

Home in a Hybrid World
or to dwell in a networked environment

RIVER PUBLISHERS SERIES IN INFORMATION SCIENCE AND TECHNOLOGY

Series Editors:

K. C. Chen

National Taiwan University, Taipei, Taiwan

and

University of South Florida, USA

Sandeep Shukla

Virginia Tech, USA

and

Indian Institute of Technology Kanpur, India

Indexing: All books published in this series are submitted to the Web of Science Book Citation Index (BkCI), to SCOPUS, to CrossRef and to Google Scholar for evaluation and indexing.

The “River Publishers Series in Information Science and Technology” covers research which ushers the 21st Century into an Internet and multimedia era. Multimedia means the theory and application of filtering, coding, estimating, analyzing, detecting and recognizing, synthesizing, classifying, recording, and reproducing signals by digital and/or analog devices or techniques, while the scope of “signal” includes audio, video, speech, image, musical, multimedia, data/content, geophysical, sonar/radar, bio/medical, sensation, etc. Networking suggests transportation of such multimedia contents among nodes in communication and/or computer networks, to facilitate the ultimate Internet.

Theory, technologies, protocols and standards, applications/services, practice and implementation of wired/wireless networking are all within the scope of this series. Based on network and communication science, we further extend the scope for 21st Century life through the knowledge in robotics, machine learning, embedded systems, cognitive science, pattern recognition, quantum/biological/molecular computation and information processing, biology, ecology, social science and economics, user behaviors and interface, and applications to health and society advance.

Books published in the series include research monographs, edited volumes, handbooks and textbooks. The books provide professionals, researchers, educators, and advanced students in the field with an invaluable insight into the latest research and developments.

Topics covered in the series include, but are by no means restricted to the following:

- Communication/Computer Networking Technologies and Applications
- Queuing Theory
- Optimization
- Operation Research
- Stochastic Processes
- Information Theory
- Multimedia/Speech/Video Processing
- Computation and Information Processing
- Machine Intelligence
- Cognitive Science and Brain Science
- Embedded Systems
- Computer Architectures
- Reconfigurable Computing
- Cyber Security

For a list of other books in this series, visit www.riverpublishers.com

Home in a Hybrid World

or to dwell in a networked environment

Martin Pot



River Publishers

Published, sold and distributed by:

River Publishers
Alsbjergvej 10
9260 Gistrup
Denmark

www.riverpublishers.com

ISBN: 9788770222129 (Hardback)
9788770222112 (Ebook)

©The Author(s) 2020. This book is published open access.

Open Access

This book is distributed under the terms of the Creative Commons Attribution-Non-Commercial 4.0 International License, CC-BY-NC 4.0) (<http://creativecommons.org/licenses/by/4.0/>), which permits use, duplication, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, a link is provided to the Creative Commons license and any changes made are indicated. The images or other third party material in this book are included in the work's Creative Commons license, unless indicated otherwise in the credit line; if such material is not included in the work's Creative Commons license and the respective action is not permitted by statutory regulation, users will need to obtain permission from the license holder to duplicate, adapt, or reproduce the material.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper.

Front cover art: © the artist
Antony Gormley
DAKOTA II, 1997
Carbon and casein on paper
8.9 × 8.9cm

“I SEARCHED FOR A REALITY THAT WAS MORE FULLY IN MY POSSESSION
THAN THE EXTERIOR WORLD,
AND I FOUND IT WAITING FOR ME IN THE BODY HOUSE IN WHICH I DWELL,
THE REALEST AND CLEAREST REALITY.”¹

