

Integrating Theory, Research, and Practice in Vocational Psychology: Current Status and Future Directions

James P. Sampson, Jr.
Emily Bullock-Yowell
V. Casey Dozier
Debra S. Osborn
Janet G. Lenz



This book is published by the Florida State University Libraries under a Creative Commons Attribution-NonCommercial 4.0 license, allowing any reader to copy and distribute the book's content without permission of the authors or the Florida State University Libraries, provided that the authors of the content are given proper attribution and that the content is not modified in any way.

Integrating Theory, Research, and Practice in Vocational Psychology: Current Status and Future Directions

James P. Sampson, Jr.
Emily Bullock-Yowell
V. Casey Dozier
Debra S. Osborn
Janet G. Lenz

This book is published by the Florida State University Libraries under a Creative Commons Attribution-No Derivatives 4.0 license, allowing any reader to copy and distribute the book's content without permission of the authors or the Florida State University Libraries, provided that the authors of the content are given proper attribution and that the content is not modified in any way.



Sampson, J. P., Bullock-Yowell, E., Dozier, V. C., Osborn, D. S., & Lenz, J. G. (Eds.). (2017). *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University Libraries. Retrieved from <http://journals.fcla.edu/svp2016/>

Publication [Http://doi.org/ https://doi.org/10.17125/svp2016](http://doi.org/https://doi.org/10.17125/svp2016)

This book is published by the Florida State University Libraries
116 Honors Way
Tallahassee, FL 32303

Copyright for the Forward, Preface, and individual chapters are held by the individual authors.
© 2017

This work is licensed under a Creative Commons CC BY-ND license. To view a copy of the license, visit <https://creativecommons.org/licenses/by-nd/4.0/>

Funding to support the publication of this book was provided by the College of Education, Florida State University.

Dedication

This book is dedicated to the theorists, researchers, and practitioners who reach beyond their typical work tasks and comfort zones to bridge theory, research, and practice to better serve young people and adults faced with increasingly complex career choices.

Table of Contents

Foreword by Saba Rasheed Ali, Chair, The Society for Vocational Psychology.....	9
Preface.....	10
James P. Sampson, Jr., Emily Bullock-Yowell, V. Casey Dozier, Debra S. Osborn, and Janet G. Lenz https://doi.org/10.17125/svp2016.preface	
About the Chapter Authors & Editors.....	14
Section 1: Challenges and Opportunities for Integrating Theory, Research, and Practice in Vocational Psychology	
Chapter 1 - Integration of Theory, Research, and Practice: A Social Cognitive Perspective.....	20
Robert W. Lent https://doi.org/10.17125/svp2016.ch1	
Chapter 2 - Holland's Integration of Career Theory, Research, and Practice	28
Robert C. Reardon https://doi.org/10.17125/svp2016.ch2	
Chapter 3 - Counseling for Work and Relationship: A Practice-Driven Theoretical Approach.....	40
Mary Sue Richardson https://doi.org/10.17125/svp2016.ch3	
Chapter 4 - The Systems Theory Framework of Career Development	50
Wendy Patton, Mary McMahon https://doi.org/10.17125/svp2016.ch4	
Chapter 5 - A Cognitive Information Processing Theory for Career Choices: Challenges and Opportunities for Integrating Theory, Research, and Practice	62
James P. Sampson, Jr. https://doi.org/10.17125/svp2016.ch5	
Chapter 6 - Integration of Theory, Research, and Practice: Using Our Tools to Address Challenging Times.....	73
Saba Rasheed Ali, Samantha D. Brown https://doi.org/10.17125/svp2016.ch6	
Section 2: Using Theory and Research to Improve Evidence-Based Practice	
Chapter 7 - The Role of Theory in Improving Evidence-Based Career Interventions	77
Nadya A. Fouad https://doi.org/10.17125/svp2016.ch7	
Chapter 8 - Meta-Analysis and Evidence-Based Career Practice: Current Status and Future Directions	82
Steven D. Brown https://doi.org/10.17125/svp2016.ch8	
Chapter 9 - Conducting General Versus Population and Setting-Specific Meta-Analyses.....	90
Susan C. Whiston https://doi.org/10.17125/svp2016.ch9	

Chapter 10 - Improving the Design and Use of Meta-Analyses of Career Interventions.....	95
Betsy Jane Becker	
https://doi.org/10.17125/svp2016.ch10	
Chapter 11 - Personal Reflections on a Career Spent Creating and Sustaining Researcher-Practitioner Collaborations	108
V. Scott H. Solberg	
https://doi.org/10.17125/svp2016.ch11	
Chapter 12 - Summary of Key Elements in Using Theory and Research to Improve Evidence-Based Practice	130
Patrick J. Rottinghaus	
https://doi.org/10.17125/svp2016.ch12	
Section 3: A View from the Editor's Desk: Ensuring Quality in Theory, Research, and Practice	
Chapter 13 - Ensuring Quality in Theory, Research, and Practice: <i>The Career Development Quarterly</i>.....	137
Ryan D. Duffy	
https://doi.org/10.17125/svp2016.ch13	
Chapter 14 - Integrating Theory, Research, and Practice: A Viewpoint from a Member of the Editorial Board of the <i>Journal of Career Assessment</i>	141
Itamar Gati	
https://doi.org/10.17125/svp2016.ch14	
Chapter 15 - <i>Journal of Career Development</i>: Recommendations for Future Journal Practices for Integrating Career Theory, Research, and Practice	148
Lisa Y. Flores	
https://doi.org/10.17125/svp2016.ch15	
Chapter 16 - Ensuring Quality in Theory, Research, and Practice: <i>Journal of Employment Counseling</i>	155
Dale Furbish, Angie Smith	
https://doi.org/10.17125/svp2016.ch16	
Chapter 17 - Integrating Theory, Research, and Practice in Vocational Psychology: Perspectives of a <i>Journal of Vocational Behavior</i> Editorial Board Member	166
Donna E. Schultheiss	
https://doi.org/10.17125/svp2016.ch17	
Chapter 18 - The Role of Refereed Journals in Integrating Theory, Research, and Practice.....	175
Kimberly A. S. Howard	
https://doi.org/10.17125/svp2016.ch18	
Chapter 19 - Integrating Theory, Research, and Practice: Lessons Learned from the Evolution of Vocational Psychology	179
David L. Blustein	
https://doi.org/10.17125/svp2016.ch19	
Chapter 20 - The State of the Art in Integrating Theory, Research, and Practice in Vocational Psychology....	188
James P. Sampson, Jr., Emily Bullock-Yowell, V. Casey Dozier, Debra S. Osborn, Janet G. Lenz, Nathan T. Ross	
https://doi.org/10.17125/svp2016.ch20	
Key Word Index	193
Author Index	194

Foreword

This book is the result of the efforts related to a very successful 12th Society for Vocational Psychology Biennial Conference in Tallahassee, FL at Florida State University. Drs. Janet Lenz, Casey Dozier, Debra Osborn, Gary Peterson, Bob Reardon, Jim Sampson, and Emily Bullock-Yowell did a wonderful job planning this biennial conference, which was held May 16–17, 2016. The conference title was *Integrating Theory, Research, and Practice*. At this conference, many diverse perspectives in the vocational psychology field were represented, which are reflected in the chapters of this book. Additionally, these chapters capture the critical juncture of vocational psychology and current events. The field is in a critical time, as vocational psychologists are pursuing theoretical advancements and interventions that will help individuals across the lifespan find and maintain gainful employment in an ever-changing economy. Work is shifting: shifting in nature or type of work, shifting from one country to another in a global marketplace, shifting our perception of what used to be stable sources of work, and shifting notions of what work produces. This book addresses how theory, research, and practice can work in tandem to address the shifting nature of work and the employment and career concerns of diverse groups. As we move the field forward to meet the demands of the 21st century workforce, this book will undeniably become one of our most treasured resources.

Saba Rasheed Ali
University of Iowa
Chair Society for Vocational Psychology (2014–2016)
Past Chair (2016–2018)

Preface

Each Society for Vocational Psychology (SVP) biennial conference has included a thematic element to provide a focus for presentations and discussions at the conference as well as a focal point for any publication that may have resulted from the conference. The theme of the 2016 SVP Biennial Conference, held at the Florida State University on May 16–17, was “Integrating Theory, Research, and Practice in Vocational Psychology.” Videos of individual presentations from the conference are available at: https://www.youtube.com/playlist?list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA

The conference content and the resulting edited book are based on the assumption that the science and practice of vocational psychology are more successful with the integration of theory, research, and practice. This book’s purpose is to examine the challenges and opportunities for integrating theory, research, and practice in vocational psychology from the perspectives of theorists, researchers, practitioners, and journal editors, with the hope that this knowledge will lead to improved science and career interventions.

Three key perspectives in examining the integration of theory, research, and practice within vocational psychology are as follows: (a) career theorists themselves, (b) researchers examining theory and practice, and (c) journal editors and editorial board members who shape the nature and quality of the knowledge disseminated about vocational psychology. While there is considerable overlap in the membership of these groups, each group has a unique perspective on integration that deserves examination. The book’s organization reflects these three perspectives.

The book’s first section identifies specific challenges and opportunities for integrating theory, research, and practice from the perspective of contemporary career theorists, including social-cognitive career theory (Lent), RIASEC theory (Reardon), work and relationship theory (Richardson), the systems theory framework of career development (Patton & McMahon), and cognitive information processing theory (Sampson). Ali and Brown then provide a summary of key elements from these chapters. Chapter authors in this section were asked to examine the relevance of, the challenges in, and the opportunities for integrating theory, research, and practice and to offer recommendations for the future.

The book’s second section examines how theory and research contribute to evidence-based practice, including the role of theory in improving evidence-based career interventions (Fouad), what we know and don’t know from existing meta-analyses of career interventions (Brown), conducting general versus population and setting-specific meta-analyses (Whiston), strategies for improving the design and use of meta-analyses in evidence-based practice (Becker), and fostering collaboration among theoreticians, researchers, and practitioners to develop evidence-based practice (Solberg). Rottinghaus then provides a summary of key elements from these chapters. Chapter authors in this section were asked to create headings for their papers appropriate for the specific content and to offer recommendations for the future.

The book’s third section examines how journal editorial policies shape the integration of theory, research, and practice in five important vocational psychology journals, including *The Career Development Quarterly* (Duffy), the *Journal of Career Assessment* (Gati), the *Journal of Career Development* (Flores), the *Journal of Employment Counseling* (Furbish and Smith), and the *Journal of Vocational Behavior* (Schultheiss). Chapter authors in this section were asked to examine the relevance of, the challenges in, and the opportunities for integrating theory, research, and practice, as well as recommendations for the future. Howard then provides a summary of key elements from these chapters.

The book’s fourth section provides two concluding chapters that first examine the evolution of vocational psychology in terms of theory, research, and practice integration (Blustein), and then examines the state of the art in integrating theory, research, and practice through a content analysis of the book’s chapters (Sampson, Bullock-Yowell, Dozier, Osborn, & Lenz).

The method used to create this edited book was as follows. Chapter authors, with the exception of the final chapter authors, were invited to present a preliminary draft of their paper at one of several plenary sessions at the 2016 SVP Biennial Conference. Authors then drafted a final version of their paper based on informal discussions at the conference and the opportunity to review other papers presented at the conference. The concluding chapter was then written after a review of the preceding chapters.

An open access publication strategy was adopted to maximize dissemination of this work to career theorists, researchers, practitioners, and policy makers. The book is published by the Florida State University Libraries as an electronic book in PDF format. In order to maximize dissemination and promote broad reuse, the book is published under a Creative Commons Attribution-No Derivatives 4.0 license. This license allows any reader to copy and distribute the book's content without permission of the authors or the Florida State University Libraries, provided that the authors of the content are given proper attribution and that the content is not modified in any way.

Creating this book involved the collaborative effort of many individuals. First and foremost, we would like to acknowledge the twenty-seven outstanding vocational psychologists who contributed twenty excellent chapters to the book. Robert Reardon and Gary Peterson provided vital guidance and support throughout this project. Mark Pope provided very helpful editorial comments and decisions for the two chapters written by the book's senior editor. Invaluable assistance related to copyright and electronic publishing was provided by Gloria Colvin, Devin Soper, and Micah Vandegrift. Pei-Chun Hou and Adam Miller provided very thorough author and key work indexes. Adam also provided very helpful assistance with the author bios. Excellent copyediting was provided by Grace Renninger. Outstanding graphic and print design was provided by Jordan Harrison. Finally, neither the conference nor this book would have been possible without the ongoing support that our research center at Florida State University (Center for the Study of Technology in Counseling and Career Development) receives from the FSU Career Center and the College of Education.

James P. Sampson, Jr.
Emily Bullock-Yowell
V. Casey Dozier
Debra S. Osborn
Janet G. Lenz

January 15, 2017

References

- Ali, S. R., & Brown, S. D. (2017). Integration of theory, research, and practice: Using our tools to address challenging times. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 73). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch6>
- Becker, B. J. (2017). Improving the design and use of meta-analyses of career interventions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 95). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch10>
- Blustein, D. L. (2017). Integrating theory, research, and practice: Lessons learned from the evolution of vocational psychology. *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 179). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch19>
- Brown, S. D. (2017). Meta-analysis and evidence-based career practice: Current status and future directions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 82). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch8>

- Duffy, R. D. (2017). Ensuring quality in theory, research, and practice: *The Career Development Quarterly*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 137). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch13>
- Flores, L. Y. (2017). *Journal of Career Development*: Recommendations for future journal practices for integrating career theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 148). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch15>
- Fouad, N. A. (2017). The role of theory in improving evidence-based career interventions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 77). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch7>
- Furbish, D., & Smith, A. (2017). Ensuring quality in theory, research, and practice: *Journal of Employment Counseling*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 155). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch16>
- Gati, I. (2017). Integrating theory, research, and practice: A viewpoint from a member of the editorial board of the *Journal of Career Assessment*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 141). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch14>
- Howard, K. A. S. (2017). The role of refereed journals in integrating theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 175). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch18>
- Lent, R. W. (2017). Integration of theory, research, and practice: A social cognitive perspective. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 20). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch1>
- Patton, W., & McMahon, M. (2017). The systems theory framework of career development. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 50). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch4>
- Rearson, R. C. (2017). Holland's integration of career theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 28). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch2>
- Richardson, M. S. (2017). Counseling for work and relationship: A practice-driven theoretical approach. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 40). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch3>
- Rottinghaus, P. J. (2017). Summary of key elements in using theory and research to improve evidence-based practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 130). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch12>
- Sampson, J. P., Jr. (2017). A cognitive information processing theory for career choices: Challenges and opportunities for integrating theory, research, and practice. In J. P. Sampson, Jr., E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. L. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 62). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch5>
- Sampson, J. P., Jr., Bullock-Yowell, E., Dozier, V. C., Osborn, D. S., Lenz, J. G., & Ross, N. T. (2017). The

state-of-the-art in integrating theory, research, and practice in vocational psychology. In J. P. Sampson, Jr., E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. L. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 62). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch20>

Schultheiss, D. E. (2017). Integrating theory, research, and practice in vocational psychology: Perspectives of a *Journal of Vocational Behavior* editorial board member. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 166). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch17>

Solberg, V. S. H. (2017). Personal reflections on a career spent creating and sustaining researcher-practitioner collaborations. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 108). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch11>

Whiston, S. C. (2017). Conducting general versus population and setting-specific meta-analyses. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 90). Tallahassee, FL: Florida State University. <https://doi.org/10.17125/svp2016.ch9>

About the Chapter Authors and Editors

Saba Rasheed Ali received her Ph.D. in Counseling Psychology from the University of Oregon. She currently serves as a Professor in the Counseling Psychology Program at the University of Iowa. Previously she served as an Adjunct Senior Staff Member at the University of Iowa University Counseling Service. Dr. Ali has served as Chair of the Society for Vocational Psychology. She has also served on the editorial boards of the *Journal of Counseling Psychology*, *The Counseling Psychologist*, *Psychology of Religion and Spirituality*, the *Journal of Career Assessment*, and the *Journal of Career Development*. She is licensed as a psychologist. She is also an elected Fellow of the American Psychological Association. Dr. Ali's research interests include vocational psychology, employment issues, and career development of under-served youth. Additional information on Dr. Ali is available at: <https://education.uiowa.edu/person/saba-rasheed-ali>

Betsy J. Becker received her Ph.D. in Education from the University of Chicago. She currently serves as the Mode L. Stone Distinguished Professor of Educational Statistics at Florida State University as well as the Chair of the Department of Educational Psychology and Learning Systems. Previously she served as a faculty member in the Department of Counseling, Educational Psychology and Special Education at Michigan State University where she also served as Director of the Office of Research Consultation. Dr. Becker has served as Associate Editor of *Psychological Methods* as well as serving on the editorial boards of *Research Synthesis Methods*, the *Journal of Research in Rural Education*, the *Journal of the American Statistical Association*, the *Journal of Educational and Behavioral Statistics*, and the *Journal of Educational Measurement*. She is also an elected Fellow of the American Educational Research Association and the American Statistical Association. Dr. Becker's research interests include meta-analysis and psychometric issues in education with a special emphasis on methods for synthesizing correlation matrices and regression slopes. Additional information on Dr. Becker is available at: <http://education.fsu.edu/faculty-and-staff/dr-betsy-becker>

David L. Blustein received his Ph.D. in Counseling Psychology from Teachers College, Columbia University. He currently serves as a Professor

in the Department of Counseling, Developmental, and Educational Psychology at the Lynch School of Education at Boston College and also serves as a practitioner at Child and Family Psychological Services in Norwood, Massachusetts. Previously he served as a faculty member at the State University of New York at Albany, as a counselor at Rockland Community College and Mercy College, and as an academic advisor at Queens College. Dr. Blustein has served as Chair of the Society for Vocational Psychology. He has also served as Associate Editor of *The Counseling Psychologist* as well as serving on the editorial boards of *The Counseling Psychologist*, the *Journal of Career Assessment*, the *Journal of Occupational and Organizational Psychology*, and the *Journal of Vocational Behavior*. He is licensed as a psychologist and certified as a school counselor. He is also an elected Fellow of the American Educational Research Association, the American Psychological Association, and the National Career Development Association. Dr. Blustein's research interests include career development, the psychology of working, work-based transitions, poverty, unemployment, and relational theories of working. He has also been active in the development of the psychology of working theory. Additional information on Dr. Blustein is available at: <http://www.bc.edu/schools/lsoe/facultystaff/faculty/blustein.html>

Samantha D. Brown is earning her Ph.D. in Counseling Psychology at the University of Iowa. She currently works as a practicum trainee with the University of Iowa's Counseling services, providing individual and group therapy to college students. Samantha co-leads the training and implementation of a theory-based career intervention for rural middle school students. Her research interests include the career development of adolescents and the effectiveness of school-based career interventions.

