific countries (APAC; see Figure 13.1). In 2019, 35% of coworking spaces were in the APAC, followed by Europe, the Middle East, and Africa (EMEA, the UK excluded) (21%), the United States (19%), the UK (18%), and the remaining 7% in the rest of the world (Figure 13.1).

In the past few decades, the Asia-Pacific region has undergone extensive change and transition. It has experienced digitization and industrialization, the emergence of new economies as global players in the international socioeconomic arena, and a surge in entrepreneurial spirit, with more citizens opting to start their own businesses. New entrepreneurs, start-ups, and freelancers demand flexible office spaces because they are hesitant to sign long-term rental agreements to lease office space (Statista, 2020). CSs based in Western countries
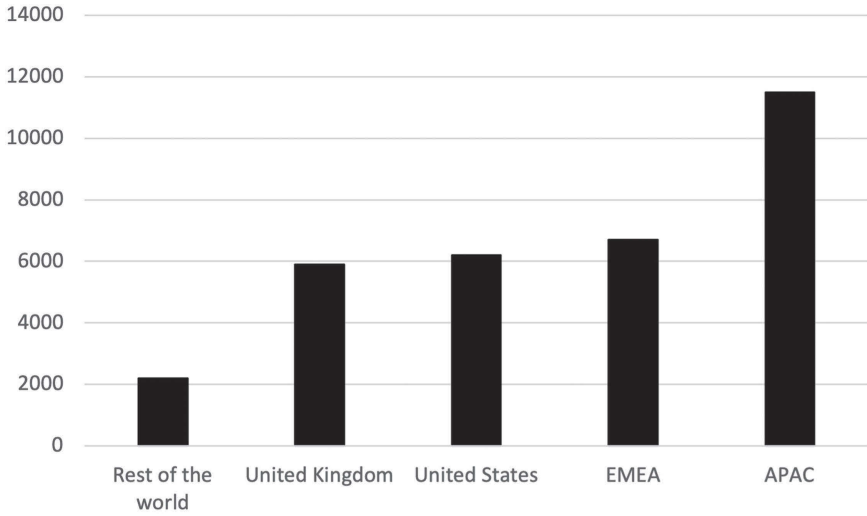
Figure 13.1 Number of flexible workspaces worldwide in 2019, by region or country.
Source: Statista (2020).
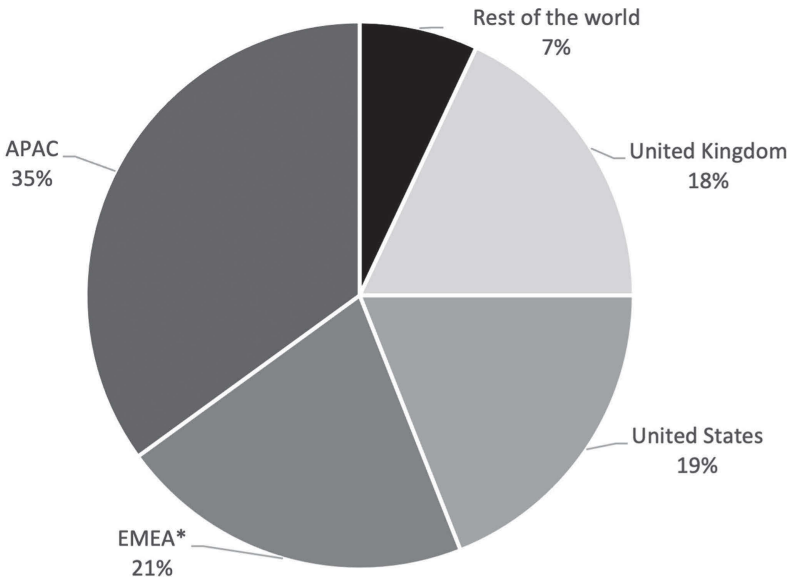
Figure 13.2 Share of coworking spaces worldwide in 2019, by region or country.
Source: Statista (2020) Note: * the UK excluded.

mainly host freelancers, entrepreneurs, and employees of small firms (so-called 'coworkers', see Mariotti & Pacchi, 2021). Conversely, in Southeast Asia, the CS phenomenon is based on nomad entrepreneurs. Nomad entrepreneurs are freelancers (the solo self-employed) who have a travelling lifestyle, and CSs locations are part of that existence in finding a reliable, enjoyable place to work. This type of worker has a 'location-independent lifestyle', in which the use of CSs is essential for business. Many Asian countries (such as Thailand, India, South Korea, and Indonesia) are favourable locations for such nomad entrepreneurs. There is a concentration of these nomads and ample opportunities for CSs. The location of independent working travellers has therefore generated supply and demand for work-friendly cafés and CSs (Orel, 2020). These 'digital nomads' have been very active in local Asian communities and have encouraged the opening of CSs (Putra & Agrirachman, 2020). Schürmann (2013) argued that the CS model is ideal for independent professionals – self-employed entrepreneurs – working in information technology (IT) and creative industries. Indeed, CSs seamlessly meet the needs of digital nomads, present in large numbers in Southeast Asia in the pre-pandemic era. CSs first emerged in these areas as temporary workspaces, allowing for the flexibility that expat entrepreneurs desire for good quality workplaces and an opportunity to connect with the local people and environment (Putra & Agrirachman, 2020).

Although nomad entrepreneurs were at the cradle of pre-pandemic CSs, Asian governments have increasingly encouraged the development of CSs for structural economic development and to foster entrepreneurship. This is the case, for example, of Shanghai, China. The Chinese government generated policies to attract Internet entrepreneurs in connecting hubs and spur more innovative behaviour (Wang & Loo, 2017). In Selangor, Malaysia, the government fostered the presence of CSs to increase social interaction and boost entrepreneurial innovation (Ying et al., 2020). In Ho Chi Minh City, Vietnam, CSs housed start-up incubators (Morgan, 2020). In Jakarta, Indonesia, CSs were created to develop a collaborative ecosystem and build business networks (Lestari, 2019). Even though most Asian CSs are not designed to host remote work, they share a common underlying principle of empowerment for entrepreneurship and innovation. The digital and sharing economies can easily be developed in third places, and CSs represent a perfect environment to work (Bouncken et al., 2020). Nevertheless, the pandemic and the need to work from home to contain the virus have given CSs a new opportunity in Asia.

Methods

To explore the trends in remote working and CSs in South Korea, we undertook desktop research that reviewed the most recent scholarly works, national policy documents, and Korean newspapers with regard to remote working and CSs and related trends in the country. To select the documents published under this topic, we used different keyword combinations (telework*, cowork*, remote work*, COVID-19, pandemic, South Korea, Seoul) to search

systematically for relevant material. Except for the scholarly works, the remainder of the documents selected and analyzed were written in Korean. In addition, we collected information from the websites of CSs located in South Korea. In identifying our sources, we considered a time window from 2013 (the year CSs began to emerge in the country) up to writing. For triangulation purposes, we cross-referenced our findings by interviewing two CS experts recognized nationally in their field. In particular, we interviewed a South Korean head manager in the development division of a leading CS in the capital and a South Korean researcher whose scholarly work on CSs is influential. We used a video conferencing tool for the interviews and they were conducted in Korean.

Remote working in South Korea before and during the COVID-19 pandemic

The work environment has represented one of the most significant changes during the COVID-19 pandemic. Before the pandemic, remote working was not a day-to-day practice in many Asian cultures. Therefore, it is essential to investigate the new rise of remote working, specifically teleworking, and how the COVID-19 pandemic has affected alternative workspaces such as CSs in countries where remote working was not fully implemented.

Seoul, South Korea[1] represents an interesting case, since the government committed itself to foster teleworking, even before the pandemic. Improving the work-life balance and reducing negative externalities of metropolitan cities have been presented as the main reasons behind this commitment. To implement this mission, the Korean government has supported public institutions in adopting flexible workplace policies, including teleworking. It has announced subsidies for small and medium-sized enterprises (SMEs) up to ₩5,200,000 (approximately €3,890) per person per year and ₩20,000,000 (about €15,000) for required equipment and systems (Jeong, 2017). Despite governmental efforts, teleworking grew slowly, since it was not widely used until the pandemic. The pandemic therefore marked the starting point of the proliferation of teleworking.

Amid the COVID-19 pandemic (14 July 2020), the Korean government announced a 'Korean New Deal' (KND) to mitigate economic damage due to the pandemic and enhance sustainable growth of the country's economic system. This plan consists in investing ₩160 trillion (approximately €120 billion) by 2025 (Joint Ministry, 2020). One of the main objectives of the KND is the Digital New Deal, which includes the digital transformation of work structures such as teleworking as a sub-aim (Joint Ministry, 2020; UNDP, 2020). Within the teleworking sub-aim, constructing a teleworking system, subsidizing business consulting, and establishing shared video conference rooms are examples of goals expressed in the KND mainly targeting SMEs. Achieving these goals will improve the ability of SMEs to shift towards a more flexible, modern type of work. Even though some government efforts to increase *smart working* (telework, flexitime, video conferencing, etc.) had been attempted before the

pandic, its spread was prevented by a hierarchical business culture, communication difficulties, and lack of trust between employers and employees. However, the COVID-19 pandemic has accelerated the digitization of workplaces, and the KND was timely in imposing the plan (Kim, 2020b).

South Korea's approach to the COVID-19 pandemic has been considered a successful model for many countries. The mass testing, track-tracing model, and citizens' excellent cooperation seem to have contained the virus effectively. Statistically, South Korea is doing better than many other countries: in April 2021, there were 1.2 daily cases of confirmed COVID-19 infections per 100,000 people in South Korea, compared to 21 in the US, 24 in Italy, and 42 in the Netherlands (*The New York Times*, 2021).

Compared to most other Asian countries, South Korea found itself in a favorable position in widely and rapidly implementing telework from an infrastructure point of view. The country, especially the city of Seoul, is endowed with a capillary, widespread digital infrastructure characterized by extensive broadband connectivity and a considerable number of subscriptions for high-speed broadband. However, despite the digital infrastructure advantage, Park (2017) showed in his research that workers have a negative impression of teleworking which hindered its implementation.

In South Korea, the level of teleworking implemented seems to differ according to company size (see Figure 13.3). A recent survey (KCCI, 2020) compared how teleworking was used before the pandemic and after it started in the nation. This research confirms the results by Eurofund on European countries (Sostero et al., 2020) on both the rise of teleworking and differences in its adoption according to company size. The different use of teleworking based on size was present even before the pandemic. Indeed, in 2016, the Ministry
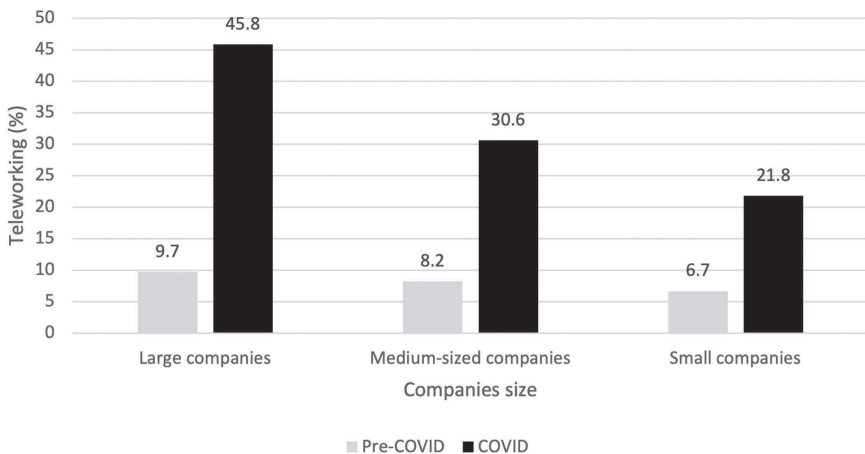
Figure 13.3 Teleworking changes due to COVID-19 from a survey of 300 member companies of the Korea Chamber of Commerce & Industry (KCCI, 2020).

of Employment and Labour surveyed 1,000 companies on their adoption of teleworking, which revealed that only 4.1% of participating companies enabled teleworking. During the pandemic, the difficulties of shifting to teleworking for SMEs have persisted. Thus, some employees at small firms and start-ups filed a complaint with the central government of an unfair work environment during the pandemic since they wanted to work remotely but could not do so. The government processed the complaints and announced financial support for fostering teleworking at SMEs (Segyeilbo, 2020).

Larger firms showed a higher implementation of flexible workplace policies, including teleworking (Jeong, 2017). According to a recent survey by Saramin[2] (2020), the main reasons for the different adoption of teleworking according to the size of the company are the capability of system support, such as Internet assistance at home, online help desk, etc. (54.6%); and the ability to cooperate between offices and subcontractors (26.6%). However, compared to a similar survey run by Saramin in 2016, it emerged that issues highlighted by SMEs regarding their difficulties with cooperation, communication, and employees' management had been solved (Jeong, 2017).

In addition to company size, several other factors affect the possibility of teleworking in South Korea. According to previous studies (e.g. Kim, 2020a), gender, age, employment type, and industry emerge as factors that most impact teleworking. Kim (2020a) showed how female employees in their thirties, temporary workers, subcontract workers, and those operating in service sectors tend to telework less. This calls for the development of a legal basis and government guidelines to implement teleworking more inclusively, especially for workers with special needs and vulnerable social groups that would benefit from teleworking (Kim, 2020b).

In sum, teleworking in South Korea seems to face challenges springing from cultural resistance at the workplace and a lack of adequate digital support for SMEs. However, the pandemic has offered new opportunities for the proliferation of telework and more comprehensive implementation of this practice, targeting groups that had previously been excluded. To effectively achieve a broader use of teleworking, cultural acceptance and greater inclusiveness in the system (supporting different firm sizes and vulnerable groups) must be implemented simultaneously. Hence, cooperation and collaboration among stakeholders (government, employers, and workers) are essential for accomplishing this goal.

Coworking spaces in Seoul and the impact of the COVID-19 pandemic

The Seoul Institute[3] (Kim et al., 2019), an institute observing and studying South Korean CSs, conducted research[4] on CSs in Seoul and their geographical distribution within the urban area. Seoul currently has 70 CSs (individual firms) and 231 CSs branches, with the majority located in Seoul's prime business districts.[5]

The growth of CSs in Seoul has been exponential, and this trend is expected to continue due to increasing demand. There are various definitions of CSs in South Korea, but in the Seoul Institute's report, CSs are categorized by their functional characteristics as follows: serviced offices (e.g. Regus); CSs (e.g. WeWork); and investment-affiliated CSs (e.g. SPARKPLUS). According to the Seoul Institute, along with private CSs, there are also 44 public CSs in Seoul. Private CSs do not receive any government support, but they have expressed a need for start-ups to obtain government support to foster job creation. Although the firms were reluctant to cooperate in the studies, there seems to be alignment in their prediction of continuous CS growth, explained, among other reasons, by firms' shifting office use. Among large companies, there is a general trend to reduce workers' commutes; they have been involved in promoting the '20-minute commute' initiative, which provides the basis for the rise of teleworking.

At the time of this research (January–May 2021), CSs in Seoul were open and, even though the pandemic situation had worsened, CSs stayed open since the government did not enforce their closure. However, all public events they had planned were on hold. Based on data collected via in-depth interviews with the CEOs of leading CSs, the report by Hwang (2020) on the future of CSs in the post-COVID era suggests that despite the COVID-19 pandemic, the demand for CSs is increasing. Seoul has seen the emergence of new creative-themed CSs. The big domestic CSs players (e.g. Fastfive and Sparkplus) have expressed their plan for aggressive expansion in Seoul. WeWork, which is experiencing business stagnation on a global level, reported a 7% increase in use its branches in Seoul (18) and Busan (2), (approximately 20,000 members) from February to July 2021.

Hwang (2020) highlighted three main drivers of the increasing demand for CSs:

1   Heightened future uncertainty combined with the economic shock to the tightly interconnected global socioeconomic system brought about by the pandemic. In response to these factors, companies decided to reduce office space investment. This trend can also be explained by the shift from conventional rigid structures to project-centred flexible work environments. Therefore, companies began to look for office spaces with flexible contract periods, allowing them to save on investments in building management.
2   CSs offers a cleaner, COVID-19-secure space accessible to small (2–50 employees) and larger companies. Finding a place with these characteristics in desirable locations appears challenging for small companies in Seoul. On the other hand, larger companies need extra office space for employees to comply with social distancing requirements.
3   Property owners favour CS-type clients. When office vacancy rates increased in Seoul, property owners leased the spaces to CSs. Indeed, the latter were attractive for their long-term contracts and significant need for space. The presence of CSs also adds value to the buildings. As a result,

building owners started to offer a share of the profit return with CSs, investing in the CSs themselves. This lifted the burdensome initial investment and led to a friendly investable environment for CSs.

In addition to the three drivers expressed by Hwang (2020), the interview conducted for the present research with a head manager in the development division of a leading CSs[6] underlined that an ongoing desire for alternative workspaces generated the rise in CS demand. Demand comes from both companies and workers. The pandemic made people seek alternatives that could provide better accessibility from their homes, shorter commutes, a comfortable environment, and, accordingly, a better work–life balance.