Maria Lassnig

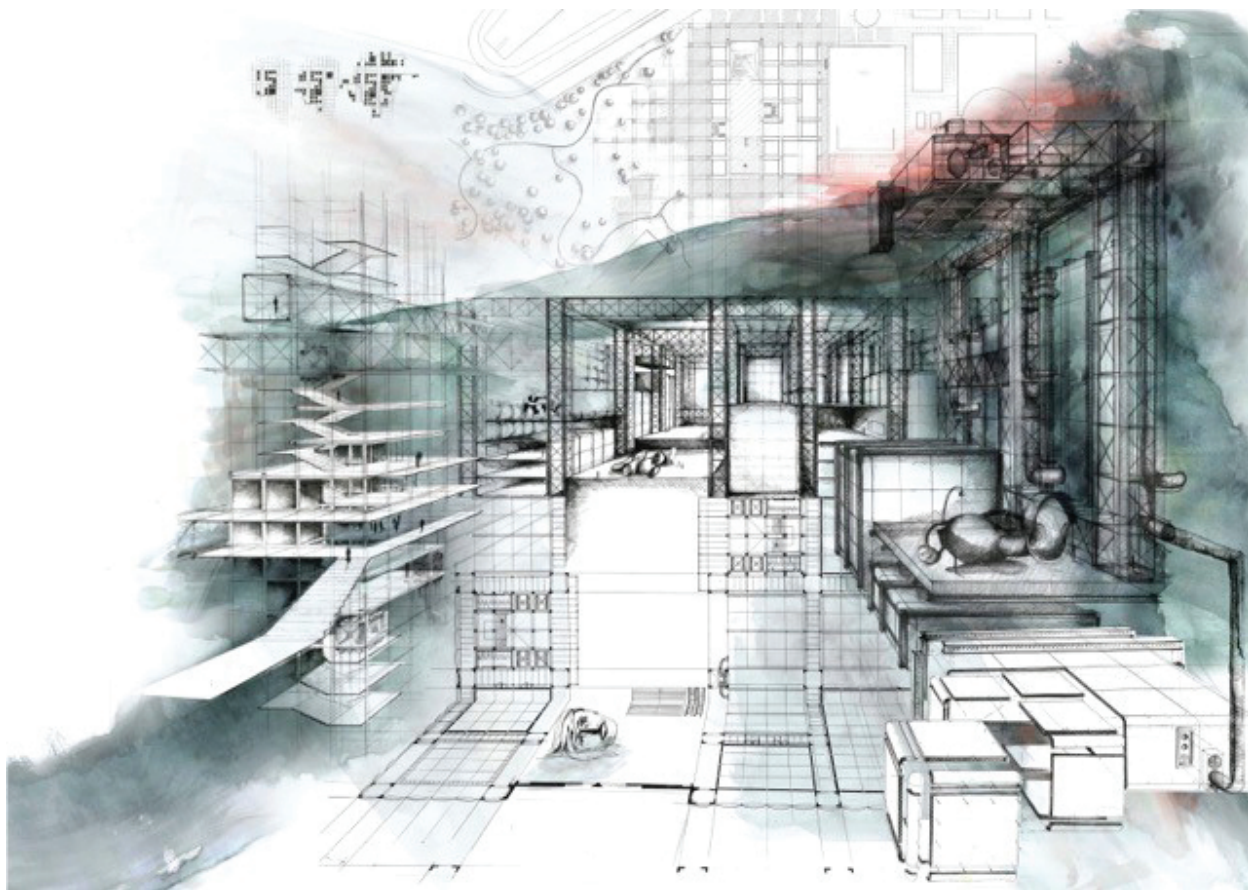
¹Catalogue Stedelijk Museum Amsterdam 2019.

