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Urban Strategies

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Nashid Nabian

A case study-driven inquiry into interactive spaces and shared urban places.

SMART CITIES AS DIGITALLY AUGMENTED SPACES



“Local Warming” is an example of marrying bits and bricks in sentient, responsive, and interactive inhabitable spaces. It is a research project by MIT SENSE-able City Lab (a research initiative at the Massachusetts Institute of Technology), that dynamically controls highly localized heating. It directs heat to where people are by digitally sensing their location.

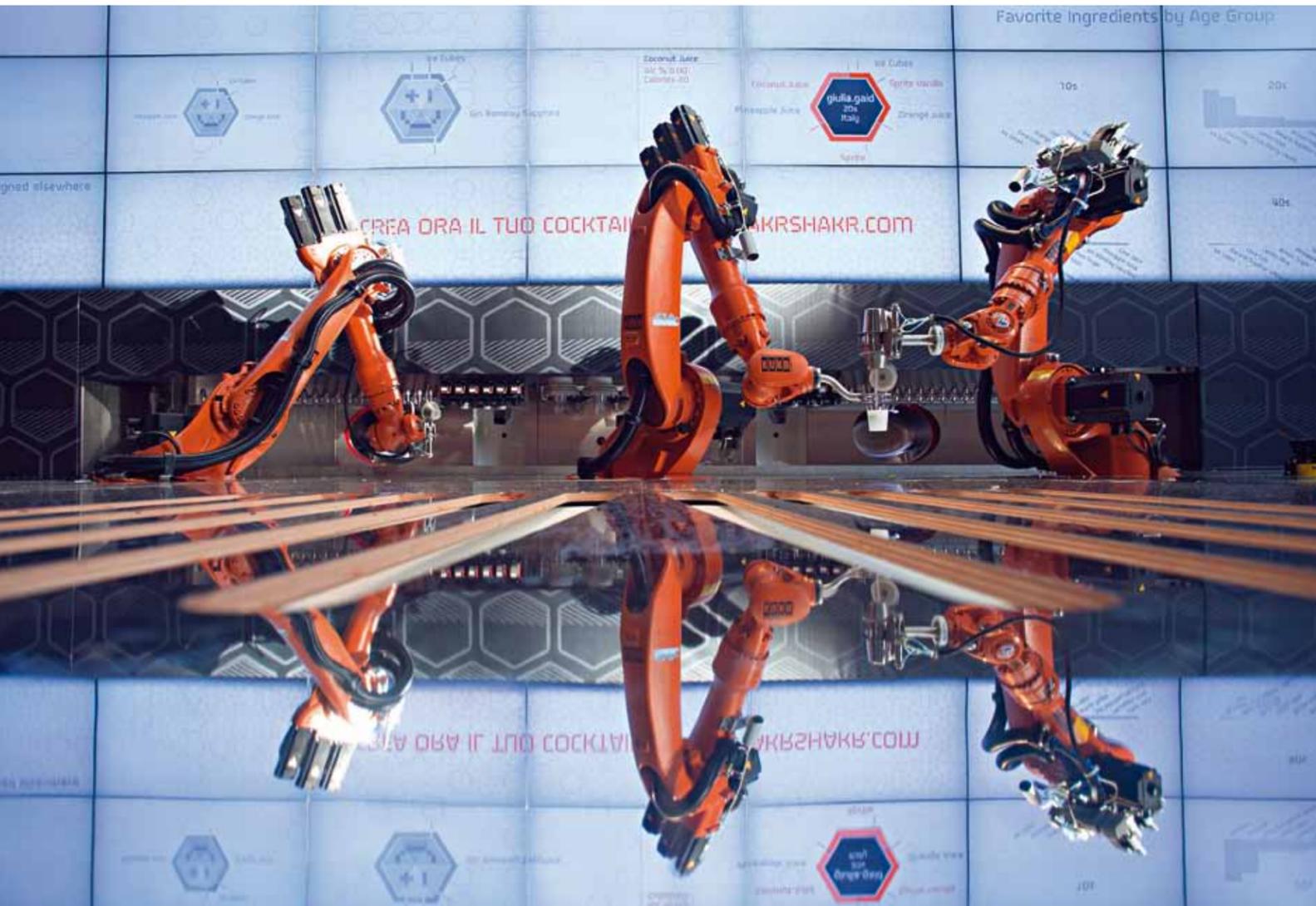
Cities that are labeled as smart are hybrid spaces that consist of materials and digital information. They are inhabited and occupied by contemporary tech-savvy subjects; they rely heavily on the technological constructs of monitoring, actuation, computing, geo-localization and networking; and they are closely connected to the temporalization of space and democratization of knowledge about spatial dynamics.