Conclusion

Despite the disruptive economic effects generated by the COVID-19 pandemic, CSs in Seoul have benefited from an increased demand for remote working locations. This trend is in line with the growth of the CS market worldwide. Such change seems to be induced by a wider spread of remote working and the ability of CSs to meet users' expectations (with cleaner, more COVID-19-secure environments and more accessible locations). The trends highlighted in this chapter suggest an acceleration of innovative use of the workspace, specifically hybrid and flexible workspaces such as CSs, which are renowned for their famously lower rental prices than conventional offices. Our exploratory research found evidence for increasing demand for teleworking, explaining, among other aspects, the growing use of CSs in Seoul. In contrast to Western countries (where CSs mainly host freelancers, entrepreneurs, and employees of small firms), in Southeast Asia and Seoul in East Asia, a large share of coworkers are employees working at larger firms who need to work remotely from the main office located in the inner city.

In South Korea, there have been conversations since the South Korean New Deal (started in 2020) regarding teleworking and the desire of companies and workers to implement it. However, conventional hierarchies, the business culture, communication difficulties, and a lack of trust between employers and employees have prevented its use. Desk research and the interviews conducted with CS managers reported a rise in the demand for CSs as an alternative workplace for teleworking. This growth looks like it will persist even in the post-COVID era. The demand for CSs is led by different drivers, such as the cost/time–effectiveness for firms and workers, the shift of the work culture to being more open to flexible work hours and workplaces, the shift of the work system towards project-based inter-office cooperation, and the '20-minute commute' company policy, which provides the basis for the rise of teleworking.

These findings in South Korea might be expected in other parts of the world when the measures to combat COVID-19 become less strict. Employees might

have experienced the benefits of working close to or from home, spending less time commuting/travelling. At the same time, employers have seen that productivity does not suffer when employees are working from home but, on the contrary, tasks can be completed when they are not physically carried out in the office. These experiences from the pandemic for both employees and employers suggest that a significant shift of part of the work location from the office to the home and/or third places will endure in the post-pandemic socio-economic situation.

Notes

1 Remote working is an umbrella term that refers to work anywhere other than the default workplace, including the more specific categories of teleworking, smart or agile working, and working from home (Sostero et al., 2020; Manzini Ceinar et al., 2021). According to the ILO (2020), remote working is done by both dependent and independent workers and occurs when they work fully or partially outside their usual place of work. Smart or agile working mainly refers to employees with a stable company contract, while self-employed workers or freelancers can telework and work from home. On the other hand, teleworking can be done from anywhere.
2 Seoul has close to 10 million inhabitants in 60,500 km^2, with a population density of 161,889 people/km^2. The GDP per capita is €32,000/year (Saramin, 2020).
3 Saramin is a recruitment firm in South Korea (www.saramin.co.kr).
4 서울연구원 (The Seoul Institute. Available at: http://global.si.re.kr, PR video in English https://youtu.be/OKjIHHEScNQ) (accessed: 4 June 2021).
5 This was the first-ever project on CSs in Seoul by a public research institute, with data collected from private CSs in Seoul.
6 This CS has opened five new branches since the start of the pandemic.

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14 Perspectives on the dynamics of third spaces

Aleid E. Brouwer, Hans Westlund, and Martijn Smit

Introduction

Coworking spaces (CSs) challenge traditional offices and the way we think about work. The recent pandemic and ubiquitous rule of working from home have shaken traditional views on productivity when working from home (Toniolo-Barrios & Pitt, 2021), giving the existing tendency to work remotely (Felstead & Henseke, 2017) a huge boost.

The digital transformation, in which people and production become less dependent on distance, location, and time, is viewed as one of the factors that has spurred the development and spread of new workspaces such as coworking spaces (Mariotti et al., 2021). The development of ICT has also allowed for changes in work patterns. Through the implementation of ICT, the time, place, and method of working have become more flexible, and, paradoxically, much *more* dependent on distance, space, and time. The traditional view is that location is irrelevant for some workers: in theory, knowledge workers can work from anywhere and at any time when their office consists of their mobile device (Bizzarri, 2014). Yet even though ICT has reduced transaction costs considerably (Rodriguez-Pose & Crescenzi, 2008; Di Marino & Lapintie, 2018; Di Marino et al., 2018), tacit knowledge still plays an important role and face-to-face contact is still necessary. Nevertheless, the current level of technology has made it possible to reinvent work content and the way in which we work, opening new possibilities besides the traditional division between home and work and allowing for the use of third spaces (Fuzi, 2015).

In this way, rapidly changing technological opportunities would lead to the disappearance of offices as the ultimate and only location to perform work-related tasks, as already signalled by Shamir and Salomon in 1985. At the time, it was widely believed that all future technological innovations in telecommunications would be able to shift millions of jobs out of the office and back into the home. Moreover, there was a strong belief that innovations in telecommunications could completely replace the need to physically travel to a central workplace (Olsen & Primps, 1984). Nevertheless, until recently, there was general acknowledgement that telecommunications could not fully replace the need for physical presence. There was ongoing debate about the increase or decrease

in productivity levels of employees and workers. Some believed that distractions at home while performing work tasks would decrease productivity over time (Cable & Elsbach, 2012), while other research indicated that more work time is available when travel is not necessary, and a quiet environment can also boost overall production. At the same time, face-to-face contact is considered highly important in economic interactions and innovations (Bathelt & Turi, 2011). With new possibilities for communication, but constraints in working in complete isolation, a new model of the work location was needed and coworking spaces emerged. According to Mitev et al. (2018), these spaces were primarily designed for lonely entrepreneurs suffering from the drawback of working alone at home. Therefore, better than any other model of work organization, coworking places address four conditions that characterize knowledge work: access to information, access to knowledge, access to symbolic resources, and access to social capital (Moriset, 2017; Leclercq-Vandelannoitte & Isaac, 2016).

Workers who use the third place as a work location tend to be more place independent than dependent, since they do not require a particular place to work. However, their tasks vary on the level of dependence on time. For example, face-to-face meetings require a particular time (Poelsema, 2019; Spinuzzi, 2012). The increasing mobility of workers has led to three changing spatial patterns. The first is diffusion: people can work everywhere with a good Internet connection. The second is spots: people meet at certain spots, and work nomads mainly concentrate at spots with a wide variety of facilities. The third is home: the home acts as a first or second workplace (OECD, 2018).

Halford (2005) argues that there are very few purely home-based workers, nor are there purely mobile teleworkers; hence hybridity is necessary. Hislop and Axtell (2007) extend this to a three-dimensional framework of the work location (Figure 14.1), illustrating the contradictory processes of teleworking. In the 'third space' at the top, they visually show that mobile workers are required to balance their time and effort across a number of different locations and different balances.

Methods

We describe the situation regarding teleworking and third spaces in the Netherlands and Sweden before and during the pandemic, and offer perspectives for the post-pandemic world. Besides existing data sources and the literature, we base our analysis on fieldwork before the pandemic by Kim Poelsema, who focused on the role of third spaces for users in Groningen (Poelsema, 2019), and fieldwork during the pandemic by Ilse Noteboom, who focused on rural teleworkers in Tholen (Noteboom, 2020).

Teleworking in the post-pandemic world

The Netherlands and Sweden are the two European countries where teleworking is the most frequent. In 2019 and 2020, almost 40% of workers in these two
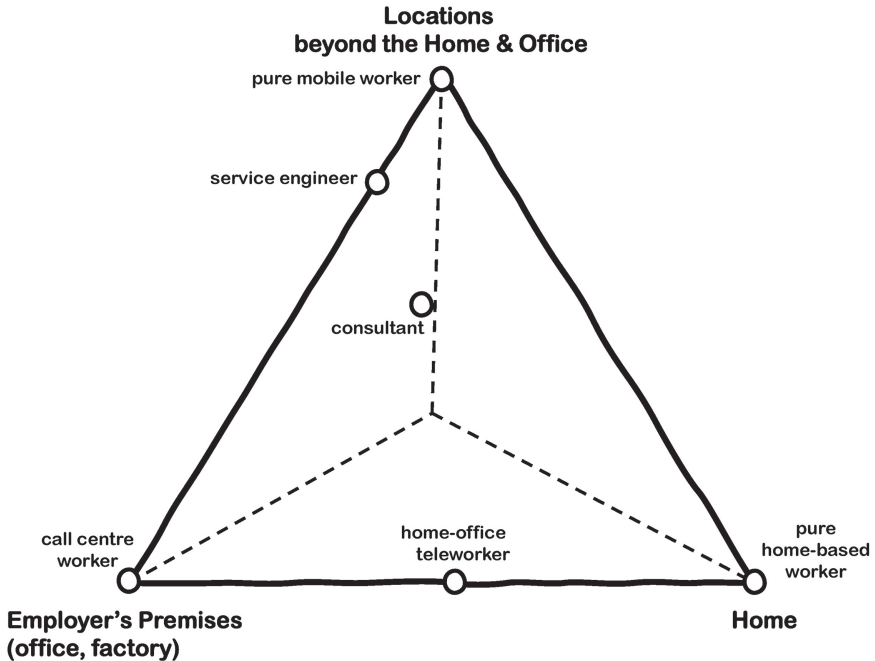
Figure 14.1 Framework conceptualizing the location of work (remade after Hislop & Axtell, 2007).

countries usually or sometimes teleworked, as shown in Figure 14.2. This, compared to the EU average of only 14%; in 7 of the 27 EU countries, the share of teleworkers was under 5%.[1] Remote working has a long history in Scandinavia. Distance working from the periphery was a popular project for a while in the 1980s – very early compared to other places – wherein employees were encouraged to work in so-called 'telecottages' in the countryside (Qvortrup, 1989), effectively precursors of today's CSs. This phenomenon was even exported, for example to Hungary in 1994 (Kovács, 2001).

The Swedish experience

In the third quarter of 2020 (July–September, i.e. between the first and second waves of the pandemic) 43% of Swedish Internet users teleworked at least part of the time (Internetstiftelsen, 2020). A survey of a stratified sample of 2,055 working individuals in January 2021 showed that 53% teleworked either full or part time (Netigate, 2021). Of those employed at national government agencies, about 60% were teleworking as of January 2021 (publikt.se, 2021).

Will things go back to 'normal' when the pandemic is over or has the pandemic caused enduring changes in work life? In Sweden, no scientific studies have hitherto been made on this issue, but a number of survey results have
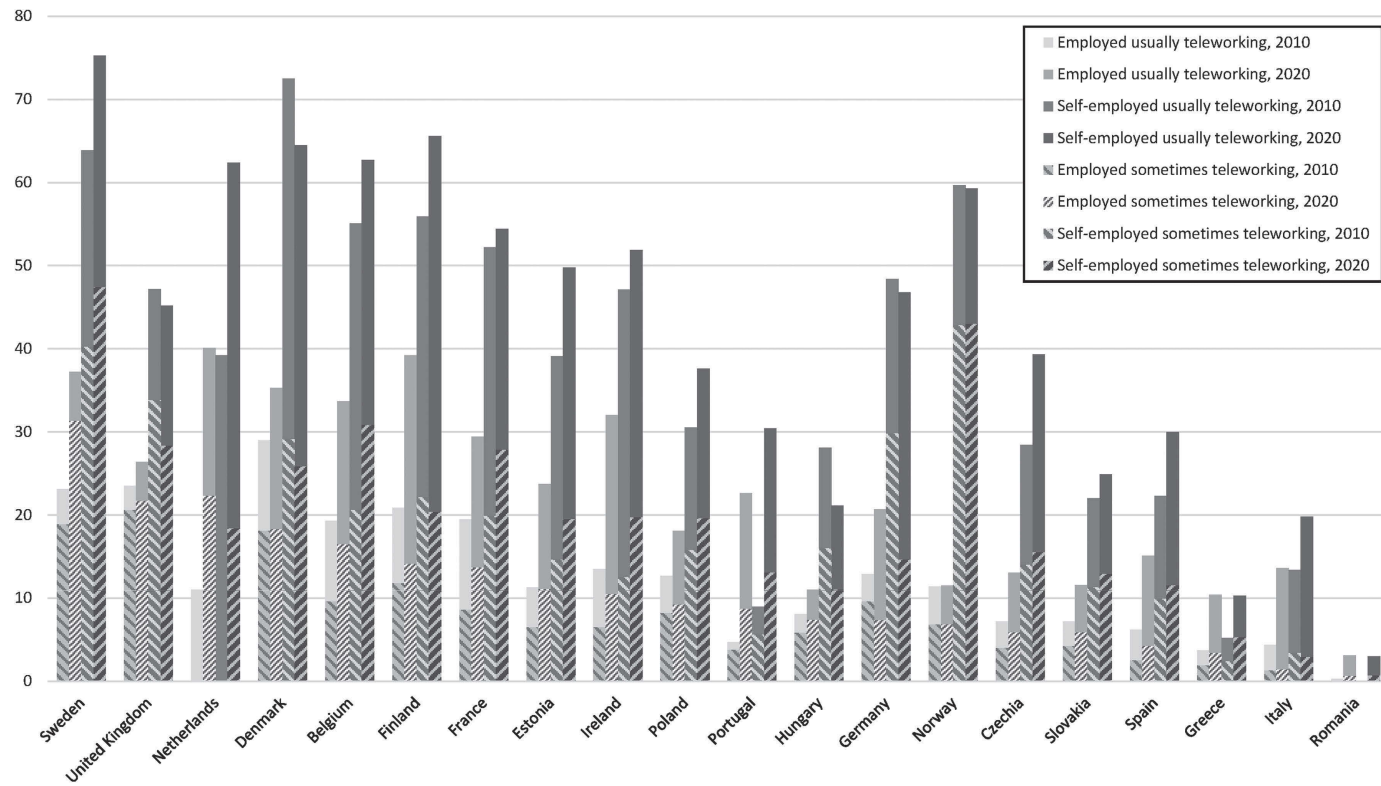
Figure 14.2 Prevalence of telework across EU member states 2020 (Sweden, UK, 2019) and 2010.

Source: Eurostat lfsa_ehomp data and European Commission (2020).

been presented. The daily newspaper *Dagens Industri* and the newsletter *Aktuell Hållbarhet* published a report in December 2020 based on a survey of the 100 biggest companies on the Stockholm Stock Exchange (response rate 27%). Eighty-four percent of responding companies said that they would reduce the number of business trips in the future compared to before the pandemic, and instead encourage more travel-free meetings. Sixty-five percent said that they would offer their employees greater freedom to choose remote working (Di Mobility Insights, 2020).

The aforementioned survey by Netigate (2021) presented a number of results concerning Swedes' attitudes to distance work after the pandemic. Seventy percent of respondents said they would like to continue teleworking (full or part time) after the pandemic and only 24% would like to work solely at their regular workplace after the pandemic. When the respondents were asked to define how much work time they would like to spend at their regular workplace and at home, the average was very close to 50/50. The positive attitude to working from home shows a slight increase with increasing distance between workplace and home. Women are slightly more positive about working from home than men. Seventy percent are satisfied with how their employers have handled working from home during the pandemic. Somewhat less than a third thought that working from home had negative effects on internal communication and collaboration, but 58% were of the opinion that working from home had a negative impact on social interaction with colleagues. Seventy-three percent thought that their work life would change due to the pandemic and only 13% thought it would not.

The positive attitude to working from home among Swedish employees does not seem to be shared equally by employers. In a report by The Remote Lab (2020) in which 366 employers and 1,076 employees were interviewed, 71% of employers stated that they did not want their employees to work remotely after the pandemic, while only 4% of employees felt negatively about some form of distance work after the pandemic.

The Dutch experience

In the Netherlands, developments in both demand and supply have fuelled the increasing influence of third places as a work location. Coworking spaces are located primarily in the dense Randstad area (see Chapter 12 by La Fleur, Smit, and Pais for details). The COVID-19 pandemic led to a strict lockdown from March 2020 onwards, in which all workers that could do so were asked to work from home. Primary school closures were used as a tool to enforce working from home.

Obviously, those who could work from home at all were primarily white-collar workers, and the public sector applied the rules most strictly. However, by the end of spring 2020, a moderate office presence was allowed once again. As the pandemic then reached a second wave in fall 2020, the rules were tightened again, with the closure of primary schools in winter. Increased vaccinations

then led to a gradual removal of restrictions in late spring of 2021, with terraces opening in May and indoor restaurants and cafes in June.

It is important to acknowledge that this country has experienced a rapidly growing share of self-employed people compared to total employment in the last decade. This increase can be related to increased entrepreneurial activities, innovation, and a more flexible labour market (OECD, 2018). This rise of self-employed people can also be seen in light of the growing presence of the third place as a work location, and research shows that the main users of coworking spaces are self-employed people or freelancers (Bouncken & Reuschl, 2017).

During the pandemic, many companies paid considerable attention to the well-being of their employees. In particular, those that already had a caring mentality increased their efforts even more. Since working from home increased employee well-being, labour union FNV, with both the green party and one of the liberal parties, strove to embed the right to telework in the 'Werken waar je wilt' law ('Work where you want to'; Parool, 2021).