Contents

Preface, by Kas Oosterhuis	xi
Acknowledgments	xvii
3 Introduction	1
4 Early and more recent history	15
5 Architecture; home, from the surface	31
6 Housing, system and principles	41
7 Home	59
8 Privacy or privacies	69
9 Thinking and rethinking	81
10 Awareness and acceptance	91
11 Technologies and the home	101
12 Sustainable: circular, modular, nature-inclusive	111
13 Actual developments and possible futures	121

viii *Contents*

14 Epilogue	137
References	145
Index	149
About the contributors and artists	153
About the Author	157



Carlijn Kingma and Nadia Pepels in 2016, 'A Factory for Art'

Preface

A Participatory World

Kas Oosterhuis, Nagymaros, August 2020

When humans enter a room or any space, the first thing they do is to check whether there is another human being in that room. In general, in their daily life, humans are primarily interested in other humans. Spatial experiences are secondary to their group instinct. Basically, according to a group of quantum physics, we are collapsing the higher dimension of the quantum state of the universe, which allows for billions of possible observed universes, into a three-dimensional space that unfolds in time by the way we perceive the universe, the world, and our immediate environment through our sense organs. We are only human, imprisoned by our senses. In that collapsed world, one's peers are the most important entities of reference.

More on the surface of their existence, in their professional life, humans might shift their focus toward a narrower band of interests. Architects may have developed a professional anomaly to look at the proportions, materials, and atmosphere of the room itself, before noticing anything or anyone else. Interior designers – the writer of this book Martin Pot is trained as an interior architect (his official qualification) – might focus on furniture and interior finishing in the first place. Such a professional deviation has its advantages since one notices things that others do not see. When architects visit a city, they typically want to see that one special building, which is a just finished masterpiece of a much published colleague; they go straight to that special place in the city, before paying attention to anything else and before seeing the people walking the streets, regardless of the fact that people and their doings are actually shaping the character of the city. By their education, architects and designers seem to have unlearned to look at their immediate environment the same way as daily users of that same environment do.

In this book, Martin Pot focuses on the notion of home, which is a renewed attempt to bring back the human factor at the forefront of the profession. Pot is not blind to recent technological development, notably to the digital invasion into the privacy of the home and believes that the notion of home needs to be redefined. This book reads as an extensive introduction to an open question. How should the home and privacy be redefined? Realizing that the new citizens have become international nomads who find their home wherever they are, wherever they work, and wherever they live for shorter or longer periods of time. Basically, the new technology allows the new citizens to take home along with them. That aspect of the new nomadic international citizen certainly is part of the necessity of a thorough redefinition of the notion of home.

But there is more; it goes in two opposite directions, the societal developments that are taking place are bidirectional. Since the world has become a deeply networked place, human beings bring the world into their private space called home. Home is a hideaway that a single person or a group of people living intimately together have exclusive access to. The material householder has the key to the front door, while the virtual home user has the password. Home, thus, becomes a merged real and virtual realm that is somehow imagined to be fully private. Yet, since the human user has allowed a variety of electronic devices in the room and apps running on cellphones and laptop computers to have access to cameras, contacts, telephone numbers, and a range of “private” data, the big tech companies and the government are looking over the shoulder into the privacy of the personal space. Martin Pot argues that one should have more control over one’s immediate environment, both the physically built environment and the sensorial sphere one lives in. After all, home is a lived space connected to the Internet of Things and People.

One way of exercising control is to shut down all digital devices, refrain from using mobile phones, and disconnect from the Internet. The other more constructive way is to find ways of establishing a bidirectional relationship with the tech companies, governmental bodies, and shared communities, which must become a process of give and take, a process of interaction. The digital revolution has this one big promise, which might give the clue to the redefinition of private space. This one big promise is the potential for user interaction, for level-playing field participation, for co-design, and for co-production. No longer should we be considered as consumers, but as prosumers instead. We are actors in an actor network. One could consider the struggle for privacy as a game of life, whereby the actors play by the rules according to their own skill levels and preferences and, occasionally, change the rules when there is a consensus to do so. The more creative people will challenge the game of life and would want to rewrite the rules of play while

playing. Writing a book is already an attempt to rewrite the rules of play or at least a contribution to form a critical mass of structural proposals that eventually converge into a substantial change in the set of rules. Less creative but nonetheless participating persons might be happy to play by the rules. Professionals may develop a high level of skill; they may enforce admiration and, eventually, propose an amendment to the set of rules. Whereas, the recreational player will be satisfied to just enjoy the game. Yet, they are both playing the same game. To interact with the space called home is the initial condition for the game of life.

