FOUNDATIONS OF COMMUNICATION THEORY

HEALTH COMMUNICATION THEORY

EDITED BY
TERESA L. THOMPSON
AND PETER J. SCHULZ

WILEY Blackwell

Health Communication Theory

Foundations of Communication Theory

The Foundations of Communication Theory series publishes innovative textbooks that summarize and integrate theory and research for advanced undergraduate and beginning graduate courses. In addition to offering state-of-the-art overviews in a broad array of subfields, authors are encouraged to make original contributions to advance the conversation within the discipline. Written by senior scholars and theorists, these books will provide unique insight and new perspectives on the core subdisciplinary fields in communication scholarship and teaching today.

Published

Health Communication Theory by Teresa L. Thompson and Peter J. Schulz

Organizational Change: Creating Change Through Strategic Communication, Second Edition by Laurie K. Lewis

Theorizing Crisis Communication, by Timothy L. Sellnow, Matthew W. Seeger

Forthcoming

The Work and Workings of Human Communication by Robert E. Sanders

Theorizing Crisis Communication, Second Edition by Timothy L. Sellnow and Matthew W. Seeger

Health Communication Theory

EDITED BY

Teresa L. Thompson

Peter J. Schulz

WILEY Blackwell

This edition first published 2021

Registered Office
John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, USA

Editorial Office
111 River Street, Hoboken, NJ 07030, USA

For details of our global editorial offices, customer services, and more information about Wiley products visit us at www.wiley.com.

Wiley also publishes its books in a variety of electronic formats and by print-on-demand. Some content that appears in standard print versions of this book may not be available in other formats.

Library of Congress Cataloging-in-Publication Data

Names: Thompson, Teresa L., editor. | Schulz, Peter J., 1958- editor.
Title: Health communication theory / edited by Teresa L. Thompson, University of Dayton, Professor Emerita Dayton, USA, University of Kansas, Edwards Campus Overland Park, USA, Peter J. Schulz, University of Lugano, Lugano, Switzerland.
Description: Hoboken, NJ : Wiley/Blackwell, 2021. | Series: Foundations of communication theory series | Includes bibliographical references and index.
Identifiers: LCCN 2020030502 (print) | LCCN 2020030503 (ebook) | ISBN 9781119574439 (paperback) | ISBN 9781119574460 (adobe pdf) | ISBN 9781119574507 (epub)
Subjects: LCSH: Communication in medicine.
Classification: LCC R118 .H4357 2021 (print) | LCC R118 (ebook) | DDC 610.1/4–dc23
LC record available at https://lccn.loc.gov/2020030502
LC ebook record available at https://lccn.loc.gov/2020030503

Cover Design: Wiley
Cover Image: © didesign021/Getty Images

Set in 10/12.5pt CenturyStd by SPi Global, Pondicherry, India

10 9 8 7 6 5 4 3 2 1

To Steve and Connor….
Love, Teri/Mimi

To Magda and my sons Thomas E., Lukas P. and Markus J.
In gratitude, Peter

With warm thanks to Scott Poole
TT and PS

Contents

Contributors

Salah H. Al-Ghaithi, Department of Communication, University of Illinois at Urbana-Champaign

Austin S. Babrow, School of Communication, Ohio University

Maria Brann, Department of Communication, IUPUI

Jennifer J. Bute, Department of Communication, IUPUI

Andrea Martinez Gonzalez, School of Communication Studies, James Madison University

Evelyn Y. Ho, Department of Communication, University of San Francisco

Youjin Jang, Department of Communication, Michigan State University

Shaohai Jiang, Department of Communications and New Media, National University of Singapore

Hannah Jones, Department of Communication, Rutgers University

Maureen Keeley, Department of Communication Studies, Texas State University

Dannielle E. Kelley, National Cancer Institute

Arunima Krishna, Department of Mass Communication, Advertising, and Public Relations, Boston University

Yanqin Liu, Clinical Studies Unit, Mayo Clinic Arizona

Michael Mackert, Center for Health Communication, Stan Richards School of Advertising & Public Relations, Moody College of Communication

Marianne S. Matthias, Department of Medicine, Indiana University

Maria D. Molina, Department of Advertising and Public Relations, Michigan State University

Robin L. Nabi, Department of Communication, University of California, Santa Barbara

Rebekah H. Nagler, Hubbard School of Journalism and Mass Communication, University of Minnesota