Steven D. Brown received his Ph.D. in Counseling Psychology from the University of California, Santa Barbara. He currently serves as the Fr. Walter P. Krolkowski Endowed Research Professor and as the Program Chair for the Counseling Psychology Program in the School of Education at Loyola University Chicago. Previously Dr. Brown served as an Assistant Professor at the University of Minnesota, as the Director for the Counseling Psychology Training Clinic at the University of California, Santa Barbara, as an NIMH Post-Doctoral Research Fellow at the University of

Wisconsin, Madison, as a counselor supervisor at the University of California, Santa Barbara, and as a staff psychologist for Central State Hospital in Petersburg, Virginia. He has served on the editorial boards of the *Career Development Quarterly*, the *Journal of Career Assessment*, and the *Journal of Vocational Behavior*. He is licensed as a psychologist. Dr. Brown is also an elected Fellow of the American Psychological Association and the Association for Psychological Sciences. His research interests include social cognitive approaches to educational and occupational choices, entry into STEM careers, vocational hope, and international applications of vocational psychology. He has also been active in the development of social cognitive career theory. Additional information on Dr. Brown is available at: <http://www.luc.edu/education/about/faculty/brownstevend.shtml>

Emily Bullock-Yowell received her Ph.D. in Counseling Psychology from Florida State University. She currently serves as an Associate Professor for the Psychology Department at the University of Southern Mississippi and as the Counseling Psychology Master's Program Training Director. She has served on the editorial boards of the *Career Development Quarterly* and the *Journal of Vocational Behavior*. She is licensed as a psychologist. Dr. Bullock-Yowell's research interests include diverse areas of vocational psychology that focus on the practical application of career-related assistance in people's lives and how this impacts their mental health, that involve participants from various backgrounds (e.g., unemployed adults, college students, veterans), and that include a concentration on Holland's RIASEC theory and cognitive information processing (CIP) theory. Additional information on Dr. Bullock-Yowell is available at: <http://emilybullockyowellphd.weebly.com/> and <http://www.career.fsu.edu/tech-center/about-us>.

V. Casey Dozier received her Ph.D. in the Combined Doctoral Program in Counseling Psychology and School Psychology from Florida State University. She is the Program Director of Career Advising and Counseling at the Career Center at FSU. Previously she served as a practitioner at the Psychological Center for Growth and Development in Thomasville, Georgia. She served on the editorial board of the *Career Development Quarterly*. Dr. Dozier is certified as a counselor and licensed as a psychologist. Her research interests include investigating mental health and career development variables in relation to informed and careful decision

making as well as examining the efficacy of career service delivery, such as self-help resources, distance counseling, and supervision, with an emphasis on integrating theory, research, and evidence-based practice. Additional information on Dr. Dozier is available at: www.fsu.edu/cvdb/VCJ02D.rtf and <http://www.career.fsu.edu/tech-center/about-us>

Ryan D. Duffy received his Ph.D. in Counseling Psychology from the University of Maryland. He is an Associate Professor and the Area and Training Director of the Counseling Psychology Program in the Department of Psychology at the University of Florida. He has also served on the editorial boards for the *Career Development Quarterly*, the *Journal of Career Assessment*, the *Journal of Career Development*, the *Journal of Counseling Psychology*, and the *Journal of Vocational Behavior*. Dr. Duffy's research interests include the psychology of working and understanding works as a calling. Additional information on Dr. Duffy can be found at: <http://www.drryanduffy.com>

Lisa Y. Flores received her Ph.D. in Counseling Psychology from the University of Missouri, Columbia. She is a Professor and Program Coordinator of Counseling Psychology in the Department of Educational, School and Counseling Psychology at the University of Missouri. Previously she served as a Co-Director for the Coalition for Cultural Competency at the University of Missouri and as an Assistant Professor and Research Fellow at The Ohio State University. She has also served as Editor of the *Journal of Career Development* and Associate Editor of the *Journal of Counseling Psychology* as well as serving on the editorial boards of the *Career Development Quarterly*, the *Journal of Counseling Psychology*, the *Journal of Latino/a Psychology*, the *Journal of Vocational Behavior*, and *The Counseling Psychologist*. She is an elected Fellow of the American Psychological Association. Dr. Flores's research interests include the career development of Latino/as, Latino/a immigrant issues, and social cognitive career theory. Additional information on Dr. Flores is available at: <https://education.missouri.edu/person/lisa-flores/>

Nadya A. Fouad received her Ph.D. in Counseling Psychology from the University of Minnesota. She currently serves as a Distinguished Professor and as the Mary and Ted Kellner Endowed Chair of the Department of Educational Psychology at the University of Wisconsin-Milwaukee. Previously she

served as the Associate Dean for the School of Education at the University of Wisconsin-Milwaukee. Dr. Fouad has served as Chair of the Society for Vocational Psychology. She has also served as Editor and Associate Editor of the *Journal of Vocational Behavior* and as Editor of *The Counseling Psychologist* as well as serving on the editorial boards of the *Career Development Quarterly*, the *Journal of Vocational Behavior*, the *Journal of Career Assessment*, the *Journal of Counseling Psychology*, the *Journal of Women Quarterly*, *The Counseling Psychologist*, and *Training and Education in Professional Psychology*. She is board certified as a counseling psychologist and licensed as a psychologist. She is also an elected Fellow of the American Psychological Association. Dr. Fouad's research interests include the career development of women and racial/ethnic minorities, interest measurements, cross-cultural counseling, and applications and extensions of social cognitive career theory. Additional information on Dr. Fouad is available at: <https://uwm.edu/education/people/fouad-nadya/>

Dale Furbish received an Ed.D. in Career Counseling from Virginia Tech. He currently serves as Professor Emeritus at the Auckland University of Technology (AUT) in New Zealand. Previously he served as Coordinator of Career Counselling for the Career Centre at AUT and as the Director of Counseling at Virginia Western Community College. He has also served as Editor of the *Journal of Employment Counseling* and has served on the editorial boards for the *Australian Journal of Career Development* and *Counseling Giornale Italiano di Ricerca e Applicazioni*. He is also licensed as a counselor. He is an elected Fellow of the Career Development Association of New Zealand. Dr. Furbish's research interests include career development experiences during sabbaticals, motivations for entering career education programs, social justice issues in employment seeking, and the engagement of career practitioners. Additional information on Dr. Furbish is available at: <https://www.aut.ac.nz/profiles/dale-furbish>

Itamar Gati received his Ph.D. in Psychology from the Hebrew University of Jerusalem. He serves as the Samuel and Esther Melton Professor at the Hebrew University of Jerusalem. Previously he has served as a research associate for the Hadassah Career Counseling Institute and the National Institute for Testing and Evaluation. He has also served on the editorial boards of *Career Development Quarterly*, the *Journal of Career*

Assessment, the *Journal of Counseling Psychology*, the *Journal of Vocational Behavior*, and *The Counseling Psychologist*. He is an elected Fellow of the American Psychological Association and National Career Development Association. His research interests include examining career decisions, facilitating career decision making, career decision-making difficulties, career compromises, internet-based self-help career decision making, and career decision-making styles. Additional information on Dr. Gati is available at: <http://kivunim.huji.ac.il/gati/gati-vita-upd.doc> and <http://kivunim.huji.ac.il/gati/>

Kimberly A. S. Howard received her Ph.D. in Counseling Psychology from Boston College. She serves as an Associate Professor and Associate Dean for Faculty Affairs at Boston University as well as serving as the Co-Training Director of the Counseling Psychology Program. Previously she served as an Assistant Professor in the Counseling Psychology program at the University of Wisconsin-Madison and as a practitioner, running a prevention program in a high school in Milwaukee, Wisconsin. She has served on the editorial board for the *Journal of Career Development*. Dr. Howard's research interests include children's concepts of career development, the relationship this has to academic achievement, and school-based intervention strategies that could support early and on-going efforts to prepare youth to be college- and career-ready. Additional information on Dr. Howard is available at: <https://www.bu.edu/sed/profile/kimberly-a-s-howard/>

Robert W. Lent received his Ph.D. in Counseling Psychology from The Ohio State University. He currently serves as a Professor of Counseling Psychology in the Department of Counseling, Higher Education, and Special Education at the University of Maryland. Previously he served as a Professor of Counseling Psychology at Michigan State University and as a practitioner at the Student Counseling Bureau at the University of Minnesota. He also has served as Associate Editor of the *Journal of Counseling Psychology* and the *Journal of Social and Clinical Psychology* as well as serving on the editorial board of the *Journal of Vocational Behavior*. He is a licensed psychologist in Maryland and an elected Fellow of the American Psychological Association. His research interests include applications of social cognitive theory to academic and career behavior, counselor training and development, psychological wellness, relationship adjustment processes, and the

promotion of health behaviors. He has also been active in the development of social cognitive career theory (SCCT). Additional information on Dr. Lent is available at: <http://www.education.umd.edu/Academics/Faculty/Bios/index.cfm?URLID=boblent> and <http://scctresearch.weebly.com/>

Janet G. Lenz received her Ph.D. in Counseling from Florida State University (FSU). She currently serves as an Associate-In Professor in the Department of Educational Psychology and Learning Systems at FSU and as the Program Director for Instruction, Research, and Evaluation in the FSU Career Center. Previously she served as a Co-Director for the Study of Technology in Counseling and Career Development, the Program Director for Career Advising, Counseling, & Programming at the FSU Career Center, and as a practitioner in the Career Centers at the University of Texas at Austin and the University of North Carolina at Greensboro. Dr. Lenz served as President of the National Career Development Association (NCDA). She also has served on the editorial board for the *Career Development Quarterly*. She is certified as a career counselor, career development facilitator instructor, and counselor. She is also an elected Fellow of the National Career Development Association. Her research interests include the application of cognitive information processing theory to career counseling and services, the relationship of client characteristics to career constructs, connections between mental health and career issues, and the application of John Holland's career theory and constructs to the design and delivery of career services. She has also been active in the development of cognitive information processing theory. Additional information on Dr. Lenz is available at: <http://www.fsu.edu/cvdb/JLENZ.rtf> and <http://www.career.fsu.edu/tech-center/about-us>

Mary McMahon received her Ph.D. in Education from Queensland University of Technology, Australia. She currently serves as an Honorary Senior Lecturer in the School of Education at The University of Queensland, Australia. Previously she served as a Senior Lecturer in the School of Education at The University of Queensland. Mary currently serves on the editorial advisory boards of the *Australian Journal of Career Development*, *British Journal of Guidance and Counselling*, *Journal of Psychologists and Counsellors in Schools*, *Career Development Quarterly*, and *International*

Journal for Educational and Vocational Guidance. She is a registered career development practitioner, teacher, and psychologist. Dr. McMahon's research interests include career construction from childhood through adolescence to later life, narrative career counselling, qualitative career assessment, and developing practical applications that can support people's career decisions. She has also been active in the development of the systems theory framework. Additional information on Dr. McMahon is available at: <https://education.uq.edu.au/profile/178/mary-mcmahon>

Debra S. Osborn received her Ph.D. in Combined Counseling Psychology and School Psychology from Florida State University (FSU). She currently serves as an Associate Professor in the Educational Psychology and Learning Systems Department at FSU and also serves a research associate for the Study of Technology in Counseling & Career Development at FSU. Previously she served as a program coordinator and faculty member at the University of South Florida and as an Assistant Director at the FSU Career Center. She has served as President for the National Career Development Association. She has also served on the editorial boards for the *Career Development Quarterly*, the *Journal of Employment Counseling*, the *Journal of Multicultural Counseling and Development*, and the *Journal of Technology in Counseling*. She is certified as a counselor and distance counselor. She is an elected Fellow of the American Counseling Association and the National Career Development Association. Dr. Osborn's research interests include the design and use of technology in counseling, innovation and effectiveness in counselor education, and the design and use of assessments in career services. Additional information on Dr. Osborn is available at: <http://www.fsu.edu/cvdb/DOSBORN.rtf> and <http://www.career.fsu.edu/tech-center/about-us>

Wendy Patton received her Ph.D. in Psychology from the University of Queensland. She currently serves as a Professor Emeritus in the Faculty of Education at Queensland University of Technology, Brisbane, Australia. Previously she served as a Head of School and then Executive Dean of the Faculty. Wendy served as Editor of the *Australian Journal of Career Development* and is currently on the editorial board for that journal in addition to the editorial boards of the *British Journal of Guidance and Counselling* and *International Journal for*

Educational and Vocational Guidance. She was Founding Editor of the *Career Development Series* with Sense Publishers. Wendy is a registered psychologist and teacher in Australia. She is the co-developer of the systems theory framework and continues to conduct research on theory-practice connections in career development. Additional information on Dr. Patton is available at: <http://staff.qut.edu.au/staff/patton>

Robert C. Reardon received his Ph.D. in Counselor Education from Florida State University (FSU). He currently serves as Professor Emeritus in the Department of Educational Psychology and Learning Systems and Senior Research Associate in the Career Center at FSU. Previously he served as the Director for Curricular-Career Information Service (CCIS), as a Co-Director for the Center for the Study of Technology in Counseling & Career Development, and as a Counseling Psychologist at the University Counseling Center at FSU. He has also served on the editorial board for the *Journal of Career Development*. He is certified as a career counselor, counselor, and secondary school teacher. He is an elected Fellow of the National Career Development Association. Dr. Reardon's research interests include the development of innovative career interventions for college students and adults that feature the use of educational and occupational information. He has also been active in the development of cognitive information processing theory. Additional information on Dr. Reardon is available at: <http://www.career.fsu.edu/sites/g/files/imported/storage/original/application/f912a02f31cf7d01d29eaf7c1a582590.pdf> and <http://www.career.fsu.edu/tech-center/about-us>

Mary Sue Richardson received her Ph.D. in Counseling Psychology from Columbia University. She is a Professor in the Department of Applied Psychology, School of Culture, Education, and Human Development at New York University and also serves as a practitioner in her independent practice. Previously she served as a Counselor and Adjunct Professor at Lehman College. She has served on the editorial boards for the *Journal of Counseling Psychology* and *Psychology of Women Quarterly*. She is licensed as a psychologist. She is also an elected Fellow of the American Psychological Association. Dr. Richardson's research interests in vocational psychology have focused on developing an approach to counseling for work and relationship that situates career counseling in a holistic frame. Additional information on Dr.

Richardson is available at: http://steinhardt.nyu.edu/faculty/Mary_Sue_Richardson

Nathan Ross received his Master's in Professional Clinical Mental Health Counseling from Harding University in Searcy, Arkansas. He is currently pursuing a doctoral degree in Counseling Psychology and is a Graduate Assistant at the University of Southern Mississippi. Nathan's research interests include college student veteran career development and career and family issues.

Patrick J. Rottinghaus received his Ph.D. in Counseling Psychology from Iowa State University. He currently serves as an Associate Professor of Counseling Psychology at the University of Missouri-Columbia. Previously he served as a faculty member and program director in the Department of Psychology at Southern Illinois University Carbondale and as an Associate Director of Research and Development at Kuder, Inc. He has served as Chair for the Society for Vocational Psychology. He has also served on the editorial boards for *Career Development Quarterly*, the *Journal of Career Assessment*, *Journal of Counseling Psychology*, *Journal of Career Development*, and the *Journal of Vocational Behavior*. He is an elected Fellow of the American Psychological Association. Dr. Rottinghaus's research interests include vocational interests, personality, values, and self-efficacy related to career choice and development, with recent projects examining holistic perspectives on career assessment interventions. Additional information on Dr. Rottinghaus is available at: <https://education.missouri.edu/person/patrick-rottinghaus/>

James P. Sampson, Jr. received his Ph.D. in Counselor Education from the University of Florida. He is the Mode L. Stone Distinguished Professor of Counseling and Career Development in the Department of Educational Psychology and Learning Systems at Florida State University, the Co-Director of the Center for the Study of Technology in Counseling and Career Development, and Associate Dean for Faculty Development in the College of Education. Previously he served as a Senior Counselor in the Student Counseling Center at the Georgia Institute of Technology. He has also served on the editorial boards for the *British Journal for Guidance & Counselling*, *Measurement and Evaluation in Counseling and Development*, and *The Professional Counselor: Research and Practice*. He

is certified as a career counselor, coach, and counselor and is licensed as a psychologist. He is also an elected Fellow of the American Counseling Association, the American Psychological Association, the National Career Development Association, and the National Institute for Career Education and Counseling. Dr. Sampson's research interests include the appropriate use of computer technology in counseling; the use of cognitive strategies in the design and delivery of career services; and the integration of theory, research, and practice. He has also been active in the development of cognitive information processing theory. Additional information on Dr. Sampson is available at: <http://www.fsu.edu/cvdb/JSAMPSON.rtf> and <http://www.career.fsu.edu/tech-center/about-us>

Donna E. Schultheiss received her Ph.D. in Counseling Psychology from the University at Albany, State University of New York. She currently serves as Interim Dean for the College of Graduate Studies and Professor of Counseling Psychology at Cleveland State University. Dr. Schultheiss has served as Chair of the Society for Vocational Psychology, and has also served on the editorial boards for the *Journal of Counseling Psychology* and the *Journal of Vocational Behavior*. She is also an elected Fellow of the American Psychological Association. Dr. Schultheiss's research interests include the interface of work and relationships, childhood career development, international and immigration issues in vocational psychology, and women's work. Additional information on Dr. Schultheiss is available at: http://facultyprofile.csuohio.edu/csufacultyprofile/detail.cfm?FacultyID=D_SCHULTHEISS

Angela Smith received her Ph.D. in Counselor Education from North Carolina State University. She currently serves as a Teaching Assistant Professor at North Carolina State University. Previously Dr. Smith has served as a counselor at the Duke University Career Center, the Meredith College Counseling and Career Centers, and in private practice as well as working in human resource development. She served on the editorial board of *The Journal of Employment Counseling*. She is certified as a counselor and supervisor. Dr. Smith's research interests include career counseling and development, online teaching and learning modalities, supervision in counseling, college counseling, group counseling, and student development. Additional information on

Dr. Smith is available at: <https://ced.ncsu.edu/people/acsmith5/>

V. Scott Solberg received his Ph.D. in Counseling Psychology from the University of California, Santa Barbara. He currently serves as a Professor in the Department of Counseling and Applied Human Development at Boston University. Previously Dr. Solberg worked on the development of Success Highways, a resiliency curriculum used in schools throughout the country, and in directing an online career information system (WisCareers). In collaboration with the Rennie Center on Education Research and Policy, MassINC, and Massachusetts Department of Elementary and Secondary Education, Dr. Solberg has launched the Massachusetts Institute for College and Career Readiness that is funded by the U.S. Department of Education's Institute of Educational Science. He has also served on the faculty of the University of Wisconsin-Milwaukee. Dr. Solberg is serving as Chair-Elect of the Society for Vocational Psychology and has served on the editorial board for the *Career Development Quarterly*. Dr. Solberg is certified as a Career Development Facilitator. He is an elected Fellow of the American Psychological Association. His interests include college and career readiness research, practice, and policy efforts and leads a range of these efforts in collaboration with the National Collaboration on Workforce and Disability for Youth that is funded by the U.S. Department of Labor's Office of Disability Employment Policy. Additional information on Dr. Solberg is available at: <https://www.bu.edu/sed/profile/v-scott-solberg/>

Susan C. Whiston received her Ph.D. in Counseling from the University of Wyoming. She currently serves as a Professor in the Department of Counseling and Educational Psychology at Indiana University. Previously Dr. Whiston worked at the University of Nevada, Las Vegas. She has also served as Chair of the Society for Vocational Psychology. She has served on the editorial boards of *Career Development Quarterly*, the *Journal of Career Assessment*, and the *Journal of Counseling Psychology*. She is certified as a counselor. She is also an elected Fellow of the American Psychological Association. Dr. Whiston's research interests include identifying effective methods for delivering career counseling interventions and the areas of career counseling and school counseling, with a focus on outcome research. Additional information on Dr.

