

This is a section of [doi:10.7551/mitpress/14668.001.0001](https://doi.org/10.7551/mitpress/14668.001.0001)

Insolvent

How to Reorient Computing for Just Sustainability

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Citation:

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DOI: 10.7551/mitpress/14668.001.0001

ISBN (electronic): 9780262374668

Publisher: The MIT Press

Published: 2023



The MIT Press

ACKNOWLEDGMENTS

I want to first acknowledge that colonialism is not in the past. It is present, and it continues to shape our lives. The land on which the University of Toronto operates, and on which I work and live, is the traditional land of the Huron-Wendat, the Seneca, and most recently, the Mississaugas of the Credit River. They have been here for thousands of years. Today, this land is still the home to many Indigenous people. I am grateful that I can live and work on it.

Coming to realize that I am a settler was an uncomfortable grappling, nudged by encounters with others who helped me see beyond my horizon and simultaneously understand better how the past shapes us and continues. This book talks about a concept I call the critical friends of computing: fields that offer a productive, constructive relationship with computing, which needs their insights. Critical friends tell us what others cannot or will not say, and we listen to them because we respect them and trust they have our best interest at heart. In this sense, I regard many of the people who have helped make this book a reality as critical friends.

First, this book really started because of my dear colleagues and friends in the Karlskrona Initiative for Sustainability Design, even though it is in many ways a departure from and even critique of our joint work. It is in no small part because of their enthusiasm, collegiality, and friendship that I was able to shift the central focus of my research to sustainability design

and, later, just sustainability design. I hope the book offers them some critical friendships.

Since then, kind and wise people have been invaluable in providing ideas, advice, critique, and suggestions. Andrew Feenberg graciously agreed to co-organize the Dagstuhl Seminar on Values in Computing in 2019, in which his presence and thoughts were crucial to not only ensure participation of key participants outside of computer science, but also to provide a framework of thought that was instrumental in shaping the discussion at this meeting point between computing and some of its critical friends. His advice on what I should read were keenly followed by this student and very helpful. Elizabeth Patitsas and Andrea Thomer gave me early opportunities to present some of the ideas here to a wider audience at McGill University and the University of Michigan. Bill Tomlinson graciously provided spontaneous support during my sabbatical stay at UC Irvine, cut untimely short by the sudden emergence of a deadly virus. Geoff Bowker took the better part of a day to learn about my struggle to reconcile science and technology studies and critical systems thinking and offered useful suggestions.

Laura Portwood-Stacer's book proposal accelerator program in 2019 helped me immensely in shaping the argument of the book. Being nudged to articulate what the book was saying in more detail than I was prepared for eventually resulted in a much clearer arc. Her encouragement and constructive feedback were as helpful as her inside-outside view on how books are made. Brian Cantwell Smith commented on the book proposal and, later, on early chapters with his usual precision and nuance. I am very grateful to Gita Manaktala at MIT Press for believing in this project and finding such excellent reviewers in times where those seem impossible to find, to Suraiya Jetha for her support in navigating the complex process, to Molly Seamans for designing the striking cover, and to Patsy Baudoin, whose developmental editing helped to sharpen, tighten, and iron out my English. And of course, I greatly appreciate the constructive and encouraging feedback received by my manuscript readers.

A group of colleagues and friends took it on them to read draft chapters as I was writing, and I am deeply grateful for the significant amount of time they spent on my imperfect writing and the helpful critique and suggestions they offered—true critical friends, as I like to think. Ola Leifler

read the whole book, chapter by chapter, encouraging me to go further and be clearer. Stefanie Betz read the first half, offered very helpful reflections and suggestions, and similarly spent hours debating these ideas. Doris Allhutter made sure I was not making a fool of myself in chapter 5 when talking about STS. Elizabeth Patitsas did the same for several earlier chapters, and our conversations have helped me make sense of my own disability and gain new perspectives on crip technoscience.