Sarah M. Parsloe, Department of Communication, Rollins College

Sandra Petronio, Department of Communication, IUPUI

Rachyl Pines, Research Administration Department, Santa Barbara Cottage Hospital

Brian L. Quick, Department of Communication, University of Illinois at Urbana-Champaign

Tobias Reynolds-Tylus, School of Communication Studies, James Madison University

Anthony J. Roberto, Hugh Downs School of Human Communication, Arizona State University

James D. Robinson, Department of Communication, University of Dayton

Peter J. Schulz, Institute of Communication & Health, School of Communication, Culture and Society University of Lugano (Università della Svizzera italiana)

Barbara F. Sharf, Independent Scholar and Professor Emerita, Dept. of Communication, Texas A & M University

Brian G. Southwell, RTI International, Duke University, University of North Carolina at Chapel Hill

Anne M. Stone, Department of Communication, Rollins College

S. Shyam Sundar, Donald P. Bellisario College of Communications, Pennsylvania State University

Teresa L. Thompson, Professor Emerita, Department of Communication, University of Dayton

Yan Tian, Department of Communication and Media, University of Missouri-St. Louis

Jeanine W. Turner, Communication, Culture and Technology Program, Georgetown University

Monique Mitchell Turner, Department of Communication, Michigan State University

Shawn Turner, Department of Communication, Michigan State University

Bernadette Watson, Director, International Research Centre for the Advancement of Health Communication (IRCAHC), Department of English, The Hong Kong Polytechnic University

Jill Yamasaki, Jack J. Valenti School of Communication, University of Houston

Marco Yzer, Hubbard School of Journalism and Mass Communication, University of Minnesota

PART I

Perspectives on the Field of Health Communication

1

The Basics of Health Communication Theory

Teresa L. Thompson and James D. Robinson

Health problems are prevalent all over the world, and communication processes play essential roles in addressing these health problems. From Ebola, MERS, Zika, and COVID-19 to vaping and the opioid epidemic, various health crises must be confronted across the world on a constant basis. The area of study that has come to be called "health communication" is crucial as practitioners and scholars attempt to alleviate and minimize a multitude of health problems and improve health care delivery. Effective and useful health communication is foundational as we attempt to control the spread of disease and health problems.

Do *message strategies* that encourage people to manage their diet to control diabetes also inspire them to look more closely at vaccination decisions? In other words, can we generalize what we learn about health communication regarding one health problem to other health issues? Does the study of patient-centered communication have implications for mental health as well as physical health and illness? Does message targeting or tailoring allow the effective adaptation of anti-vaping messages to different audiences? These and other questions are conceptual and theoretical concerns that underlie health promotion and a broader

Health Communication Theory, First Edition. Edited by Teresa L. Thompson and Peter J. Schulz.

understanding of health communication processes. Through health communication research one may understand not only how communication operates in relation to a particular health issue, but how health communication functions more broadly. Indeed, the ultimate hope is an increased understanding of communication processes across contexts and a healthier world.

As is evident in the title of this volume, the focus of this book is on the theories that we use to study health-related processes. Our goal is to help students, scholars, and practitioners more adequately examine health communication concerns by grounding their work in solid theory. We thus begin the volume by briefly defining health communication, health, health care delivery, and theory. We then talk about why theory is important in the study of health communication. We follow this with brief discussions of the traditions of health communication theory and generative tensions in health communication scholarship. This chapter concludes with a preview of the remainder of the book and a discussion of ethical concerns.

What is Health Communication?

It is frequently noted that the area of study that has become known as health communication began to emerge from research in the 1940s that looked at the persuasive impact of health information and promotion, although Salmon and Poorisat (2019) point to even earlier traditions from the field of public health. This work goes back to the development of germ theory and can be traced to the beginning of the twentieth century. Starting with newspapers and then moving to film, radio, and television, media campaigns about health issues began to appear. The emergence and refinement of social science research methods, including the development of Thurstone and Likert-type scales and sampling techniques à la George Gallup, was another central factor in the progress that was made during earlier decades of the twentieth century. Salmon and Poorisat (p. 1) identify four key factors that influenced and characterized this growth:

1. the early use of mass communication for public health campaigns (1900–1910s);
2. the search for effects (1920–1930s);
3. the search for explanation from interdisciplinary perspectives (1940–1950s); and
4. the formal recognition of health communication as a distinct and valuable field of practice and research (1960s).

The reader will see these influences reflected in the theories and chapters that follow.