Chapter 1 - Integration of Theory, Research, and Practice: A Social Cognitive Perspective

Robert W. Lent

University of Maryland, College Park

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lent (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch1>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from <https://www.youtube.com/watch?v=4d5nG7OZGuQ>

Appreciation is expressed to Drs. Ellen B. Lent and Steven D. Brown for their comments on an earlier draft of this chapter.

Correspondence should be addressed to Robert W. Lent, Department of Counseling, Higher Education, and Special Education, University of Maryland, College Park, MD 20742. E-mail: boblent@umd.edu

Keywords: social cognitive career theory, theory, research, practice, integration, policy

The conferences of the Society of Vocational Psychology (SVP) are always wonderful occasions for sharing ideas with colleagues, both old and new. In some ways, the focus of the current conference on integration takes us back full circle to the very first SVP conference, held nearly 25 years ago at Michigan State University. Actually, we had not yet adopted the current society name at that time, but the energy behind the creation of a vocational psychology collective was clearly in evidence. That 1992 conference, chaired by Mark Savickas and myself, included contributions by many of the most influential career theorists of the last century, including Edward Bordin, Rene Dawis, John Holland, John Krumboltz, and Donald Super. For me, that first conference holds some very special memories.

In addition to the heady experience of getting to meet and listen to each of these foundational theorists, that conference was special for me in that it provided the occasion for social cognitive career theory's (SCCT) first public test drive (Lent & Hackett, 1994). We subsequently presented SCCT's interest, choice, and performance models in greater detail (Lent, Brown, & Hackett, 1994, 2000), and we later added segments focusing on satisfaction/well-being and self-management of adaptive career behaviors (Lent & Brown, 2006a, 2008, 2013). It has been exciting to be a part of the theory's growth and to witness the many applications of SCCT by creative researchers and practitioners.

By saying that SVP's conferences have come full circle, I may be overstating the case just a bit. At the Michigan State conference, we were concerned with highlighting prospects for convergence among career development theories. That is, a major goal was to identify instances in which the theories focused on similar outcomes, suggesting the potential for crafting more comprehensive explanations by fashioning bridges among the theories (see Savickas & Lent, 1994). This was the spirit in which SCCT was developed—to help integrate seemingly disparate views on career behavior by highlighting their common themes and elements. The integration, or convergence, agenda was also aimed at stimulating research on the intersection among the theories and on building more practice-friendly theoretical frameworks.

While I am tempted to invoke that wonderful old Yogi Berra line, “It's like déjà vu all over again,” that would not quite capture the goals of the 2016 SVP conference. Rather than encouraging a dialogue about integration across theories, this conference, as I understand it, was aimed at integration within theories. This understanding emerged when I asked Jim Sampson to clarify what the conference organizers meant by the integration of theory, research, and practice. I asked, “Are you looking, for example, to integrate all or some theories together? Or to better articulate the connections between each theory, its research base, and practical

applications? Both? Neither?” (R. W. Lent, personal communication, September 27, 2015). Jim responded, “We are not looking for the integration of all or some of the theories together. Rather, we are interested in better articulating the connections between each theory, relevant research, and practical applications” (J. P. Sampson, personal communication, October 23, 2015). With this understanding in mind, I will consider the relevance, challenges, and opportunities of integration from my perspective as one of SCCT’s developers.

The Relevance of Integrating Theory, Research, and Practice

Career development theories, like other types of psychological theory, attempt to explain important aspects of human behavior. Explanation is typically their *raison d’être*. In the case of career theories, the focus is on explaining how people develop and function in the context of career preparation, entry, and/or adjustment. Different career theories may focus on different pieces of the larger puzzle or may be concerned with somewhat different outcomes, such as career choice, work satisfaction, or career adaptability. But all try to offer a framework for understanding meaningful aspects of career behavior. From a purely scientific perspective, psychological theories do not need to do more than that—that is, to help us understand parts of the human experience.

To be most viable, again from a scientific perspective, it is important for theories to offer testable hypotheses. These hypotheses can generate research that leads to inferences about the theory’s utility, generalizability, and limitations. Disconfirming findings may give rise to further research on effect size moderators (i.e., study of the conditions under which certain relationships are more or less likely to occur) or may prompt theory revision or abandonment. We do not always demand that career development theories contain clear hypotheses, but this is an essential feature if we wish them to be more than thought-provoking points of view or conjecture—if we wish to know how well they actually conform with data.

Career development is, of course, not typically approached as a basic science endeavor; it is an applied science. As such, we usually expect our theories to do more than explain things. We like them to offer ideas that we can translate into practice. But it is important

to remember that theories do not have to have immediate implications for practice. As many examples from physics or other basic sciences demonstrate, if we build fruitful theories, practical applications are likely to come about in time, whether or not they were initially foreseen by their theorists. It is, therefore, helpful but not absolutely essential for career theories to be designed with off-the-shelf practice methods in mind.

Looking back at the first SVP conference, Savickas (1994, p. 240) observed, “One of the outcomes of the convergence project was widespread agreement that we have theories of career development but not theories of career counseling. This could be true, yet I am not sure.” In fact, theories of career development are not equivalent to theories of career counseling, nor do I believe that they need to be. A theory can focus, for example, on how interests develop or function without prescribing how interests can be assessed, matched to occupations, or modified in practice. However, our enduring career development theories generally have informed practice, for example, by generating useful assessment devices or counseling activities. An important caveat is that such theory translation is often an off-shoot (rather than a designed feature) of the theory, and it may be implemented by creative and well-informed practitioners apart from the theorists themselves. For example, in the case of SCCT, our primary goal was to create a set of clear hypotheses to guide research on, and aid understanding of, particular aspects of career development (Lent et al., 1994). SCCT was not explicitly designed as a theory of practice in the sense of prescribing specific counseling actions, yet theory-linked interventions soon emerged and have expanded over time (see Sheu & Lent, 2015, for a recent review).

Is it important, then, to be concerned with “articulating the connections between each theory, relevant research, and practical applications” (J. P. Sampson, personal communication, October 23, 2015)? My answer is both “yes” and “it depends.” From the perspective of SCCT, which was designed to be responsive to research and practice, it is quite important to ensure that the theory is both testable and useable. From the perspective of psychological science more broadly, it depends on what a theory is designed to do. In theory, a theory could offer a valuable window on career behavior without having clear or immediate implications for career practitioners. In practice, such theories are not very

likely to emerge because career theory developers tend to be scientist-practitioners who are motivated, at least in part, to come up with better ways to help people to select and pursue career paths. But it is important, I think, to celebrate diversity in our theories as well as in our clients—and to not judge career theories only in terms of their immediate relevance to practice, unless, of course, they are designed explicitly as theories of practice. And, even then, the decision about how to intervene presupposes an explanation of more basic career development processes (i.e., what should be changed to promote what type of career progress?).

The Challenges in Integrating Theory, Research, and Practice

The challenges here can perhaps be usefully divided into those that involve articulating connections between (a) theory and research, (b) theory and practice, and (c) (theory-based) research and practice.

Theory-Research Linkages

Career scholars sometimes offer compelling arguments and ideas yet without necessarily defining their central concepts clearly, showing how they can be operationalized, or translating their assumptions into a set of hypotheses that specify the nature of the relationships among variables, which can then be tested in research. The presence or absence of specific, testable propositions is a key part of what distinguishes a conceptual perspective from a formal theory. This is by no means intended to disparage the framing of provocative perspectives or points of view on career behavior; neither is it intended to discourage exploratory research. Indeed, theoretical perspectives sometimes evolve into formal theories and many important scientific advances have been made via exploratory or discovery-oriented research. However, theory-based research is facilitated by the provision of clear, specific, and testable hypotheses. In developing SCCT, we used as our models prior theories that had offered explicit predictions or causal assumptions (e.g., Dawis, 2005; Holland, 1997).

Theory-Practice Linkages

As suggested above, it is not writ in stone that a career development theory needs to offer practical implications, either immediately or even eventually. Although it is hard to imagine that those who design career development theories are entirely uninterested in how their ideas can be applied to practice, practical applications may be more or less salient to a particular theory at the time the theory is developed or as the theory evolves over time. Super's theory is a good case in point. As Super's theory developed over time, it spawned a variety of useful assessment devices and, eventually, an explicit model of practice, the career-development assessment and counseling (C-DAC) model (Hartung, 2013). However, such theory-practice linkages are impeded, at least temporarily, when theorists do not offer speculations, hypotheses, or case examples showing how their theories can be applied to practice.

Research-Practice Linkages

As with theory, not all research is designed to have immediate applications to practice. Research can, for example, be designed to test particular theoretical hypotheses or to examine how a particular theoretical model fits the experiences of a novel group of participants. Some research can therefore be described as “practice-far” and may be part of a larger program of inquiry that is intended, more immediately, to test the theory, with impact on practice perhaps being a longer term goal. Problems may arise, however, when career practitioners do not see the practice light at the end of the research tunnel or when researchers do not make a credible effort of highlighting what practical implications their findings may have. Both theory-practice and research-practice linkages are also hindered when theorists and researchers do not interact or collaborate with practitioners, thereby perpetuating science-practice gaps and fueling practitioner frustrations with the academic literature.

Opportunities and Recommendations for Integrating Theory, Research, and Practice

The conference organizers asked me to address opportunities and recommendations for integrating theory, research, and practice under separate headings. However, I find it helpful to translate these issues into

the twin categories of “what we can do” and “how we can do it,” and will therefore discuss them together in this section. I was also asked to discuss “how theorists, researchers, practitioners, professional associations, and policy makers can better cope with challenges and maximize opportunities in integrating theory, research, and practice.” I will consider various configurations of these groups in this section because they can be seen as overlapping entities (e.g., theorists and researchers can also be practitioners and members of professional associations) for whom similar opportunities, challenges, and recommendations may be relevant.

Theorists and Researchers

As I hinted earlier, theorists can increase the likelihood that their theories will stimulate research if they define their constructs clearly, provide examples of how these constructs can be measured or otherwise studied, and frame their key assumptions in the form of clear, testable hypotheses. I attribute much of SCCT’s success at generating research to the following elements: First, we defined our constructs in relation either to existing career constructs (e.g., interests, goals, abilities) or to well-delineated social cognitive variables (e.g., self-efficacy, outcome expectations). Second, we initially offered broad propositions and more specific hypotheses, supplemented by path diagrams, reflecting our notions about how the constructs should relate to one another. These predictive or causal assumptions were based on prior findings, relevant theory, and/or our experiences as career practitioners. Not all of our educated guesses were substantiated (Lent, 2016), but they at least provided a reasonably clear starting point for research. Third, we developed or adapted measures to operationalize our constructs so that we and others could research them.

This last point represents a continual challenge for SCCT-based research because the constructs are assumed to be domain, situation, and/or task specific. This means that new or adapted measures are typically required when one wishes to study the theory’s predictions in the context of a novel application. We soon started receiving many requests for our early measures from graduate students and young scholars—and they eventually became the leading producers of SCCT research. We later created a guide summarizing what we had learned about how to measure social cognitive constructs (Lent & Brown,

2006b) and we routinely share it with those who request our measures or measurement advice.

Parenthetically, in our experience, free measures (i.e., ones shared without cost) really help to jumpstart research. Vocational researchers do not tend to have very deep pockets or sizeable grants; nor in our value system, should the exchange of ideas become secondary to commercial interests. The moral of the story? To facilitate theory-based research, it helps to offer clear predictions and (free) measurement or intervention samples. Other theorists and researchers we admire also tend to “give psychology away,” though we certainly understand why some practice-focused measures may require commercial fees, particularly if expensive, periodic revisions are needed for them to remain current. Fortunately, we now have practice tools, like the O*NET, and websites maintained by vocational psychologists that also give career materials away, thereby making them available to a wider range of researchers and practitioners.

Theorists do not necessarily need to be active researchers themselves but it does help to be able to model how the theory can be studied. When theorists are not actively engaged in research testing their ideas, it helps to collaborate with researchers. I believe that some very clever theories may have failed to reach their empirical potential for lack of some direct research modeling by their theorists. Perhaps it is less a matter of “build it and they will come” than it is “start it and show them how to get there.”

The Theorist-Researcher-Practitioner Triad and Professional Associations

It has long been argued that engaging practitioners in the process of generating theory and research is crucial to closing the gaps between career theory, research, and practice (e.g., see Savickas & Lent, 1994). This, of course, is easier said than done, in part because though the motivations and preferred activities of theorists, researchers, and practitioners can overlap, they are also somewhat distinct. Numbers of publications and citation counts may be de rigueur in academia but do not cut it in “the real world” of practice, where success is marked by one’s ability to aid clients more directly and immediately. It is no wonder, then, that many career practitioners lose enthusiasm for theory and research

immediately after completing their required studies, if not before.

I think I get it. I started out my career as a practitioner before adding the academic role and I quickly discovered that counseling can be more art than science. If clients are supposed to conform exclusively to the template of one theory or another, many of us practitioners may have missed that memo. We typically need to improvise based on clients' needs and the immediacy of a given session. Practitioners, out of necessity, learn to mix and match theories—and fill in with our implicit theories when the “off-the-rack” variety does not seem to apply. While some degree of theory improvisation is unavoidable (and even desirable given the complexity of our clients and our still-evolving knowledge of career behavior), I am convinced that we can do more to make our theories and research more responsive to practice—and our practice more responsive to theory and research. None of my ideas are strikingly novel, and some may not even be terribly practical. But I suppose that is what happens when you ask a theorist to get real.

First, and most fundamentally, it seems to me that the three sides of the theory-research-practice triangle need to be in communication with one another. Theorists and researchers need (at minimum) to rub shoulders with practitioners and to engage in serious dialogue about practical client issues. While some theorists and researchers are also practitioners, and thus quite sensitive to the need for practical science, there is often a temptation to be dazzled by intellectually juicy ideas and complex research methods that are far removed from the interests of most practitioners. This can result in highly elaborate conceptual models, research designs, and statistical analyses, the practical implications of which may stump even those who produce them. I am not implying that our inquiry always needs to be simple (or immediately practical)—indeed, reality does not always cooperate with simple explanations—but there are undoubtedly times when “less is more” and simpler works just as well (Brown, 2015).

As a natural corrective to the “bright lights, big city” allure of complex theories and research methods, it would help, I think, to encourage more routine dialogue and joint efforts between theorists, researchers, and practitioners. This can be done both at a “local level”

and via the facilitation of our professional associations and their leaders. By local level, I am thinking of modest efforts to bring the three groups together in joint projects. For example, Steve Brown and I have been planning to do an “SCCT in practice” book in which we will invite practitioners to describe novel applications of SCCT to different client groups and using different intervention modalities. We intend to ask practitioners to discuss the theory's utility and how SCCT might be revised to address their and their clients' needs. Less formal discussion groups, bringing representatives of the three sides together, can also be organized at the local level.

Professional organizations and journals can perhaps play an even more significant role in promoting three-sided interactions. It is fairly obvious that we tend to gravitate toward different professional “silos” with, for example, academics in vocational psychology being more likely to identify with SVP and APA and to subscribe to research journals. By contrast, career practitioners, particularly if they attended masters' level counselor education programs, may be more likely to join NCDA and ACA and read more practitioner-friendly journals. Speaking for myself, when I attend NCDA meetings (which I could stand to do more often), I usually find my eyes wandering toward the more science-focused programs on the schedule. I need to actively remind myself to leave my comfort zone and to seek out practice-oriented programs, too. I am usually glad when I do because I invariably get exposed to new ideas and interesting people that way.

I suspect I am not alone in this sort of affiliative tendency. In fact, if there is any validity to Holland's RIASEC theory (and research clearly shows that there is; Nauta, 2013), there is every reason to expect that “birds of a feather will flock together.” Translation: We tend to seek environments containing others who we think will share our interests. While the problem might be oversimplified as one of bridging the gap between Artistic/ Investigative and Social types, the happy reality is that many career theorists, researchers, and practitioners have A, I, and S tendencies as a part of their Holland codes, though the rank ordering may differ. For example, all three types of professionals tend to prize artistic/creative and social (helping/teaching) pursuits, though not all may have prominent science interests. We may not need to find wholly different ways of communicating with one another but may rather need to locate the lingua

franca in which we can all converse. For some theorists, for example, it may be a bit like speaking “Social” as a second (or third) language. It may not be entirely foreign, but it may require a bit more effort.

Professional organizations and journals can address the science-practice gap by helping us to transcend some of our natural flocking tendencies. For example, whole conferences, or at least sessions within conferences, can be structured around theory-research-practice dialogues. Membership dues discounts can be arranged to incentivize memberships in both science and practice-oriented (e.g., SVP, NCDA) associations. Our journals can promote “science into practice” (or vice versa) projects or ongoing dialogues via special issues, sections, or ongoing columns. Such ideas are not necessarily new and none is a silver bullet. For instance, the second SVP conference, at Ohio State in 1994, was directed at closing the career science-practice gap. Likewise, some of our professional leaders, such as Janet Lenz, David Blustein, Mark Savickas, Mark Pope, and Barry Chung, have worked hard to “integrate” the places where career scientists or practitioners tend to congregate (especially SVP, NCDA, and IAEVG). These efforts have, I believe, done much good and deserve renewed commitment.