Everyone has a notion of home, even the homeless, for whom the physical aspect of home is almost non-existing, and everyone participates in this game, while some are much more actively participating in changing the rules of the game than others. I believe that the solution to the privacy crisis lies in the development of participatory design instruments on all levels of the development of the domain that is called home. I prefer the word “instrument” over the word “tool;” while an instrument can be played in many different ways, open for composers and interpreters alike, all can play their own tune, according to their own interest and preferences, whereas tools are, as per definition, monofunctional. The hammer is always looking for a nail to hit. Participatory design instruments include the participation of highly skilled professionals and laymen alike. Participatory design methods are inclusive by nature. Both the professional designer and the user are considered experts, playing in the same level playing field. The user has the expertise of daily life that the professional often lacks, while it is clear that a professional has a special skill that is indispensable. The game of life is a multiplayer game. In a participatory design process envisaging to build homes, there are many different experts involved: the user, the designer, the banker, the environmentalist, NGOs, the material supplier, the circularity expert, the fabricator, the manager, the referee, and basically any stakeholder for that particular project. They all should be included in a level-playing field, supported by a real-time unfolding serious game. The game of life is an open set of rules with many parameters, which can be set by the players in real time according to their personal stakes.

The game of life is transportable, meaning that the participation is not confined to one physical home but to the mobile privacy sphere that people bear with them wherever they go. In the digital participatory future, there will be no more coming home but only taking home along. Home is where you are, where you live, where you work, where you interact with your environment, digitally and physically, and where you socialize with others. Home is as quiet or as busy as the parameters you set for your own interaction with the world

around you. Returning to the place that you once left will most likely not be the same anymore after a while. The world around you is changing fast, not in the least because you are changing yourself, and you can only have influence on its pace of change by interacting with your immediate environment in real time. You can live fast, make many connections, and become an influencer or you can live slow and live a secluded life; it is up to you in a participatory world.

*“My house is diaphanous, but it is not of glass.
It is more of the nature of vapor.
Its walls contract and expand as I desire.
At times, I draw them close about me like protective armour...
But at others, I let the walls of my house blossom out in
their own space, which is infinitely extensible”.*

Gaston Bachelard, citing Georges Spyridaki's lines from 'Mort Lucide'
The Poetics of Space

Acknowledgments

The various first seeds for these texts were, to a certain extent, probably planted in the early 1980s while working at a large architectural office in Rotterdam with a portfolio devoted primarily to housing. While working on a wide variety of floor plans and outer facades, it soon seemed clear to me that this way of designing, building, and providing housing could never be an adequate answer to a question unknown. After initially being educated and trained as furniture maker in earlier years, I studied, at the same time, in the evenings, Interior Architecture and Spatial Design at the Willem de Kooning-Academy of Arts in Rotterdam, where I researched the further discrepancies between housing for the people and the consequences for what we call home. When – later on – technological/digital developments entered architectural and sensorial space, questioning what we call home or private space I decided to start a Ph.D. on the combined subjects of architecture, technology, and dwelling. After successfully finishing the preparatory Hora-Est program at Erasmus University Rotterdam and having written my research proposal, I searched for one – preferably two – professor who would guide me; a process so far in vain. The one that did wanted to act as mentor was Kas Oosterhuis from Hyperbody Lab at TU-Delft Architecture; unfortunately for me, he was about to leave the Institute given his retirement. One clear later advice from him I remember: he argued that, given my background, experience, and current work/research, I should withdraw from my Ph.D. and write a book instead. A few years later, after some initial hesitation, I decided to follow his advice, one for which I am still thankful.

