Critical Acclaim for *Humanistic HCI*

The Bardzells' new book is an excellent contribution to the growing field of Humanist HCI. It's a comprehensive, thoughtful, provocative guide to work in this complex and sometimes unfamiliar field of ideas and methods. The carefully designed chapters provide just enough information and a critical take to make you want to go off and explore more deeply, without getting you bogged down in detail. The Bardzells' personal style draws you in as a reader, and the book is perfectly pitched for both young researchers entering the field and experienced researchers and teachers.

Peter Wright, Professor of Social Computing,
Open Lab, Newcastle University, UK

Given the importance of digital technologies in the world, the research field of Human-Computer Interaction is and needs to be interdisciplinary. But the marriage between different disciplines is not always easy. This book provides an important bridge between the humanities and Human-Computer Interaction, showing how, when, and where humanities can play a crucial and important role. A must-read for not only established HCI-academics, but also new Ph.D. students coming into the field.

Kristina Höök, Professor of Interaction Design,
Royal Institute of Technology (KTH), Stockholm, Sweden.

Synthesis Lectures on Human-Centered Informatics

Editor
John M. Carroll, *Penn State University*

Human-Centered Informatics (HCI) is the intersection of the cultural, the social, the cognitive, and the aesthetic with computing and information technology. It encompasses a huge range of issues, theories, technologies, designs, tools, environments, and human experiences in knowledge work, recreation and leisure activity, teaching and learning, and the potpourri of everyday life. The series publishes state-of-the-art syntheses, case studies, and tutorials in key areas. It shares the focus of leading international conferences in HCI.

Humanistic HCI
Jeffrey Bardzell and Shaowen Bardzell
September 2015

The Paradigm Shift to Multimodality in Contemporary Computer Interfaces
Sharon Oviatt and Philip R. Cohen
April 2015

Multitasking in the Digital Age
Gloria Mark
April 2015

The Design of Implicit Interactions
Wendy Ju
March 2015

Core-Task Design: A Practice-Theory Approach to Human Factors
Leena Norros, Paula Savioja, and Hanna Koskinen
March 2015

An Anthropology of Services: Toward a Practice Approach to Designing Services
Jeanette Blomberg and Chuck Darrah
February 2015

Proxemic Interactions: From Theory to Practice
Nicolai Marquardt and Saul Greenberg
February 2015

Contextual Design: Evolved
Karen Holtzblatt and Hugh Beyer
October 2014

Constructing Knowledge Art: An Experiential Perspective on Crafting Participatory Representations
Al Selvin and Simon Buckingham Shum
October 2014

Spaces of Interaction, Places for Experience
David Benyon
September 2014

Mobile Interactions in Context: A Designerly Way Toward Digital Ecology
Jesper Kjeldskov
July 2014

Working Together Apart: Collaboration over the Internet
Judith S. Olson and Gary M. Olson
November 2013

Surface Computing and Collaborative Analysis Work
Judith Brown, Jeff Wilson, Stevenson Gossage, Chris Hack, and Robert Biddle
August 2013

How We Cope with Digital Technology
Phil Turner
July 2013

Translating Euclid: Designing a Human-Centered Mathematics
Gerry Stahl
April 2013

Adaptive Interaction: A Utility Maximization Approach to Understanding Human Interaction with Technology
Stephen J. Payne and Andrew Howes
March 2013

Making Claims: Knowledge Design, Capture, and Sharing in HCI
D. Scott McCrickard
June 2012

HCI Theory: Classical, Modern, and Contemporary
Yvonne Rogers
May 2012

Activity Theory in HCI: Fundamentals and Reflections
Victor Kaptelinin and Bonnie Nardi
April 2012

Conceptual Models: Core to Good Design
Jeff Johnson and Austin Henderson
November 2011

Geographical Design: Spatial Cognition and Geographical Information Science
Stephen C. Hirtle
March 2011

User-Centered Agile Methods
Hugh Beyer
2010

Experience-Centered Design: Designers, Users, and Communities in Dialogue
Peter Wright and John McCarthy
2010

Experience Design: Technology for All the Right Reasons
Marc Hassenzahl
2010

Designing and Evaluating Usable Technology in Industrial Research: Three Case Studies
Clare-Marie Karat and John Karat
2010