Although face-to-face dialogue is an obvious antidote for a lack of communication, there are also other means for addressing the science-practice gap. For example, theorists can work harder at showcasing the practical applications of their theories via the use of case examples in their publications or presentations. They can also seek opportunities to publish in practice journals and to collaborate with practitioners to design and test theory-based interventions. Creative theory-into-research and practice projects, such as SCCT-based interventions with underserved persons can be publicized (work by Ali, Byars-Winston, Chronister, Varghese, and others comes to mind here).

Practitioners can create “book and journal groups” to discuss relevant theoretical ideas and research findings. Researchers can be encouraged to devote some of their considerable creativity to expanding the requisite, pro forma “practical implications paragraph” that often appears at the end of research reports. This suggestion would profit from editorial policies that place more of a premium on science-practice translation. Online journals and blogs can serve as practitioner digests that

help readers tap the clinical implications of scientific findings. Other technological tools may also be useful in this effort; those who are digital natives may have lots to offer here. Training programs can employ “didactic practica” models that merge coverage of theory and research along with practice in the same course. Finally, while I am not a huge fan of treatment manuals (because of their tendency to oversimplify client issues), these, too, may have some useful roles to play in connecting theory and research to practice.

Policy Makers

Policy makers can be in a position to take our career theories, research, and interventions and apply them on a far grander scale, with the potential for much greater good than most of us can ever imagine as individual theorists, researchers, and practitioners. The limited personal contact I have had with policy makers has involved a few government agencies that are concerned with increasing the workforce diversity of STEM fields via educational programs, career services, or research funding. With the exception of funding agency representatives, who generally (but not always) understand the slow and plodding pace of research leading to practical solutions, I have sometimes been frustrated by the differences in tactics I have encountered at government agencies that employ scientists and practitioners.

For example, one government agency representative, whom I generally had much in common with at a values level, told me that my effort to write a “white paper” on the policy implications of SCCT suffered from my use of tentative language. Where I used hedge words like *may* or summarized findings in terms of relationships between variables or effect sizes, she felt my writing would be much more persuasive if I could just drop the pretense and state more definitively, in essence, that “research shows that X causes Y and, therefore, we need programs that will change X in group Z.” We had some lively discussions about the limits of research designs, the state of current findings, and my commitment to professional ethics, but we never satisfactorily bridged our fundamental gap. You can call me overly cautious but, in my world, though data may not be able to speak entirely for themselves, there is a

point at which it becomes imprudent to say too much on their behalf.

At the same time, I fully appreciate that policy requires definitive decisions, such as “should we fund this type of program or that type of program for attracting more women into engineering?” Probabilistic scientific summaries may be only so helpful in a binary (do this or do that?) context. If policy makers and politicians are to base such decisions on more than opinion or rhetoric, we need to find a way to communicate our findings to them. Now, we do have professional leaders who likely do a better job than I do of speaking with policy makers, highlighting the policy relevance of the field’s theory and research, and thereby create a place at the policy table for career science and practice. People such as Scott Solberg come to mind. We need to support their efforts and thank them for playing this vital role. Indeed, we need to create more of them. Without them, we will continue to sing largely to our own choir.

Conclusion

Although concerns about how to improve theory-research-practice linkages are not new to our field, and while I believe we have made some progress in addressing them, we still have a long way to go. Projects like the present one keep the heat turned up and prevent us from remaining cloistered in separate silos. But, as in the rest of life, actions generally speak louder than words. I have offered my take on how to bridge certain differences that may be daunting but are not irreconcilable. At the end of the day, theorists, researchers, and practitioners generally want many of the same things—especially, to find better ways of helping clients on their career journeys—though we may approach this objective from different angles.

From a social cognitive perspective, the challenge of promoting theory-research-practice linkages can be defined as an overarching or distal goal that can best be divided into proximal sub-goals that are stated clearly, specifically, and publicly. SCCT holds that goals are most likely to lead to actions when necessary environmental supports can be marshalled and when barriers are identified and neutralized via appropriate coping strategies. Because the sort of goal we are talking about is a collective one, it is probably best approached in a collective way. I therefore see concerted, organized,

and sustained efforts by our professional leaders and organizations as offering perhaps the most fruitful means for facilitating connections between theory, research, and practice.

References

- Brown, S. D. (2015). On statistical wizardry, construct proliferation, and other challenges to our science. *The Counseling Psychologist, 43*, 614–628.
- Dawis, R. V. (2005). The Minnesota theory of work adjustment. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 3–23). New York: Wiley.
- Hartung, P. J. (2013). The life-span, life-space theory of careers. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (2nd ed., pp. 83–113). New York: Wiley.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Lent, R. W. (2016). Self-efficacy in a relational world: Social cognitive mechanisms of adaptation and development. *The Counseling Psychologist, 44*, 573–594.
- Lent, R. W., & Brown, S. D. (2006a). Integrating person and situation perspectives on work satisfaction: A social-cognitive view. *Journal of Vocational Behavior, 69*, 236–247.
- Lent, R. W., & Brown, S. D. (2006b). On conceptualizing and assessing social cognitive constructs in career research: A measurement guide. *Journal of Career Assessment, 14*, 12–35.
- Lent, R. W., & Brown, S. D. (2008). Social cognitive career theory and subjective well-being in the context of work. *Journal of Career Assessment, 16*, 6–21.
- Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology, 60*, 557–568.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and

academic interest, choice, and performance [Monograph]. *Journal of Vocational Behavior*, 45, 79–122.

Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of Counseling Psychology*, 47, 36–49.

Lent, R. W., & Hackett, G. (1994). Sociocognitive mechanisms of personal agency in career development: Pantheoretical prospects. In M. L. Savickas & R. W. Lent (Eds.), *Convergence in career development theories: Implications for science and practice* (pp. 77–102). Palo Alto, CA: Consulting Psychologists Press.

Nauta, M. M. (2013). Holland's theory of vocational choice and adjustment. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (2nd ed., pp. 55–82). New York: Wiley.

Savickas, M. L. (1994). Convergence prompts theory renovation, research unification, and practice coherence. In M. L. Savickas & R. W. Lent (Eds.), *Convergence in career development theories: Implications for science and practice* (pp. 235–257). Palo Alto, CA: Consulting Psychologists Press.

Savickas, M. L., & Lent, R. W. (Eds.) (1994). *Convergence in career development theories: Implications for science and practice*. Palo Alto, CA: Consulting Psychologists Press.

Sheu, H-B., & Lent, R. W. (2015). A social cognitive perspective on career intervention. In P. J. Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *APA handbook of career intervention: Foundations* (Volume 1, pp. 115–128). Washington, D.C.: American Psychological Association.

Chapter 2 - Holland's Integration of Career Theory, Research, and Practice

Robert C. Reardon

Florida State University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch2>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=-zIFqeBs-hA&index=4&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA

Appreciation is expressed to Janet G. Lenz, R. Bob Smith III, and Emily Bullock-Yowell for their comments on an earlier draft of this chapter.

Correspondence should be addressed to Robert C. Reardon, The Career Center, Florida State University, 110 S. Woodward Ave, Tallahassee, FL 32306. E-mail: rreardon@fsu.edu

Keywords: Holland, RIASEC, matching, personality, career, SDS, challenge, opportunity

John Holland was my professional mentor for more than 35 years, and our periodic phone conversations about the profession, publishers, and people were lively and informative. His ideas initiated many of the topics I have written and presented about. Indeed, inspection of my vita indicates that about 24% of it is on RIASEC theory and its applications. I told Gary Gottfredson (who was John's most frequent collaborator) that I was giving this talk, and he suggested that I should, "Have a good time with it, speak bluntly, and channel John." I need to do that channeling part because the other chapter authors in this section are able to speak in the first person about their theories.

Holland visited Florida State University (FSU) twice, once for a career theory symposium in 1968 and 10 years later to examine the tactile board (Figure 1) format of the Self-Directed Search (SDS) we had created for use by persons with visual disabilities (Reardon & Kahnweiler, 1980). Both visits had a big impact on me. This board version of the SDS was a forerunner of later SDS formats (e.g., computer, Internet, Vocational Exploration and Insight Kit, smart phone, and mail-in scoring service).

Holland's critique of the woodworker's skills in creating the SDS tactile board version was my first hint at the varied nature of his interests. More evidence of this was revealed later in his SDS results reported by Stephen



Figure 1. SDS Tactile Board

Weinrach (1996). Holland's scores were R = 26, I = 27, A = 29, S = 26, E = 29, and C = 8 providing a summary code of A/EI. Holland viewed it as AEI/R/S. His high profile elevation and lack of differentiation suggests he was open to a number of occupational options and the eight occupational aspirations provide further evidence of that. His Aspirations Summary Code was SAE with these occupations listed: psychologist/researcher (social psychologist = ASE), writer (AES), research administrator (research worker = IER), vocational counselor (counselor = SAE), college teacher (SEI), counseling

center director (counselor = SAE), musician (ASI), and engineer (RES). Given these varied interests and skills, Holland would have been an interesting and perhaps challenging counselee. And for our purposes here, I think they reveal some things about his life and theory.

In preparing this paper, I followed Gottfredson's suggestion and channeled Holland by

- reading and rereading many of his publications;
- reviewing my correspondence with him;
- listening to and viewing recordings of his numerous interviews and talks;
- drawing upon materials in the book that Janet Lenz and I just wrote (*Handbook for using the Self-Directed Search: Integrating RIASEC and CIP Theories in Practice*, Reardon & Lenz, 2015);
- visiting The State Historical Society of Missouri on the University of Missouri Columbia campus and examining some of Holland's papers and artifacts archived there; and
- reading and using Holland's words from an unpublished autobiography, *My Life with a Theory* (Holland, 2004).

I believe the theme of this conference, "Integrating Theory, Research, and Practice" (hereafter referred to as TR&P), is one that Holland would have seized upon because much of his life and career were devoted to exploring and embracing these three areas.

Relevance of Integrating Theory, Research, and Practice

A review of Holland's contributions in TR&P should begin with his statement of purpose. In *Making Vocational Choices*, Holland (1997, p. 1) listed three questions his theory sought to address:

- What personal and environmental characteristics lead to satisfying career decisions, involvement, and achievement, and what characteristics lead to indecision, dissatisfying decisions, or lack of accomplishment?

- What personal and environmental characteristics lead to stability or change in the kind of level and work a person performs over a lifetime?
- What are the most effective methods for providing assistance to people with career problems?

These three questions relate to the theme of this conference in numerous ways that I examine in this paper, and I think they are distinctive among career theories.

As I reviewed Holland's lifetime of work, I concluded that the integration of these three areas epitomizes it. In his autobiography he explicitly points out how his experiences in college and in the military, along with jobs at Western Reserve University, the VA Hospital at Perry Point, the National Merit Scholarship Corporation, the American College Testing Program, and Johns Hopkins University, necessitated that he focus on research and data analysis, creating and validating instruments, and improving the theory at various times. He continued this work during his retirement after 1980 and until his death in 2008. Holland (2004) identified specific people, including family members, friends, and neighbors, as well as events (involuntary departure from ACT; directing the Center for the Social Organization of Schools at Hopkins) that contributed in varying ways to his work. However, the overwhelming theme of it all was his persistence, creativity, and resourcefulness in sustaining the theory's viability. The fact that we are discussing it today over 55 years after the first formal article, "A Theory of Vocational Choice," was published in the *Journal of Counseling Psychology* (Holland, 1959) is further evidence of its all-encompassing impact.

Focusing on Theory and Research

Spokane and Schultheiss (1996) summarized the way Holland integrated TR&P. They described him as a "rebel by nature" and as interested in the intervention side of measurement as he was in the scaling side, which was emphasized in his doctoral program at the University of Minnesota. They concluded that his research style was characterized by relentless empirical trials and examinations followed by theoretical reformulations. This recursive combination of data and theory was largely responsible for the theory's success and its numerous

inventories and applications (Spokane & Schultheiss, 1996).

In discussing the theory's development, Holland (2004) described the contributions of two philosophers, Herbert Feigl and Bill Alston. Feigl taught a course in the philosophy of science at the University of Minnesota which got Holland interested in theoretical endeavors that contrasted with the prevailing views in the psychology program. Later, Alston helped Holland develop a more defensible theory. While Holland's critics complained that the whole scheme was too simple, Alston urged him to simplify it more because it was too complex in some places (e.g., the formulations for the types were filled with clinical ideas and constructs that did not lend themselves to empirical testing). Further, Holland (2004, p. 19) noted that

Alston got me to see that “interests” were dispositions and not simple, automatic traits that are expressed without regard to the environment or other competing traits. His writing implied that a person's profile of “interests” can be viewed as a “tendency field” composed of competing interests—an idea that I made explicit only recently. (Holland, 1997)

For Holland, theory and research were inseparable.

The cost of writing a theory that is a literary venture is minimal, but the long-term cost of researching theoretical ideas for clarification, revision, or replication is great. (Holland, 1994, p. 46)

Later, he wrote

Several roads may lead to the development of more useful career theory. These include a shift from advocating a favourite theory to collecting evidence (broadly construed) to demonstrate its value. Another road is to revise an old theory and see if it leads to important practical or theoretical outcomes. (Holland, 1998, p. 557)

Focusing on Theory and Practice

In discussing the development of the SDS, Holland indicated that practical service delivery options weighed heavily:

I wanted to see if I could create an inventory that would be self-scored and would avoid the problems involved in separate answer sheets, mailing, scoring, and so on. I did not anticipate the positive reactions that the SDS stimulated in users and professionals. (Holland, Powell, & Fritzsche, 1994, p. 51)

In the Weinrach (1980) interview, Holland noted that the SDS evolved over a period of years, roughly 1953–1970, in rhythm with the development of RIASEC theory and the Vocational Preference Inventory (VPI). For example, the VPI came first and demonstrated that short scales of equal length scored “yes” and “no” arranged in RIASEC order could provide a basis for effective measurement.

“In test construction, I relied more on following my theory in item selection rather than on item theory—old and new” (Holland, 1994, p. 81). This comment reminded me of a personal conversation many years ago when Holland told me about the development of the SDS 4th edition and deciding which items to include. Some good items had similar psychometric numbers but only 11 could be included in that section of the Assessment booklet. Holland said, “I had Amy (Powell) read the items to me several times, slowly, so I could determine which best exemplified the type and should be included in the SDS.” Probably no better statement demonstrates Holland's understanding of the relationships among theory, practice, and research than this one.

Focusing on Holland's Tripartite Integration

In the autobiography and reflections on his work during the early days at Hopkins, Holland (2004) indicated he was surprised by how much he had forgotten and “how thoroughly the theory and the SDS were integrated in our research and thinking” (p. 9).

I don't think it is possible to provide an accurate and comprehensive account of the many interactions among the theory, its instrumentation, the

research data, my colleagues' work and thinking, and my own. The only interpretation I feel confident about is that the main elements of the theory provided a rough framework for organizing our research that in turn led to the revised theory. (Holland, 1973)

In order to document the scope and nature of Holland's contributions, Foutch, McHugh, Bertoch, and Reardon (2014) used bibliographic research tools to identify publications from 1953–2011 on RIASEC theory and its applications. They located 1,970 reference citations to Holland's work during the 58-year period and categorized them into five areas: (a) application of the theory in practice, (b) research and practice directed to specific populations (e.g., K–12, age, occupation), (c) tools or instruments operationalizing the theory, (d) validity and efficacy of RIASEC theory, and (e) diverse populations studied in terms of ethnicity, disability, and status. Because some references could be categorized in multiple ways, a total of 3,312 references were cited across the five categories. For example, an article about theory might also include material on applications and diversity.

Foutch et al. (2014) found that the largest reference category was Applications (1,298; 66%), followed by Specific Populations (745; 38%), and Theory/Typology/Validity (580; 29%). The Applications category included references that described the way Holland's theory and applications had been used in practice (e.g., for specific groups, with special populations, to develop specific programs, and so on). The Diverse Populations category included references based on gender, race, nationality, disabilities, and socioeconomic status. The Theory/Typology/Validity category included references relevant to the theoretical constructs and empirical evidence for the reliability and validity of Holland's theory and its applications.

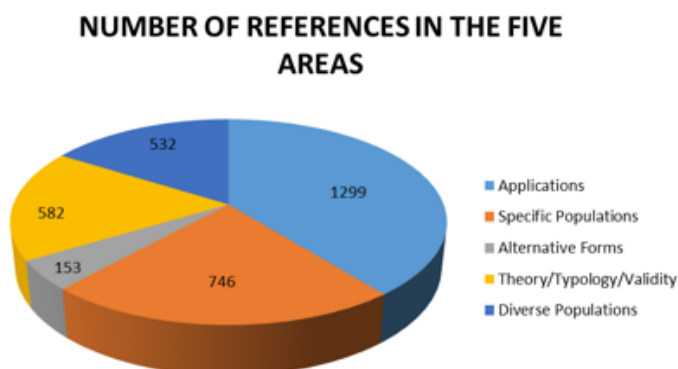


Figure 2: Number of references in the five areas

It is noteworthy in terms of this SVP conference that so many publications related to Holland's theory connect to the practice of career counseling and program development. This theory seems to have retained its viability because it is so useful and practical for persons worldwide to understand and apply. Sampson (2016) noted that RIASEC theory (Holland, 1997) has been integrated with CIP theory in both the study of vocational behavior and the delivery of career interventions (Reardon & Lenz, 2015). It has also been incorporated into so many other tools and programs that the theory and hexagon have become icons in our field. Indeed, the synthesis of TR&P is the essence of Holland's work and SVP 2016 conference speakers repeatedly referenced this in their papers and presentations.

The SVP conference organizers asked presenters speaking about career theories to address the challenges and opportunities related to each theory. After reviewing theoretical issues and thinking about it, I identified 10 challenges and opportunities and briefly discuss them in the following pages. I chose not to focus on issues such as level of congruence and job satisfaction, the shape of the hexagon in a global context, postmodern views of matching theories, the possible changing nature of work, or personality stability from youth to adulthood. Others have written about these issues in various publications.

Challenges in Integrating Theory, Research, and Practice

Holland was never shy about identifying the challenges he faced in integrating TR&P. In this section, I will try to summarize some of them in no order of importance.

1. **Theory Unprotected.** Because a career theory cannot be copyright protected, the ideas included in RIASEC theory can be and have been incorporated into many different career assessments and measurement tools. Holland had no control over this use of his theory, with the result that some applications do not fully or accurately reflect the theory as he understood it, and the applications can produce conflicting results. This circumstance complicates the integration of TR&P because not all applications are theoretically accurate or equivalent. For

example, the three-letter codes for occupations vary across different classification systems (Reardon & Lenz, 2015). Eggerth, Bowles, Tunick, and Andrew (2005) found that the O*NET, SII, and *Dictionary of Holland Occupational Codes* disagreed on first letter code assignments about one third of the time.