A user perspective

According to Van Ham et al. (2017), the philosophy behind the formation of coworking spaces is to create a platform for three types of workers: independent professionals, entrepreneurs, and teleworkers. Entrepreneurs and self-employed people are keen to work in coworking spaces since these locations are known for their creative and innovative atmosphere. The openness and sharing in these spaces stimulate interaction and collaboration (Bouncken et al., 2018). Nevertheless, a study in the Netherlands found that even though third spaces are popular for users due to such characteristics, they are not considered a substitute for traditional offices or working from home, but rather an *additional* place to work. Moreover, they also function as places to meet with friends or for private activities (Poelsema, 2019). Below, we evaluate the different types of users and consider their motives in the context of the pandemic.

Companies as users of coworking spaces

Traditionally, meeting fellow workers in third spaces was not a priority for employees at SMEs and large companies; they met their colleagues at the office, and often enjoyed the physical and mental separation between place of work and place of residence. However, in increasing numbers of countries, companies have seen the usefulness of flexible third spaces, such as with famous examples in Milan (e.g. WeWork). The pandemic has accelerated this development, with several companies leaving their large central headquarters and downsizing to a more affordable location, in the expectation that employees will no longer visit the office every day. Examples of such decisions include the largest Dutch bank, ABN Amro, which headed the development of Amsterdam's financial district around Zuid station, but announced they were leaving the area in the midst of the pandemic, settling for an older office building a

few kilometres away (Flinders, 2020). It remains to be seen how large companies will now reorganize their teams, and whether team managers will want to regain control over the employees they barely saw in person during the lockdown, or whether more flexible relationships will become the de facto standard. Moreover, companies will have to reorganize the many spontaneous knowledge flows that exist within companies and company buildings (Kabo et al., 2014). Coworking spaces form an interesting platform for encouraging such flows around physical coffee machines, not only within companies, but also with competitors. The pandemic did not slow the development of coworking spaces; rather, most took the opportunity to grow even further. Due to more flexible space organization, coworking became – especially in denser cities – a solution for people who could not work from home due to space limitations and could not work at inflexible office spaces. It is expected that the trend of more flexible working will continue in the Netherlands (Daalder, 2021).

A case in point are the organized CSs in Stockholm. Before the pandemic began, Sweden had shown a steady increase in coworking spaces, primarily in Stockholm. (di.se, 2019). As the capital and the biggest city-region of Sweden, Stockholm provides the most accessible place for conferences and meetings, not only for people in the Stockholm region, but also for actors in other parts of Sweden. It has therefore been important for many companies outside Stockholm to have an office or workplace in the capital. CSs with shared office equipment and infrastructure became the choice for many nonresident companies and the pandemic implied a rapidly shrinking demand for these services (svd.se, 2020).

There is, however, evidence of increasing demand for coworking places in certain areas in Sweden. This holds especially for rural tourist destinations, for example the ski resort of Åre and the winter sport city of Östersund, where CS providers have seen increased demand. A certain portion of the large share of the labour force that has been forced to work from home has left the city for country cottages or hotels. Vacation homes have become permanent homes and coworking places have become new, temporary offices.

Self-employed workers

When the concept of coworking was first developed in the USA by Brad Neuberg in 2005 (Mitev et al., 2018), the spaces were primarily designed for lonely self-employed workers suffering from the drawback of working alone at home. Self-employed people still dominate the coworking scene in many countries.

In the Netherlands, the number of CSs grew from 640 locations in 2019 (ZZP Barometer, 2019) to 707 in 2020 (Vastgoedjournaal, 2020). This quick growth of coworking spaces is due to the high percentage of self-employed people, i.e. workers without personnel; about 10% of workers in the Netherlands are currently self-employed (CBS, 2019a, 2019b). These people often work from home, but there is a steady increase in the share of self-employed workers
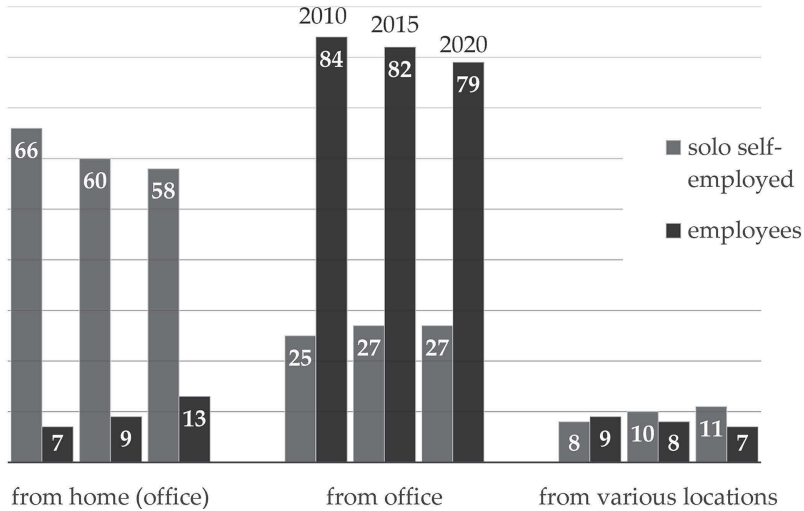
Figure 14.3 Changing working locations for self-employed workers in the period 2010–2020 in the Netherlands (Centraal Bureau voor de Statistiek, 2021).

at 'third places' (Figure 14.3), which shows up at CSs. Before the COVID-19 pandemic, most CS users in the Netherlands were self-employed, either as entrepreneurs or flexible 'dependent' workers. Moreover, they were and are still highly educated, relatively young, and primarily working in business services and consultation. Most workers have some flexibility and/or control over their working hours and the place where they work. Most users are between 20 and 30 years old, and most can be regarded as starters or workers with a medium amount of experience (up to 10 years). This indicates that the third place is to some extent fulfilling the role of the first work location. Interestingly, coworking locations and third places are not used as fixed full-day locations, but more often as a place to work 'in between' transitions (Poelsema, 2019).

Workers who cannot work at home

Coworking has faced a new challenge with the pandemic forcing people to work from home. In fact, when working from *home* is compulsory, the concept of coworking seems counterintuitive; working in close proximity in enclosed spaces is not feasible, and working from home seems to be the only available option.

Nevertheless, many CSs have an advantage that many permanent offices and home working locations do not have: adjustable space dividers and options for rearranging the work layout, generating work conditions that are healthy and good for well-being during such pressing times (Todd, 2020). Furthermore, CSs have altered their services and created new solutions and changed their

business models to contain the spread of COVID-19. These include offering membership for individuals, as well as renting office equipment to work from home better, and online workshops or courses (Manzini Ceinar & Mariotti, 2021). These aspects have made CSs a viable alternative for white-collar workers of all kinds.

Governments preferring when people work at CSs

Government policy and public efforts can make further use of the special benefits of CSs, which already occurred before the pandemic. CSs beyond prime inner city locations, in particular, can improve quality of life for individual users by shortening commutes and also reducing traffic congestion during peak hours (Choudhury, 2020; Watkins, 2021). As such, the UK government, for example, has stimulated people to use coworking in more peripheral areas to lighten crowded public transport towards the city, not only amid the current need for social distancing, but also for the future (*The Times*, July, 2020). Similar trends are seen in many urban areas across the globe. The pandemic has increased migration away from dense, populous urban centres, effectively putting an end to the back-to-the-city movement for sectors in which it is possible to work remotely (Manzini Ceinar & Mariotti, 2021).

Non-users

Amid heartening stories about the new organization of work in time and space, it is easy to forget that a large class still does not use such concepts. In the Netherlands, the population density is high and houses are small, making a place to work outside the home attractive (Heaslip, 2020). In fact, searches for larger houses, necessarily with a study, increased markedly during the pandemic (Funda, 2020). Moreover, in the Netherlands, it is normal for both partners to have a job, but one partner often holds a part-time job and takes care of the children at home several days of the week. This too makes the house a less feasible place to work.[2] From an urban perspective, and the dominant view of the dense Randstad area, there are thus several factors pushing workers out of the home, even when they cannot or do not want to visit the office.

In the countryside, however, these driving factors are weaker. There is still little research into CSs outside metropolitan areas (a complaint voiced by Fuzi, 2015), but it is clear from the more general literature on teleworking that loneliness plays an important role (Mann & Holdsworth, 2003; Daniels et al., 2001). Although CSs are ideal for countering loneliness by providing a community of ersatz colleagues, empirical research on the island of Tholen, a 45-minute drive south of Rotterdam's city centre, showed not only no CS users, but also no knowledge of or interest in CSs (Noteboom, 2020).

Of course, a strong sorting process is at work here. Most workers take their current or possible work location(s) into account when choosing a place to live and vice versa (Rouwendal & Meijer, 2001). Those who end up in the

countryside have a high appreciation for space, a high tolerance for long commutes, and/or a high personal attachment to a specific area. Research shows they are quite happy with the idea of working more from home after the pandemic, and they feel no need to look for a coworking space.[3]

Conclusion: a new workspace concept

Coworking spaces can be seen as spatial entities in a work ecosystem, adding value by managing knowledge flows and the possibility of networking. For users, coworking spaces are places for entrepreneurship and innovation, to (co-)create and add value; spaces that provide social support, innovation, creativity, knowledge sharing, and collaboration. As such, CS users are diverse, leading to social interactions that add value and boost productivity and knowledge sharing. During the pandemic and most likely in the following period, CSs have and probably will also become places to work for those who need to be more flexible in their work location and are not always able to work from home. As such, workplace decisions may become a *lifestyle choice* rather than a requirement from the work provider.

Future research should first of all investigate whether certain groups are now finally becoming true 'digital nomads'. Secondly, during the pandemic, much research has been done on the well-being of home workers. Of course, stress and uncertainty about the crisis have also played a role. Nevertheless, if we indeed increasingly continue to work outside the office, it is necessary to investigate what the best places are for working most happily and efficiently. Thirdly, a key avenue of research relates to knowledge spillovers. Since these are well known to be necessary for innovation, coworking seems to be a solution for all parties concerned, and may grow considerably compared to the pandemic period, since all workers during the pandemic could rely on pre-existing networks. For example, future research could compare knowledge spillovers between embedded workers and people who switched jobs during the pandemic. Finally, the spatial implications of hybrid workplaces is of interest, for example, if attractive rural places will form new small agglomerations of (part-time) coworkers.

Notes

1 The high Swedish score is contradicted by other sources, however, including the Swedish Internet Foundation, setting the share of employed Internet users that teleworked at least occasionally before the pandemic at 23% (Internetstiftelsen, 2020).

2 In 2018, the share of households with one full-time partner and one part-time partner was 49%; a further 15% had two full-time jobs (more often those without young children at home). The share of households with both partners holding part-time jobs is growing, but was still just below 10% in 2018 (Centraal Bureau voor de Statistiek, 2019).

3 Only one respondent out of the twelve interviewed in the Tholen fieldwork identified as a real teleworker; this person had concluded that moving to be closer to their very mobile job would mean many repeated moves. They had therefore settled for a pied-à-terre in another city, spending three days a week there and the others on their native island of Tholen (Noteboom, 2020).

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15 Home, university, and other spaces

Where Finnish and Italian academics did research prior to and during the COVID-19 pandemic

Chiara Tagliaro, Alessandra Migliore,
Vitalija Danivska, Jenni Poutanen, Sofie Pelsmakers,
Tapio Kaasalainen, and Suvi Nenonen

Academics' spatial challenges during the COVID-19 pandemic

Academics have a relative amount of job autonomy and can usually choose freely where and when to work. In the 1990s, Drucker (Forbes, 1997) predicted that university campuses would become relics since they would not survive the following thirty years due to the impact of information and communication technology (ICT). Has this prediction played out with the extensive work-from-home (WFH) experience of COVID-19? The lockdown period enforced in many countries around the world to counteract the spread of the virus led to the most extensive WFH experiment ever. Whereas WFH during the COVID-19 pandemic has been addressed in some studies (e.g. Felstead & Reuschke, 2020), a focus on academia is still missing. In the short term, all academic activities, including research and teaching, switched to a virtual mode, and universities were almost empty for several months. The potential long-term impacts of this change on the future of university work environments are still uncertain and deserve exploration.

Occupying an office on campus and using other campus spaces (e.g. informal areas, canteens, break areas) is critical to feeling recognized as a member of an intellectual community (Dowling & Mantai, 2017; Temple, 2009). Previous research confirms that disidentification occurs when working from home (Kuntz, 2012); while home may support solitary research, it hampers the sense of being a productive researcher. WFH requires an ability to juggle competing identities (e.g. parent, researcher, etc.) and the capacity of non-university spaces to support disciplined, focused, and productive research work. WFH also hinders informal interactions on campus which are often necessary for researchers' early career development and networking, replacing them with online conferences and meetings which limit face-to-face interaction.

The COVID-19 pandemic has accelerated the evolution of the traditional campus-based model of teaching and research (Orel & Bennis, 2020) towards a 'location-independent' work mode typical of knowledge work (Hernaus et al.,

2018). Campuses have changed from static geographical spaces to blurred places (Kuntz, 2012) spread across and integrated within the territory (Den Heijer, 2011). For example, hybrid environments for coworking and co-learning are increasing. Den Heijer (2020) describes the physical state of the campus as a combination of (i) fixed structures and (need for) territory on campus; (ii) multiple connections and shared spaces on campus; and (iii) the open structure of the campus and the possibility of working and studying anywhere. The third description has dominated during the pandemic. According to Ninnemann et al. (2020), there is a need for more 'hybrid environments' that combine traditional campuses with e-campuses and integrate formal and informal spaces to overcome disciplinary and organizational boundaries. Lahti and Nenonen (2021) state that co-designing the digital and physical work environment means co-designing the experience of presence and distance. A hybrid working environment requires not only the skills to use both digital and physical solutions for different functions and purposes, but also that users learn to identify their own needs.

Many opportunities for understanding the new needs of academics and imagining the future of research environments can be drawn from the experience of research work during COVID-19. This chapter discusses threats and opportunities for future physical research environments by analyzing academics' work locations, workspaces, and work outcomes throughout the recent pandemic period. This study compares two different countries in Europe, Italy and Finland, which represent two contrasting situations for investigating research activities during the COVID-19 pandemic.

COVID-related regulations were significantly different in the two countries due to the different spread and trajectory of the pandemic over time. In Italy, restrictive regulations were lifted after 3 May 2020 and the degree of individual freedom to move around cities returned to normal during summer 2020, with campus facilities becoming accessible again. In Finland, only some restrictions were lifted in May 2020. Most universities advised their employees to continue working remotely when possible, in accordance with guidance from the Finnish Institute for Health and Welfare. In Italy, most universities invited their staff to repopulate campuses, whereas in Finland all research activities that did not require special physical settings (such as laboratories) and almost all teaching were conducted remotely for the whole of the 2020–2021 academic year.

These distinct policies might be explained with data from the OECD (2020), indicating that Finland was 9th of the 28 EU countries best adapted to remote working, with nearly 40% of jobs being compatible with remote work. Italy, on the other hand, ranked 21st with only 30% of jobs compatible with remote working. This misalignment between the two countries might also impact the number of active coworking spaces. For example, in Italy there were about 800 coworking spaces (CS) as of January 2021 (italiancoworking.it), which corresponds to about 1 CS for every 75,000 people, whereas in Finland there are an estimated 120 coworking spaces,[1] with about 1 CS every 45,000 inhabitants. Despite these differences, remote work has been growing and studied in both

countries. Italy and Finland appear among the most prolific countries for publications on coworking spaces (Berbegal-Mirabent, 2021). This study therefore explores (i) how the pandemic has affected the way academics use spaces for research, including working from home and third spaces such as coworking spaces, and (ii) if any differences emerge between the two countries.

Methods

Sample selection

This study focuses on a sample of academics from two Italian universities (Politecnico di Milano and Università di Bergamo, all campuses) and two Finnish universities (Aalto University, Otaniemi campus, and Tampere University). The four universities were chosen since they are located in similar geographical contexts and they share comparable socioeconomic structures. Milan and Bergamo, like Helsinki and Tampere, are close to each other but different in size. Milan and Helsinki are both the main business centres in their respective regions and are well connected to Bergamo and Tampere, which often house commuters to the main centres. This allowed us to evaluate the impact of COVID-19 not only on two different countries, but also between larger and smaller cities. The selected universities are home to multidisciplinary fields such as engineering, architecture, and social science, with the Politecnico di Milano and Aalto University located in larger cities. The Università di Bergamo and Tampere University are located in smaller urban areas. The four institutions cover a wide range of disciplines where academics generally are 'free' to choose their preferred work locations and lab-based research is more limited than, for example, institutions focused on life sciences with more lab-based work. With regard to campus layout and spatial features, both Italian universities feature a mix of historical and contemporary buildings distributed across multiple campuses in the city centre and peripheral locations (e.g. Dalmine for Università di Bergamo and Mantua for the Politecnico di Milano). The Finnish universities (Aalto University and Tampere University) were both established based on recent university mergers. Aalto University recently concentrated all their activities on one main campus, whereas Tampere University campuses are distributed across different locations within the city. Both universities are relatively young, and their building stock is characterized by both 1960s modernist and contemporary buildings.