The premise of Smart Cities as an intellectual project is that the new technological thinking about spatial design goes beyond human-machine interaction into the slightly expanded realm of sentient, responsive, and interactive inhabitable spaces and shared urban places. A smart city is populated with technologically enhanced artifacts that provide an interface between the two parallel systems that constitute the contemporary subject's reality: the physical world of material constructs and the virtual world of digital information. In designing for digitally enhanced smart cities, the central focus has shifted from the spatial allocation of substance, to the temporal allocation of non-substance or information. This allows for a cross-format mediation that can go both ways: if the space or artifact is designed to provide a platform for translating a series of 0's and 1's to durational phenomena perceived by a sensory faculty, what is at hand is a machine that orchestrates an affective, corporeal experience based on digitized information. If the space or artifact is designed to provide a platform for translating patterns of the presence and absence of material entities to a series of 0's and 1's, any sensory, affective experience can be translated to a digital file that can be stored, retrieved, and shared via a network.

Another fruitful branch of digital augmentation to explore is its applicability to hi-tech art installations, where spatial mise-en-scènes are provided for the collective amazement of the audience and the demonstration of technological feats. Digitally augmented art exhibitions may be organized



Open Source Architecture (OsArc) is an example of translating bits of information into their corresponding material manifestations. For a piece of the exhibition, Adhocracy, curated by Joseph Grima for the first Istanbul Design Biennial, the studio Carlo Ratti Associati envisioned a canvas on which a free-flowing pen writes, erases and constantly rewrites the different versions of the Wikipedia page on Open Source Architecture.



“Makr Shkr”, a project developed by MIT SENSEable City Lab and Carlo Ratti Associati in collaboration with Bacardi and Coca Cola, is an example of a digitally enhanced installation that is demonstrative of technological feats and mediates social encounters among those who choose to participate in the piece. It is a new robotic bartending system that allows users to create, in real-time, personalized cocktail recipes through a smart phone application and transform them into crowd-sourced drink combinations.

around a piece that is communicating the designer’s concept, while the audience act as passive spectators or bystanders witnessing the dynamics of the piece. In another variation, a space is created around a piece and one member of the audience interacts with it, while others maintain the roles of spectators. In a different version, a space is created as a piece that mediates relations between subjects, who engage in fleeting encounters encouraged by a spatial scenario that is realized or facilitated through the use of digital media. At its extreme, the space is created in the virtual or digital terrain of connections among wireless devices that are used both as input or/and output terminals, to control the digitally enhanced piece.

Moreover, digital augmentation scenarios can re-examine the notion of monitored spaces, especially in publicly shared or semi-privatized civic spaces, where surveillance technology is reconsidered not as means of exacting socio-political control over individuals’ actions and behaviors, but as a possible platform for acquiring and analyzing data from complex, large-scale processes over time. In thinking of the space of a smart city as augmented, the designer explores ways to supplement physical environments with non-substantial architectures of spatially well-situated and geo-localized information that modify and enhance their perception and performance. The representations of this data have great potential to make sense of what is happening in publicly shared spaces at the macro level of management and design strategies. On a micro level, once such information is fed back to the individuals who are part of a monitored crowd, they are endowed with real-time consciousness about events and dynamics of the space, which allow them to make well-informed decisions. This is the main aspect of the democratization of space in smart cities: the transparency of urban processes and spatial dynamics to all those affected by such processes. Examples of such practices are context-aware, location-based wireless services that provide subscribers with access to real-time information about the dynamics of the city including traffic, weather condition and ongoing cultural events.