2. **Instruments Protected.** In contrast to the theory, Holland authored numerous instruments and systems based on RIASEC theory that are protected by trademark [™] or copyright © and persons seeking to use these resources in their research or practice need to obtain permission from the copyright holder and publisher, Psychological Assessment Resources, Inc. These tools (e.g., SDS and Occupations Finder) are not free to use. The challenge is that unlike research tools or free assessments, these costs may curtail the use of these resources in practice and research. Together, the open nature of the theory and the proprietary nature of Holland's RIASEC tools provide some distinctive challenges for integration in terms of TR&P.

To further illustrate this point, practitioners and researchers should be aware that the three-letter SDS code is not always identical to the codes in the Strong Interest Inventory (SII, 2%) and the O*NET Interest Profiler (OIP, 11.8%) which also draw upon RIASEC theory. Holland and Messer (2013) found the first and second letters of the SDS code matched the first and second letters of the other two codes 13.7% (SII) and 9.8% (OIP), respectively. These findings indicate that the SDS codes are not completely the same across different interest measurers. Practitioners and researchers should be mindful of this fact when using RIASEC codes obtained from various instruments.

3. **Theory Changes.** A career theory should show stability and continuity over time, and this is true of RIASEC theory. If the theory changes dramatically each time it is revised, one might wonder if it is valid. However, the theory should also be modified as new research and information further clarifies and extends it. Reardon and Lenz (2015) suggested that RIASEC theory

changed about 20% from 1973–1985 and another 15% in 1997, but they suspected that Holland would have thought it changed less over this time. Integrating TR&P using the most recent statements of the theory is the challenge posed to practitioners and scholars today, as ideas in the theory have evolved and been refined. Practitioners and researchers should use and build upon the most current statements of RIASEC theory.

4. **Environmental Neglect.** Holland (1997) defined environments with a strong or clear identity as having a limited set of consistent and explicit goals, while those with a weak or diffuse identity have a large set of conflicting and poorly defined goals. Holland, Fritzsche, and Powell (1994) offered some observations about the weaknesses of the theory, including the idea that hypotheses about career environments needed more research support, hypotheses about Person–Environment interactions had received some support but required more testing, and that classifications of occupations have differed slightly according to the instruments used. Perhaps because counselors are more focused on persons than environments, the environmental side of the typology has received less attention in research and practice. The remedy for this poses a challenge.
5. **Linking Theory and Interventions.** “I should do a better job of linking the typology to vocational interventions” (Holland, 1994, p. 50). Indeed, although Holland fully described the SDS and related tools, he never placed them directly into the working procedures of a counseling or career center. Perhaps this reflected his lack of time working in such offices. For example, how exactly would the My Vocational Situation (MVS; Holland, Johnston, & Asama, 1993) be used to screen persons lacking readiness for educational or career decision making? Would it be part of an intake procedure? How would SDS results be used in follow-up sessions if the secondary constructs indicated more intensive interventions would be required? Holland never provided operational procedures for

linking theory and various kinds and levels of interventions, or who might provide them.

6. **Massive Literature.** Holland's RIASEC theory has generated an enormous amount of information reported in journal articles, book chapters, and professional presentations, and it has not diminished in recent years. As noted earlier, Foutch et al. (2014) identified almost 2,000 citations regarding the theory and its applications. This imposing body of literature poses a challenge for practitioners, researchers, and reviewers seeking to understand the optimal ways to draw upon this work. How does one know if all relevant studies pertaining to the secondary constructs of the theory have been identified prior to conceptualizing a study? Monitoring the ongoing work with RIASEC theory will be challenging in the future.
7. **Myths and Critics.** Reardon and Lenz (2015) identified 12 myths that have clouded the TR&P integration of Holland's RIASEC theory. Indeed, such myths were also a concern for Holland because they misrepresented the theory and evidence and also presented a challenge to moving forward (e.g., the sex bias controversy). One critic, after hearing Holland's Division 17 talk at an APA Convention about the SDS, "A Theory-Ridden, Computerless, Impersonal Guidance System" (Holland, 1971), was asked if his journal would publish it. "No," he said, "It's just another gimmick." Holland revealed that such experiences helped formulate his paranoia about journal editors, or at least some editors.

Holland (2004) noted that the typology attracted a wide range of criticism for being simplistic, ignoring developmental theory, having questionable origins based largely on male data, and for being authored by a privileged European-American male who relied on old fashioned logical positivism. Dealing successfully with the challenges from critics was an ongoing theme of Holland's work with his theory.

8. **Sustainability.** The current scene for new faculty in contemporary research universities includes teaching and administrative responsibilities

along with an expectation that they pursue grants and publish early and vigorously in their careers. Given these circumstances, can work like Holland's be sustained? This situation can hinder faculty's long term focus on theory-based research and practice where results may take years to materialize. These circumstances stand in contrast to Holland's work with TR&P, which was not encumbered by grant funding agencies or heavy institutional oversight (Holland, 2004).

9. **Training.** Holland lamented the quality of training for practitioners on using the theory and the SDS. He viewed this as an important challenge in integrating TR&P;

My negative impression of some current training and practice includes the failure to inculcate critical thinking about research reports, practical interventions, as well as unsupported theory and speculation. At the core of this uncritical acceptance of ideas or flawed reports, is the failure to appreciate the difference between fantasy and evidence. The decline in critical thinking has been accompanied by a decline in the quality of diagnostic skills in the use of interest inventories. I am most familiar with counselor's use of the SDS. In general, many use the SDS like a cookie cutter. They note the three-letter code and assume there is nothing else of value. At the other extreme, some practitioners use the SDS like a projective device and find 'support' for many creative interpretations instead of relying on more obvious and empirically supportable interpretations. (Holland, 2004, p. 89)

Holland believed this deficiency in training hindered the integration of TR&P.

10. **Contemporary Presentations.** Several years ago a presenter at an NCDA conference program proclaimed that Holland had been "dethroned" and concluded that his work was no longer relevant. Reardon and Lenz (2015) found that the 2014 National Career Development Conference Program included 198 programs, but only three had any mention of RIASEC theory or the SDS, 1.5% of the programs listed. A key

word search of the 2014 American Psychological Association Conference Program found no hits for RIASEC, Holland, Self-Directed Search (SDS), or other related terms. A similar search of the 2014 American Counseling Association Conference Program revealed no hits for these terms. This situation illustrates a troubling irony—RIASEC is a widely used career theory with evidence-based tools that purport to help people make career decisions, but it is not often discussed at our professional meetings.

The challenges listed in this section lead to the next chapter section and Holland's views for integrating TR&P, in effect reframing the *challenges* to *opportunities*.

Opportunities for Integrating Theory, Research, and Practice

The integration of TR&P in response to challenges illustrates how a good theory is not static but changes as needed over time. For Holland, this was a lifelong pursuit.

1. **Theory Unprotected.** Holland's theory and the hexagon have become iconic in vocational psychology worldwide. RIASEC theory has had an unprecedented impact on both research and practice in counseling and career development, both for educational institutions and other organizations. It is no small irony that eight years after his death, Holland's theory and ideas remain robust and pervasive. The theory did not die. Indeed, the fact that Holland's publisher continues to improve and support instruments related to the theory such as the SDS and Occupations Finder bodes well for the theory's continued relevance and its ongoing use by scholars and practitioners.
2. **Instruments Protected.** Although many instruments now claim a basis in and relevance to RIASEC theory, only the tools published by PAR, Inc. were authored by John Holland. Although RIASEC codes are produced by other instruments, only the SDS has Holland's imprint or authorship. The fact that the publisher has chosen to maintain the integrity of Holland's original work is noteworthy and not always found

in the case of other deceased authors or theorists. In order to help researchers and practitioners defray some of the instrument costs, PAR, Inc. has instituted a program for funding research proposals and product discounts for student research and practitioner training.

3. **Theory Changes.** Holland's RIASEC theory took on the properties of a living social system as it grew and changed as the result of environmental changes and new information. Rather than acting as a static system, the theory was modified in ongoing attempts to improve its validity and efficacy. These changes, documented in the literature, have increased the opportunities to integrate TR&P in vocational psychology. Holland (1997, p. v) wrote in the preface to his last book: "This book is my sixth attempt to create a more satisfying theory of careers. I never seem to get it quite right." Rather than static and outdated, the theory is still evolving and developing. Opportunities remain for other scholars and practitioners to continue to "create a more satisfying theory of careers."
4. **Environmental Neglect.** Holland and Gottfredson addressed potential weaknesses in the theory's environmental aspect by developing two instruments for research and practice. They developed the Position Classification Inventory (PCI; Gottfredson & Holland, 1991) in order to apply the theory to the classification of work positions and occupations. The PCI consists of 84 items and can be completed and scored in fewer than 10 minutes. The items are organized according to activities, outlooks, personal style or values; skills/abilities/personal characteristics; abilities/skills/talents and frequency of activities; and personal characteristics.

In addition, Holland and Gottfredson developed the Environmental Identity Scale (EIS; Holland, 1997) also called the Organizational Focus Questionnaire) to tap into a worker's beliefs about the explicitness and consistency of an organization's goals, work rules, and rewards for performance. A high score means an environment provides clear and consistent direction and rewards. The environmental identity construct

was patterned after vocational identity, and future research could provide information about the usefulness of the scale in explaining person/job congruence with RIASEC theory. Reardon and Lenz (2015) described multiple ways the PCI and EIS could be used in research and practice, although only limited activity has been reported in the literature for either instrument. Further study of the typology's environmental aspects represents another opportunity for applying RIASEC theory in research and practice.

5. **Linking Theory and Interventions.** In some of Holland's later writing, such as *Making Vocational Choices* (Holland, 1997), he addressed this issue of theory informing practice by including new ideas on career interventions and providing career assistance. He described this as his most spontaneous writing in that book. For example, he introduced the concept of Personal Career Theory (PCT), which he characterized as personal characteristics related to occupational structures, as well as strategies for achieving work and nonwork aspirations that flow from one's experiences. When a PCT is weak or "fails," a person typically seeks outside career assistance, and a successful career intervention can help a person revise or implement a PCT.

Holland's (1974) earlier views on this matter suggested that most people did not require special assistance in solving career problems and he indicated that only "30 percent of the population (young and old) require . . . extensive services and remedies" (p. 12). Holland et al. (1994) noted that most students seeking career assistance expected reassurance about a choice already made and what occupation to follow rather than information about more options. This idea merits more research. Holland (1974) observed that the most effective interventions (e.g., "a cafeteria of services") should be tailored to meet individuals' needs. The essence of Holland's ideas about career intervention programs was that they should help connect individuals with the world of work, provide theory-based interventions, use the RIASEC classification for translating self-knowledge into options, and reduce the focus on career counseling by appointment.

Reardon and Lenz (2015) moved Holland's ideas about linking career theory to interventions a step forward in their *Handbook for Using the Self-Directed Search: Integrating RIASEC and CIP Theories in Practice*. Their demonstration of the integration and implementation of these two career theories is a unique contribution to the vocational behavior field.

6. **Massive Literature.** The literature on Holland's theory and its applications is vast. Holland (1997) updated the status of the theory and cited over 840 documents related to it in his last book. Foutch et al. (2014) used bibliographic research tools and created a researchable database from 1953–2011 with 1,970 literature citations in 275 publications. The RefShare website <http://www.refworks.com/refshare2?site=020751135918800000/RWWEB1061316284/012991109946687000> displays this database. Practitioners and scholars can use this resource to search for documents related to their interests and projects, further integrating TR&P. Most recently, Sargent and Kennelly (2016, May) updated the research by Foutch et al. (2014) and found 2,255 unique reference citations on Holland's work in 355 publications appearing between 1953–2015. Literature on RIASEC theory and applications opens opportunities for new research and improved practice.
7. **Myths and Critics.** Holland (2004, p. 86) noted that responding to critics was a challenge, but "Eventually, I learned it was more productive to focus on new research and promising theoretical revisions than to debate critics." One of the ways Holland responded to these myths and falsehoods was to set up "questions" as a foil for saying what he wanted about the theory and the SDS. The *SDS Professional User's Guide* (Holland, Powell, & Fritzsche, 1994) includes 39 such questions and answers which are especially informative and candid. He added, "I took most of these critical evaluations seriously and responded by thinking it over with friends, designing research to test a critical idea, making revisions in the theory or just worrying about

potential remedies” (Holland, 2004, p. 86).

The sex-bias controversy in the early 1970s illustrates Holland’s response to myths and critics. The dispute arose because some persons viewed the theory as limiting women’s career options. Holland’s response to this criticism was to perform an experimental evaluation of the effects of the SDS on high school students (Zener & Schnuelle, 1976). “Her [Zener’s] work led to more than 22 studies of the effects of the SDS on test-takers. I was relieved to learn that taking the SDS had positive effects for men and women” (Holland, 2004, p. 28). There is evidence that Holland’s initial response to critics was to stew about it, but he moved on to find research evidence to respond to critics with or to help improve the theory. Altogether, more evidence of his integration of TR&P.

8. **Sustainability.** Holland’s contributions may have occurred because of unique circumstances concerning his interests, skills, and the jobs he held over his lifetime. Those circumstances may not be replicable, and as a result, it may take a combination of contributors, including his publisher and persons integrating TR&P in vocational psychology and career development, to sustain Holland’s work in the future. Holland (1997, 2004) acknowledged scores of persons whose contributions enhanced his work, and most of them are now retired or no longer active in the field. I wonder what names will be listed in the next generation of researchers and practitioners pursuing Holland’s theory. Opportunities will exist for the next generation of those dedicated to Holland’s theory in research and practice. For example, Spokane, Moya, and Faris (2016) suggested that international attention to Holland’s theory may signal the value of vocational psychology in emerging economies and be a sign of new life for RIASEC theory.
9. **Training.** Holland noted that the American Counseling Association, National Career Development Association, and the American Psychological Association’s Division 17 (Counseling Psychology) were composed

primarily of Social types. It is reasonable to assume that these S types would welcome workshops and training events in a group setting. In addition, it is reasonable to assume that they would enjoy discussing SDS cases in a group setting. Faculty teaching the career information course or the assessment course in a master’s counseling program could employ such teaching techniques and obtain copies of the complete set of SDS 5th Edition Form R materials for each student. These materials, along with related Power Point slides, can be obtained from PAR for free or a reduced cost. The SDS is a Qualification Level A assessment, which means that no special qualifications, degrees, or training are required to us it.

10. **Contemporary Presentations.** A remedy for the dearth of presentations related to RIASEC theory at contemporary professional meetings will require some adjustments and new initiatives. Lent (2016) noted that many career theorists, researchers, and practitioners have A, I, and S in their Holland codes, indicating an overlap in their interests and activities. He suggested that the three groups may need to find a common language for communicating. Some theorists and researchers, for example, may need to speak “Social” in order to communicate with practitioners. A new initiative for a conference program committee could indicate that proposals integrating TR&P would receive higher ratings by reviewers. Travel grants supporting conference presenters could be awarded by publishers of instruments drawing upon RIASEC theory, and recipients of grants from the American Psychological Foundation Fund in Memory of John L. Holland could make presentations at APA meetings and elsewhere. These examples of adjustments and new initiatives might help overcome some of the inertia associated with RIASEC theory presentations.

Recommendations for the Future

In this section I offer some ways in which theorists, researchers, practitioners, professional associations, and policy makers can better cope with

challenges and maximize opportunities in integrating TR&P. I will draw upon Holland's ideas for doing this where possible, but I also want to follow the 60-30-10 goal for the content of research literature in career development identified by Sampson et al. (2014). This goal would involve rebalancing the topic content of literature in the field from 93% vocational behavior and 7% evidence-based practice to 60% vocational behavior and career theory, 30% evidence-based practice, and 10% public policy analysis and implementation of innovation, including descriptions of best practice.

Sustaining Theory Tools

Since Holland's death in 2008, PAR, Inc., his publisher, has revised selected instruments and applications of RIASEC theory. For example, new editions of the SDS and all of the accompanying materials were published in 2013, and new tools (e.g., *The Veterans and Military Occupations Finder*; Messer, Greene, & Holland, 2013) were created. R. Bob Smith III (2013, p. iii), chairman and CEO of PAR, wrote in the foreword to the *SDS Manual* (Holland & Messer, 2013), "PAR continues to feel honored to be the publisher of such an exceptional theorist and author." The fact that Holland's publisher has picked up the mantle for sustaining and enhancing the SDS is a powerful and positive sign for the future of RIASEC theory and its applications in research and practice.

Ongoing Research

Holland (1997) provided students (and others) with suggestions for future research in Appendix E of his last book. He created categories of studies related to types, environments, interactions, classifications, and special problems that included more than 60 researchable questions. He provided a list of his favorite research projects and strategies, including more work-history studies; examining the predictive values of vocational aspirations; reexamining coherence, profile consistency, and so forth.; more person-environment experiments; and studies of rare codes or flat profiles. Engaging in these research projects would enhance our knowledge of RIASEC theory and its applications for years to come.

Training

The SDS is one of the five most frequently taught assessments by counselor educators (Neukrug, Peterson, Bonner, & Lomas, 2013), and is also among the top three taught in the career area (SII, SDS, O*NET Interest Profiler). A second study of assessment use by practitioners, except those in school and mental health areas, revealed the SDS was the third most frequently used assessment (Peterson, Lomas, Neukrug, & Bonner, 2014).

The recent publication by Reardon and Lenz (2015), *Handbook for Using the Self-Directed Search: Integrating RIASEC and CIP Theories in Practice*, was written for practitioners to help them more fully appreciate John Holland as a person, the status of Holland's theory in contemporary career literature, and how the SDS and other assessments and resources could be used in practice and program development. They drew upon Holland's idea that vocational theory integration requires agreement about goals and that cognitive information processing theory (Sampson, Reardon, Peterson, & Lenz, 2004) was highly compatible with RIASEC theory in that regard.

Recognizing Limits

In contemplating the future for Holland's theory, I am reminded of his observation that he did not have the time, talent, or interest in doing everything well. "As I began working, I felt responsible for every facet of my research, but it didn't take long to realize that I needed help with writing for publication, statistical analyses, data collection, relevant literature, and so on" (Holland, 2004, p. 50). In thinking about the integration of TR&P and Holland's theory, it is likely that future efforts may not fully engage all three of these areas.

In this regard, Holland noted that "Theories have different audiences and goals. Some are oriented to practitioners: others are oriented to psychologists, sociologists, or other groups. It's hard to do both, for practitioners want help and psychologists want perfection or scientific respectability" (Holland, 1994, p. 46). Holland kept the focus of his work on TR&P, and this is consistent with the recommendation by Sampson et al. (2014).