Questionnaire design and administration

A survey was created by the Politecnico di Milano authors to investigate (i) usage frequency of different locations for research before and during the COVID-19 pandemic, considering 'office', 'third space', 'home', 'collaborators' premises', 'in transit', and 'other' (items adapted from Kojo & Nenonen, 2015; Aroles et al., 2019; Burchell et al., 2020); (ii) university- and home-based

workspaces (items adapted from Bodin Danielsson & Bodin, 2008; Hua et al., 2010) and preferences towards the two spaces according to specific physical variables[2] (adapted from Appel–Meulenbroek et al., 2018); and (iii) satisfaction with work conditions and outcomes before and during the COVID-19 period (adapted from Appel–Meulenbroek et al., 2018).

The survey was administered in summer 2020 to all Italian academics (n = 52,630) thanks to public online lists, including all scholars tenured at public Italian universities but excluding PhD students, postdoctoral researchers, and research grant holders. The survey was distributed via email and remained open for voluntary confidential participation from 24 July to 24 September 2020. In a later phase, the same survey was translated and distributed among Finnish academics. Because Finland does not have the same open database of academics as Italy, the survey was shared with internal university communication teams, and then distributed via university newsletters and intranets between 15 February and 31 March 2021.

A total of 384 full, usable answers were obtained from the two Italian universities (population 1,832; response rate 21.0%), namely, the Politecnico di Milano (324) and the Università di Bergamo (60). Another 139 answers came from Finland (response rate approx. 2.6% of all academic staff, approx. 5,200), with 83 at Tampere University and 56 at Aalto University. Given the different countries and universities, not to mention sample size, direct comparisons were not always possible. Moreover, since the total number of responses (523) is not representative of all academic staff, the generalizability of results is limited. Nonetheless, this chapter still provides a valuable overview of the impacts of COVID-19 on academics.

Results and discussion

Sample characteristics

In both countries, the academics who responded belong mainly to engineering (70.3% in the Finnish sample; 84.6% in the Italian sample), followed by social sciences (18.1% in the Finnish sample; 15.1% in the Italian sample). Only a small number of respondents belong to the life sciences (11.6% in the Finnish sample; only one person in the Italian sample).

The sample shows differences in the two countries in terms of gender and age. In Italy, more women (225, 58.6%) than men (159, 41.4%) answered the questionnaire, while in Finland, slightly fewer women (60, 43.8%) responded than men (73, 53.2%), with a few unknowns. The Italian respondents were 48 years old on average, while Finnish respondents were 41 years old on average. This might be explained by the exclusion of more junior researchers in the Italian sample who were not publicly listed.

Prior to the COVID-19 pandemic, the Italian academics used to balance individual and collaborative research (individual work accounts for 51.6% of their overall time devoted to research, while collaborative work accounts for 48.4% of their time). The Finnish academics, however, were generally solo researchers (on average, 71.2% of their research time was spent individually and only 28.8% collaboratively).[3] During the pandemic, the share of individual work increased by around 10% in both countries.

Table 15.1 Descriptive statistics about sample characteristics.

	Finland	Italy
Number of respondents	139	384
Women	60	225
Men	73	159
Average age (years old)	41	48
Engineering sciences	70.3%	84.6%
Social sciences	18.1%	15.1%
Life sciences	11.6%	1 person
Individual work (% time)	71.2%	51.6%
Collaborative work (% time)	28.8%	48.4%

Source: Authors.

The descriptive statistics are summarized in Table 15.1 As expected, these differences in types of work also emerged in different spatial practices.

Research at home, university, and 'other spaces' before and during the pandemic

This study analyzed which research locations the academics involved in the survey used prior to and during the COVID-19 pandemic for both individual and collaborative research activities.

Prior to the COVID-19 pandemic, individual and collaborative work in both countries was located mainly on campus. Most of the surveyed academics worked on campus at least once a week for individual work (95% Italian; 92.5% Finnish) and collaborative work (92.71% Italian; 88.4% Finnish). The second location by usage frequency was the home, which was used especially by the Italian academics, who seemed more used to working from home even for their collaborative work compared to the Finnish academics. On the one hand, 66.7% of the Italian academics and 69.9% of the Finnish academics performed individual work from home, with 23.2% of the Italian sample and only 5.2% of the Finnish sample performing teamwork from home. This is somewhat surprising, given the data from Eurofund regarding remote work, but it may depend on the fact that the Finnish researchers surveyed already collaborated less prior to COVID-19. However, a share of academics never worked from home prior to the pandemic, whether for individual (Italian 14.1%; Finnish 8.7%) or collaborative work (Italian 61.2%; Finnish 80.2%).

During the COVID-19 period, both Italian and Finnish academics moved their research primarily to the home. In Italy, 71.4% of researchers adopted WFH five or more times per week for individual work and 55.2% did so for col-laborative work. In Finland, 89.1% of all respondents worked from home five or more times a week for individual work and 46.0% did so for collaborative work. It is worth noting that according to the open answers, Finnish academics also worked from their second homes (normally only used in summer for leisure).

The use of on-campus spaces decreased drastically. In Italy only 29.4% of the sample worked individually on campus at least once a week, while 30.5%

did so for collaborative work. In Finland, the university campus was still used at least once a week by 21.4% and 15.9% of respondents for individual work and teamwork, respectively. However, almost half the respondents never used the campus facilities for teamwork (52.9% Italian; 45.8% Finnish) or individual work (52.1% Italian; 42.9% Finnish). This result is an intuitive consequence of national and university policies during the COVID-19 period.

Other places were occasionally adopted for research both before and during the pandemic. Prior to COVID-19, 47.4% of the Italian sample and 59.2% of the Finnish sample used to collaborate from partners' premises (such as other universities or companies) but typically less than once a week. With regard to the use of third spaces (e.g. coworking spaces, cafés, etc.), the situation was quite different in the two countries. Just 15.9% of the Italian sample used third spaces for collaborative research, while 46.9% of the Finnish sample collaborated from third spaces, even if this occurred less than once a week. However, before the COVID-19 period more than 40% of Finnish academics and over 50% of Italian academics never worked from collaborators' offices or from third spaces, whether for individual or team work. This is also expected given the distinct concentration of coworking spaces in the two countries.

Also as expected, the occasional use of collaborators' facilities and third spaces dropped during the COVID-19 pandemic. Only a small group of academics in the two countries conducted collaborative research from collaborators' facilities (10.4% Italian; 10.0% Finnish) or third spaces (6.67% Italian; 14.1% Finnish), even if less than once a week.

While no particular differences emerged between the two Finnish universities, the Politecnico di Milano was more attractive for on-campus research than Bergamo both prior to and during the COVID-19 pandemic. Indeed, in Bergamo, WFH seemed to be a widespread practice before the pandemic: 31 of the 60 academics surveyed in Bergamo worked from home before COVID-19 for a considerable amount of time (more than 2 times per week). The same was not true for the Politecnico di Milano. During the COVID-19 pandemic, more of the academics surveyed (32.4%) worked on campus – especially for collaborative activities – compared to the scholars from Bergamo (20.0%). One reason for this may be the specific discipline-related activities, or the different perceived attractiveness of the campus facilities. However, Bergamo was one of the cities most affected by the COVID-19 pandemic (Wall Street Journal, 2020), which might have discouraged on-campus presence. In addition, further studies should be able to explain whether larger universities are more attractive in general, even in times of emergency (e.g. they offer more services, spaces, and research facilities).

University versus home environments

Beyond university recommendations and workers' fear of contagion, this study compared the home and campus environments to determine whether spatial factors influenced the chosen research location.

When on campus before COVID-19, 76.8% of the Italian academics and 59.7% of the Finnish academics worked from a shared office, ranging from

rarely to always; 58.9% of the Italian academics and 33.8% of the Finnish academics worked from a single office. This means that overall, the Italian academics were able to switch between multiple workstations on university premises. Moreover, in contrast to Italy, open–plan offices were frequently used at Finnish universities. Of the Finnish sample, 35.3% worked from open–plan offices and, specifically at Aalto University, open–plan offices were more used than private offices (44.6% versus 30.4%). However, after office spaces, meeting rooms were the most frequented spaces (Italy: 74.0%; Finland: 78.4%), confirming that prior to COVID-19, researchers used campus facilities for collaboration. This small difference might be explained by a larger use of open–plan spaces in Finland, where there is less access to private office space. In Italy, private office spaces are also used to host meetings. Moreover, 50.5% of the Italian sample and 33.8% of the Finnish academics also used labs for their research. This was especially the case for the Politecnico di Milano, for which the academics surveyed were mainly engineers.

During the COVID-19 period, social distancing norms increased the use of private spaces. When on campus, Italian academics occupied private office rooms at least rarely (32.8% of the Italian sample). In Finland this was less (19.4%), and private offices were subjected to the smallest decrease in use compared to other types of spaces. Meeting rooms, instead, showed the greatest decline in use (only 17.7% of the Italian sample and 21.6% of the Finnish occasionally accessed them), while labs showed a smaller decrease in use (25.8% of the Italian sample and 20.1% of the Finnish sample continued to use them to some extent during COVID-19). This again confirms that engineers may have needed labs for their research.

With regard to WFH, the use of home spaces is quite similar between the two countries. In both countries, the academics surveyed conducted their research mainly from their home offices (49.7% of respondents in Italy; 49.1% in Finland) or living rooms (70.8% of respondents in Italy; 77.7% in Finland). However, 50.3% of Italian and 50.9% of Finnish respondents stated they never used a home office (assuming they might not have had access to any). Just 29.2% of the Italian sample and 22.3% of the Finnish respondents said that they never used their living rooms. Differences emerged in Italy: academics at the Politecnico worked more from their living rooms than the academics from Bergamo (72.5% of Politecnico academics versus 61.7% of those from Bergamo). Moreover, in Italy, only 35.2% of the respondents said they worked from the bedroom. In contrast to the Italian sample, 56.1% of Finnish respondents stated they used their own bedrooms to work, with a higher proportion of those at Aalto University (69.6%). Other slight differences also existed between the two Finnish institutions, for example only 46.8% of respondents at Aalto University worked from a home office (compared to 50.7% in Tampere).

Differences among respondents from the four institutions do not appear to depend on house size, since dwellings were generally reported to be large in both Italian and both Finnish cities (more than 3 rooms on average). Further study is required to explain these differences. For example, the number of

people sharing the house and the inclination of the researchers to share the workspace with cohabitants are likely to influence these habits.

Beyond house spaces, specific physical features that made the house the preferred space for work were analyzed. Figure 15.1 shows respondents' spatial preferences between their home and the campus. Overall, most of the respondents found better break areas, exterior view, aesthetics, and privacy at home, while teamwork spaces, ICT facilities, ergonomics, and inspiration from the space were generally preferred on campus.

In Finland, campuses were reported to be much more comfortable than in Italy, especially related to more ergonomic facilities, better ICT facilities, and
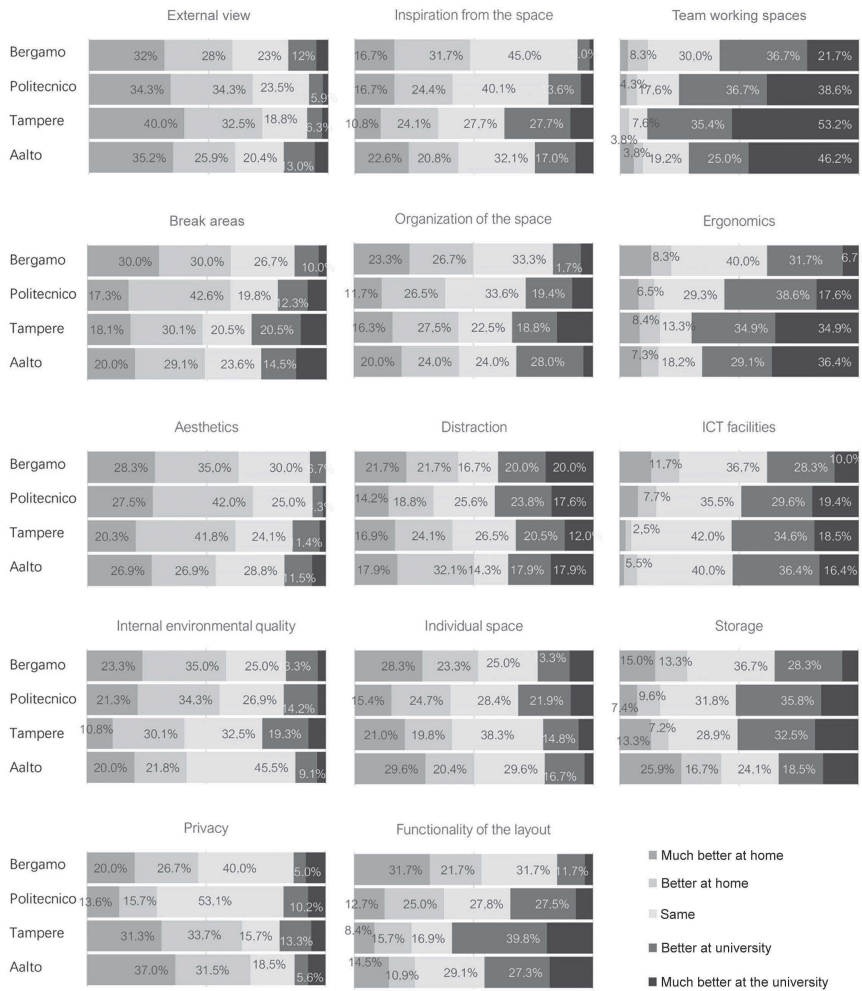
Figure 15.1 University versus home spatial features among the four surveyed universities.

Source: Authors.

functionality of the campus workspace (e.g. layout appropriateness). In Italy in contrast, especially in Bergamo, the academics stated that the workspace functionality was better at home than on campus, which might explain the preference for home working even prior to the COVID-19 pandemic. Among Finnish respondents, the premises at Tampere University appeared more comfortable than at Aalto University. This might be related to factors such as storage availability; whereas Tampere University provided adequate storage space, in Aalto, the scholars rated the availability of storage space better at home. The importance of storage space may be due to the prevalence of both shared and open-plan offices in Finland compared to the Italian universities. Conversely, the high rate of private offices in Italy intuitively favoured the fact that 51.2% respondents from the Politecnico di Milano rated better storage availability on campus than at home, while only 35.5% of academics in Bergamo did the same. This might be the reason why half of the Italian respondents rated individual space and privacy equally satisfactorily at campus and at home, while the Finnish respondents preferred their home environment.

However, when asked in an open-ended question (239 completed from the Italian sample; 145 blank; 114 completed from the Finnish sample; 25 blank) about future modifications of their homes to improve WFH, many Italian and Finnish academics extensively complained about the need for a single work room. This might be explained by the home and spaces being shared with other family members also working or being home-schooled during the pandemic.

Among the Italian samples, the Politecnico di Milano showed higher satisfaction rates than the Università di Bergamo for ergonomic comfort at work. These emerging differences might explain why academics in Bergamo worked from home more often than the respondents from Milan, even prior to COVID-19. Similarly, in Finland, the deficiency stated most often was the lack of a proper ergonomic workplace at home.

Outcomes on research and life

Figure 15.2 shows the respondents' work conditions and outcomes prior to and during the COVID-19 pandemic. With regard to 'availability of work time for research' and 'general working hours sufficiency', the sample is equally divided. However, differences emerged between the two countries. In Italy, the sample seems more impacted by new COVID-19 habits and fewer academics stated that their work time did not change compared to before. The same results emerged in relation to work-life balance, which was worse in general than before, but sufficiently better for a significant share of Italian and Finnish respondents. These results relate to the individual experience of each respondent. Some stated that their ability to take breaks – and possibly take care of their private life – was the same as before or even increased; others stated that it was worse or much worse than before. Further studies are necessary to justify this result, which likely depends on the specific family and private situation.