The Stanford Heart Disease Prevention Program, which began in 1971, was also an important development in the history of health communication. During the early 1970s scholars such as Barbara Korsch and her colleagues (e.g. Korsch and Negrete, 1972) conducted work that served as the foundation of research on physician–patient communication. This work, published in such prestigious outlets as *Scientific American*, created interest within the broader field of communication. Some of this work was labeled "medical communication." Simultaneously, scholars building on the interactional view articulated in Watzlawick, Beavin, and Jackson's (1967) *Pragmatics of Human Communication* and further developing the conceptualization of communication processes offered by Gregory Bateson (1972) focused on what was called "therapeutic communication." These traditions came together beginning in the early-1970s to prompt the development of the new area of study called "health communication." The inception of the Health Communication Division of the International Communication Association in 1975 (following the founding of the Health Communication Interest Group in 1972) most clearly demarcated this new area of study. The movement within medicine, public health, and the social sciences from a biomedical approach to a biopsychosocial view was simultaneously occurring (see Ho and Sharf, Chapter 14 in this volume, for more discussion of this).

The area of health communication did not take long to develop. Books on the topic, most notably Kreps and Thornton's (1982) *Health Communication: Theory and Practice*, began to emerge in the early 1980s. By 1986, enough work was being conducted in the area that the publisher Lawrence Erlbaum Associates expressed interest in a journal on health communication. The first author of the present chapter, who is also the editor of the journal *Health Communication*, began soliciting submissions in 1987, and the first issue of the journal came out in January of 1989. The journal originally published four issues a year, but at the time of the writing of this chapter is publishing 14 lengthy issues a year. During 2019, the journal processed 776 submissions. Two hundred and nine issues of the journal have now been published. *Health Communication* was shortly followed by *The Journal of Health Communication: International Perspectives*, *Patient Education and Counseling*, *Journal of Communication in Healthcare*, *Communication and Medicine*, and several other outlets. The *Journal of Health Communication* began publishing in 1996. The first edition of the *Handbook of Health Communication* (chapters of which were translated into Korean) was published in 2003, and the second edition, *The Routledge*

Handbook of Health Communication was published in 2011. The third edition of the handbook is in press at the time of the writing and will be published in 2021. *The Sage Encyclopedia of Health Communication* came out in 2014. All of these publications are evidence of the rapid growth of this area of study.

International interest in health communication has also increased notably over the last three decades. This is reflected in the subtitle of the *Journal of Health Communication: International Perspectives*, but is really reflected in the work published in all the health communication outlets. The journals all receive and publish submissions from a variety of countries. As continents, Europe, Oceania (Australia and New Zealand), and Asia are particularly active in health communication scholarship, as is North America. Within Europe, scholars in the Netherlands, Switzerland, and the UK are highly involved in health communication research. The Asian countries of Korea, China, Taiwan, and Singapore are also replete with active health communication researchers. In North America, health communication research is conducted in both the US and Canada.

The initial issue of *Health Communication* included many invited pieces by such important scholars as Barbara Korsch, Gary Kreps, David Smith, and Jon Nussbaum. These pieces attempted to set the agenda for the field – and they did, continuing to be cited during subsequent decades. Several articles in the 100th issue of the journal referred back to these articles and identified the progress that had been made over the last 100 issues. Much advancement was, indeed, apparent. Many of the directions suggested by these scholars have now been actualized.

Early submissions to and publications in *Health Communication* tended to be atheoretical and offered relatively simplistic views on communicative processes, although not as simplistic as those that are still apparent in the research conducted today by submitters without a background in the social sciences. The quality and focus of most of the work that is now submitted to the journal has changed substantially in the 30-some years in which the journal has been publishing, and work is rarely accepted for publication without a guiding theoretical foundation.

As is the case with any area of study or phenomenon, varying definitions of health communication have been offered. The process of communication focuses on simultaneous, transactional message co-creation of meaning through interaction. Health communication focuses on such processes as they relate to and impact health and health care delivery. The primary areas of study that are the foci of health communication

work include provider–patient communication, health campaigns and other types of health promotion, health information in the media, eHealth and mHealth, health risk communication, communicative processes within health organizations, and everyday health communication (see Kreps 2020, for more detailed discussion of many of these areas). Everyday health communication focuses on communication *about* health and as it *impacts* health among family members and friends, as opposed to that communication which takes place with formal health care providers and through mediated channels of communication (Cline 2011; Head and Bute 2018).