In any of the scenarios, the first question among the many that come to mind, is the future of physical space as we know it. With all the possibilities offered by digital augmentation technologies, it seems that built space cannot be envisioned and examined only in terms of its constitution in bricks and mortar, but also in terms of bits of information and strings of machine-readable code. Under these circumstances, are we moving towards the dissolution of physical space and the end of the designing of physical space, or are we moving towards a reinforcement of the physical space through enhancing its logics of operation with digital and telecommunication technologies? The augmented space matters, and it opens up to plethora of possibilities for spatial practitioners, but what about the more ordinary, traditional spaces of habitation?



“Makr Shkr” is a social experiment that looks at how people might embrace the new possibilities offered by digital manufacturing. The cocktail creation is assembled by three robotic arms, whose movements, visualized on a large display positioned behind the bar, mimic the actions of a bartender.

AUTHORS

Mihai Alexandru is an urban planner currently working as a Teaching Assistant at the Faculty of Urban Planning at Ion Mincu University for Architecture and Urban Planning (UAUIM), Bucharest. He is also co-editor for *Urbanismul*, the Romanian professional journal for urbanism. mi.alexandru@yahoo.com

Jane Amidon is a Professor and Director of the Urban Landscape Program at Northeastern University in Boston. She is also the founding principal of Amidon design communication. Jane lectures and writes books, articles, and criticism on practitioners within the field of landscape architecture as well as on contemporary landscape and urbanism issues. j.amidon@neu.edu

Gloria Aponte, architect, holds an M.A. in Landscape Architecture from the University of Sheffield. Since 2009 she has been the Director of the Landscape Design Master's programme that she promoted at Universidad Pontificia Bolivariana in Medellín. gloria.aponte@upb.edu.co

Solange Carvalho is an architect and urbanist. She graduated from the Faculty of Architecture and Urbanism at the Federal University of Rio de Janeiro, and completed a specialization course in the Management of Programs in Irregular Settlements at the Institute of Housing and Urban Studies (IHS), Rotterdam. She holds a Master in Architecture at the Post-Graduate Program of

Architecture and has been a Professor at Faculty of Architecture and Urbanism of Federal University of Rio de Janeiro since 2008. solange@fau.ufrj.br

Kim Dirckinck-Holmfeld is an architect and manager of the publishing house Bogværket. From 1983 to 2007 he was CEO for the *Danish Architectural Press*, Executive Editor at *Arkitekten*, Denmark's most important journal for architecture, and Arkitektur DK. kim@dirckinck-holmfeld.dk

Noël van Dooren is a landscape architect, professional journalist, and researcher. He is currently finishing a Ph.D. on the issues of representation and time in landscape architecture at the Amsterdam Academy of Architecture/University of Amsterdam. nvandooren@xs4all.nl

Herbert Dreiseitl is the founder of Atelier Dreiseitl. When Atelier Dreiseitl joined the multinational Ramboll Group in 2013, he became a member of the Advisory Board of Atelier Dreiseitl and Director of the new "Liveable Cities Lab". herbert.dreiseitl@dreiseitl.com

Gabriel Duarte is a founding partner of CAMPO aud, an architecture and urban design office in Rio de Janeiro, and an Assistant Professor at the Department of Architecture of the Catholic University of Rio de Janeiro (PUC-Rio). Duarte is currently working on a Ph.D. dissertation on urban uncertainty and vagueness. He was

educated as an architect at the School of Architecture of the Federal University of Rio de Janeiro and at the Delft University of Technology. duarte@campoad.com.br

Ellen Fetzter studied landscape planning at the University of Kassel and currently works for the International Master Programme in Landscape Architecture, organized by the universities of Nürtingen and Weihenstephan, Germany. ellen.fetzter@hfvu.de

Michael Grove is Director of Sasaki's Shanghai office. His international experience includes large land planning, new communities, urban districts, and waterfronts. Michael is a graduate of Cornell University, with a B.Sc. in Landscape Architecture and a focus on Planning and Urban Design. mgrove@sasaki.com