With regard to individual and collaborative productivity, both the Finnish and the Italian respondents reported that their productivity was worse or much
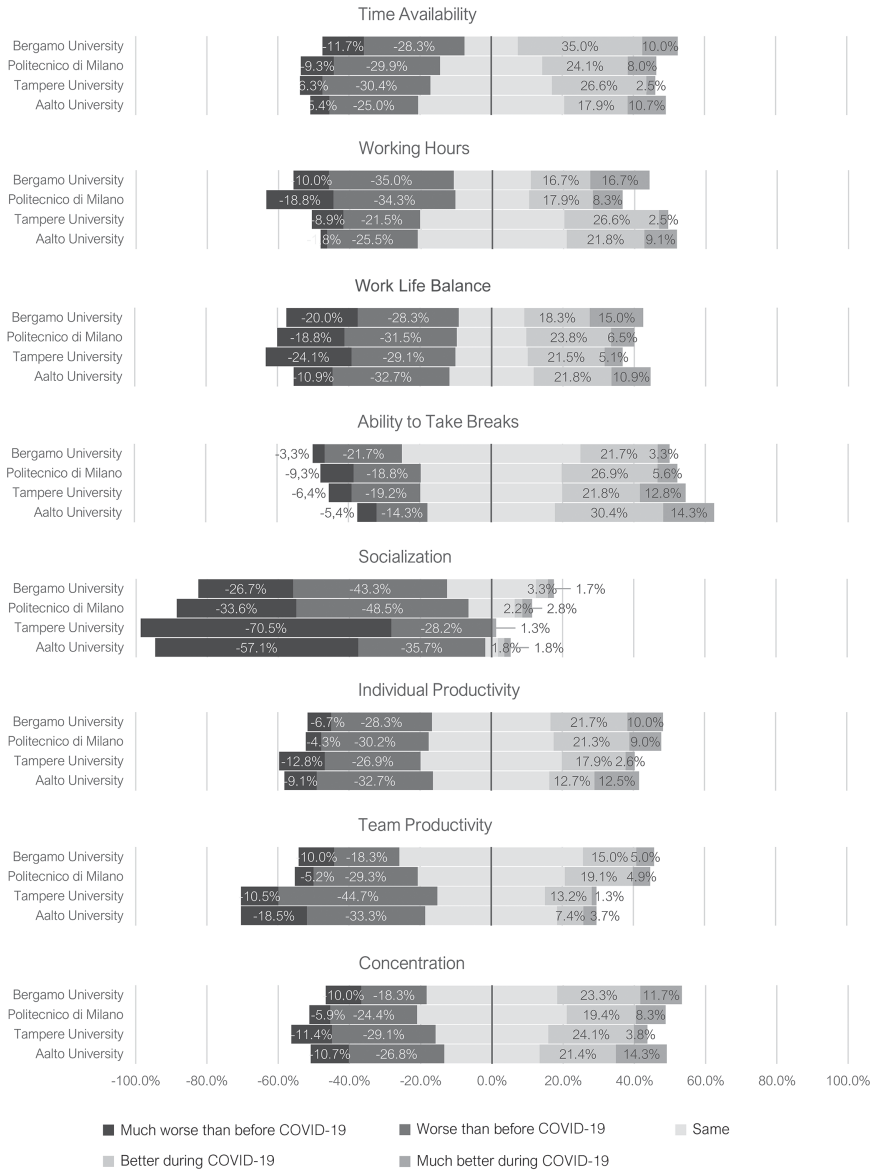
Figure 15.2 Respondents' work conditions and outcomes prior to and during the COVID–19 pandemic.

Source: Authors.

worse than prior to COVID-19, though some respondents also reported being more productive. This was also strongly reflected in the open responses. The main reasons identified for the lack of productivity were the additional time needed for remote teaching preparations and the lack of socialization with colleagues (e.g. not being able to exchange ideas with colleagues). Other factors also affecting productivity referred to the psychological discomfort caused by, for example, isolation and lack of a social environment and not being able to extend the workday because the workspace was shared with family members. Team productivity, especially in Finland, was considered even more affected than individual productivity during the pandemic, despite virtual environment tools (such as Teams, Zoom). Likewise, opportunities for socialization among colleagues were found to be much worse during COVID-19, especially for the Finnish respondents. This might indicate the importance of co-presence with colleagues.

Conclusions and future developments

This chapter contributed to the discussions about future research environments by analyzing work locations, work spaces, and work outcomes throughout the COVID-19 pandemic.

The study has several implications for the potential diversification of work locations for research. Despite the flexibility for scholars to decide where and when to work, a more flexible work style was only adopted in earnest during the COVID-19 period. The pandemic turned the focus to home as a real new workplace, including for academics. On the one hand, the home has the potential to provide the needed privacy and increased individual productivity, especially for academics working in shared or open-plan offices at the university, as highlighted by several respondents. On the other hand, the results also indicate that domestic privacy is enabled only/mainly if the employee is working alone at home. Otherwise, when family members are present, privacy is limited if there is a lack of a dedicated workspace at home. Although several respondents preferred their homes to other spaces, they still generally complained about their WFH conditions (especially in terms of ergonomic comfort and lack of appropriate ICT facilities and, in some cases, storage) and outcomes (e.g. socialization and team productivity). There is clearly a need for future studies to create a better understanding about the connection between home and work and the conditions for home working, including regional and national comparisons. While some open answers in this study captured the need for home modifications to enable WFH, actual knowledge on how hybrid work-living environments can best be designed is limited.

Furthermore, WFH issues might be mitigated through an increase in the use of third working spaces. If the freedom of knowledge workers has created an expansion of third spaces as workplaces, the academics surveyed still disregarded this option both before and during COVID-19 and worked mostly from home

instead. More research is necessary to understand the reasons why such spaces are still underused by academics (beyond COVID-19 safety reasons). Nevertheless, there might be room for coworking spaces, libraries, and other third spaces to host more research work once shared spaces are considered safe again. This perspective is especially relevant when considering that socialization and collaborative work, which are key to fruitful research activities, appear to have suffered the most from home-working. Therefore, spaces where community and social interactions are the core business, such as coworking spaces, are likely to gain further attention in the future. Moreover, these spaces can offer an array of services to support workers in neighbourhoods near their homes, including childcare and the provision of well-equipped facilities for those who do not have a dedicated space at home and find their campus spaces lacking key features to foster their productivity. Coworking spaces may offer cross–fertilization with other professionals, which supports the generation of ideas and business opportunities.

This study also highlights the need for university campuses to become more attractive. It has been said that work is not a place to go to but something one does, potentially anywhere. More research is required to explain why smaller cities (especially Bergamo in our sample) seemed to better accommodate more home workers than larger cities. In this study, no radical difference emerged between smaller and larger cities for any of the factors analyzed. In general, scholars seem to have gotten used to WFH by now and, given the freedom of choice and a 'cabin fever' effect, it might be challenging to re-establish strong academic communities and a sense of belonging on campus. Therefore, university spaces must offer something unique that academic staff cannot find anywhere else. For instance, the open layout of some university offices suggests a lack of private areas suitable for individual productivity (that homes might better enable). At the same time, open plan layouts foster collaborative productivity and socialization, which was found to be negatively affected during WFH. Perhaps a more flexible future of work may provide positive implications for work–life balance. Work is expected to permeate potentially every location of one's life, yet the opportunity to have a dedicated and activity-based space for work in different locations may help in articulating more sustainable working hours.

Overall, the correct balance of collaborative and individual spaces will need to be created in university spaces, but the correct balance between on–campus and off-campus locations for work will also be increasingly important. Future developments for spaces for academic research might include their hybridization with other building types, for example mixed-use residential and commercial spaces.

Notes

1 An assumption from *coworker.com* data, which registers 44 CSs in Finland in May 2021 but usually records only a fourth to half of the existing spaces (proxy verified from other countries like Italy and Norway).

2 We considered the following 14 items: (i) internet connection quality; (ii) availability of space to take a break; (iii) availability of team working spaces (e.g. meetings/calls, etc.); (iv) ability to organize the space (e.g. personalization); (v) lack of distractions; (vi) privacy; (vii) availability of individual space; (viii) availability of storage for own items/work items; (ix) inspiration given by the environment (e.g. atmosphere, colours); (x) functionality of the workspace (layout); (xi) ergonomics of the workstation (e.g. desk); (xii) indoor environmental quality (e.g. temperature, air quality, light, etc.); (xiii) aesthetics; (xiv) outside view.

3 It is interesting to note that in the open answers, the respondents also clearly expressed the importance of co-presence for their solo research activities. While engaged in individual work, they seek the support of peers by occasionally exchanging ideas, for example.

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16 Women empowering women? Challenges and opportunities of new female-oriented workplaces in the post-pandemic era

Mina Akhavan, Anita Fuzi, and Vieri Calogero

Introduction

Motivation

The COVID-19 pandemic has profoundly changed the ways in which we live and work. While the aftermath of this ongoing situation has affected the work–life balance of workers in general, it seems that women are more vulnerable to the immediate negative effects of this pandemic. The issue of changing work-family balance had already caught the attention of scholars before the pandemic. In this respect, studies have discussed the blurring of work-life boundaries, mainly due to factors such as longer working hours, part-time work, increasing number of working women and single parents, technological advances, the use of multiple ICTs at work (see, for example, Kossek & Michel, 2010; Kossek & Ozeki, 1998), and the phenomenon of flexwork,[1] with both positive and negative consequences (Rice, 2017). While the digital transformation has affected individuals' well-being and quality of life both positively and negatively, major gender gaps have emerged in some domains such as work-life balance, social interaction, and digital security (Samek Lodovici et al., 2021).

Periodic lockdowns and restrictions have led to a massive shift to working from home, which, together with school closures, has put an additional burden on families. For example, the findings of a study in Italy show that although the additional workload imposed by the current pandemic falls on women, it seems that childcare activities are shared relatively equally among couples compared to housework; achieving a work-life balance is more challenging for working women with children aged 0–5 (Del Boca et al., 2020). Though massive lockdowns are coming to an end after the first and second waves of the pandemic, many companies across various sectors still prefer to continue remote working, or working from anywhere, even if partially. The question, however, is whether the home office is a preferred location for remote workers in the long term.

A pre-COVID study of people working at home in the UK showed a positive correlation between working at home and satisfaction with leisure

time for both men and women. Working from home for freelancers and self-employed workers, however, is negatively correlated with subjective well-being. Moreover, working at home and job satisfaction are positively correlated for employees (Reuschke, 2019). Two worldwide surveys by *Buffer. com*[2] conducted during the pandemic (in 2020 and 2021) showed that the 'biggest struggles with working remotely' are mainly tied to factors such as difficulties with collaboration and communication, loneliness, not being able to unplug, and *distractions at home*. Furthermore, the largest benefits reported were mainly the *ability to have a flexible schedule and flexibility to work from any location*, among other aspects, as shown in Figure 16.1.

Home offices undoubtedly have their benefits, yet it seems that they are not the best workplace for everyone, also considering the difficulties that arose from lockdown-enforced working at home for couples competing for the same workspace and resources, and adding childcare and homeschooling for some families (Reuschke & Felstead, 2020). An alternative solution, therefore, may be coworking spaces (CSs) that are preferably close to home to reduce the commuting time and which provide basic services such as childcare for female
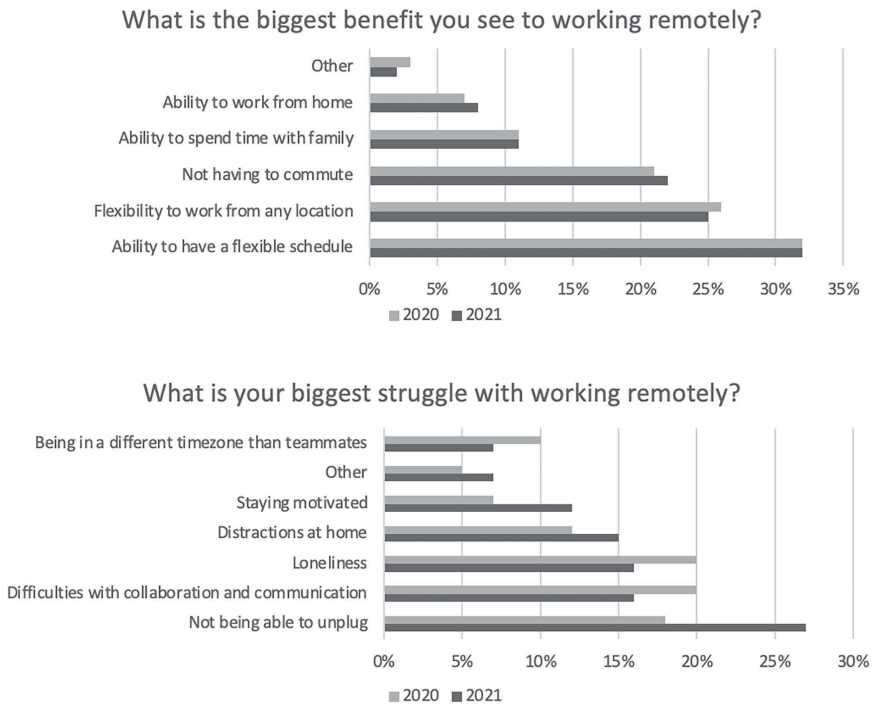
Figure 16.1 The biggest benefits and struggles of remote working during the pandemic (2020 and 2021).

Source: Prepared by the authors using data from *Buffer* (2020, 2021).

workers and families. Such CSs can be inserted in the innovative and sustainable planning schemes of the 15-minute city, which are already being promoted by some European cities, for example, in Paris and Milan (see Milano Collabora project, Mariotti et al., 2021).

In this context, the focus of this study falls on specialized vertical CSs founded and managed by women with a specific focus on female workers and entrepreneurs based in Europe. The reason for this selection is the gap in the growing literature on new working spaces. In fact, although academic attention to this topic has grown quickly in recent years, little is known about gender issues and the situation of female workers and entrepreneurs. This study therefore follows a twofold aim: (i) to explore the rise of women-oriented CSs and the challenges and opportunities faced by their female managers; and (ii) to present the preliminary findings of an ongoing empirical study carried out during the COVID-19 pandemic. We discuss the facilities offered by these CSs to improve aspects such as work-life balance, especially during the pandemic. The empirical findings of this study intend to fill the gap in the literature on coworking, providing knowledge that could help to design strategies and policies for the future of new working spaces from a gender perspective.

Methods and data collection

A comprehensive literature review about female workers during the pandemic who have been affected by the increase in remote working and the origins of women-owned CSs was carried out to provide a basis for the empirical research.

Desk research was then conducted to scan the space and select some of the most relevant aspects for further analysis. We collected primary data by means of semi-structured online interviews (in the first half of 2021). A total of eight interviews were conducted:

- Six interviews with the following CSs: QF11 (Milan, Italy), Co-Stanza (Florence, Italy), Ada Coworking (Poissy, France), Tadah (Zurich, Switzerland), Loffice (Budapest, Hungary), and Town Square Spaces (Wales, UK).
- Two interviews with Impact Hub global managers (based in Germany and Greece), providing an extreme case of a worldwide network of spaces.

All interviewees were asked similar questions and the interview transcripts were then analyzed with a focus on the following questions:

- What were the original ideas and (business) strategies for opening your CS?
- What were your preferred factors for the location of your CS?
- What are your specific services to support female workers and entrepreneurs?
- So far, what are the pandemic's effects on your space and your coworkers?
- For you, what are the future perspectives for female-oriented spaces?

Background studies: remote working and female-oriented coworking spaces

The pandemic and the permanent increase in remote working

Although the phenomena of remote working (other similar concepts are known as teleworking) and home offices are not new, it is evident that the COVID-19 pandemic has led to a sharp rise in the number of people working at home. While it is reported that about 25% of employment in European countries belongs to teleworking sectors as a whole, around 40% of current EU workers began teleworking full time in recent months. In 2019, only 11.1% of EU employees were working from home 'usually' or 'sometimes', with more women teleworkers than men (11.6% and 10.6%, respectively; Eurofound, 2020). This can be explained by the already higher level of teleworking female-employing occupations, as discussed by Sostero et al. (2020), since they also confirm that potentially teleworking employment in the EU is higher for women than for men (45% compared to 30%).

Remote working may provide flexibility in time and space, reduce commuting times, improve work-life balance, and provide employment opportunities for women, especially for those in rural and peripheral areas, yet there is a need for facilities such as childcare, digital-skills training, access to affordable broadband, etc. In this respect, a recent survey showed a broad gender difference in the perception of the positive effects of remote working on work-life balance, with men being more optimistic (83.3%) than women (74.1%). However, a larger share of women (75.9 %) than men (59.4%) agree that remote working may increase work opportunities for women with child- or elder-care responsibilities (Samek Lodovici et al., 2021).

According to the *Living, working and COVID-19 e-survey* (Eurofound, 2020), more female respondents than male respondents reported difficulties combining work and private life and struggled to manage their work-life balance. In fact, the gender gap in terms of childcare and housework becomes more evident for those with children under 12: women spent about 1.8 times more on childcare and 1.5 times more on housework. Moreover, young women and self-employed respondents were most likely to lose their jobs. In general during the pandemic, financial vulnerability has been higher among women than men.

Gender inequality, women workers, and female entrepreneurs

There is already a large body of literature on gender equality and gender gaps (see, for example, Sholevar & Harris, 2020; Santos & Klasen, 2021). In general, the literature highlights that gender inequality issues associated with economic development can be categorized as values and religion, cultural restrictions and roles, legal and inheritance laws and practices, labour market access, education, gender-specific market failures in finance, power in decision making, etc. (Mikkola, 2005). Moreover, studies on women starting and/or running their

own businesses (including self-employed women) and so-called female entre-preneurship have only appeared since the 1980s, which may be explained by the fact that in most countries, women were not considered a distinct group of business owners prior to this period (Brush, 1998). Kelly et al. (2020) discuss the fact that female entrepreneurs face many challenges and biases that should be considered seriously in order to develop an inclusive society and a fully functioning economic system, firstly by providing women with access to lead-ership and decision-making processes.