What are Health and Health Care Delivery?

Although most of us probably have an ordinary conception of health as a state of being disease-free, more precise conceptualizations of it have been offered. The World Health Organization defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (The World Health Organization 2020, n.p.). Please note the focus on mental and social issues as well as physical health.

Building on this, the US National Institutes of Health (NIH) defines health care delivery as "The concept concerned with all aspects of providing and distributing health services to a patient population" (NIH 2020, n.p.). Although this definition appears to focus on formal health care delivery, health communication scholarship goes well beyond this traditional emphasis. The best health communication work is that which is grounded in theory.

What is Theory? What is Health Communication Theory?

The term "theory" is used rather loosely in ordinary conversation ("I have a theory about why my brother is so messed up") but has a more precise meaning in scholarship. Once again, many different definitions are offered of theory. Put fairly simply, a theory is an attempt to explain a phenomenon or set of phenomena in a testable manner. It provides guidance for research and can serve as a lens or a map. It is a supposition that is based on past research. This makes it an educated guess.

It should not be tautological or based on circular reasoning. The theory should be independent of the phenomenon to be explained. Theories make predictions which are then testable.

Theory plays a different role in qualitative/interpretive research than it does in positivist/quantitative research. Whereas good quantitative research is typically grounded in and tests theory, qualitative research is more likely to generate theory. The goal of interpretive work is to reform society and generate understanding more than to test predictions and hypotheses. Jill Yamasaki (Chapter 3 in this volume) articulates this difference in more detail and makes clearer the role of theory in interpretive work.

Babrow and Mattson (2011) offered a useful definition of health communication theory in the 2nd edition of the *Routledge Handbook of Health Communication*. They define health communication theory "as consciously elaborated, justified, and uncertain understanding developed for the purpose of influencing practice related to health and illness" (p. 19). This will be our working definition of health communication theory in this volume.

Why Do We Need Health Communication Theory?

As is the case with any area of scholarly study, health communication work that is guided by a theoretical framework is stronger than work that is atheoretical. Some work that falls within the general category of health communication is problem-focused but not theoretically framed. Work that is based in theory is more systematic than is work that is problem-oriented but atheoretical. Work that is grounded in theory is generalizable beyond the particular context or health condition that was the focus of the original study. Good theories are not content- or health-problem-specific. They apply to broader communicative processes, not just to a particular health problem or in a particular setting. Good theory is, most importantly, practical and applicable to social concerns.

If a study on diabetes management is grounded in a perspective such as the theory of reasoned action, findings from that study will provide insights that scholars may apply to other health problems and contexts. Although generalizability is partially based on sampling, design issues, and ecological validity concerns, it is also based on theoretical framing.

Through the theoretical grounding of a study the broader base of knowledge is extended. This is the goal of scholarship. This is how a body of knowledge is built.

One of the more interesting examples of theory being extended into new areas of study is cybersecurity. If imitation is the sincerest form of flattery, theories of health and health communication should at least blush occasionally. Several theories discussed within this volume have gained theoretical traction in research on computer security.

Scholars studying how to motivate end users to engage in safe computer practices use the health belief model (Rosenstock 1974), the protection motivation theory (Rogers 1975), and the transtheoretical model (Prochaska and DiClemente 1983) to guide their research.

For example, Ng et al. (2009) found that perceptions of susceptibility, benefits, and feelings of self-efficacy were the best predictors of opening email attachments. The analogue of "don't click on links or open unexpected email attachments" in the realm of health is "maintain social distance and wash your hands." Viruses move through contact and malware moves through virtual contact or email.

Recently researchers from Carnegie Mellon (Faklaris, Dabbish, and Hong 2018) recognized the value of the transtheoretical model for designing security interventions. Their recommendations acknowledge that, just like the public in a general health information campaign, end users are not equally accepting or ready for making changes to their behavior. By targeting messages based on users' current readiness or stage of change, cybersecurity professionals may increase the effectiveness of their campaigns and training materials. Also important, developing targeted messages may help reduce the feelings of cyber-fatigue that are now recognized as the bane of security training efforts.

Training programs for avoiding phishing attacks and ransomware attacks require different lists of rules. It is no wonder that end users receiving information not targeted to their readiness produce fatalistic attitudes about cybersecurity training.