Holland's "Theoretical Estate"

What happens to the integration of TR&P when the theorist dies? This is a significant challenge for the future of RIASEC theory. Holland was the creator, stimulus, critic, manager, chronicler, and shepherd of this theory. Are there individuals or groups that can move into the theoretical estate he left and fill such a role? There is presently no university institute or center that could execute systematic research or develop training materials focused on Holland's theory. Perhaps Holland was so unique in his vision, dedication, and productivity that no individual or group can take his place. Time will tell us what future developments will occur in the TR&P of RIASEC.

A Personal Reflection

Thinking back to 1968 and Holland's talk at FSU, I remember it vividly and being quite energized to learn more about his ideas and how to implement them. His career service delivery scheme was the antithesis of what we were doing in our counseling center. If I could turn back the clock 50 years but also move forward to the present, I would take away two important things. First, I would understand that at age 25 I could build my career on the TR&P of RIASEC following the path that Holland blazed. Second, I would know that such a career would include professional success, positive relationships, and the provision of vocational assistance to thousands of people worldwide. Holland did this, and my hope is that others will be inspired to do the same.

Summary

As suggested by someone who knew him well, this paper has used varied media to channel John Holland's ideas about his TR&P. The tools for constructing this paper involved reading, listening to, and viewing Holland's words, along with some limited editorial infusion of my own ideas. Holland's contributions over a half century are the epitome of integrating TR&P in vocational psychology. In constructing this paper, I considered the relevance of such integration, its challenges and opportunities, as well as recommendations for the future.

References

- Eggerth, D. E., Bowles, S. M., Tunick, R. H., & Andrew, M. E. (2005). Convergent validity of O*NET Holland code classifications. *Journal of Career Assessment, 13*, 150–168.
- Foutch, H., McHugh, E. R., Bertoch, S. C., & Reardon, R. C. (2014). Creating and using a database on Holland's theory and practical tools. *Journal of Career Assessment, 22*, 188–202. <http://doi.org/10.1177/1069072713492947>
- Gottfredson, G. D., & Holland, J. L. (1997). EIS Organizational Focus Questionnaire. In J. L. Holland (1997), *Making vocational choices* (3rd ed.; pp. 273–275). Odessa, FL: Psychological Assessment Resources.
- Gottfredson, G. D., & Holland, J. L. (1991). *The Position Classification Inventory professional manual*. Odessa, FL: Psychological Assessment Resources.
- Holland, J. L. (1959). A theory of vocational choice. *Journal of Counseling Psychology, 6*, 35–45.
- Holland, J. L. (1971). A theory-ridden, computerless, impersonal guidance system. *Journal of Vocational Behavior, 1*, 167–175.
- Holland, J. L. (1973). *Making vocational choices: A theory of careers*. Englewood Cliffs, NJ: Prentice-Hall.
- Holland, J. L. (1974). Vocational guidance for everyone. *Educational Researcher, 3*(1), 9–15.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Holland, J. L. (1998). New and old perspectives. *British Journal of Guidance and Counseling, 26*(4), 555–558.
- Holland, J. L. (1994). Separate but unequal is better. In M. Savickas & R. Lent (Eds.), *Convergence in career development theories: Implications for science and practice* (pp. 45–51). Palo Alto, CA: CPP Books.
- Holland, J. L. (2004). *My life with a theory*. Unpublished manuscript, Accession CA6195, John L. Holland Papers. The State Historical Society of Missouri Manuscript Collection, University of Missouri, Columbia, MO.
- Holland, J. L., Fritzsche, B., & Powell, A. (1994). *Self-Directed Search technical manual*. Odessa, FL: Psychological Assessment Resources.

- Holland, J. L., Johnston, J. A., & Asama, N. F. (1993). The Vocational Identity Scale: A diagnostic and treatment tool. *Journal of Career Assessment, 1*, 1–12. <http://doi.org/10.1177/106907279300100102>
- Holland, J. L., & Messer, M. A. (2013). *Self-Directed Search professional manual*. Lutz, FL: Psychological Assessment Resources.
- Holland, J. L., Powell, A., & Fritzsche, B. (1994). *SDS professional users guide*. Odessa, FL: Psychological Assessment Resources.
- Lent, R. W. (2017). Integration of theory, research, and practice: A social cognitive perspective. In J. P. Sampson, Jr., E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 20). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch1>
- Messer, M. A., Greene, J. A., & Holland, J. L. (2013). *The Self-Directed Search Leisure Activities Finder*. Lutz, FL: PAR.
- Neukrug, E., Peterson, C. H., Bonner, M., & Lomas, G. I. (2013). A national survey of assessment instruments taught by counselor educators. *Counselor Education & Supervision, 52*, 207–221.
- Peterson, C. H., Lomas, G. I., Neukrug, E. S., & Bonner, M. W. (2014). Assessment use by counselors in the United States: Implications for policy and practice. *Journal of counseling & development, 92*, 90–98.
- Reardon, R. C., & Kahnweiler, W. (1980). A comparison of paper-pencil and tactile board forms of the Self-Directed Search. *Journal of Counseling Psychology, 27*, 328–331.
- Reardon, R. C., & Lenz, J. G. (2015). *Handbook for using the Self-Directed Search: Integrating RIASEC and CIP theories in practice*. Lutz, FL: Psychological Assessment Resources.
- Sampson, J. P., Jr. (2016). A cognitive information processing theory for career choices: Challenges and opportunities for integrating theory, research, and practice. In J. P. Sampson, Jr., E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. L. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 62). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch5>
- Sampson, J. P., Jr., Hou, P.-C.; Kronholz, J. F.; Dozier, V. C.; McClain, M.-C.; Buzzetta, M.; Pawley, E. K.; Finklea, J. T.; Peterson, G. W.; Lenz, J. G.; Reardon, R. C.; Osborn, D. S.; Hayden, S. C. W.; Colvin, G. P.; & Kennelly, E. L. (2014). Annual review: A content analysis of career development theory, research, and practice – 2013. *Career Development Quarterly, 62*(4), 290–326. <http://doi.org/10.1002/j.2161-0045.2014.00085.x>
- Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling and services: A cognitive information processing approach*. Pacific Grove, CA: Cengage. [book rights returned to authors November 19, 2014]
- Sargent, A. C., & Kennelly, E. (2016, May). *Examining the influence of Holland's theory in today's vocational literature*. Poster presented at the meeting of the Society of Vocational Psychology, Tallahassee, FL.
- Spokane, A. R., Moya, M., & Faris, E. (2016, in press). Vocational personalities in work environments: Perspectives on Holland's theory. In G. B. Stead & M. B. Watson (Eds.), *Career psychology in the South African context* (2nd ed.). Pretoria, SA: Van Schaik.
- Spokane, A. R., & Schultheiss, S. S. (1996). There is nothing so practical as a good theory. In M. Shahnasarian (Ed.), *The Self-Directed Search (SDS) in business and industry: A resource guide* (pp. 27–46). Odessa, FL: Psychological Assessment Resources.
- Weinrach, S. (1980). Have hexagon will travel: Interview with John Holland. *Personnel & Guidance Journal, 58*, 404–414.
- Weinrach, S. (1996). The psychological and vocational interest patterns of Donald Super and John Holland. *Journal of Counseling & Development, 75*, 5–16.
- Zener, T. B., & Schnuelle, L. (1976). Effects of the Self-Directed Search on high school students. *Journal of Counseling Psychology, 23*, 353–359.

Chapter 3 - Counseling for Work and Relationship: A Practice-Driven Theoretical Approach

Mary Sue Richardson

New York University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch3>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=vlalZNCJML8&index=5&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA

Appreciation is expressed to Emily Bullock-Yowell and Janet Lenz for their comments on an earlier draft of this chapter.

Correspondence should be addressed to Mary Sue Richardson, 246 Greene St., Kimball 705, New York, NY, 10003. E-mail: msr1@nyu.edu

Keywords: vocational psychology, narrative, career counseling, intentional process, identity process, career development, career and work

I have struggled to come to grips with the charge to address the challenges and opportunities for integrating theory, research, and practice with respect to counseling for work and relationship (CWR) (Richardson, 2012b, 2012c; Richardson & Schaeffer, 2013a, 2013b). Central to this struggle is the question of where CWR belongs in relation to these categories, and whether integrating theory, research, and practice is relevant for CWR. A comparison to social cognitive career theory (SCCT), highlighted in this book (Lent, 2017), will help address this question. While flattered that CWR might be considered a theory, it is not a theory in the sense that social cognitive career theory is a theory (Lent, 2017). Rather, CWR is a theoretical approach to practice.

According to Lent (2017), SCCT is a set of theoretical propositions that attempts to first, explain and understand important aspects of human development and behavior that can be empirically validated, and second, apply these understandings (or not) to developing practices that seek to modify these aspects of behavior. Practices so derived are considered theory-driven practices and are highly regarded. In following through on these steps, SCCT is an outstanding example of the traditional empiricist understanding of science, referred to as paradigmatic knowledge by Bruner (1990), by seeking to understand behavior from the stance of an objective observer (Zittoun et al., 2013).

In contrast to SCCT, CWR is different in its logic, values, and scientific tradition, focusing instead on understanding human development and behavior from within the ongoing subjective stream of human experience (Gergen, 2014; Gergen, Josselson, & Freeman, 2015; Zittoun et al., 2013). Within this subjective or qualitative tradition, the pragmatic usefulness of theory upstages its truth value (Gergen, in press), and can be viewed primarily through the prism of its relationship to practice. The primary goal of practice is to influence and change behavior, not understand it. A useful theory is one that translates into and helps develop practices that are effective in fostering desired change. Thus, CWR, informed by the subjective or qualitative tradition, is a theoretical approach developed with the goals of practice first and foremost in mind. It is what might be called a practice-driven theoretical approach.

Given the scientific tradition from which CWR emanates, I have taken the liberty of reinterpreting the charge of addressing the issue of integrating theory, research, and practice, an issue perhaps more directly relevant to traditional empiricist science, to consider some interconnections among theory, research, and practice from the perspective of CWR. In the following sections I first describe the goal of practice as it has evolved in CWR before turning to consider CWR as an exemplar of a theoretical approach grounded in narrative theory, one of the major categories of the subjective science of

human development (Gergen, 2014). I then examine three different interpretations of CWR's core narrative principle and their implications for practice. Finally, I discuss the way in which CWR, across all readings of its core narrative principle, is informed by critical discourse analysis, and the implications of this for practice. Implications for research will be considered throughout the paper, and the paper will conclude with a discussion of the most important implication for research from the perspective of CWR, which is how might we begin to assess the effectiveness of counseling practices designed with CWR in mind in relation to CWR's goals.

The Goal of Counseling Practice from the Perspective of CWR

The goal of counseling practice centers around the question: What kind of client change is envisioned by a particular counseling practice? The initial goal of CWR was to help people co-construct their lives through work and relationship. This formulation of the goal is an extension of the rich history of vocational guidance and vocational psychology that initially focused on helping people make vocational choices, then shifted to helping people choose and develop careers, and then, from the perspective of CWR, to helping people co-construct lives through work and relationship. This articulation of this goal was my interpretation, deeply informed by the worldview of contextualism (Lerner, 2006; Pepper, 1942), about how to position desired client change in relation to the radical social changes affecting social worlds, including, but not restricted to, the context of market work. Within this broader rubric, CWR posited two different kinds of work, market work and unpaid care work. Along with relationship, they represent the three major contexts of development.

Revising CWR's goal to helping people co-construct meaningful lives going forward through work and relationship makes two issues more explicit. First, CWR posits that taking agentic action is fundamental in the co-construction of lives in contexts. Taking agentic action is essentially about meaning. It is about doing what a person wants to do on some level: It is about doing what gives meaning to that person's life. An emphasis on lives of meaning as a goal of counseling practice is an important theme in contemporary vocational and organizational psychology (Dik, Byrne, & Steger 2013,

in press; Duffy & Dik, 2013; Rehm, 1999; Rosso, Dekas, & Wrzesniewski, 2010). Second, by referring to the co-construction of lives going forward, this revised goal explicitly positions CWR in relation to helping people with issues regarding the future dimensions of their lives. Going forward, the practice of helping people co-construct meaningful lives through work and relationship can be referred to as *work and relationship counseling*.

Narrative Theory in General

CWR is grounded in narrative theory, a major development in contemporary social science and in psychology that seeks to understand how people interpret and make sense of their ongoing subjective experience (Bruner, 1990; McAdams, 2001; Polkinghorne, 1988; Sarbin, 1986a, 1986b). It is a large, rapidly growing, and multifaceted area. According to Hoshmand (2005), narrative theory can best be considered a set of principles that focuses on the subjective experience of people's lives, especially as narrative, the stories people tell to explain their lives to themselves and others, structures that subjective experience. Basic narrative theory is the belief that narrative is a way of thinking, ubiquitous across cultures, that provides the means for people to organize, process, and make sense of their experience. Hoshmand identifies narrative on a continuum with counseling practice, a practice that also seeks to understand how people, in this case clients, make sense of their lives. As such, narrative is a theory closely akin to counseling. Just as narrative is ubiquitous in people's lives, narrative is ubiquitous in counseling practice.

In light of the similarities between narrative and counseling, it is not surprising that many new and innovative approaches to counseling practice are indebted to narrative theory in the vocational literature (McIlveen, 2012; McIlveen & Patton, 2007, 2010; McMahan & Watson, 2011; Savickas, 2005, 2011, 2012; Young & Popadiuk, 2012). The system's theory framework of career development (Patton & McMahan, 2017) featured in this book is deeply influenced by narrative theory. Thus, CWR is just one approach, among many, that draws on narrative theory.

The Core Narrative Principle of CWR: A First Reading Informed by Life Course Theory

The central narrative principle at the core of CWR is about lives lived in the context of time. People's lives are never static. Time is always moving forward, as are people's lives. It has long been my belief that the centrality of time in lives and, especially, issues about future directions has always been central to, though implicit in, vocational psychology. The issue of time in vocational psychology, especially future time, has been masked to some extent by attention to the kinds of vocational and career choices people make. In my mind, the basic question of "What kind of work am I going to do?" or "What is my career choice?" is, on some level, a question about the future.

The focus on the issue of career choice, or what I refer to as market work, in vocational psychology is an outgrowth of the enormous changes in the nature and complexity of the labor market over the past few centuries, along with the need to help people select among the daunting array of alternatives. In contrast, the notion of choice having to do with other future aspects of life, such as family and relationships, has been more fully structured and scripted by normative expectations about what, how, and when other aspects of life should evolve. In a world of flux and radical change, the describing of lives, the individualization of the life course, and the erosion of normative expectations (Bauman, 2011; Beck, 1992; Beck & Beck-Gernsheim, 2002; Giddens, 1991; Guichard, 2005), the notion of choice or what to do with a life, not just market work, becomes a central issue for many. It also becomes an issue of concern with which many people need help. This is one reason that CWR takes a holistic perspective regarding how to facilitate or help people co-construct the future story lines of their lives. It is not just that future occupational or market work trajectories may be problematic for many: It is that the basic contours of what constitutes a life have come into question. Within this broader lens, work continues to be central. In fact, in CWR, work is even more central in people's lives than in traditional vocational literature because of the expansion of the meaning of work to include unpaid care.

Narrative theory provides a way to think about how lives evolve over time. The basic narrative principle of CWR, derived from Ricoeur (1980;1984), is that

the story lines of the future emerge from the telling and retelling of the stories of the past, in the present, through action. Central to this churning of narrative is a process of reflexivity in which people revise the directionality of their lives in response to their experiences. For counseling practice, the focus of attention is on agentic action: that is, actions people want to take that may lead to future story lines of lives. Counseling practitioners are not just interested in how story lines of the future emerge: They are interested in helping people co-construct story lines characterized by an inner directionality, a sense that they are helping people pursue lives they want to live. In CWR, the traditional notion in vocational psychology of making a career choice is transformed into taking action and finding some level of inner directionality across major contexts of lives. Furthermore, this process of taking action and co-constructing future story lines characterized by inner directionality is recursive, reflexive, and ongoing as people navigate through ongoing, radical social change.

This central principle of CWR translates easily into counseling practice. It sets forth a basic guideline that counseling practice designed to help people co-construct meaningful lives going forward through work and relationship should focus on facilitating agentic action across the life contexts a person participates in. It is here that life course theory informs counseling practice (Elder, Johnson, & Crosnoe, 2003; Elder & Shanahan, 2006). Agentic action is the key. Once identified and emergent in one domain or context of life, agentic action can be fostered in other domains and contexts as both need and opportunity arise. According to life course theory, the multiple trajectories across the major domains and contexts of lives are deeply interconnected and interdependent.

Life course theory also orients CWR to life span issues, recognizing, for example, that the need for agentic action in relation to market work contexts is likely to be most salient for young people transitioning from school to market work, while agentic action in relation to unpaid care work may be more significant at later stages of life. Throughout the lifespan, developing healthy and sustaining relationships is critical for co-constructing lives of meaning. This is the essence of work and relationship counseling.

Opportunities abound to develop a rich narrative research literature that investigates how agentic action and new story lines emerge in lives, a literature that will both inform and be informed by work and relationship counseling. While we have a vast trove of research in vocational psychology on the antecedents of multitude aspects of vocational life, we are likely to find a very different kind of understanding when pursuing these questions using narrative methods. Another topic of interest to vocational psychologists addressed in the narrative research literature is life transitions (McAdams, Josselson, & Lieblich, 2001). Research by Haynie and Shepherd (2011) on the narratives of a sample of Marines who became disabled in combat going through a career transition process attends to the kind of issues likely to interest counseling practitioners.

At this point, the literature on narrative methods of inquiry provides a rich resource on how to do narrative inquiry (Clandinin, 2007; Daiute, 2014; Riessman, 2007). Most importantly, narrative research, to the extent that it is attentive to how lives are embedded and evolve in vastly different cultural and social locations, can help to elucidate how and under what conditions individuals can transcend cultural and social constraints. Such findings are of particular significance for work and relationship counseling with respect to issues of social justice.

My work on intentional and identity processes (Richardson, Meade, Rosbruch, Vescio, Price, & Cordera, 2009) illustrates another important area of research inquiry that informs both narrative theory and work and relationship counseling. It is research relevant to understanding the processes of counseling practice based on narrative. For many years, fascinated by the question of how new directions emerge in lives and, especially, how these new directions are socially constructed, my teaching practice has included a component of experiential learning in which students engage in a series of narrative-based group discussions and write short papers about their experience in these groups in which they are encouraged to be reflexive. Reflexivity, in this context, is defined as a process in which a person reflects and reconsiders aspects of his or her self and/or life in response to experience. A research project on one semester of student reflexive papers identified themes that we labeled intentional process and identity process. The conceptualization of intentional process is based

on the notion that intentions frame actions: that is, the broad range of intentional states, including thoughts, feelings, beliefs, attitudes, and desires regarding aspects of a person's life, provides the subjective frame that enables actions to emerge in relationship to opportunity. Intentional process has to do with thoughts, feelings, beliefs, attitudes, and desires about where and how a life (or specific aspects of a life) is going. In the narrative data in student papers, we found both revisions and recommitments to intentional states. For example, one student's intentional process might reveal an emerging ambivalence and second thoughts about, heretofore, clear market work goals. Another student's intentional process might indicate increased commitment to a planned course of action. Similarly, identity process data revealed reflexive thinking that either reaffirmed thoughts and feelings about self or considered revisions stimulated by the group discussion. Intentional and identity processes can be considered evidence of the reflexive processing of experience, an important idea in narrative theory having to do with the construction and reconstruction of narrative.