The female employment rate in the Western world has been increasing steadily. In Europe, the employment rate for women between the ages of 20 and 64 was 67% in 2018, which was 5 percentage points higher than in 2008. The employment rate for women is still less than men of the same age, while the female unemployment rate is higher than for males. Moreover, women are more likely to work part time: 30% of working women work part time, while this rate is only 8% for men[3] (Eurostat, 2020a, 2020b). The share of female managers in Europe differs across countries. Iceland and Poland, with around 42%, have the highest rates, while the Netherlands, Denmark, Italy, and Greece have the lowest share (25–26%).[4] As for female-founded and female-led startups, the data show a considerable increase, but it still accounts for a small fraction of all startups worldwide: 20% in 2019, for a 10% increase in 10 years.[5] Central and Eastern Europe have the largest number of female tech startup founders in the EU.[6]

Coworking model and female-oriented coworking spaces

CSs are proliferating rapidly all around the world. They are shared, flex-ible, and relatively affordable working environments that support innovation and creativity; places where independent workers and teleworkers can benefit from opportunities for networking, social interaction, knowledge exchange, and community making (Akhavan & Mariotti, 2018; Fuzi et al., 2014). While the coworking industry grew at a slower pace in 2020, it is predicted that by 2024, more than 40,000 CSs will be operating worldwide, hosting nearly 5 million people[7] who are predominantly freelancers, but also self-employed entrepreneurs and employees at small to large enterprises. In academia, the phenomenon of third places for work and new workplaces has been the sub-ject of many studies in recent years. More than 15 years after the foundation of the first CS in the USA, research on coworking has been conducted by scholars from various disciplines (see Akhavan, 2021). However, no particular attention has yet been given to gender issues in new spaces for work, and our knowledge about female-oriented CSs is therefore very limited.

Based on the data, CSs are becoming more and more attractive to female workers. As reported by *Deskmag* (2019), the share of female members has risen from 33% in 2012 to above 51% in 2019 (Figure 16.2). Nevertheless, women tend to use such spaces less frequently than men across all weekdays, which may explain why the estimated share of women users and operators of CSs is
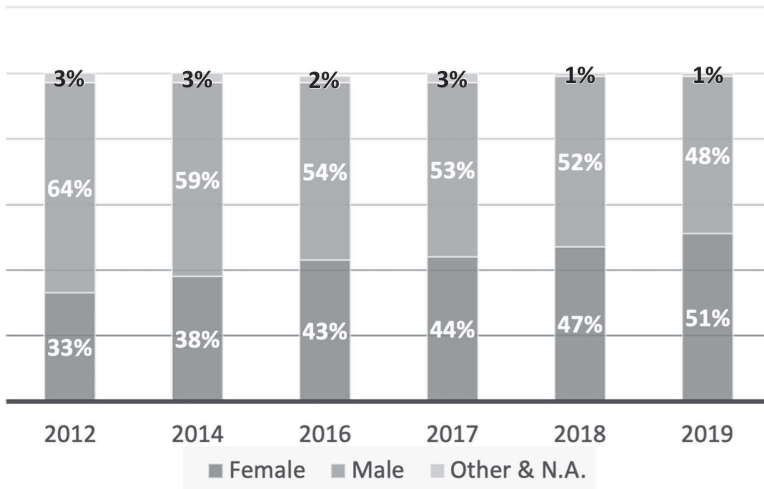
Figure 16.2 Share of female and male members of coworking spaces worldwide (2012–2019).

Source: Prepared by the author, data from *Deskmag*, 2019 Global Coworking Survey.

still less than 40% (Foertsch, 2020). Although the numbers are growing towards a more gender-balanced space, in 2018, only 34% of CS owners or founders worldwide were women; around half of these founders were in their thirties.[8]

One specialized vertical CS has recently emerged that intends to attract (mainly and not exclusively) women workers, female entrepreneurs, and young mothers in response to the specific needs of this group of users. We refer to this category as *female-oriented CSs*. The pioneering Hera Hub, which opened in San Diego in 2011, was one of the first women-focused CSs aimed at giving women entrepreneurs, freelancers, and startups a workplace to connect and collaborate. Since then, such spaces have flourished in North America and also in Europe and Asia. Although it is not the focus of this study, some social movements such as 'Me Too (#metoo)[9]' have drawn media attention to whether female-only CSs may be a possible solution to overcome the fear of women who have experienced sexual harassment in the workplace. The Wing, with several locations in New York, is one controversial example (North & Lieber, 2019).

There is scant literature on female-oriented CSs. Kelly et al. (2020) explore the case of Hera Hub and its eight locations in the US with the application of Shine Theory ('I don't shine if you don't shine'), which is based on the core philosophy and technology of women empowering women. Accordingly, the authors discuss the level of female entrepreneurial development by means of success of innovations such as collaborative licensing and benefit corporations. Another recent survey on CSs in the United States by Sargent et al. (2021) showed that organizational logic in CSs may mitigate the challenges of female

entrepreneurs, such as exclusion from men's networks, since women have less access to important resources such as business opportunities, knowledge, and networking channels with respect to their male counterparts. The study also highlights the importance of a more balanced 'gender composition' within CSs, which may encourage more diversity and inclusion.

Female-focused CSs have undoubtedly grown in popularity in the US, yet there is also evidence of the moderate proliferation of female-oriented CSs in Europe. The French CEO and founder of Ada Coworking, Poussier (2020), narrates her journey of exploring the dynamics behind 30 women-focused CSs in 22 European cities. She affirms that there is no single European model, though such CSs can be classified into six main types of spaces: (i) parent friendly, (ii) clubs, (iii) women first, (iv) women only, (v) work collectives, and (vi) diversity promoters.

Empirical studies

The case of Impact Hub

Impact Hub (IH) is a network of CSs founded in London in 2005 with 103 workspaces in different cities and more than 16,000 members across 5 continents. IH is highly concentrated in Europe (42%), followed by Latin America (19%), the United States and Canada (15%), Asia and the Pacific (13%) and, finally, Africa and the Middle East (12%). The goal of this network is to encourage the collaborative community of entrepreneurs and those aiming to generate a positive impact on the planet. The United Nations acknowledges IH as a driver of community engagement, helping to expand efforts to address the UN's Sustainable Development Goals via entrepreneurial and innovative solutions. The Annual Internal Survey is conducted each year to measure the impact of IH, and in 2018, 3,078 members from 77 local hubs participated, 54% of whom were male and 45% female. Regional Reports show that there are significant differences in the characteristics of memberships on a regional level. Memberships are very gender-balanced in Asia/Pacific (50.5% male) and Europe (52.5%). Sixty-five percent are male in Latin America, while North America is the only region showing a prevalence of females. With regard to gender equality among IH managers and founders (makers), the latest available data was published in the Maker Survey Report of 2018. It shows that the percentage of women in leadership positions was 54%, while the percentage of female makers was 63%. However, this data is not fully reliable since it comes from a sample of 629 makers of which 63.3% were women.

In May 2021, we conducted interviews with the female managers of IH Berlin and the EU Programs Lead and Cluster Coordinator to better understand female dynamics at IH, especially during the pandemic. They both confirmed that the work environment at Impact Hub is already female dominated, while there is no written or specific tendency to attract more women, and

no particular female support services are offered. However, when it comes to managers, they are still mostly men.

Female–oriented coworking spaces in Europe

In this section, we present the results of our semi-structured interviews (conducted between April and May 2021) with the managers with several CSs in Italy (Milan and Florence), France (Poissy), Switzerland (Zurich), Hungary (Budapest), and Wales (UK). Almost all CSs were founded and are managed by women. Following the central aim of this study, the following topics are explored in each case: (i) initial key ideas and strategies, (ii) location, (iii) female-oriented services, (iv) effects of the COVID pandemic, and (v) future perspectives.

QF11 (Milan, Italy)

The only CS with childcare in Milan, QF11, was founded in 2014 by two women entrepreneurs who met each other in their prenatal classes; a male manager was later added to the team. Erika Martinazzoli (visual designer) and Raffaella Celi (psychologist) endeavoured to develop a multifunctional and flexible workplace where they could develop professionally and fulfil the responsibilities of motherhood, i.e. balance work and family. The CS is located in a lively central, gentrified neighbourhood, on the ground floor of a residential complex (200 m²: kitchen, one open-office space, two smaller offices). Its purpose is to offer a flexible work environment for new mothers and/or fathers to work peacefully. The childcare service (with maximum 9 children 3–36 months) comes at an extra cost, but there is a discount for coworkers. This CS is well-inserted within the neighbourhood. All coworkers live in the neighbourhood or nearby; non-users from the neighbourhood also have access to some services such as childcare. Another important service offered by the CS is *spazio equilibrio* (balance space), which provides mental support services. During the pandemic, there has been a growing demand for small private office spaces and QF11 has expanded and added another floor (rented).

Co-Stanza (Florence, Italy)

The first CS with childcare in Florence, Co-Stanza, was opened in 2016 by three women with different professional backgrounds who had already experienced informal coworking. Its core aim is to promote social-cultural projects. Maria, one of the CEOs, underlined that 'young mothers in Italy are still struggling to balance their careers and duties as mothers; we therefore provide flexibility in our services that can help them build a work-life balance'. Some women coworkers had previously worked at companies and were forced to leave their jobs when they became pregnant; or they were freelancers working

from home. Maria continues, 'We offer several services such as company welfare (*welfare aziendale*), and work-life balance solutions for women'. However, this space does not only target women, but also men and couples who prefer to share a desk. Although Co-Stanza is not a neighbourhood CS, the coworkers are from nearby neighbourhoods.

Ada Coworking (Poissy, France)

A recently founded women–only CS in Poissy, France, Ada Coworking is the first step in the 'Co-working Féminin' project launched by Ivanne Poussier, the author of *Sisters in Arms: Women in Search of Inclusive Coworking*, which narrates her visit to 22 female-focused CSs in Europe. The aim is to focus on women's needs in the workplace. According to her interview with female workers, women in rural areas are more motivated, yet prefer not to commute more than 15–20 minutes. Unlike many other examples of female-oriented CSs in Europe, Ada Coworking deliberately does not offer childcare, since for Ivanne this is a child-friendly CS, but the French prefer not to have childcare at CSs. As for the effects of the pandemic, she asserts that 'for female remote workers at home, with household duties, taking care of kids or the elderly, this is the best time to open a CS, especially in peripheral and rural areas'.

Tadah (Zurich, Switzerland)

Tadah is Switzerland's first CS with a childcare facility. It was opened in October 2019 in Zurich by four working mothers. As Sarah Steiner, one of the cofounders explained, their own challenges with the compatibility of work and family life inspired them initially to open a coworking space only for mothers. They later switched to a coworking space for parents, and Tadah now is a place 'where everybody can work and can have their kids taken care of'. At present, the Tadah community stands at 50–50 when it comes to the proportion of mothers and fathers in the coworking community. Besides running its own space, Tadah is currently working on implementing its first coworking and children's space in a corporate facility. The founders hope this space will be an eye-opening role model for other corporations. As Sarah adds, 'Corporations have to provide some solutions for working parents because this entire generation that is coming to the workforce is now purpose driven. They don't want to just work for a lot of money, they want to have their working life and family life. They don't want to have work-life balance. They want to have work life integration'.

Loffice (Budapest, Hungary)

Founded in 2009 by two sisters (Kata and Panni Klementz), Loffice introduced a new model of working in Hungary based on the sharing economy with the aim

of supporting and inspiring entrepreneurs, freelancers, and startups. Today, they run three coworking spaces in two countries (Budapest, Hungary, and Vienna, Austria). The two female founders opened their latest coworking complex during the pandemic in downtown Budapest in a seven-storey smart building. Although the initial idea was not a female-oriented space, special attention is reserved for women, and new mothers in particular: supporting women after maternity leave to re-enter the job market or start a business by learning how to use the new skills and competencies gained while raising their children at home and by supporting them in 're-finding themselves'. Moreover, Loffice organizes workshops for women in leadership. Kata added, 'Our aim with such workshops is to encourage women to take leadership positions. We want them to be actively involved in leadership, shaping our country and the entrepreneurial culture of Hungary'. Nevertheless, this space promotes openness and diversity; open culture, an open attitude, and equal treatment are the key values.

Town Square Spaces (Wales, UK)

Founded in 2017, Town Square Spaces is a B-corp initiative focusing on building community-focused CSs across the UK (with five locations) in areas that are underserved, 'where there is sometimes social deprivation or lots of different segmented communities', as underlined by Georgia Alston, community manager of Bognor Regis. Town Square Spaces is inclusive and has a mixed audience, even though they run women-focused events as well. 'Our women-only startup club is still one of the most popular. Our research shows that very often women like to do business with women and that's why it's got to be on our portfolio of courses. It's always the one that is oversubscribed', explains Mandy Weston, co-founder of Town Square Spaces. As for young mothers, there is an advanced support system in the UK which makes it easier for them to return to work or start their own businesses. One example is 30 hours of free childcare per week or early education support for children aged 3 and 4. With such a system in place, providing temporary childcare support at CSs, for instance during events, could be an option to consider in the future.

Table 16.1 summarizes some of the most interesting topics discussed with the managers of the six cases described. The topics are based on a selection of questions outlined in the introduction. All spaces have similar strategies and attract female workers and entrepreneurs because of their flexibility, professional environment, and support provided. All spaces are optimistic in general about the post-pandemic situation for specialized CSs for female teleworkers and home-based entrepreneurs.

Conclusion: women at coworking spaces as managers and coworkers

There is very little literature on female-oriented CSs, so we have little knowledge about the importance of such spaces for female workers and entrepreneurs. This study shed some light on this aspect. Based on our limited empirical

Table 16.1 Six examples of female-oriented CSs in Europe.

Coworking space	Initial key ideas and strategies	Location factors/ manager preferences	Female-supporting services	Effects of the pandemic	Future perspectives
QF11 (Milan, Italy)	CS + childcare facilities	Located in a central-gentrified neighborhood; accessibility to public transport and other urban amenities	Childcare facilities, psychological services'	Increasing demand for small-private office, therefore the CS was expanded in 2020	The managers are optimistic about the future of CSs in the post-pandemic era, while they believe that more female-oriented spaces are needed in Milan (and Italy in general).
Co-Stanza (Florence, Italy)	CS + childcare facilities	Central location; accessible by public transport and private car	Childcare facilities, well-being courses	Reduced number of desks; raised awareness about CSs teleworkers at home	Companies are considering hybrid-working and may consider seriously CSs as an alternative.
Ada Coworking (Poissy, France)	Women-only CS	Small town (peripheral to Paris); accessible by public transport		More pressure has been put on women workers with household duties	There is potential for CSs in peripheral and rural areas.
Tadah (Zurich, Switzerland	CS + childcare facilities	Outer district of Zurich in a newly developed neighbourhood; rental price and close proximity to public transportation	Networking events; coaching sessions and community events; educational trainings	Forced to close due to national lockdown but now people are fed up to be at home and they really enjoy coming to the CS	Companies must create some incentives to bring back people to the offices: the so-called corpoworking (spaces for interaction and creativity) will have a great future.

Table 16.1 (Continued)

Coworking space	Initial key ideas and strategies	Location factors/ manager preferences	Female-supporting services	Effects of the pandemic	Future perspectives
Loffice (Budapest, Hungary)	A new workplace model based on sharing economy to support and inspire entrepreneurs, freelancers, and startups	Central locations; close proximity to key transportation and to venture capitalists, startup communities, corporate HQs	Series of events called Coworkid: to support women with children, to harmonize their career goals with the; temporary childcare facility	All events are made online. Coworking and event area had to be split into private offices and rent out to companies.	CSs are changing; people are tired of being isolated and want to return to CSs and offices to be able to socialize, network, and connect to each other again; this pandemic encouraged more people to start their own businesses.
Town Square Spaces (Wales, UK)	Community-focused CS in socially deprived areas	Underserved rural places and outskirts of cities that are underserved	Holistic support, well-being focused support; different taster courses and workshops, from physical exercise to meditation	Rapid growth in the past 18 months; membership was already designed in a flexible way so people could access spaces a couple of times during a typical work week.	Coworking will come to the forefront; people want to work more local, near their homes and want less commuting; people also want more flexibility and flexible membership options in CSs.

Source: Prepared by the authors.

findings, most female-oriented CSs in Europe do not exclude men. Global networks of coworking spaces such as Impact Hub seem to already have a good base for female workers, but still suffer from gender inequality with respect to female managers. As highlighted by the founders of Town Square Spaces in the UK, 'Women need other women around, and while sisterhoods could be extremely motivational, if women want to be part of this world, whether it's running a business or be in a business, they need to learn to operate within an inclusive environment. Women-only initiatives are great, and there always are women-only clubs and networks but coworking spaces are about inclusiveness, and those running it have to make sure that their focus is around everyone, an established level of support must be present'.

The type of these spaces (coworking + childcare, women only, etc.) is shaped by welfare policies (for example maternity leave, public support for families, public childcare services, etc.) and also cultural backgrounds regarding gender issues. Nevertheless, all female-oriented CSs can provide support for female entrepreneurship and help empower women to enter the world of business, which is still dominated by men. As also discussed by Rodríguez-Pose and Tselios (2015), promoting women's participation in the workforce and granting higher access to work is a source of growth. This follows the Europe 2020 strategy for smart, sustainable, and inclusive growth, which insists on policies to promote gender equality by increasing labour force participation, thereby adding to growth and social inclusion (European Commission, 2010, p. 17).