Fortunately, health communication theory has come to the rescue here, too. Recent research by Zhang and Borden (2019) employed the extended parallel processing model (Witte 1994) and found fear and anxiety mediated end-user behavior. Specifically, negative emotions were shown to influence the impact of threat on end-user intentions to comply and seek additional information. Efforts to motivate end-user cybersecurity behavior need to consider the role self-efficacy plays in

the process. It remains to be seen how effective these theories will be, but it is clear scholars from other disciplines are looking to health and health communication for theoretical models. The next section of this chapter focuses on the different types of theories. The breadth and depth of these theoretical traditions have certainly helped us grow the discipline.

Traditions of Health Communication Theory

Much has been written about communication theory as an area of study over the last several decades. Perhaps the most frequently cited and well-known work on communication theory was published by Robert Craig (1999) in the journal *Communication Theory*. Among the many important points made by Craig is an insightful discussion of the multiple disciplines from which communication theory has developed. These varying disciplinary roots have led to rather different conceptualizations of the nature of theory and its application in the broad field of communication. Craig notes that acknowledging these differing roots is more fruitful than arguing about the validity of varying theoretical approaches. Craig identifies seven traditions of communication theory. His discussion has become foundational to our understanding of theory in the field of communication.

Building on this work, Babrow and Mattson (2003, 2011) identify how these traditions apply to health communication scholarship. They trace the following lines of research and knowledge in this discussion: (i) rhetorical ("the practical art of persuasive discourse", Babrow and Mattson 2011, p. 25); (ii) semiotic ("intersubjective mediation by signs and sign systems", p. 26); (iii) phenomenological ("communication as dialogue or experience of otherness", p. 26); (iv) cybernetic ("information processing by which systems are able to function", p. 27); (v) sociopsychological (a focus on behavior expressing psychological systems, states, and traits producing a variety of effects); (vi) sociocultural (symbolic processes producing and reproducing sociocultural patterns that are shared within a group); and (vii) critical traditions (which focus on "material practices and hegemonic ideologies that distort communication" p. 29). More of the theories to be discussed in the remainder of this volume focus upon sociopsychological and sociocultural traditions than on the other traditions (for exceptions see Ho and Sharf, Chapter 14 in this volume).

Understanding the conceptualization of communication and theory on which a particular theory is based is important in order to adequately assess the value of that theory and research.

Generative Tensions in Health Communication

Understanding theory in health communication is also directly related to comprehension of the "generative tensions" underlying the study of health communication (Babrow and Mattson 2011, p. 19). One of these tensions focuses upon the interplay of the body and communication that is inherent in the biopsychosocial turn that has been key to changes in views of medicine in the last few decades. The guiding principles after the turn are: Disease shapes communication. Communication shapes disease and other aspects of health. Social and cultural factors influence all aspects of health communication. How disease is defined and the manner in which we communicate about it determine how it is treated.

A second generative tension is related to this – the opposition between science and humanism. Contrasts between the potentialities of science vs the actualization of being human epitomize this. Babrow and Mattson (2011) exemplify this tension through a discussion of death and dying. The contemporary fear of mortality is but one factor that captures and typifies this tension.

The strain between idiosyncrasy and communality characterizes the third generative tension that they identify. The contrast between ontological and holistic views of medicine makes this apparent. Finally, the experience of uncertainty and values are central to the fourth generative tension described by Babrow and Mattson (2011). This tension will be most apparent in the chapter written by Babrow, Matthias, Parsloe, and Stone (Chapter 13 in this volume), which focuses on uncertainty management theories.

Preview of the Book

Many of the theories that are commonly used in health communication scholarship are applied across contexts and areas of health communication study. Dividing these theories into chapters is somewhat arbitrary, but it was necessary to do so in some manner in order to make the presentation of the theories manageable. We looked in part at the origins of

various theories to shape the various chapters. All theories in the book are applied to the field of health communication but might originate elsewhere. Four origins can be distinguished: (i) theories developed in the field of *health communication* proper, (ii) theories developed in the context of *health* in general (and then specified or made useful in the more narrow area of health communication), (iii) theories developed in *communication* (and then also specified to health communication), and (iv) theories of provenance from fields *beyond health or communication*, but which are nevertheless applied in health communication. The book begins with an overview in Part I and then moves to narrower interpersonal contexts. We broaden the context from there.