Interacting with Information
Ann Blandford and Simon Attfield
2010

Designing for User Engagement: Aesthetic and Attractive User Interfaces
Alistair Sutcliffe
2009

Context-Aware Mobile Computing: Affordances of Space, Social Awareness, and Social Influence
Geri Gay
2009

Studies of Work and the Workplace in HCI: Concepts and Techniques
Graham Button and Wes Sharrock
2009

Semiotic Engineering Methods for Scientific Research in HCI
Clarisse Sieckenius de Souza and Carla Faria Leitão
2009

Common Ground in Electronically Mediated Conversation
Andrew Monk
2008

© Springer Nature Switzerland AG 2022

Reprint of original edition © Morgan & Claypool 2015

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—electronic, mechanical, photocopy, recording, or any other except for brief quotations in printed reviews, without the prior permission of the publisher.

Humanistic HCI
Jeffrey Bardzell and Shaowen Bardzell

ISBN: 978-3-031-01086-6 print
ISBN: 978-3-031-02214-2 ebook

DOI 10.1007/978-3-031-02214-2

A Publication in the Springer series
SYNTHESIS LECTURES ON HUMAN-CENTERED INFORMATICS #31
Series Editor: John M. Carroll, Penn State University

Series ISSN 1946-7680 Print 1946-7699 Electronic

Humanistic HCI

Jeffrey Bardzell and Shaowen Bardzell
Indiana University

SYNTHESIS LECTURES ON HUMAN-CENTERED INFORMATICS #31

ABSTRACT

Although it has influenced the field of Human-Computer Interaction (HCI) since its origins, humanistic HCI has come into its own since the early 2000s. In that time, it has made substantial contributions to HCI theory and methodologies and also had major influence in user experience (UX) design, aesthetic interaction, and emancipatory/social change-oriented approaches to HCI. This book reintroduces the humanities to a general HCI readership; characterizes its major epistemological and methodological commitments as well as forms of rigor; compares the scientific report vs. the humanistic essay as research products, while offering some practical advice for peer review; and focuses on two major topics where humanistic HCI has had particular influence in the field—user experience and aesthetics and emancipatory approaches to computing. This book argues for a more inclusive and broad reach for humanistic thought within the interdisciplinary field of HCI, and its lively and engaging style will invite readers into that project.

KEYWORDS

HCI, human-computer interaction, humanities, philosophy, experience, UX, aesthetics, essay, social justice, activism, pragmatism, somaesthetics, Marxism, psychoanalysis, feminism, postcolonialism, critical theory, conceptual analysis, discourse analysis

For Tom Jennings, with love, gratitude, and admiration. —Jeffrey
To my sisters, Shaoying Lu and Sunako Liu, with love and fortitude. —Shaowen

Contents

Preface . . . . . **xv**

Acknowledgments . . . . . **xxi**

1 Introduction **1**
1.1 HCI and the Humanities 2
1.2 Aims and Structure of this Book 6
1.3 Counteracting the God-Trick: Introducing Your Narrators 8

Part I: Theorizing Humanistic HCI **11**

2 What is Humanistic HCI? **13**
2.1 What are the Humanities? 13
2.1.1 The Societal Contribution of the Humanities 14
2.1.2 Characteristic Features of Humanistic Practice 17
2.1.3 Against the Humanities 23
2.1.4 Final Thoughts on the Humanities 27
2.2 What is Humanistic HCI? 29

3 Humanistic HCI and Methods **33**
3.1 Methods and the Subjects and Objects of Inquiry 33
3.2 Humanistic HCI Methodologies: A Survey 38
3.2.1 Importing a Humanistic Concept into HCI 38
3.2.2 Critical Analysis of Designs as Theory-Building 40
3.2.3 Critical Analysis of HCI Discourse 47
3.2.4 Blended Critical and Social Scientific Methodologies 52
3.2.5 Humanistic Thinking And Design Futuring 57
3.3 Summary: Three Key Themes of Humanistic Approaches 62
3.3.1 Critique: Rooting out the Stale and Illuminating Worth 62
3.3.2 Extending Knowledge vs. Improving Thinking 62
3.3.3 Disclosing New Forms of Life 63