Notes

1 Flexwork or work flexibility includes part-time jobs, telecommuting/flexplace, job-sharing, compressed work weeks, paid personal leave, sick leave, and childcare (Eaton, 2003).
2 Details about the two surveys – '*The 2020 State of Remote Work*' and '*The 2021 State of Remote Work*' – are respectively available at: https://lp.buffer.com/state-of-remote-work-2020 and https://lp.buffer.com/2021-state-of-remote-work.
3 Data drawn from Eurostat *Women's employment in the EU*, available at: https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20200306-1
4 Data drawn, available at: https://stats.oecd.org/index.aspx?queryid=54751#
5 Data drawn, available at: www.visualcapitalist.com/on-the-rise-2019-set-a-record-for-new-female-led-unicorns/
6 Data drawn, available at: www.statista.com/statistics/863019/female-founders-europe-region/
7 Data drawn, available at: www.coworkingresources.org/blog/key-figures-coworking-growth
8 Data drawn from, Statista.com, Share of female owners or founders of coworking spaces worldwide from 2012 to 2018.
9 The 'Me Too movement' was originally founded in 2006, yet became known worldwide in 2017, both online and in the mainstream.

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17 Work–life balance services in coworking spaces and the impact of COVID–19

Lenka Smékalová, Jana Matošková, Eva Belvončíková, Judit Kálmán, and Zuzana Crhová

Introduction

Balancing work and personal life was already an issue of some importance to many freelancers, micro-entrepreneurs, and employees long before the COVID-19 pandemic emerged. Nevertheless, as the pandemic has progressed, problems with balancing work and private life have become even more pressing for a variety of professions across the globe. Increased working from home and pressures on essential workers due to the pandemic highlight the need to establish practices supporting a work-life balance in modern society. Studies into work-life balance already preceded the pandemic and garnered much interest in popular literature. For many workers, the pandemic brought a general change to the work-life balance and a shift in space where it is being pursued. Even before the pandemic, the second place (office) had shifted markedly to other places, including the first place (home) and different types of places combining the characteristics of a second and third place, a social gathering place, such as coworking spaces (Morisson, 2019). The pandemic forced increased concentrations of people and activities into the home. It highlighted that home is, in some instances, an insufficient environment for work activities, thus prompting yet more workers and employers to think about other places and encourage their spread.

In light of these changes in workplaces and the strain the pandemic has placed on the work-life balance, this chapter discusses work-life balance issues specifically within new workplaces, namely coworking spaces. Coworking spaces (CSs) present a blend of second and third places (Morisson, 2019), well equipped in both equipment and increased social contact compared to working at home. While there is abundant literature on both CSs and work-life balance, there is a gap when the topics are combined, which few authors have covered thus far (e.g. Orel, 2019; Robelski et al., 2019). This chapter therefore aims to broaden the understanding of how CSs may contribute to balancing work and private life, specifically describing which services these spaces offer to improve the work-life balance and how the COVID-19 pandemic has impacted these services.

The chapter is structured as follows. The second section introduces the research on work-life balance, CSs, and a combination thereof, while the third section describes the selection of respondents, data collection, and analysis methods. The fourth section presents and discusses the findings. The final section summarizes the findings and offers suggestions for further research.

Theoretical background

Like other topics, work-life balance is not clearly defined in the academic literature. An overview by Guest (2002) of the theory on the topic offers five perspectives of the interaction between work and non-work activities. These range from total non-influence to spill-over influences, compensation of dissatisfaction with one type of activity by the other type, facilitation of success across work and non-work activities, and, finally, a conflict model between these activities. More recently, Sirgy and Lee (2018) reduced the number of perspectives to role engagement and minimizing conflict between work and non-work activities. However, other views offered by Guest (2002) also appear in their work.

The non-work part of the definition is frequently understood to be family-related activities. Thus, 'work-family balance' is an often-used term that overshadows the individual. In this chapter, we understand work-life balance as resolving the conflict between the various social roles a person takes on in work and private life or resolving the conflict between work and non-work activities (Greenhaus & Beutell, 1985; Sirgy & Lee, 2018). The discourse on work-life balance in the academic literature focuses on the specific roles people play, their conflict, overlap, overall life satisfaction, role of gender, age, education, profession, or mode and place of work.

The COVID-19 pandemic has interfered with both work and non-work activities. The severe disruption of usual living, work, and study practices has mainly related to national lockdowns. For white-collar jobs, the pandemic often resulted in a shift from office work to working from home. Other professions such as teachers or healthcare professionals intensified their work either in the workplace or at home. In some sectors, workers were furloughed, or their workload changed, while other groups saw little disruption to work activities. With regard to work-life balance, various situations have had various outcomes. People shifting from office work to the home office reported both positive (Ipsen et al., 2021) and negative (Palumbo, 2020) influences on work-life balance. More intense work activities resulted in a negative impact (Kannampallil et al., 2020), and, regardless of mode or place of work, the overall disruption to everyday life weighed heavily on families with young children (Schieman et al., 2021; Spinelli et al., 2020), primarily due to school closures.

The pandemic will undoubtedly bring many changes to traditional work organization, since many workers have abandoned the office (second place)

and still work from home (first place) (Manzini Ceinar & Mariotti, 2021). Dissatisfaction with such arrangements combined with the desertion of traditional offices by employers presents an opportunity for an even wider spread of other places, namely CSs. The number of these new workspaces was increasing rapidly worldwide before the pandemic, including in the Central and Eastern European countries discussed in this chapter. CSs offer many services for coworkers. The various office, meeting, and recreational areas, frequently with non–stop access, are essential, with different layouts, number of rooms and desks, and Internet connection. Less common services include accessibility for disabled people, parking spaces, child- and animal-friendly facilities, or the provision of childcare services (Deskmag, 2019).

Some of these services may contribute to an improved work-life balance for users – coworkers – even if not initially introduced with that purpose. The work-life balance in coworking is generally well perceived due to the perception of flexibility, community, or sense of belonging (Ivaldi et al., 2018), more than in other types of workplaces, including home office (Robelski et al., 2019). Orel (2019) emphasizes the advantages of CSs in building a supportive community of like-minded people in similar life situations, limiting isolation, and decreasing interruptions for coworkers. In this research, we focus on business hours and location as indicators of flexibility, cooperation of the CS with other organizations as an indicator of community building, and equipment, rooms, and services offered as indicators of environment surpassing the home office.

Although the ranks of people working at CSs are swelling, few studies have examined how the CSs may influence essential aspects of the work-life balance. The purpose is to fill this research gap by framing it with the following questions without proposing specific hypotheses:

1   *Which elements of CSs support the work-life balance of the coworkers?*
2   *What influences the offer of these services?*
3   *How did the COVID-19 pandemic influence the services offered for the work-life balance of coworkers?*

Methods

The data for this chapter were collected between March and May 2021 using online questionnaires and interviews. With prompts based on a literature search, other surveys conducted internationally and containing similar questions served as inspiration for the research and for future comparison across sectors and countries.

The interviews were designed to uncover an individual's private social world and gain insight into the subjects' stories and experience. They were semi-structured to enable flexibility and touch upon established topics leading to the set of questions. The questionnaires were completed by the managers,

owners, and employees of CSs via email or by the interviewers during the interview. The questionnaires mirrored the interviews with regard to the topics.

Both methods were conducted via purposive sampling. This means that only CSs in the capital cities Bratislava, Budapest, and Prague were included in the sample. Maximum variation within the sample was applied, while only independently operated CSs were asked to participate. The list of CSs in capital cities was derived from previous desk research for all three countries. A standard procedure for interviews with several steps was prepared while respecting the GDPR in the three countries and common scientific guidelines.

The interviews were conducted via communication platforms/applications, mostly MS Teams, Zoom, or Google meet. Respondents were asked to fill in questionnaires as well. Field notes were obtained from most of the interviews, although five interviews were recorded and transcribed using a selective protocol. Transcription was checked through repeated listening. The questionnaires formed part of the interviews or were prepared in MS Forms and sent via email to CSs that were inactive on social platforms. They were used as a text document for qualitative data analysis, not for quantitative evaluation.

The potential pool of respondents at the beginning of the pandemic from March to May 2020 consisted of 31 independently run CSs in Budapest (Hungary), 41 in Prague (Czech Republic), and 12 in Bratislava (Slovakia).

Twenty-seven CSs were ultimately involved: 11 from the Czech Republic, 10 from Hungary, and 6 from Slovakia. Except for nine CSs that completed only the questionnaire and four that took part only in the interview with transcript, the others participated in both the questionnaire and the interview. Therefore, in most cases, two documents are available for each CS. The oldest CS was established in 2009 and the three youngest CSs were established in 2020. The majority of CSs examined were business units. Participating CSs reported different sizes; at least two were very small (fewer than 10 coworkers), ten had between 10 and 49 coworkers, seven had 50 or more coworkers, and the rest were unknown.

With regard to the respondents, sixteen were women. Three were younger than 25, twelve were between 30 and 39, and the rest were 40 or older. Seventy-nine percent of participants reported having higher education. Nineteen percent of participants had worked at the CS for less than two years and 52% between two and five years. Sixty-three percent of participants owned the CS. To ensure participants' anonymity, they are referred to as RXY, where X and Y represent numbers based on country and number of interview/ questionnaires.

This chapter is based on content analysis of chosen relevant data segments. The data obtained from both questionnaires and interviews were coded using a hybrid-coding approach while combining inductive and deductive approaches (Swain, 2018; Fereday & Muir-Cochrane, 2006). Deductive

coding was used in the initial identification of known topics and inductive coding with new codes was used when sifting through the data. Manual line-by-line coding and hierarchical framing were applied. To choose qualitative data, we used both structural coding in the case of research questions or topics and descriptive coding to summarize extracts with a single word or noun. Codes were grouped into categories relevant to research questions according to similarities in thematic contribution. Axial coding to find relationships and links between earlier rounds of coding was also applied. Afterwards, the codes and categories were re-examined, with some categories merging, others splitting, or new ones appearing. The authors used Atlas.ti software for coding and Microsoft Excel to summarize the participants' characteristics. Co-occurrence tools were used. The co-occurrence frequency counts co-occurrence of 'events', and the c-coefficient indicates the strength of the relation between two codes (similar to a correlation coefficient). The c-coefficient is calculated as follows:

$$c = n12/(n1+n2)–n12$$

where $n12$ = co-occurrence of two codes, $c1$ and $c2$, for which $n1$ and $n2$ are their occurrence frequencies.

To present services offered by the CSs, a visual representation from Atlas.ti software was used to code services into thematically similar categories. The visual representation consists of code nodes that were automatically assigned a colour by Atlas.ti according to their groundedness (i.e. the number of associated quotations, first number in brackets) and density (i.e. the number of links to other codes, second number in brackets).

The techniques used to ensure the validity of the research were as follows. For data collection, the different size of coworking spaces, different positions of respondents with the CSs, and different age and gender were checked and combined in the sample. Interviews were conducted. Moreover, triangulation of the methods used – records of answers in the questionnaire and interviews – and triangulation of settings – CSs in three countries with similar historical and cultural backgrounds – were applied. To analyze and interpret the data, two researchers coded data separately and afterwards compared and discussed their results. The final categories of services offered by CSs for coworkers to improve their work-life balance were discussed and agreed upon by three researchers.

Results

Services for the work–life balance of coworkers offered by CSs

The first research question in this chapter addresses the elements that CSs offer to support the work-life balance of their coworkers. The findings show that services, business hours, CS location, and equipment may be instrumental in

balancing people's work and private lives. All four concepts were related to the perceived benefits of working at a CS and labelled as 'better work-life balance'. For the participants, better work-life balance means, among other things, increased freedom and flexibility, reduced stress because they can concentrate on work, and the ability to separate work and private life.

The services offered by CSs for coworkers, which are the main focus of this chapter, are often available either free of charge or at a reduced price. These services can be divided into five categories according to thematic similarities. The first category, 'social events', may be understood as different types of cultural events (e.g. film clubs, dinner dances, concerts, theatre performances), events for coworkers' children (e.g. Saint Nicholas Day, Children's Day), charity events, swap events, or informal meetings of coworkers (after-work drinks, hobby courses, wedding or birth celebrations). It also includes other informal interactions such as joint breakfasts or trips. These activities seem to be closely related to community building in the CS.

The second category, 'training and development activities', includes public events for coworkers and the surrounding community, CS-wide events, and individual events aimed at professional or personal development or both. Personalized events (e.g. mentoring, solving a specific problem) may require payment. Some CSs also carry out information campaigns related to training and development activities, such as keeping healthy, yoga classes, and discussions with a psychologist.

The third category, labelled 'making work duties easier', also seems important. In some cases, such services only make job tasks more convenient or save time (e.g. personal assistants). In other cases, they are vital so that coworkers can concentrate on their work, such as babysitting services. With regard to babysitting, R53 (Hungary) mentioned that they offer babysitting at all events, a service that is provided in cooperation with a particular provider. R04 (Czech Republic) added that babysitting can improve the work-life balance when coworkers have time to work without children and also have time for their private lives in the afternoon.

Some CSs highlighted the casual environment with no strict rules, where people feel more at home, as one of their essential traits. This is different from working from home because coworkers are not surrounded by household duties, can concentrate on work, and are in face-to-face contact with other people. Some services offered by CSs seem to be related to this attribute; for example, the often-mentioned possibility of bringing pets to the CS, or drinks for free or at a reduced price. R05 (Czech Republic) believed that their café, part of the CS, can help coworkers improve their work-life balance. Business partners or family members may visit working coworkers in such an environment.

The fifth category of services, which concerns the provision of information to coworkers, seems to be more operational. Interestingly, the information contains more than basic facts about the services offered by CSs, or when and
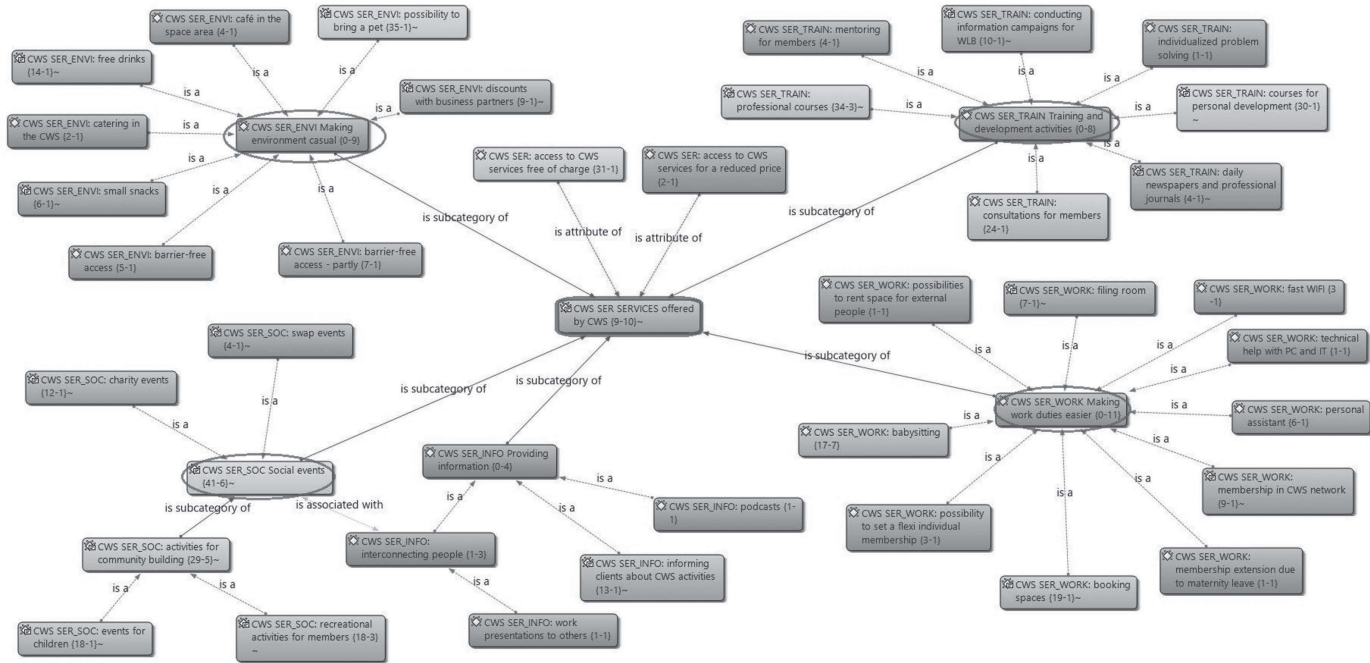
Figure 17.1 Services offered by CSs.

Source: Authors.

how much they cost. It also includes information about people or members of the community, such as who does what and why it might be helpful to cooperate with each other. For example, R01 (Czech Republic) mentioned that they conduct joint breakfasts or lunches where coworkers can present what they do. This way of providing information to coworkers overlaps with social events.