Some of the conceptual constructs that frame health communication scholarship are not proper theories, per se, but function in ways similar to that which is found in theoretical scholarship. We elected to include them in Chapter 2 by Brian L. Quick et al. that follows this introduction and occasionally throughout the other chapters. These variables/processes are frequently used to segment audiences and allow the adaptation of messages. They include notions such as tailoring and targeting health messages based on demographic, geographic, psychographic, and behavioral considerations. Other individual difference variables are also used and discussed in the chapter by Quick et al. Important amongst these are involvement, reactance proneness, locus of control, self-monitoring, and sensation-seeking. Health literacy is a key concept in much health communication research, although it is not specifically theoretical, so we have also added this notion into Chapter 2. This first section culminates with Jill Yamasaki's chapter (Chapter 3) on interpretive health communication scholarship. This chapter is appropriately called "When Theory and Methods Intertwine" because interpretive scholarship does not typically begin with a particular theory that is then tested, as is the case with the other theories discussed throughout the book. Yamasaki introduces several interpretive approaches to research that frame health communication theory.

As is common in books focusing on communication, we then move in Part II to dyadic contexts and a discussion of the theories most commonly used in that area of health communication research. These dyadic contexts tend to be interpersonal in focus. Three theories are the focus of discussion in the following chapter (Chapter 4) – communication accommodation theory, communication privacy management theory, and the theory of negotiated morality. Although these theories have different origins, they all illuminate interpersonal interaction as it relates to health and health care delivery. It should be noted that none of the

theories are used exclusively in health and illness contexts, but they all have been applied extensively and fruitfully in health communication scholarship. This chapter is presented in an unusual manner, in that we had experts on the different theories write separate sections, with authorship of each section noted within the chapter. The authors of this chapter are Maria Brann, Jennifer J. Bute, Maureen Keeley, Sandra Petronio, Rachyl Pines, and Bernadette Watson.

Broadening the context a bit to the family, we move to four important theories that illuminate our understanding of how health processes operate within familial settings. Maureen Keeley and Hannah Jones's chapter (Chapter 5) discusses inconsistent nurturing as control theory, Olson's circumplex model of marital and family systems, affection exchange theory, and the double ABCX model of family stress and coping. These theories have important implications for mental health concerns as well as physical health.

Still focusing on the interpersonal context is Peter J. Schulz and Shaohai Jiang's discussion in Chapter 6 of several theories that are important in the study of provider–patient interaction. We selected the following theories for this chapter: narrative medicine, politeness theory, dialectical tensions, the relational health communication competence model, the care model/productive interaction change approaches, and argumentation theory. Narrowing this chapter to the theories we selected was challenging because provider–patient communication is one of the dominant areas of study within health communication. This area of study, however, is the least theoretically based. Schulz and Jiang speculate on reasons for this limitation within the chapter.

Part III of the book broadens to a focus on persuasive communication, although this label should not be interpreted to imply that there is communication that does not have persuasive elements. Certainly, the theories prior to this section also pertain to persuasion in some ways. This section of the volume begins with Monique Mitchell Turner, Youjin Jang, and Shawn Turner's discussion of information processing and cognitive theories (Chapter 7), and includes a focus on the following theories: the risk information seeking and processing model; the risk perception attitude framework; PRISM (planned risk information seeking model); the health belief model and the reconceptualized health belief model; dual-processing models; and attribution theory and attribution error. Moving to theories of affective impact, Robin Nabi outlines for us in Chapter 8 the concept of psychological reactance; work on fear appeals and the extended parallel process model; and action tendency emotions.

A focus on behavior is then found in the chapter by Marco Yzer and Rebekah Nagler in Chapter 9 of the book. This discussion is extensive and includes the following important theories: theory of normative social behavior; theory of planned behavior; theory of reasoned action; the integrative model; the transtheoretical/stages of change model; social cognitive theory; and the societal risk reduction motivation model. We conclude Part III with a focus on message effects by James Robinson, Yan Tian, and Jeanine W. Turner (Chapter 10). Their discussion emphasizes agenda setting; cultivation theory; inoculation effects; use and gratifications theory; narrative engagement theory; media complementarity theory; and framing theories (regulatory focus, construal level theory).

Part IV turns our focus to theories of organizations and society. We begin with Yanquin Liu and Anthony J. Roberto's thorough discussion of sociopsychological theories in Chapter 11, which includes: the diffusion of innovations model; social judgment theory; self-determination theory; and social comparison theory. None of these theories were originally developed to apply to health communication contexts, but all of them have come to play important roles in our understanding of such processes. Also taking a comprehensive focus is Chapter 12 on public relations by Arunima Krishna. This chapter focuses on situational theory and organizational-public relations theory. The reader will notice the broadening contexts of the chapters as the book moves toward its culmination.