This book's flaws are most certainly my own, but the argument emerges from and draws on the collaborative research I have been fortunate to be involved in over the past decade. This includes the Karlskrona group who I have coauthored with: Sedef Akinli Kocak, Stefanie Betz, Ruzanna Chitchyan, Leticia Duboc, Steve Easterbrook, Birgit Penzenstadler, Jari Porras, Norbert Seyff, and Colin Venters. I want to highlight some whose involvement was particularly generous and insightful. Leticia Duboc was the first to embark on a critical friendship adventure between requirements engineering and critical systems heuristics with me, and her interest, ethical commitment, and friendship means a lot to me. Chapter 10 would have never happened were it not for our collaboration and the participants of the CREW workshops in 2020 and 2021, including Francien Dechesne, Antonio Vetrò, Matti Nelimarkka, Christoph Schneider, and others mentioned here. Doris Allhutter's critical friendship, also featured in chapter 10, is offering a lot more than the book can capture, and I look forward to exploring it further. That Fabian Fagerholm decided to apply for a postdoctoral fellowship I advertised was my incredible luck. The hours we spent discussing intertemporal choice and conducting our studies were endlessly enriching, and his many insights resonate all across chapters 7 and 11. The studies on intertemporal choice would have never taken place were it not for the collaborations Fabian and I developed with Alexander Chatzigeorgiou, Stefanie Betz, Leticia Duboc, Birgit Penzenstadler, Rahul Mohanani, Colin Venters, Carol Cardenas Castro, and Jenny Gil. Some of the arguments made in later chapters have benefited from my collaborative work and interactions with critical friends in science and technology studies, participatory design, HCI, and adjacent fields, including Lucy Suchman, Andrew Clement, Ann Light, Chris Frauenberger, Victoria Palacin, Wolmet Barendregt, Douglas Schuler, Syed Ishtiaque Ahmed, Rachel Charlotte Smith, Pedro Reynolds Cuéllar, David

Nemer, Erhardt Graeff, Shion Guha, EunJeong Cheon, Devansh Saxena, Kenneth R. Fleischmann, and Maria Angela Ferrario. And I would like to thank the Fellows I had the honor of hosting at the Digital Curation Institute during the pandemic, whose research, collegiality and discussions have enriched the pandemic isolation and made it feel a little less lonely: Victoria Palacin, Vanessa Thomas, Ren Loren Britton, Isabel Paehr, Doris Allhutter, and David Wachsmuth.

Like many academics, I learn a lot from my students. I am grateful to the students at the just sustainability design course I have taught since Fall 2020, whose responses, discussions, and insights have helped me shape the argument presented here. I have been fortunate to advise PhD students Dawn Walker and Curtis McCord, who I continue to learn from and who have been involved in some of the projects discussed here too. Curtis has explored and pushed forward the use of critical systems thinking in systems design in his own PhD research as well as our joint work. And my graduate research assistants at the Faculty of Information at the University of Toronto, especially Andres De Los Rios, Tara Tsang, Enning Zhang, and Rachel Booth, have been wonderful to work with.

I wrote most of this book during two years of pandemic isolation. I am grateful to those who supported me during this time, especially Zippy, Andres, Elana, and Sarah. Nox and Lux were the best supervisors one can hope for.

Some research covered here was supported by the Canadian National Science and Engineering Research Council through RGPIN-2016-06640, the Canada Foundation for Innovation, the Ontario Research Foundation, and the Connaught Fund. Early work on this manuscript was supported by a research stay at the Leibniz Center for Informatics at Dagstuhl, sponsored by the German Academic Exchange Service. And some of the groundwork was funded by the Vienna Science and Technology Fund, the best-run funding agency I know.

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The MIT Press would like to thank the anonymous peer reviewers who provided comments on drafts of this book. The generous work of academic experts is essential for establishing the authority and quality of our publications. We acknowledge with gratitude the contributions of these otherwise uncredited readers.

This book was set in Stone Serif by Westchester Publishing Services.

Library of Congress Cataloging-in-Publication Data

Names: Becker, Christoph (Director of the Digital Curation Institute), author.

Title: Insolvent : how to reorient computing for just sustainability / Christoph Becker.

Description: Cambridge, Massachusetts : The MIT Press, [2023] | Includes bibliographical references and index.

Identifiers: LCCN 2022038283 (print) | LCCN 2022038284 (ebook) | ISBN 9780262545600 | ISBN 9780262374651 (epub) | ISBN 9780262374668 (pdf)

Subjects: LCSH: Electronic data processing—Social aspects. | Computer systems—Environmental aspects. | Information technology—Social aspects. | Sustainable development.

Classification: LCC QA76.9.C66 B435 2023 (print) | LCC QA76.9.C66 (ebook) | DDC 303.48/34—dc23/eng/20221121

LC record available at <https://lcn.loc.gov/2022038283>

LC ebook record available at <https://lcn.loc.gov/2022038284>