Factors influencing the services offered for coworkers' work–life balance

The second research question deals with the factors that influence the services discussed in the previous part. This section examines the differences among countries and CS sizes in this context. The findings offer a clue as to the differences in the focus of services among CSs in the capital cities of the various countries. It is probable that CSs in Hungary concentrate more on social events and creating a casual environment than CSs in the Czech Republic or Slovakia. In contrast, Hungarian CSs more frequently mentioned the possibility of bringing a pet, while CSs in Prague and Bratislava offer training and development activities more often than CSs in Budapest.

The size of the CS appears to matter in terms of the services offered. The services offered at small CSs seem to be limited. The reason could lie in the formation of small CSs, which may be based on friendship among several people who knew each other before establishing a CS and do not require enhanced comfort. They merely want to work together. The number of mentions of social events could support this, since these coworkers know each other and also want to spend their free time together. In line with this, the larger CSs add more professional services, e.g. training and development. Since there are more coworkers, they cannot rely merely on direct communication between people, and services related to providing information come to the fore. However, only independently run CSs were surveyed and interviewed; training,

Table 17.1 The frequency count of the category of services offered in the examined countries.

Category of offered services	Country			Number of coworkers in the CSs		
	CZ	*HU*	*SK*	*1–9*	*10–49*	*50 or more*
Number of documents[1]	*12*	*18*	*11*	*2*	*19*	*10*
SER Making environment casual	17	34	21	2	38	17
SER Making work duties easier	18	27	18	1	25	17
SER Providing information	6	4	6	1	5	8
SER Social events	29	51	32	6	43	38
SER Training and development activities	23	21	31	3	22	27
TOTAL	93	137	108	13	133	107

[1] Documents mean interview transcription and fulfilled questionnaires.
Source: Authors.

information sessions, and other professional services are prolific in CSs that form part of international chains such as Impact Hub or HubHub. These CSs advertise events with chain partners or full network events and use those for marketing. During the pandemic, such events were held online, which made sharing even more effortless. Some independently run Slovakian CSs have also recently adopted online sharing to increase the chances of survival following the pandemic.

Coworkers' expectations may also influence the services offered. For example, R23 (Slovakia) mentioned that the CS concentrates on people visiting the city for short periods, and that they provide them with everything they need, including great coffee. Similarly, R05 (Czech Republic) said that 95% of coworkers are women and including a café at the CS encourages coworkers' families to visit.

Lastly, the services offered are influenced by the owners' attitudes and experiences and the possibility of gaining subsidies. A convenient example of this is babysitting. R22 (Slovakia) said that an opportunity for a subsidy allowed this service to be started, but it was also a way to create a family-friendly atmosphere and a feeling of acceptance. R02 (Czech Republic), R22 (Slovakia), and R57 (Hungary) mentioned that their CSs offered work–life balance services because they have children and want to take care of them while feeling self-actualized at work. R01 (Czech Republic) mentioned a belief in training and education as a way to move forward, which is why such services are offered to coworkers.

Impacts of COVID-19 on services offered for coworkers' work–life balance

The last research question deals with how the pandemic of COVID-19 has influenced the work–life balance services offered for coworkers. The findings stem from respondents' opinions on the change in demand for the services in question. Many services were reduced or somehow limited with respect to both offer and demand. This seemed to be the case especially for training/development activities and social activities such as those related to community building, recreational events, or children's events. Access to CSs was limited. In many cases, only regular coworkers were let in and often in reduced numbers. Therefore, it is understandable that the involvement of people from the local community was reduced and sometimes even totally halted. In general, it seems that one of the main strengths of CSs, the vision of the CS as a place where it is possible to meet and discuss with others, was impaired. The CSs could not adequately fulfil their mission of interconnecting people.

In some cases, the use of the services continued as before the pandemic. One example is the possibility of bringing a pet to the CS if the CS was not closed. Some services also transferred to an online version. Development activities (courses, seminars) especially received this treatment, as mentioned by R04 (Czech Republic) or R22 (Slovakia).

Table 17.2 Intensity of demand for the defined categories of services for work–life balance during and post pandemic.

Categories of offered services	Change in the intensity of demand for the work-life balance services due to the pandemic						Supposed change in the demand for work-life balance services post pandemic					
	drop		no change		growth		drop		no change		growth	
	freq[1]	c^2	freq[1]	c^2	freq[1]	c^2	freq[1]	c^2	freq[1]	c^2	freq[1]	c^2
SER Making environment casual	5	0.03	2	0.02	0	0	1	0.01	6	0.06	0	0
SER Making work duties easier	4	0,02	1	0.01	0	0	3	0.04	2	0.02	1	0.01
SER Providing information	1	0.01	0	0	0	0	0	0	1	0.02	0	0
SER Social events	14	0.07	0	0	0	0	5	0.04	14	0.11	5	0.04
SER Training and development activities	9	0.05	2	0.02	0	0	0	0	9	0.09	5	0.06

[1] Frequency count of quotations related to particular service category
[2] c-coefficient
Source: Authors.

The respondents had different expectations about future demand for these services after the COVID-19 pandemic ends. In many cases, they presumed demand would return to the same level as before the pandemic. In other cases, they thought it might even increase. For example, R05 (Czech Republic) expected that reduced consultations during the pandemic would result in increased post-pandemic demand. Nevertheless, several participants believed that the intensity of demand would drop in some cases. For example, R04 (Czech Republic) thought that people would not be willing to attend social events with many other people. R02 (Czech Republic) was afraid that companies that used to book spaces at the CS would not have enough money after the pandemic, and would reduce costs by not booking, which would strongly affect the business model and survival of the CS.

Discussion

The findings show that services, business hours, CS location, and equipment may contribute to the work-life balance of people at CSs. The perception of work-life balance among the participants related to increased freedom and flexibility, reduced stress, ability to concentrate on work, and the ability to separate work and private life. Similarly, Kelliher and Anderson (2010) mention flexibility and reduced stress as important factors in the improved work-life balance of flexible workers.

The services offered to coworkers were divided into the five categories illustrated in Figure 17.1. The category of 'social events' included diverse, primarily in-person interactions, which may include coworker family members and foster informal interactions and community building. The existence of a community is a supposed vital trait of CSs, as also confirmed by Orel (2019), who cites supportive relationships and reduced loneliness as conducive to balancing life and work for individual coworkers. The 'training and development activities' may also include the communities surrounding CSs, as well as individualized events. 'Making work duties easier' refers to convenience and the ability to concentrate on the work at hand. The lack of distractions and ability to concentrate was also appreciated by coworkers in a study by Robelski et al. (2019). 'Creating a casual environment' was a category often highlighted by the respondents. Services in this category contribute to reducing professional isolation and loneliness among coworkers, among other aspects, as Orel (2019) notes. Finally, the category of 'providing information' concerns information going beyond the expected basic characteristics, such as pricing. Such information also included networking-related data and was closely related to social events. This information corroborates Orel's (2019) findings of increased opportunities at CSs for building social networks and gaining access to others with professional knowledge.

As for factors influencing the offer of work-life balance services, size seemed to be the most frequently confirmed factor. Smaller CSs, especially those outside CS networks, frequently lack personnel for professional services (Ross

et al., 2017; Luo & Chan, 2020) and have difficulties meeting coworker expectations (Lumley, 2014), whereas larger or networked CSs often standardize their environments (Waters-Lynch & Potts, 2017).

With regard to the impacts of the COVID-19 pandemic, training and development activities and social activities such as those related to community building, recreational events, or events for children were especially impacted. Thus, the findings indicate that several essential advantages of working at CSs disappeared or were reduced to a minimum during the COVID period studied. This could be a reason why not all CSs survived and the number of independently run CSs was lower at the end of the period. This is in line with reported closures and losses reported by Manzini Ceinar and Mariotti (2021) and Mayerhoffer (2021).

Concluding remarks

CSs are equipped to help resolve the conflict between the various social roles a person takes on in work and private life. This chapter examined how coworking spaces may contribute to balancing work and private life; it described which services these spaces offer to improve work-life balance, and how the COVID-19 pandemic has impacted these services.

The findings show that the services offered, equipment, business hours, and location of the coworking place may support a balance between work and private life. The services identified were divided into five categories based on their thematic similarities and purpose: 'social events', 'training and development activities', 'making work duties easier', 'creating a casual environment', and 'providing information'. The results show that the type and number of services offered is influenced by context, such as country, CS size, coworker characteristics and expectations, and the owners' attitudes and experiences. The COVID-19 pandemic has impacted training and development activities above all and understandably reduced social activities. Thus, the vital role CSs play in connecting people could not be adequately fulfilled during the pandemic. Closures, reduced membership, and cuts in rents have heavily affected the business viability of independently operated CSs. How many will survive the pandemic period in the long term remains to be seen.

This study presents some limitations. The survey was conducted in three Central and Eastern European countries: the Czech Republic, Slovakia, and Hungary. While all three were impacted by the pandemic, they also took various measures to curb it, which differed from one another and from countries in other geographical areas. Since the research was based on a qualitative approach, the results should not be generalized. The sample was purposive and international CSs were not included. In some cases, the CSs were willing to participate only either via a questionnaire or interview, which may have influenced the richness of the available data.

Future research could focus on the characteristics of coworkers in greater detail and their impact, usage, and demand for work–life balance services. It may also be beneficial to understand how the owners' or managers' life situations influence the work–life balance services offered and what overall changes a post–pandemic, more digitized, more flexible working world will bring to the services offered by CSs.

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18 Concluding remarks, trends, and future research on new working spaces

Ilaria Mariotti, Mina Di Marino, and Pavel Bednář

This book provided a novel understanding of the socioeconomic and spatial consequences of the COVID-19 pandemic on NeWSps such as (i) coworking spaces and smart work centres; (ii) makerspaces and other technical spaces (fab labs, open workshops); (iii) other new working spaces (hackerspaces, living labs, and corporate labs); and (iv) coffee shops and public libraries that provide formal and informal spaces for working. To reach this goal, we explored the following issues.

Firstly, the effects of the COVID-19 pandemic on NeWSp business model reorganization and change were analyzed and described (see Part 1). In particular, we described and discussed the new socio-spatial relationships and strategies for communication and interaction (see Chapter 1 by Gerosa and Manzini Ceinar and Chapter 2 by Danko et al.,) and rethinking socioeconomic factors to sustain NeWSp values, practices, and engagement activities (see Chapter 3 by Micek et al., Chapter 4 by Akhavan et al., and Chapter 5 by Tagliaro et al.).

Secondly, the contributions to the edited volume (see Part 2) reveal how 'other locations' (for work) have increased within our cities and regions, impacting mobility and work patterns in various ways (see Chapter 10 by Bajada et al. and Chapter 8 by Leducq et al.), as well as the opening and/or closing of rural coworking spaces (see Chapter 9 by Tomaz et al. and Chapter 7 by Lange et al.). Thus, NeWSps can have a renewed role in urban and regional development, policies, and planning within this context, including peripheries and rural areas during and following the COVID-19 pandemic (see Chapter 6 by Pacchi et al.).

Thirdly, the book explored the effects of COVID-19 on remote workers and teleworkers and the potential of working from non-traditional workplaces such as NeWSps. Several chapters in Part 3 showed that during the pandemic, CSs have become complementary to other forms of flexible working (e.g. remote working and presence of 1–2 days at the office) (Chapter 12 by Smith et al., Chapter 13 by Seong et al., and Chapter 14 by Brower et al.). The combination of remote working and virtual coworking can be viewed as a hybrid form (see Chapter 11 by Sinitysina et al.) which can support a sustainable way to balance work and life (see Chapter 15 by Akhavan et al. and Chapter 17 by Smekalova et al.).

Furthermore, the book reflected on the relevance of tailored policy tools and governance actions to face the expected upcoming phases of the pandemic, and, if necessary, also waves of new viruses. These aspects should be further investigated on the national level (including comparative analysis). It is therefore important to further explore (i) living and working in safe and healthy work environments; (ii) improving work-life balance considering the additional family and gender issues that have mainly penalized women working from home; (iii) rethinking traditional offices (e.g. providing larger open spaces and renting working spaces in coworking spaces; (iv) relocating office buildings/spaces and NeWSps closer to workers and their own neighbourhoods, thus using different spaces for work in addition to home (CSs, public libraries, and coffee shops); and (v) providing new layouts in NeWSps (e.g. more spacious and flexible meeting rooms and more single offices) (Di Marino et al., 2022; Mariotti et al., 2021a).

At the beginning of the pandemic, several researchers claimed the 'death of the city' because dense areas had become risky. Public transport was not prepared to counteract COVID, and compact cities and neighbourhoods became the epicentres of the pandemic crisis. Besides, ICT has allowed knowledge workers to work from anywhere, thus reinforcing what Thomas Friedman (2005) underlined in his book *The World is Flat* that people present similarity and greater homogeneity in different parts of the world, and that the transaction costs have fallen rapidly.

However, during the pandemic, knowledge workers have worked inside their homes and discovered their neighbourhoods. Less dense peripheries and rural areas have been reconsidered for offering closer proximity to outdoor spaces and access to green places, and such areas have been perceived by the population as a more healthy and safer environment, albeit with local differences. Within this context, NeWSps may therefore represent an alternative to traditional offices in central areas as more sustainable locations and an alternative to home, which is not always the most efficient place to work if it is small, noisy, and crowded, especially when children are around. In addition, working from home is characterized by the following aspects: inadequate technology, a sense of loneliness, poor work-life balance, and overworking (Osservatorio Smart Working, 2020).

After the second wave of the pandemic, people returned to work in the city with different frequencies: from 1–3 days a week to 5 days a week, depending on the country and city. Several studies have therefore supported the idea that 'the city is still alive and is flourishing'. As stated by Florida et al. (2021, p. 3), 'Throughout history, large cities have rebounded from the devastation of epidemics and many other types of crises and catastrophes', because innovation, creativity, and economic growth require the clustering of talent and economic assets, face-to-face interaction, buzz, diversity, and the critical mass that only cities can provide (Storper & Venables, 2004). Moreover, knowledge-intensive activities require the frequency of face-to-face interaction because the time (opportunity) costs associated with not having continuous face-to-face contact have increased with the quantity, variety, and complexity of the information produced (McCann, 2008).

Although at the time of writing, people around the globe are debating about what the 'new normal' will look like, the COVID-19 pandemic has shown that several, mainly knowledge-intensive activities can be carried out remotely, and thereby support resilience of CSs and communities by knowledge-sharing (Bednář et al., 2021). Not only central areas, but also suburban and peripheral areas can become places to work, either within the boundaries of the home or at NeWSps. With regard to urban areas, several cities worldwide have developed the '15-minute' or 'x-minute' concept (Moreno et al., 2021; Mariotti et al., 2021b, 2022b; Di Marino et al., 2022). The '15-minute city' seeks to provide primary services within walking and biking distance. In some cities, there are 'flexible working' season tickets for rail travel in line with new commuter behaviour to accommodate some working from home, as in the case of London.[1] These strategies aim to strengthen remote working as an ordinary system, to be conducted at home or in NeWSps, thus ensuring work–life balance (Mariotti, 2021a, 2021b).

A new debate has flourished among scholars and policymakers regarding local-global development and the centre-periphery model. The COVID-19 pandemic has shown the importance of networking with community hubs (e.g., from third to fourth and fifth places), and moving beyond the peripheral/rural and urban dichotomy, as well as developing sustainable strategies in decentralized areas (Mariotti et al., 2022a).

Suburban and peripheral areas are enhancing and developing NeWSps to host remote workers, and specific policy measures are designed to make these areas more attractive places to live and work. The redistribution of working in suburban and peripheral areas might positively impact these areas and reduce the congestion of large cities. Less frequent commuting will allow for larger hinterland areas, and this will tend to favour most prosperous cities, thus producing a sort of shadow effect on weaker cities; besides, cities that are more economically weaker will become more vulnerable (Mariotti, 2021b).

Another important issue concerns the negative effects of the COVID-19 pandemic on low-skilled and low-income workers. Higher-income groups have more easily adapted to working online and to more flexible working than lower-income groups, and this requires attention by policymakers to reduce social and territorial imbalances. Tailored policies aimed at enhancing and supporting the labor market should also be developed to achieve work–life balance. Indeed, if remote working becomes permanent, women will continue carrying the most considerable family load, which is not reimbursed and not adequately recognized.

The contributors to the edited volume collected data from December 2020 to May 2021 (with some variations based on the cases) during the third wave of the pandemic. The results from this temporal window cannot be generalized, but they help in interpreting the complexity of the phenomenon. Moreover, this book collected pioneering research on the impacts of the COVID-19 pandemic on NeWSps, and it presented in a large compendium of several comparative and

interdisciplinary analyses which have not yet developed within the academic debate. Future studies should focus on a combination of quantitative and qualitative analyses that can further support the understanding of new trends in working spaces and practices. Additionally, further research is needed to examine the effects of COVID-19 in other countries which are not investigated in the book, that is, outside Europe, Lebanon, and the US. It is also crucial to study the impacts of future waves of the pandemic, including related recessions and new health crises, on NeWSps that may experience different effects across the globe.

Note

1 'City of London seeks to reinvent itself after pandemic', *Financial Times*, 19 October 2020.

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Index

Note: Page numbers in *italics* indicate a figure and page numbers in **bold** indicate a table on the corresponding page.