Chapter 13, by Austin S. Babrow, Marianne S. Matthias, Sarah M. Parsloe, and Anne M. Stone, provides an insightful discussion of uncertainty management theories and health. These include the theory of motivated information management; uncertainty management theory; problematic integration theory, and harm reduction theory. As uncertainty management processes are fundamental to all health and illness contexts, these theories operate on the same broad level as do the other theories in this section. Also discussing theories at a broad, cultural level is Chapter 14, written by Evelyn Y. Ho and Barbara F. Scharf. This focus on cultural perspectives provides insightful analysis of the evolution of the study of health communication and the notion of culture as well as in-depth discussion of social construction perspectives; ecological perspectives; culture-centered approaches; the rhetoric of health and medicine; the cultural variance model; the communication theory of identity; critical approaches; and globalization theory.

The world in which we live requires an understanding of communication technology as it currently operates and will continue to change.

To address this, Shyam Sundar and Maria D. Molina (Chapter 15) discuss some key theories that frame research on digital information technologies in health communication. These important theories include the motivational technologies model; network influence; and gamification.

Danielle E. Kelley and Brian G. Southwell (Chapter 16) conclude the volume for us with a focus on underdeveloped directions in health communication research. This chapter provides insight that will guide the work of health communication scholars and practitioners in the decades to come. As is implicit in this chapter and others throughout the book, ethical concerns are fundamental to all health communication research.

Ethics

As any area of scholarship or practice develops, it takes a bit of time for those within the field to begin to develop awareness of ethical issues that are especially relevant to their work. Bioethics are, of course, relevant to almost all health communication research. The first explicit mention of ethics in the title of a *Health Communication* article appeared in 1995 in work by Thomas Addington and Jeanne Wegescheide-Harris. This work focused upon ethics in communication with the terminally ill. Subsequent work on end-of-life communication has continued to provide a strong focus on ethical concerns, as has much other work related to provider–patient and family–patient communication.

The work on health promotion and campaigns has important ethical implications, as well. This work is most notably articulated by Nurit Guttman, beginning with her 1997 article describing 13 ethical dilemmas in health campaigns. Guttman extended this argument in her 2000 book on ethical dilemmas, and continues to be a primary source on the ethical concerns of which health communication scholars and practitioners should be aware (see also Guttman and Thompson, 2010).

Conclusion

The goal of this volume is to facilitate the process of understanding and applying health communication theory in future scholarship. It is hoped that this presentation of the theories we have selected for inclusion accomplishes this goal. Health communication research has made and

will continue to make important contributions on both scholarly and practical levels. The grounding of future research in a theoretical foundation will undoubtedly serve to further these contributions.

At some point we have to decide if we believe what Kurt Lewin (1935) said. Everyone knows that he said "There is nothing so practical as a good theory" (p. 169) but he also said "If you want truly to understand something, try to change it" (in Tolman 1996, p. 31). The development of theory depends on research identified and tested by what Lewin called "basic social scientists" and evaluated by applied behavioral scientists. These tests provide critical information that enables basic scientists to revise, refine, or reject their initial principles.

Toward that goal, strident theoretically based tests such as structural equation modeling are useful because they allow the researcher to better understand both the relationships between observed and unobserved variables and their influence on some outcome. Because there is no standard model, the researcher must carefully specify the relationships between variables based on the theory. Unexpected relationships are consequently more difficult to ignore and point out the relative value of measured variables compared to unmeasured variables. As a multivariate test, structural equation modeling identifies boundary conditions and demands explanations for relationships that fit or do not fit the theory.

The use of experimental design as a test of the theory is also critical because as, Lewin points out, if you understand something about human behavior you should be able to change it. The use of experiments – both laboratory and field – allow those behavioral scientists charged with testing the models to demonstrate that the theory works as advertised.

It is also hoped that in the experimentation phase of theory development the researchers will focus on health behaviors. Attitudes and intentions are important but ultimately we want to see how communication behavior influences health. So at some point our research programs need to move in that direction. With the advent of new measurement technologies, we should begin looking at physiological responses to communication right along with our examination of overt behavior. We need not become neuroscientists or physicians but we do need to consider how such expertise can be incorporated within our research. Demonstrating that A1C scores, which indicate blood sugar levels, change along with the way people communicate with a health care professional is a start but ultimately we would like to demonstrate the direction of causality and we

would like to see if changes in communication produce changes in health. This may best be done with longitudinal research studies. More stringent testing of our theories should help ensure that we progress as a discipline and increase our understanding the role of communication and health.