Sam Keshavarz is landscape architect at White. He works part-time as a Lecturer at the Landscape Architecture School at the Swedish University of Agricultural Sciences. sam.keshavarz@white.se

Krister Lindstedt is a partner of White and head of the Urban Design team in Stockholm and will be the senior Urban Designer for the team from White. Lindstedt is also a Lecturer at the School of Architecture at the Royal Institute of Technology in Stockholm. Krister.lindstedt@white.se

Nashid Nabian earned an M.Sc. in Architectural Engi-

neering at Shahid Beheshti University, Iran. She pursued her post-graduate studies at the University of Toronto's Daniels Faculty of Architecture, Landscape and Design, where she earned an M.Sc. in Urban Design. In 2012 she co-founded [Shift] Process Practice with Rambod Eilkhani. Nabian holds a Ph.D. in Design from the Harvard Graduate School of Design. nnabian@gsd.harvard.edu

Christian Nyerup Nielsen is Department Director Urban Water Planning at Ramboll. He has extensive experience in the management of large and small projects within infrastructure planning and detailed design. He also has a high level of expertise in climate adaptation planning and infrastructure schemes related to flood risk prevention and the recreational/sustainable use of rainwater. CNN@ramboll.com

Gabriel Pascariu is an architect specialized in urban and regional planning and Associate Professor at Ion Mincu University for Architecture and Urban Planning in Bucharest. He is also President of the Professional Association of Romanian Urban Planners. pascariugabriel@upcmail.ro

Dennis Pieprz works for Sasaki Associates. He was educated at the Harvard University Graduate School of Design and the University of Toronto School of Architecture. At the Harvard University Graduate School of Design, Pieprz teaches in the Professional Develop-

ment program and in 2010 taught a studio focused on the Boston Innovation District. He also served as the youngest president of Sasaki from 2004 until 2011. [dpiprz@sasaki.com](mailto:dpieprz@sasaki.com)

Chris Reed is Principal of Stoss Landscape Urbanism and Associate Professor of Practice in Landscape Architecture at the Harvard University Graduate School of Design. He is an internationally recognized figure in the fields of landscape and urbanism, most recently involved in major re-visioning strategies such as for the city of Detroit. cr@stoss.net

Svend Erik Rolandsen is an urban planner and civil engineer employed at COWI, a Danish consulting company working within the fields of engineering, economics, and environmental science. He is a specialist in urban planning strategies and has been working as a consultant for the Danish Ministry of the Environment, Real-estate, and several Danish cities. SERO@cowi.dk

Eva Schwab holds an M.A. in Landscape Architecture. She is a Lecturer and Researcher at the Institute of Landscape Architecture at the University of Natural Resources and Life Sciences in Vienna. She has spent seven months in Medellín to conduct the fieldwork for her Ph.D., and wishes to thank the inhabitants of Comuna 13 and the PUI employees who supported her research. eva.schwab@boku.ac.at

Mikael Stenqvist is an architect at White with varied experience through his work in Sweden, The Netherlands, and Peru. mikael.stenqvist@white.se

Neel Strøbæk is Director of the Group Environment at Ramboll. She holds an M.Sc. in Engineering in Hydraulics and Hydrology from the Technical University of Denmark. Strøbæk has been with Ramboll since 1992 and specializes in environmental impact assessments and international environmental permitting and inspection procedures.. NES@ramboll.com

PHOTO CREDITS

Alex S. MacLean / Landslides Aerial Photography: 16/17, 24
Stoss: 19 top and bottom, 20, 21, 22, 23
Stoss, with Hamilton Anderson Associates et. al.: 19 centre
ArquiTraço Projetos Ltda: 26/27
Custódio Coimbra/Agência OGlobo: 28
AECOM: 29
Carolina Thibau: 30
Érica Ramalho/Governo do Rio de Janeiro: 31
Solange Carvalho: 32 (2), 33
Maps, Eva Schwab, source EDU: 36
Eva Schwab: 37, 38, 40, 43
Gloria Aponte: 39, 41, 42
Sasaki: 44-50
Helmut Ignat: 51, 52
Mihai Alexandru: 53 map
Ellen Fetzter: 54
White arkitekter: 56-63
Atelier Dreiseitl: 72/73, 74, 76, 77, 78/79, 79
Ramboll: 73, 75