These research findings directly translate into implications for counseling practice. They suggest that the process of facilitating agentic action encompasses the encouragement of the reflexive processing of experience that, in turn, is characterized by intentional and identity process. The identification of this process enables counselors to better conceptualize and more deeply understand the work they are doing with clients. It also enables counselors to reframe progress in counseling to encompass helping clients find some level of inner directionality in their lives and *move along* in how they are thinking and feeling about themselves and their lives. This moving along is fostered by the reflexive examination of their lives and experience of talking about their lives in counseling. These findings resonate with dialogic theory about the self and about counseling (Hermans, 2014; Hermans & Kempen, 1993), especially with the research on dialogic approaches to group counseling for vocational guidance and counseling (Keskinen & Spangar, 2013; Koivuluhta & Puhakka, 2013).

This research also suggests that narrative-based group discussions, combined with reflexive writing, may be particularly helpful to stimulating the reflexive processing of experience and related intentional and identity processes. Group discussions, especially when

informed by a group counseling perspective, provide a rich and stimulating arena for maximizing the potential of the social construction of experience. The use of writing to encourage reflexive thinking and self-development is a significant and innovative practice in vocational guidance (Meijers & Lengelle, 2012; Lengelle, Meijers, Poell, & Post, 2013). In this case, the method of research has implications for work and relationship counseling regarding the use of groups and reflexive writing. At the same time, this research informs narrative theory with a more nuanced understanding of how actions related to potential future story lines emerge in the telling and retellings of the stories of the past and what exactly constitutes the reflexive processing of experience.

The Core Narrative Principle of CWR: A Second Reading Informed by a Narrative Perspective on Psychotherapy Practice

The first reading of the core narrative principle of CWR, that the story lines of the future emerge from the telling and retelling of the stories of the past, in the present, through action, addresses its implications for forward movement in lives. The second reading focuses on the telling and retelling of the stories of the past. From the perspective of counseling practice, the statement about the telling and retelling of the stories of the past evokes the practice of psychotherapy. Telling and retelling the stories of the past is an apt description of psychotherapy. In this case, psychotherapy is defined as a practice designed to help people resolve problems and issues that in some way or another are due to experiences located in the past. These past experiences affect present functioning in less than desirable ways.

Although some have noted that psychotherapy practice is essentially about restorying a life (Schafer, 1992; McAdams & Josselson, 2004) and there is even a theory of psychotherapy regarding the reconstruction of problematic past narratives (Angus & McLeod, 2004), Hansen's (2006) postmodern interpretation of counseling and psychotherapy theories takes this understanding of narrative and psychotherapy to a different level. According to Hansen, theories of counseling and psychotherapy are best thought of not as maps of reality, but as meaning structures counselors bring into psychotherapy relationships that enable

people to restory their lives. These meaning structures are fundamentally narrative in nature. They tell a story about how people get into psychological trouble and how to resolve this trouble. Most importantly, it is the restorying of lives in counseling and psychotherapy, enriched by the counseling and psychotherapy theories of the counselor, that heals. Thus, Ricouer's description of a general narrative process is very applicable to the narrative process across theories of counseling and psychotherapy. In this case, narrative can be considered a metatheory of psychotherapy practice.

The Core Narrative Principle of CWR: A Third Reading That Integrates Work and Relationship Counseling and Psychotherapy

The core narrative principle of CWR, which is that the story lines of the future emerge from the telling and retelling of the stories of the past, in the present, through action, can be understood as a critical theoretical link between psychotherapy and CWR, and the foundation for a practice that can be referred to as *counseling/psychotherapy*. It constitutes a third reading of the core principle of CWR. The practice of counseling/psychotherapy encompasses both CWR (the first reading of the core narrative principle of CWR having to do with issues regarding future directions in life) and the broad range of diverse theoretically-based psychotherapy practices (the second reading of the core narrative principle of CWR having to do with issues regarding the past).

This third reading of the core principle of CWR, which knits together the past and the future in the present, suggests that how stories are told about the past influences the kinds of actions that emerge in the present that have implications for the future. For counseling practitioners interested in maximizing the emergence of agentic action, particularly with people who may be having trouble identifying future directions, this connection between past and future suggests that limited or less coherent narratives of the past may impede the emergence of the story lines of the future. Restorying past narratives to enable the resolution of problems rooted in the past may facilitate the emergence of new and more agentic story lines of the future. Similarly, the emergence of new and more agentic story lines of the future may promote the restorying of lives in healing ways. In fact, one school

of psychoanalytic thought proposes that agentic actions that help create meaning in people's lives are the essence and engine of therapeutic change (Summers, 2001, 2005). More importantly, the narrative principle at the heart of CWR makes it possible to begin to think about how to integrate psychotherapy informed by the broad range of counseling and psychotherapy theories with work and relationship counseling.

While the rationale for this proposed integration of the practices of work and relationship counseling and psychotherapy is very rudimentary and speculative at this point, it suggests an approach to practice that does not split past and future. It is a practice in which time is central: It looks both forward and backward in time. In its forward dimension, it is attentive to the current social reality that figuring out future directions is an ongoing task for most people throughout life. In its backward dimension, it is attentive to the fact that many people have, to a greater or lesser extent, problems with living rooted in their past experiences and may need and want to resolve these problems. By not splitting past from future concerns, counseling/psychotherapy also does not split issues that affect inner lives from issues having to do with the social worlds in which people are embedded and through which they need to navigate. Counseling/psychotherapy also does not split normal from abnormal in its acknowledgement that people are integrated wholes who, for any number of reasons, may have trouble from their pasts or trouble with their futures and that both aspects of lives need to be considered together when resolving these troubles.

This discussion of a potential integration of the practices of work and relationship counseling and psychotherapy also suggests a significant research opportunity to inquire about the ways in which past narrative structures might be impeding forward movement in lives: Conversely, it opens up inquiry on how forward movement in lives may help to generate healing narratives of the past. A richly textured discussion of research on how one might proceed to study the ways in which prevailing narratives can constrain forward movement in lives is available in Zittoun et al. (2013).

Unpaid Care Work: An Exemplar of Critical Discourse Analysis

My proposal for a dual model of work inclusive of market work and unpaid care work (Richardson, 2012b, 2012c; Richardson & Schaeffer, 2013a, 2013b) is an exemplar of critical discourse analysis (Richardson, 2012a; Schultheiss & Wallace, 2012) that examines how work has been separated from care in the historically evolving discourse of work and family. In turn, the discourse of work and family is and has been influenced by prevailing ideologies of patriarchy and capitalism. To talk about discourse is to draw attention to how such ideologies deeply influence language use. The discourse of work and family continues to *disappear* work in personal care settings such as family and other relationship contexts. Although unpaid care work is included as one kind of work in the vocational literature, notably by Blustein (2006; 2013), as long as we continue to think of work, per se, predominantly in relation to paid employment, the power structure of work and family discourse is not disrupted. What is required is language, such as unpaid care work, that specifically pulls unpaid care out of the shadows of domesticity and into the realm of work.

Typically, critical discourse analysis limits itself to a theoretical analysis of the ideologies that shape language use. However, the proposal for a dual model of work moves beyond theoretical analysis to suggest a professional discourse that is, in fact, antithetical to how people think about their lives: that is, in fact, a challenge to prevailing narrative structures. To talk about unpaid care work is a disruptive discourse. Care and work are not supposed to go together. Although a good argument can be made about the adaptive potential for considering unpaid care as work, especially as disruptive technologies are radically altering the nature of and even the possibility of market work for many (Ford, 2015), promoting care as work is essentially a value-laden stance. It is informed by a belief that revaluing care work as central to the lives of both men and women fosters gender equity and, more broadly, is a constituent of the movement towards a more humane and sustainable capitalism (Morris, 2013; Mulgan, 2013). To promote unpaid care as work also locates CWR in the ranks of world-making social science recommended by Gergen (in press) and connects it with early founders of the vocational guidance movement who questioned whether and how the vocational guidance

movement ought to promote progressive change in the world of work (Guichard, 2013; Richardson, 2015), not just prepare people for the world of work.

Whether, and to what extent, the discourse of unpaid care work will affect the practices of work and relationship counseling and counseling/psychotherapy beyond these theoretical papers remains to be seen. I, for one, attentive to language usage in the popular press, note that the term *caregiving* seemed to have a lock on popular discourse until relatively recently. I have begun to see occasional references to the importance of unpaid work and even of unpaid care work in popular discourse, indicating that it may now be more timely to move forward with a dual model of work that encourages people to think of their unpaid care responsibilities as significant and meaningful life and work commitments.

Conclusion

This journey to consider some interconnections among theory, research, and practice from the perspective of CWR has led to the articulation of two broad approaches to counseling practice, with the first one, work and relationship counseling, embedded in the second one, counseling/psychotherapy. Both approaches are holistic, although counseling/psychotherapy is holistic across more dimensions than CWR. Both also encompass the disruptive discourse of unpaid care work. To conclude this chapter, I briefly address the issue that Fouad (2017) so evocatively discusses in her chapter in this book regarding the critical need to develop a research base that supports the effectiveness of clinical practices. According to Fouad, the future of clinical practice is dependent upon such research. From the perspective of CWR, this is indeed the critical question: Are the practices suggested by CWR effective in helping people accomplish the goals of these practices?

Kazdin (2008) describes two approaches to the task of demonstrating the effectiveness of counseling and psychotherapy interventions. The first is evidence-based treatment in which controlled trials for specific interventions produce results that validate the treatment. The second approach, much more in line with the philosophy of counseling psychology with which vocational psychology is closely aligned (Wampold, 2001), is evidence-based practice that tests

the effectiveness of an intervention or approach to practice in real-life settings that integrate the approach to practice with clinical expertise and clients' specific needs and predilections. Developing the evidence base for the two practices suggested by CWR, work and relationship counseling and counseling/psychotherapy, is the task that lies ahead.

Although this is a daunting challenge, several steps come to mind, inspired by Reid and West's (2011) research on narrative in career guidance. They worked with a group of collaborating practitioners to first, train them in narrative methods based on Savickas's model (2011) and then, to evaluate the methods for career guidance in real-life practice settings. Similarly, the broad and holistic approaches to practice suggested by CWR need to be more fully developed as models for practice and implemented by counselors in the field with diverse kinds of clients in diverse settings. At the same time, the evaluation of these practices needs to examine how, to what extent, and with whom these practices are helpful based on assessments geared toward the goals of these practices. In so doing, the traditional commitments of practitioners to training and supervision will be enriched by an evaluative dimension. What is most important is that the development and evaluation of the clinical practices of work and relationship counseling and counseling/psychotherapy proceed with practice development shaped by research, and research, in turn, shaped by clinical practice.

References

- Angus, L. E., & McLeod, J. (Ed.). (2004). *The handbook of narrative and psychotherapy: Practice, theory, and research*. Thousand Oaks, CA: Sage.
- Bauman, Z. (2011). *Culture in a liquid modern world*. Malden, MA: Polity Press.
- Beck, U. (1992). *Risk society: Towards a new modernity*. Trans. M. Ritter. London: Sage.
- Beck, U., & Beck-Gernsheim, E. (2002). *Individualization*. Thousand Oaks, CA: Sage.
- Blustein, D. L. (2006). *The psychology of working*. Mahwah, NJ: Lawrence Erlbaum.

- Blustein, D. L. (2013). *The Oxford handbook of the psychology of working*. New York: Oxford University Press.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Clandinin, D. J. (Eds.). (2007). *Handbook of narrative inquiry: Mapping a methodology*. London: Sage.
- Dik, B. J., Byrne, Z. S., & Steger, M. F. (Eds.), (2013). *Purpose and meaning in the workplace*. Washington, D.C.: American Psychological Association.
- Daiute, C. (2014). *Narrative inquiry: A dynamic approach*. Thousand Oaks, CA: Sage.
- Duffy, R. D., & Dik, B. J. (2013). Research on calling: What have we learned and where are we going? *Journal of Vocational Behavior*, 83(3), 428–436.
- Elder, G. H., Jr., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course*. New York: Kluwer.
- Elder, G. H. Jr., & Shanahan, M. J. (2006). The life course and human development. In R. M. Lerner (Eds.), *Handbook of child psychology, Vol. 1. Theoretical models of human development* (pp. 665–715). New York: Wiley.
- Ford, M. (2015). *Rise of the robots: Technology and the threat of a jobless future*. New York: Basic Books.
- Fouad, N. A. (2017). The role of theory in improving evidence-based career interventions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 77). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch7>
- Gergen, K. J. (in press). From mirroring to world-making: Research as future forming. *Journal for the Theory of Social Behavior*.
- Gergen, K. J. (2014). Pursuing excellence in qualitative inquiry. *Qualitative Psychology*, 1(1), 49–60.
- Gergen, K. J., Josselson, R., & Freeman, M. (2015). The promises of qualitative inquiry. *American Psychologist*, 70(1), 1–9.
- Giddens, A. (1991). *Modernity and self-identity*. Stanford, CA: Stanford University Press.
- Guichard, J. (2005). Life-long self-construction. *International Journal for Educational and Vocational Guidance*, 5, 111–124.
- Guichard, J. (2013, June). *Forms of reflexivity and transformation of the system of subjective identity forms during life designing dialogues*. Paper presented at the International Conference: Life design and career counseling: Building hope and resilience. University of Padua, Italy.
- Hansen, J. T. (2006). Counseling theories within a postmodernist epistemology: New roles of theories in counseling practice. *Journal of Counseling & Development*, 84, 291–297.
- Haynie, J. M., & Shepherd, D. (2011). Toward a theory of discontinuous career transition: Investigating career transitions necessitated by traumatic life events. *Journal of Applied Psychology*, 96(3), 501–524.
- Hermans, H. J. M. (2014). Self as a society of I-positions: A dialogical approach to counseling. *Journal of Humanistic Counseling*, 53, 134–159.
- Hermans, H. J. M., & Kempen, H. (1993). *The dialogical self: Meaning as movement*. San Diego, CA: Academic Press.
- Hoshmand, L. T. (2005). Narratology, cultural psychology, and counseling research. *Journal of Counseling Psychology*, 52, 178–186.
- Kazdin, A. E. (2008). Evidence-based treatment and practice. *American Psychologist*, 63(3), 146–159.
- Keskinen, A., & Spangar, T. (2013). “Stop and Go”: In search of new ecology and dynamics in group counselling for employees in transition. *International Journal for Educational and Vocational Guidance*, 13, 233–245.
- Koivuluhta, M., & Puhakka, H. (2013). Dialogical approach applied in group counseling: Case Study. *International Journal for Educational and Vocational Guidance*, 13, 187–202.
- Lengelle, R., Meijers, F., Poell, R., & Post, M. (2013). The effects of creative, expressive, and reflective writing on career learning: An exploratory study. *Journal of Vocational Behavior*, 83, 419–427.

- Lent, R. W. (2017). Integration of theory, research, and practice: A social cognitive perspective. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 20). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch1>
- Lerner, R. M. (2006). Developmental science, developmental systems, and contemporary theories of human development. In R. M. Lerner (Ed.), *Handbook of child psychology, Vol. 1. Theoretical models of human development* (pp. 1–17). New York: Wiley.
- McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology, 5*(2), 100–122.
- McAdams, D. P., & Josselson, R. (2004). *Healing plots: The narrative basis of psychotherapy*. Washington, D.C.: American Psychological Association.
- McAdams, D. P., & Josselson, R., & Lieblich, A., (2001). *Turns in the road: Narrative studies of lives in transition*. Washington, D.C.: American Psychological Association.
- McMahon, M., & Watson, M. B. (Eds.). (2011). *Career counseling and constructivism: Elaboration of constructs*. New York: Nova Science Publishers.
- McIlveen, P. (2012). Extending the metaphor of narrative to dialogical narrator. In P. McIlveen & D. E. Schultheiss (Eds.), *Social constructionism in vocational psychology and career development* (pp. 59–76). Rotterdam: Sense Publishers.
- McIlveen, P., & Patton, W. (2007). Narrative career counseling: Theory and exemplars of practice. *Australian Psychologist, 42*(3), 226–235.
- McIlveen, P., & Patton, W. (2010). My career chapter as a tool for reflective practice. *International Journal for Educational and Vocational Guidance, 10*(3), 147–160.
- Meijers, F., & Lengelle, R. (2012). Narratives at work: The development of career identity. *British Journal of Guidance and Counseling, 40*(2), 157–177.
- Morris, I. (2013). *The measure of civilization: How social development decides the fate of nations*. Princeton, NJ: Princeton University Press.
- Mulgan, G. (2013). *The locust and the bee: Predators and creators in capitalism's future*. Princeton, NJ: Princeton University Press.
- Patton, W., & McMahon, M. (2017). The systems theory framework of career development. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 50). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch4>
- Pepper, S. C. (1942). *World hypotheses*. Berkeley, CA: University of California Press.
- Polkinghorne, D. E. (1988). *Narrative knowing and the human sciences*. Albany, NY: SUNY Press.
- Reid, H., & West, L. (2011). “Telling tales”: Using narrative in career guidance. *Journal of Vocational Behavior, 78*, 174–183.
- Rehm, M. L. (1999). Vocation as meaning-making narrative: Implications for vocational education. *Journal of Vocational Education Research, 24*(3), 145–159.
- Richardson, M. S. (2012a). A critique of career discourse practices. In P. McIlveen & D. E. Schultheiss (Eds.), *Social constructionism in vocational psychology and career development* (p. 87–104). Rotterdam: Sense Publishers.
- Richardson, M. S. (2012b). Counseling for work and relationship. *The Counseling Psychologist, 40*(2), 190–242.
- Richardson, M. S. (2012c). The ongoing social construction of the counseling for work and relationship perspective. *The Counseling Psychologist, 40*(2), 279–290.
- Richardson, M. S. (2015). A conversation with Jean Guichard: Reflexivity in action. In A. DeFabio & J. L. Bernaud (Eds.), *Psychological constructions of identity in the 21st century: A new intervention theory for self-developing in turbulent times*. Hauppauge, NY: Nova Science Publishers.
- Richardson, M. S., Meade, P., Rosbruch, N., Vescio, C., Price, L., & Cordera, A. (2009). Intentional and identity process: A social constructionist investigation using student journals. *Journal of Vocational Behavior, 74*, 63–74.
- Richardson, M. S., & Schaeffer, C. (2013a). From work and family to a dual model of working. In D. L. Blustein