4 Enacting the Struggle for Truth in Full View: Writing and Reviewing Humanistic Research **65**
4.1 The Humanistic Essay 67

4.2 The Essay in HCI 68
4.3 Humanistic HCI and Peer Review 70
4.4 Humanistic HCI and Interdisciplinary Practice 74

Part II: Major Topics in Humanistic HCI 77

5 User Experience and Aesthetics 79
5.1 From Usability to User Experience 79
5.2 The Re-Theorization of Experience 82
5.3 Pragmatism and User Experience 85
5.3.1 Dewey's Theory of Aesthetic Experience 86
5.3.2 Deweyan Pragmatism and UX 89
5.3.3 Somaesthetics or Embodied Pragmatism 92
5.4 Interaction Design Poetics 100
5.4.1 The Poetics of Aristotle 102
5.4.2 Brenda Laurel: Computers as Theater 104
5.4.3 Reading Laurel—and Aristotle—Today 105
5.5 Conclusion: A Critical Take on User Experience Concept Systems 107

6 Social Change and Emancipation 115
6.1 Introduction 115
6.2 Emancipatory Critique in the Humanities 116
6.2.1 Marxism, Psychoanalysis, Feminism, and Postcolonialism 117
6.2.2 "The Hermeneutics of Suspicion" 120
6.3 Emancipation in HCI 122
6.4 Humanistic Emancipatory HCI 125
6.4.1 Reflective HCI 125
6.4.2 Political (Marxist?) HCI 126
6.4.3 Feminism, Queer Theory, and/in HCI 128
6.4.4 Sex and the Subject (Psychoanalytic HCI?) 133
6.4.5 Postcolonial HCI 138
6.5 Conclusion: A Critical Take on Emancipatory HCI 140

7 Conclusion 143

Bibliography 147

About the Authors 163

Preface

Fifty years ago, computers lacked sufficient power to both do their tasks and also render a user interface; human specialists instead functioned as the interface between a human with a computational need and the system capable of performing it. Today, user interfaces capture our imaginations, drive economies, and are the very stuff of everyday life—be it delighting or frustrating. In those intervening 50 years, we witnessed the development of the graphical user interface, which meant that direct access to computing was directly available to most professionals, rather than only to specialist technicians. Driven by Moore's Law, falling prices led to PCs moving from the white-collar office to most workplaces, and then to our homes in the forms of workstations tailored for the home and video game consoles. The Internet took off, giving us the World Wide Web and email, persistent virtual worlds, social media, and online video. Soon, computers were in our pockets, dishwashers, cars, cameras, TVs, and today most of us don't know how many computers we own (or, thanks to complex laws and licensing agreements, whether we own them at all). Enabled by our smart devices and social media habits, algorithms now watch us online, in airports, via financial transactions to figure out whether we might be terrorists as well as which kinds of cheese we're be more likely to buy.

Jonathan Grudin describes this movement of the computer from a narrow technical specialist domain to something ubiquitously around us as "the computer reaching out" (1989). For those of us who have lived through this history, it's easy to see that the computer reaching out has enormous sociocultural consequences: practical, legal, ethical, financial, political, and aesthetic. Those who design information technologies are in the midst of adding a new dimension—virtuality—to the artificial world that all humans now must live in, it being nearly impossible to opt out (Vertesi, 2014).

No wonder, then, that the young field of HCI has seen enormous changes in its objects of inquiry, theory, and methods. In a little over three decades, HCI has already gone through three Kuhnian paradigms (Kuhn, 1996), that is, coherent concatenations of theoretical, methodological, and content-specific research structures (Bødker, 2006; Rogers, 2012; Harrison et al., 2007). In the 1980s, during its first paradigm or wave, HCI successfully developed and championed a concept of usability, which could be measured according to task completion time, error rates, learnability, memorability, and subjective satisfaction (Shneiderman and Plaisant, 2010). This remains a major intellectual achievement, but while usability offers an excellent way to evaluate professional systems, the field of HCI has long recognized that usability is weak at other evaluation criteria that are increasingly relevant as the computer reaches out. For example, usability is weak at capturing

the social dimensions of collaboration, and also at the contextually specific dimensions of interaction; research in the second paradigm or wave of HCI sought to correct these shortcomings, and to do so turned to disciplines and theoretical traditions outside of HCI—social psychology, sociology, and anthropology in particular.