Second, special thanks to Marja Elsinga from TU-Delft Faculty of Architecture and Frans Vogelaar and Elizabeth Sikiaridi from hybridspacelab, Berlin for reading the first complete draft and their critical, yet, always supportive and constructive remarks. Third, my sincere thanks to Gerald Santucci for reading several basic chapters and providing valuable input, and to Ruud Hazes, Hilde Remøy, Frans van der Werf, and Tijmen Wisman for reading and providing valuable input on specific chapters.

xviii *Acknowledgments*

Third, over the years, I have experienced a numerous, wide variety of talks and discussions with fellow researchers and/or professionals working in a large variety of disciplines; many of them have, consciously or unconsciously, directly or indirectly, in writing or talks, attributed to these texts. I will mention the most relevant ones, with my sincere apologies should I have forgotten anyone. Therefore, many thanks to, in alphabetical order:

Liam Bannon, Jan Belon, Peter Boelhouwer (for his knowledge of the housing market), Miranda Bruce, Pascal De Decker, Delfina Fantini van Ditmar (for her research experience on home and IoT), Nicole Dewandre (for her critical remarks concerning the philosophical topics), Esther Fritsch (for her comments concerning the ethical topics), Rob van Gijzel (for his contributions concerning urban topics), Usman Haque (for his ever innovative projects), Florian Hellwig (for his peripheral approach), Tomasz Jaskiewicz (for his knowledge on smart architecture), Els de Jong (for her overall experience in housing issues), Jan Jongert (for his thoughts on circularity and sustainability), Marc Koehler (for his thoughts on architecture), Bert-Jaap Koops (for his valuable contributions where it concerns privacy/legal aspects), Rob van Kranenburg (for his extensive knowledge and experience in many matters concerning society and the Internet of Things), Arie Lengkeek (for his views on cooperative housing), Ben van Lier (for our mutual discussions on relevant issues), Michela Magas (for her peripheral initiatives), Justin McKeown, Maria Molenaar (for her experience in housing corporations), Vincent Muller, Henry Nankman (for our frequent discussions), Piet Oskam (for his extensive knowledge of the building column), John Post (for our intense discussions on relevant issues), Ronald Schleurholts, Lara Schrijver, Roger Tan (for his thoughts on architecture and the senses), Catalin Vrabie, Yvonne Droge Wendel, Robert Winkel, Daan Zandbelt, Bo Zhao (for the parallel contributions), and Remko Zuidema (for his extensive experience in all issues concerning building).

Last, but not least, I owe sincere thanks to Antony Gormley for his generosity to provide the cover image of one of his artworks, and to Carlijn Kingma, Marwan Rechmaoui and Rob Voerman for the use of their images. I also thank Rajeev Prasad and Junko Nakajima from River Publishers for their continuous guidance and editorial support, as well as Nathan Verberne (Bonniefanten Museum Maastricht) and Maddalena Pelù (Galleria Continua) for their assistance in providing the images.

Last, but by no means least, thanks to my wife Marijke who understands that getting older does not imply less intellectual curiosity and granting me the time to research and write.

Munich, the "Pinakothek der Moderne," June 2007. I am standing in front of an intriguing painting by James Bishop, an American artist who, in honour of his 80th birthday, has been awarded with an extensive exhibition of his "Works on Paper." The work I am looking at is referred to as nr. 10, "Ohne Titel," (Without Title, mp) and is painted around 1970. The vague image suggests the outline of a house, reduced to its voluminous timber frame, suggested only by thin brown/ochre lines closely along the borders of the sheet of paper. In the accompanying catalogue, Heinz Liesbrock writes: *"Their lines and colours constitute one last attachment to the visible world, but one that must be restrained, almost dissolved, in order to make space for that inner note: this thing that may not itself utter, but can only be adumbrated indirectly."*

Other similar paintings suggest a three-dimensional space by its forms, by outlining the framework of a house and adding the sphere that is within. It is *"the presence of different layers in a highly constricted space, delicately evoking something in the nature of memory."* (ibid)