References

Addington T., & Wegescheide-Harris, J. (1995). Ethics and communication with the terminally ill. *Health Communication*, *7*, 267–281.

Babrow, A., & Mattson, M. (2003). Theorizing about health communication. In T.L. Thompson, A.M. Dorsey, K.I. Miller, and R. Parrott (Eds.), *The handbook of health communication* (pp. 35–61). Mahwah, NJ: Lawrence Erlbaum Associates.

Babrow, A., & Mattson, M. (2011). Building health communication theories in the 21st century. In T.L. Thompson, R. Parrott, and J.F. Nussbaum (Eds.), *The Routledge handbook of health communication* (2nd ed). New York, NY: Routledge.

Bateson, G. (1972) *Steps to an ecology of mind*. Chicago, IL: University of Chicago Press.

Cline, R.W.C. (2011). Everyday interpersonal communication and health. In T.L. Thompson, R. Parrott, and J.F. Nussbaum (Eds.) *The Routledge handbook of health communication* (2nd ed; pp. 377–396). New York, NY: Routledge.

Craig, R. (1999). Communication theory as a field. *Communication Theory*, *9*, 119–161.

Faklaris, C., Dabbish, L., & Hong, J. (August 13, 2018). Adapting the transtheoretical model for the design of security interventions. A paper presented at the Symposium on Usable Privacy and Security Conference, Baltimore, MD.

Guttman, N. (1997). Ethical dilemmas in health campaigns. *Health Communication*, *9*, 155–190.

Guttman, N. (2000). *Public health communication interventions: Values and ethical dilemmas*. Thousand Oaks, CA: Sage.

Guttman, N., & Thompson, T.L. (2010). Health communication ethics. In C. Cheney, S. May, & D. Munshi (Eds.), *ICA handbook of communication ethics* (pp. 293–308). Mahwah, NJ: Lawrence Erlbaum Associates.

Head, K., & Bute, J. (2018). The influence of everyday interpersonal communication on the medical encounter: An extension of Street's ecological model. *Health Communication*, *33*, 786–792.

Korsch, B.M., & Negrete, V.F. (1972). Doctor–patient communication. *Scientific American*, *227*(2), 66–74.

Kreps, G. (2020). The value of health communication scholarship: New directions for health communication inquiry. *International Journal of Nursing Sciences*, *7(*2s).

Kreps, G., & Thornton, B.C. (1982*). Health communication: Theory and practice*. Prospect Heights, IL: Waveland.

Lewin, K. (1935). *A dynamic theory of personality*. New York, NY: McGraw Hill.

National Institutes of Health. (2020). The delivery of health care. https://www.semanticscholar.org/topic/Delivery-of-Health-Care/16054

Ng, B-Y, Kankanhalli, A., & Xu, C. (2009). Studying users' computer security behavior: A health belief perspective. *Decision Support System*, *46*, 815–825.

Prochaska, J.O., & DiClemente, C.O. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting & Clinical Psychology*, *51*, 390–395. doi:10.1037/0022-006X.51.3.390

Rogers, R.W. (1975). A protection motivation theory of fear appeals and attitude change. *Journal of Psychology*, *91*, 93–114.

Rosenstock, I.M. (1974). Historical origins of the health belief model. *Health Education Monographs*, *2*, 328–335.

Salmon, C., & Poorisat, T. (2019) The rise and development of public health communication. *Health Communication*, online first.

Tolman, C. (1996*). Problems in theoretical psychology*. International Society for Theoretical Psychology.

Watzlawick, P. Beavin, J. and Jackson, D. (1967). *The pragmatics of human communication*. New York, NY: W.W. Norton.

Witte, K. (1994). Fear control and danger control: A test of the extended parallel process model. *Communication Monographs*, *61*, 113–134.

World Health Organization: 2020. Definition of Health. https://8fit.com/lifestyle/the-world-health-organization-definition-of-health/ n.p.

Zhang, X. A., & Borden, A. (2019). How to communicate cyber-risk? An examination of behavioral recommendations in cybersecurity crises. *Journal of Risk Research*. doi: 10.1080/13669877.2019.1646315