In the early 2000s, it became clear that whereas then-dominant theories and methods were optimized for workplace-based interaction, many of the most exciting developments in the field—such as mobile, domestic, and entertainment computing—were not amenable to such theories and methods. There were questions of experience, emancipation, domestic life, intimacy, sustainability, and the good life—issues that have come to dominate the third paradigm or third wave of HCI. Meanwhile, scholars in adjacent fields, including digital media studies, digital arts, video games, and science and technology studies (STS) were building a compelling track record of success with these issues by turning to humanistic theories and approaches. And so HCI made the turn as well to humanistic thinking—a sensible move, as we hope to demonstrate in what follows.

One final caveat to this brief narrative: it should not be read as teleological, as if the third paradigm of HCI is better than or somehow replaces the earlier two paradigms. Rather, all three paradigms now operate together, often in a complementary way. It would be absurd to argue, for example, that usability doesn't matter in an video game or a mobile phone app. Likewise, it would be foolish to dismiss the contributions of activity theory, distributed cognition, or ethnomethodology in researching collaborative behavior in a massively multiplayer online game, such as World of Warcraft.

WHAT IS HUMANISTIC HCI?

Chapter 2 offers a careful and substantive response to this question, but we'll aim to be pithy here in the Preface. We begin with a definition of the humanities.

> The term 'humanities' includes, but is not limited to, the study and interpretation of the following: language, both modern and classical; linguistics; literature; history; jurisprudence; philosophy; archaeology; comparative religion; ethics; the history, criticism and theory of the arts; those aspects of social sciences which have humanistic content and employ humanistic methods; and the study and application of the humanities to the human environment with particular attention to reflecting our diverse heritage, traditions, and history and to the relevance of the humanities to the current conditions of national life (http://www.neh.gov/about, accessed August 16, 2014).

We'll comment on this definition in Chapter 2, but we include it here simply to remind readers how wide-ranging the humanities are (extending far beyond obvious instances such as literary theory and philosophy to include archaeology, law, linguistics, and history) and also to show

that even the U.S. National Endowment for the Humanities (the source of the above definition) sees the humanities as contiguous with and inseparable from certain aspects of the social sciences.

We agree. And in that spirit we offer our take on *humanistic HCI*.

> We understand *Humanistic HCI* to refer to any HCI research or practice that deploys humanistic epistemologies (e.g., conceptual systems) and methodologies (e.g., conceptual analysis; critical analysis of designs, processes, and implementations; emancipatory criticism) in service of HCI processes, theories, methods, agenda-setting, and practices.

A few clarifications (developed later in more detail) are in order. We do not understand humanistic HCI to be the same sort of thing as the Digital Humanities. The latter we understand to be contemporary humanities scholarship mediated by technological tools (e.g., text search capabilities, algorithms for pattern recognition and prediction). In contrast, *we understand humanistic HCI to be HCI scholarship*, supported or mediated by humanistic theories and methods. In turn, this means that *HCI researchers and practitioners do humanistic HCI*; it is certainly not limited to researchers and practitioners with advanced degrees in the humanities. Indeed, some of the most influential contributions to Humanistic HCI came from social scientists, including Paul Dourish, John McCarthy, and Peter Wright, and designers, such as Ann Light and Kristina Höök.

WHO SHOULD READ THIS BOOK?

Given our view that humanistic HCI is basically a style or mode of HCI scholarship, and that it is done by HCI researchers and practitioners, then one implication is that the whole HCI community is likely to benefit from resources that support its members in the uptake of humanistic HCI—to whatever degree they want to think about humanistic issues in their work, and starting from wherever they are in terms of humanities training. This book is intended as one such resource.

Specifically, we hope the book offers the following benefits to readers in the HCI community, regardless of background. The book should:

- demystify humanistic knowledge production processes (e.g., theoretical commitments, methodological predispositions, and standards of rigor) and humanistic knowledge outcomes (e.g., what constitutes a humanistic "contribution");
- offer an accessible and synthetic narrative of major contributions to humanistic HCI and a generous collection of bibliographic leads, to improve their accessibility to wider HCI readerships;
- provide immediate practical resources to help HCI researchers and practitioners to incorporate humanistic ways of knowing into their practice;

- highlight areas where humanistic approaches are particularly strong and/or influential in HCI practice, in particular, user experience and emancipatory HCI; and
- contribute toward the consolidation of humanistic HCI as one of the many coherent, if heterogeneous, subdomains of HCI, with the view that it can be further developed and improved internally and also that it has sufficient hooks to be able to function side-by-side with other HCI subdomains.