GreenWorks: 78 left
MIT SENSEable City Lab: 80, 84, 85
Pietro Leon: 81
Max Tomasinelli: 82
Lucas Werthein: 83
Anneliese Latz: 86
Monika Nikolic: 87, 88, 94
right (4)
Latz + Partner: 89, 90, 91 right (2), 92, 93 top (2), 94 left, 95 top, 97, 98 top (2), 98 bottom left and right (2), 99, 100, 101, 103 top (2), 104, 105 top, 105 bottom centre (2), 106 (images 7, 12, 15)
Christa Panick: 91 left, 95 bottom, 106 (images 6, 8, 13)
9th China International Garden Expo: 93 bottom
Park Ariel Sharon Company: 98 bottom centre
Fabrizio Zanelli: 102, 103 bottom right
Mattia Boero: 103 bottom left
Jane Sebire: 105 bottom left, 106 image 9
Michael Latz: 105 bottom right, 106 (images 3, 4, 10, 11, 14), 107, 109
Peter Schäfer: 106 image 1
Harf Zimmermann: 106 image 2
Duisburg Marketing GmbH: 106 image 5

TRANSLATORS

German/English:
Caroline Ahrens: 3,11
David Skogley: 86

COPY EDITORS

Caroline Ahrens
Kamni Gill
Kate Guiney
Michael Wachholz

STATEMENT

Beijing Beilin Horizon Landscape Planning and Design Institute (BHLPD) requests the following statement in response to the article "Qinhuangdao Forest Park" by Kongjian Yu, published in *Topos* 79:

1. Beijing Beilin Horizon Landscape Planning and Design Institute (BHLPD) has worked on the general planning of Qinhuangdao Forest Park which covers 1,000 hectares. The 233 hectares Kongjian Yu mentioned in his paper are a part of the whole park. Therefore, the title of his paper is not only misleading to readers but also ignores BHLPD's contribution.

2. Qinhuangdao Forest Park has four phases. BHLPD takes responsibility for the whole process. The design area marked inside the boundary line on the image on page 59 shows phase 3 and phase 4. Although the design for phase 3 has been changed, phrase 4 is still based on the design by BHLPD. This was not shown in the paper. Details can be found on http://www.horizonlandscape.cn/projects_1_4.html

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EDITOR

Address: address same as publishing house
Tel +49 89/43 60 05-0
Fax +49 89/43 60 05-147
E-mail: topos@toposmagazine.com
Internet: www.toposmagazine.com

Editor in Chief: Robert Schäfer (responsible for editorial contents), Tel. ext -150
E-Mail: r.schaefer@toposmagazine.com

Editors: Peter Zöch, Tel. ext. -156
E-Mail: p.zoech@toposmagazine.com
Gesa Loschwitz-Himmel, Tel. ext. -136
E-Mail: g.loschwitz@garten-landschaft.de

Project Management: Tanja Gallenmüller, Tel. ext -153
E-Mail: t.gallenmueller@callwey.de

Graphic Design: Heike Frese-Pieper, Sabine Hoffmann

SUBSCRIPTION SERVICE

Callwey Verlag Leser-Service
Heuriedweg 19, D-88131 Lindau
Tel +49 83 82/96 31 93
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Postbox 80 04 09, D-81604 Munich
Tel +49 89/43 60 05-0
Fax +49 89/43 60 05-113
Internet: www.callwey.de
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CEOs: Dr. Marcella Prior-Callwey, Tel. ext. -163
Dominik Baur-Callwey, Tel. ext. -159

Advertising Director/Key Account Manager: Andreas Schneider, Tel. ext -197 (responsible for advertisement)

Advertising Admin: Birgit Weibrecht, Tel. ext -122, Fax +49 89/4 36 11 61

Marketing and Sales Director: Peter Priewasser, Tel. ext. - 178, E-Mail: p.priewasser@callwey.de
Distribution: Marion Bucher, Tel. ext -125, Fax -317

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