We have broader and longer-term hopes as well. Let us begin with the present state of the humanities. There is no question that the humanities have been in decline both in prestige and across a number of measures in recent decades. Academic disciplines come and go. The idea of a literature department or the academic study of literature is less than two hundred years old and emerged in a specific sociocultural moment. We are skeptical that what it would become in its heyday—the literature department of the 1940s–1970s, which taught "soft skills" such as critical thinking and deep and wide reading of "great books," to a professional white collar class, will come back again (or even that such an outcome would be desirable). But the intellectual virtues of the humanities, such as those in the box below should *not* be relegated to the past.

Key Intellectual Virtues of Humanistic Thought

- Critical thinking
- Mastery of one's own language (and others)
- Argumentative skill, including the accurate representation and analysis of ideas—one's own or those of others
- Sensitivity to historical patterns and genealogies, in particular their significance in the present and implications for the future
- Perceptiveness concerning false pleasures and ideological machinations
- Commitment to rational and democratic jurisprudence
- Imaginative connection to sociocultural others (e.g., people from the distant past, from other parts of the world, in different life stages, pursuing different forms of life)
- Reflectiveness about the conditions of one's own knowledge-producing capability

Our optimistic hope is that the humanities will in the coming years realign themselves with new major new disciplinary fields—informatics being one of them—to the mutual benefit of all of these fields and, far more importantly, to the benefit of the world we live in. In this regard, we as authors hope that we have readers beyond HCI, for instance, readers in the humanities interested in seeing the rise of humanistic HCI as a success story, one in which they can recognize themselves.

THE COMPUTER PUSHED OUT

We opened this Preface with a narrative of "the computer reaching out"—a powerful metaphor. But we in HCI are not just passively "being reached" by the computer. It is our profession that, along with others', *pushes* the computer out. This happens as researchers and practitioners identify new needs, explore new technological capabilities, design and release new things, construct new IT infrastructures, and imagine computation as a kind of approach to the very real problems we face. Nearly 15 years ago Paul Dourish (2001) wrote that the development and application of computational technologies is "most certainly also a philosophical enterprise," continuing,

> It is philosophical in the way it represents the world, in the way it creates and manipulates models of reality, of people, and of action. Every piece of software reflects an uncountable number of philosophical commitments and perspectives without which it could never be created. (vii-viii)

Dourish left tacit what we'll now ask directly: *Are we pursuing this philosophical enterprise competently?* Are we as a field merely waiting for the computer to reach out to us, running behind to study it after the fact, or are we owning up to our own agency as (at least one) party *pushing* the computer out? Can we even tell the difference in practice?

Our position is that humanistic theories and approaches, emerging out of and reflecting the values we just listed—of critical thinking, communicative competence, imaginative empathy, reflective self-awareness, etc.—not only *can* help HCI researchers and practitioners live up to their own utilitarian, ethical, and aesthetic ideals, but, as the following chapters show time and again, they *already have*. That's the story that we have to tell, and in doing so, we also hope our project brings into view some sense for *what comes next*.

But such topics aren't destined for humble prefaces.

Acknowledgments

The writing of this book was an enlightening and also a humbling process; it revealed to us just how much we didn't know about the stuff we're supposed to know the most about. Fortunately, we had a lot of help from some good friends. Above all, we want to thank our reviewers, all of whom advocated for you, dear reader, rather forcefully: Lone Koefoed Hansen, Kristina Höök, Ann Light, and Peter Wright. This book is much stronger for their constructive feedback. We are grateful to our Morgan & Claypool editor, Diane Cerra, for her guidance throughout this process. We also want to acknowledge Gopinaath Kannabiran, Tyler Pace, and Austin Toombs for helping us with the humanistic HCI literature review. It turns out to have been rather a lot of literature to review! Lastly, we wish to acknowledge the support of the Intel Science and Technology Center for Social Computing, which provided financial support for this work.