- (Ed.), *Handbook of the psychology of working* (pp. 141–159). New York: Oxford University Press.
- Richardson, M. S., & Schaeffer, C. (2013b). Expanding the discourse: A dual model of working for women (and men's) lives. In W. Patton (Ed.), *Women's working lives: Moving the boundaries of our discourse* (pp. 23–50). Rotterdam: Sense Publishers.
- Ricoeur, P. (1980). Narrative time. In W. J. T. Mitchell (Ed.) *On narrative* (pp. 165–184). Chicago, IL: University of Chicago Press.
- Ricoeur, P. (1984). *Time and narrative*. Chicago: University of Chicago Press.
- Riessman, C. K. (2007). *Narrative methods for the human sciences*. Thousand Oaks, CA: Sage.
- Rosso, B. D., Dekas, K. H., & Wrzesniewski, A., (2010). On the meaning of work: A theoretical integration and review. *Research in Organizational Behavior*, 30, 91–127.
- Sarbin, J. R. (Ed.). (1986a). *Narrative psychology: The storied nature of human conduct*. New York: Praeger Publishers.
- Sarbin, J. R. (1986b). The narrative as root metaphor for psychology. In J. R. Sarbin (Ed.), *Narrative psychology: The storied nature of human conduct* (pp. 3–21). New York: Praeger Publishers.
- Savickas, M. L. (2005). The theory and practice of career construction. In S. D. Brown & R. W. Lent (Eds.), *Career development & counseling* (pp. 42–70). Hoboken, NJ: Wiley & Sons.
- Savickas, M. L. (2011). *Career counseling*. Washington, D.C.: American Psychological Association.
- Savickas, M. L. (2012). Life design: A paradigm for career intervention in the 21st century. *Journal of Counseling & Development*, 90, 13–19.
- Schafer, R. (1992). *Retelling a life: Narration and dialogue in psychoanalysis*. New York: Basic Books.
- Schultheiss, D. E., & Wallace, E. (2012). An introduction to social constructionism in vocational psychology and career development. In P. McIlveen & D. E. Schultheiss (Eds.), *Social constructionism in vocational psychology and career development* (pp. 1–8). Rotterdam: Sense Publishers.
- Summers, F. (2001). What I do with what you give me: Therapeutic action in the creation of meaning. *Psychoanalytic Psychology*, 18, 635–655.
- Summers, F. (2005). The self and analytic technique. *Psychoanalytic Psychology*, 22(3), 341–356.
- Wampold, B. E. (2001). *The great psychotherapy debate: Models, methods, and findings*. Mahwah, NJ: Lawrence Erlbaum.
- Young, R. A., & Popadiuk, N. E. (2012). Social constructionist theories in vocational psychology. In P. McIlveen & D. E. Schultheiss (Eds.), *Social constructionism in vocational psychology and career development* (pp. 9–28). Rotterdam: Sense Publishers.
- Zittoun, T., Valsiner, J., Vedeler, D., Salgado, J., Goncalves, M. M., & Ferring, D. (2013). *Human development in the life course: Melodies of living*. Cambridge, UK: Cambridge University Press.

Chapter 4 - The Systems Theory Framework of Career Development

Wendy Patton

Queensland University of Technology, Australia

Mary McMahon

The University of Queensland, Australia

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch4>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=1PCrvZIN5rs&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA&index=6

Correspondence should be addressed to Wendy Patton, Queensland University of Technology, Faculty of Education, GPO Box 2434, Brisbane QLD 4001, Australia. E-mail: w.patton@qut.edu.au
Mary McMahon, School of Education, The University of Queensland, Brisbane Q 4072, Australia.
E-mail: marylmcMahon@uq.edu.au

Keywords: systems theory framework; career development; integrating theory, research, and practice; qualitative career assessment; My System of Career Influences; career counselling; storytelling; narrative career counselling

The development of the systems theory framework over 20 years ago (STF; McMahon & Patton, 1995; Patton & McMahon, 1999, 2006, 2014) responded to the challenge presented by the convergence debate of the early 1990s (Savickas & Lent, 1994) to produce a metatheoretical framework that could recognize the contribution of all career theories and foster convergence of theory, and theory and practice. The STF has facilitated theory integration and convergence between career theory and practice, including for non-Western populations (Patton & McMahon, 2015). In its original formulation, mindful of Savickas's (1994) conclusion at the convergence conference that “we have theories of career development but not theories of career counseling” (p. 240) and Osipow's (1996) concern that career theorists “apply theory to counseling only as an afterthought” (p. 404), the STF integrated practice considerations can, therefore, be viewed also as a theory of career counseling, a feature that distinguishes the STF from other theories. Indeed, “theory translation” (Lent, 2017, p. 21) by the theorists themselves and also practitioners, has been a defining feature of the STF throughout its history. In addition, the STF, through its visual representation of the complex contexts of career development and career practice and clearly identified core constructs, has stimulated the development of a

number of constructivist approaches to career counseling and reflective career assessment processes.

This chapter provides a brief overview of the theoretical underpinning of the STF and commentary on the relevance of integrating theory, research, and practice. In reflecting on challenges and opportunities for integration, the chapter describes the STF's contributions to career theory integration and theory and practice integration. Theory and research integration is reflected in the development and evaluation of STF-based practices. Future directions and recommendations for the STF's theoretical, research, and practice contributions are also discussed.

The Systems Theory Framework

The STF (McMahon & Patton, 1995; Patton & McMahon, 1997, 1999, 2006, 2014) had its genesis in practice and research. It was initially conceived as a contextual model of adolescent career decision making (McMahon, 1992). Subsequent research “established that the systems theory framework is applicable to children and adolescents” (McMahon, 1994, p. 209). Further work to refine the framework prior to its first

publication in 1995, was conducted with students and practitioners. Twenty years on, the STF remains the first attempt to present a comprehensive metatheoretical framework of career development and the first based specifically on systems theory. As an overarching, or metatheoretical, framework, the STF can integrate concepts of extant career development theories and position them for use in theory and practice. Central to the STF is the individual who constructs his or her own meaning of career in context. The STF depicts both the content and dynamic process of career development. Illustrative examples of content influences provided in the STF relate to individuals, their social system, their environmental-societal system, and the context of time. Process influences include the interaction within and between influences known as recursiveness, change over time and chance. These elements of the STF are depicted in Figure 1. The STF has demonstrated similarities, differences, and interconnections between existing theories. In practice, career counsellors determine the relevance of extant theoretical constructs for individual clients; the individual in context is emphasized over theory and by telling career stories, individuals construct their own STF. Therefore the STF is applicable at a macrolevel of theory analysis and at a microlevel of individual analysis. Systems theory constructs align with the philosophical shift from positivist approaches to constructivist approaches.

The Relevance of Integrating Theory, Research, and Practice

As discussed, the STF was derived from both research and practice. It was developed to create a greater integration between theories (Savickas & Lent, 1994) and to respond to practitioner concerns about developing strategies from existing theories of career development. This use is similar to that discussed by Richardson (2017), who noted that counseling for work and relationship is “a selection at a point in time of a set of theories that both ground and inform practice” (p. 40). Similarly, Sampson (2017) noted that reciprocity between theory and practice is evident when counseling issues are used to refine theory and further inform practice. It is this connection between theory, research, and practice that strengthens the questions researchers can examine and provides a guide for practitioners in drawing from relevant theory to work with different

clients. To cite Lent (2017), “it is quite important to ensure that theory is both testable and usable” (p. 21).

The Challenges in Integrating Theory, Research, and Practice

For the STF to be testable and usable is a challenge in itself. As it is a metatheoretical framework, in many ways its usability is what is testable. The STF tries to integrate many theoretical perspectives, and a key challenge is to demonstrate these qualities when it is not feasible to develop testable hypotheses as individual theories can. Lent (2017) emphasized the need to collaborate with practitioners, and working to demonstrate an integration between theory and practice has been an underpinning of the STF since its development. It is interesting that Reardon (2017) noted that Holland had wanted to do more of this. The usability of the STF has been to

- demonstrate integration between theories, as well as to extend this project to new and emerging theories;
- further develop practice strategies and resources for practitioners; and
- demonstrate usability through research.

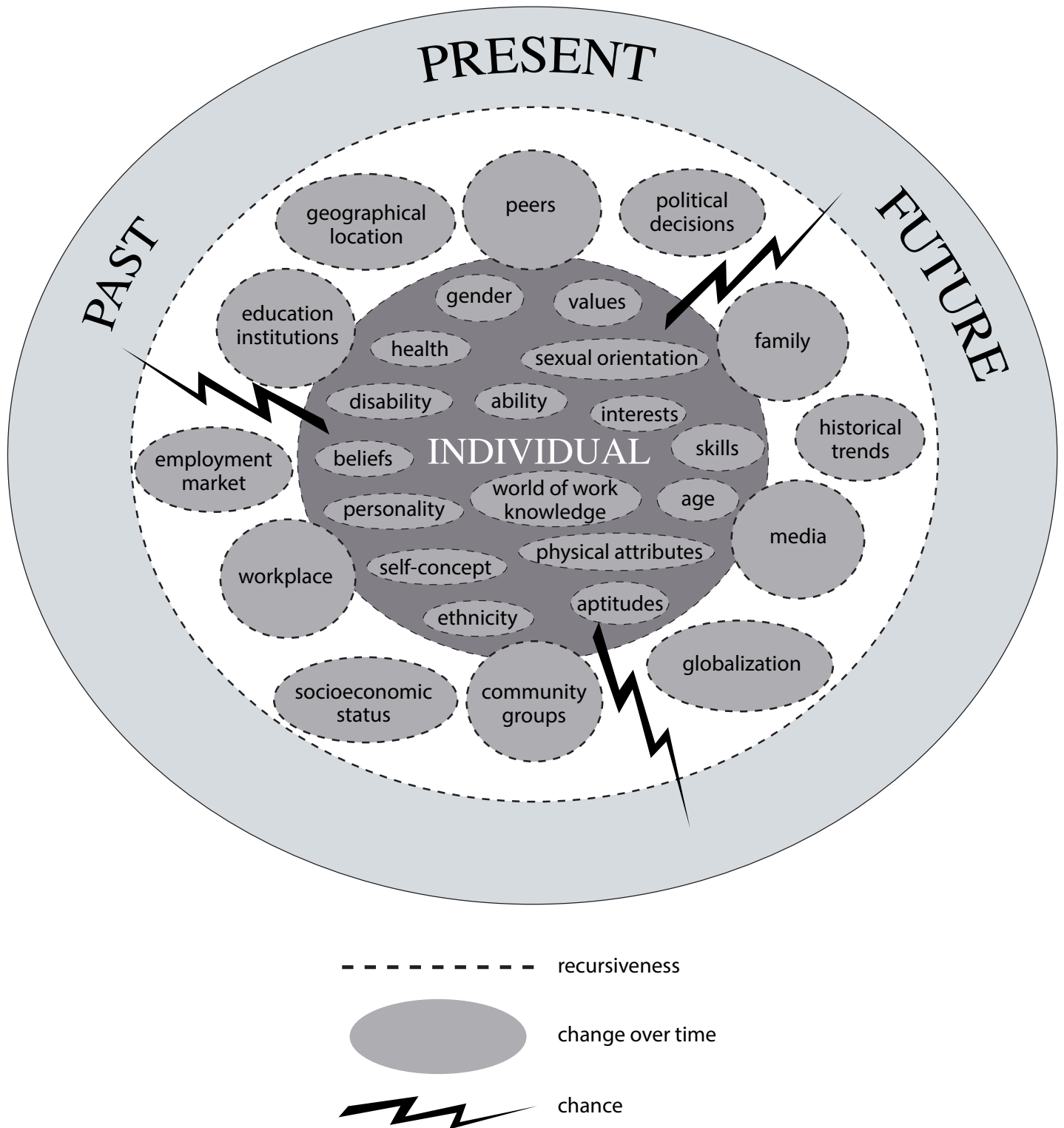


Figure 1. The systems theory framework (STF) of career development.

The Opportunities for Integrating Theory, Research, and Practice

In response to these challenges, the STF has examined several opportunities to demonstrate integration between theory, research, and practice. Ongoing work has demonstrated career theory integration, integration between theory and practice, and between theory and research. These opportunities are presented in Table 1 and are detailed below.

Table 1: Systems theory framework: Theory, research, and practice integration

Theory, Research, and Practice	Integration
Practice	Contextual model of career decision making (McMahon, 1992)
Research	STF of career development (McMahon, 1994; McMahon & Patton, 1995)
Theory, practice	Application of STF by career practitioners (Patton & McMahon, 1997) Refinement of STF (Patton & McMahon, 1999)
Practice	A framework for career learning (e.g., McMahon & Patton, 2003)
Theory, research, practice	Guidelines for using (McMahon & Patton, 2002) and developing qualitative career assessment (McMahon, Patton, & Watson, 2005) Development of MSCI (Adolescent; McMahon, Patton & Watson, 2005a,b; 2017a,b)
Theory, practice	Storytelling approach to career counselling based on STF (McMahon, 2005, 2006) McMahon, Patton, & Watson, 2004); McMahon & Watson (2008, 2010, 2012, 2013)
Theory, research, practice	Integration with new and emerging theories (Patton, 2007, 2008, 2015; McIlveen, 2007; McIlveen & Patton, 2007) Research into process of storytelling approach to narrative career counselling (McMahon, Watson, Chetty, & Hoelson, 2012a,b)
Research, practice	MSCI (Adult; McMahon, Watson, & Patton, 2013a,b)
Theory	STF 3rd edition (Patton & McMahon, 2014)

In addition to the original description of the STF, which demonstrated integration with existing theories, work has continued to document integration with new and emerging theories. Potential theory integration between the STF and relational theories has been discussed (Patton, 2007) as has the integration of dialogical theory (Hermans, 2002, 2003) with both the STF and career construction theory (McIlveen, 2007; McIlveen & Patton, 2007). These authors described how the multiple voices and positions of the dialogical self contribute to understanding how individuals construct and co-construct career-related stories of life themes. Patton (2008) compared and contrasted the STF and career construction theory and noted the contribution of both to the convergence agenda. More recently, drawing from the connections between the STF and contextual action theory noted by Young, Valach, and Marshall

(2007), Patton (2015) expanded a discussion on these commonalities, focusing in particular on theoretical developments that have enhanced our understanding of conceptual (e.g., individual, systemic thinking, the notion of story, and recursiveness) and practice dimensions (e.g., connectedness, meaning-making, the nature of learning, agency, and the nature of the counseling relationship).

In discussing theory and practice integration, Lent (2017) emphasised the importance of including practitioners in theory generation and theory usefulness, suggesting “an ‘SCCT in practice’ type of book in which we will invite practitioners to describe novel applications of SCCT to different client groups and using different intervention modalities” (p. xx). As discussed earlier, the genesis of the STF was in practice and research,

and dialogue with practitioners has been a feature of its development. Indeed, the first book published on the STF (Patton & McMahon, 1997) was an edited text in which practitioners described applications of the STF to various client groups and in various settings. In the original contextual model that was the precursor of the STF, McMahon (1992) illustrated its practical application through the use of genograms, social atoms, sociodrama, structured peer interviews and adolescent-parent interviews. Subsequently, in considering the utility of the STF, Patton and McMahon (1999, 2006, 2014) emphasized career development learning as central to the practical application of the STF, and discussed it as an underpinning process in career counseling, career education, and training and supervision. As a “conceptual and practical map for career counsellors” (McMahon & Patton, 2006, p. 94), the STF is readily applied in practice and encourages clients to “relate the details and reality of their own maps through the telling of their career stories” (p. 97).

Specific activities for career counselors using the STF were outlined in McMahon and Patton (2003, 2015). Further, in applying the STF to career counseling, McMahon (2005) identified foundational conceptual understandings and practical considerations. The conceptual understandings of the individual, systemic thinking, recursiveness, and story encourage systemic thinking; career counselors take an “individual in context perspective” (McMahon, Watson, & Patton, 2014) and consider their clients in the context of their recursive relationships, including their complex and dynamic systems of influence, which are revealed by the stories clients tell. Clients are encouraged to think systemically about their careers and to identify themes and patterns located within and between stories. At a practical level, facilitating connectedness, the use of story, and the counseling relationship are fundamental to career counseling.

Connectedness is a multilevelled construct best illustrated by the diagrammatic depiction of the counseling relationship as a therapeutic system (see Figure 2). It is enacted through counselor-client relationships that are based on the Rogerian principles of empathy, unconditional positive regard, and genuineness (Rogers, 1951). In practice, career counselors remain connected with their own systems of influence while considering the organizational and environmental-societal systems in

which they work. Clients are assisted to tell stories that recursively connect with their own systems of influence and in turn, career counselors become connected with the client’s system of influences (McMahon, Watson, & Patton, 2015). These conceptual understandings and practical considerations are not only applicable to career counseling, but are also integral to qualitative career assessment instruments derived from the STF.

STF application to career counseling. Building on the work of McMahon, Patton, and Watson (2004), McMahon (2006) conceptualized career counseling through the metaphor “working with storytellers” (p. 16). Founded on the STF and this metaphor, the “emerging approach to narrative career counselling” (McMahon & Watson, 2013, p. 278), the storytelling approach has been developed (McMahon, 2006; McMahon & Watson, 2010, 2012, 2013). This approach directly applies the STF by incorporating the conceptual understandings and practical considerations as well as STF’s core constructs of connectedness, meaning making, agency, reflection, and learning.

The storytelling approach encourages individuals to engage in a reflective process (reflection) during which they tell their stories in relation to the systems of influence within which they live (connectedness), begin to understand how identified influences have impacted on their story (meaning making), identify themes and patterns evident within and across stories (learning), and, as a result, play a more active role in constructing their future identities and career stories (agency). In this way a thematic connectedness between past and present experiences and future aspirations is facilitated. (McMahon, Watson, & Patton, 2015, p. 151)

The storytelling approach provides an opportunity for both the career counselor and the client to engage with systemic influences in a collaborative and discursive narrative counseling relationship (McMahon & Watson, 2008). This approach (McMahon & Watson, 2008; McMahon, Watson, Chetty, & Hoelson, 2012a, 2012b) provides a holistic process for incorporating career assessment into career counseling, including applications of the STF such as the My System of Career Influences (MSCI; McMahon, Patton, & Watson, 2005a, b; 2017a, b; McMahon, Watson, & Patton, 2013a, b) qualitative career assessment reflection process (to be discussed in the next section).

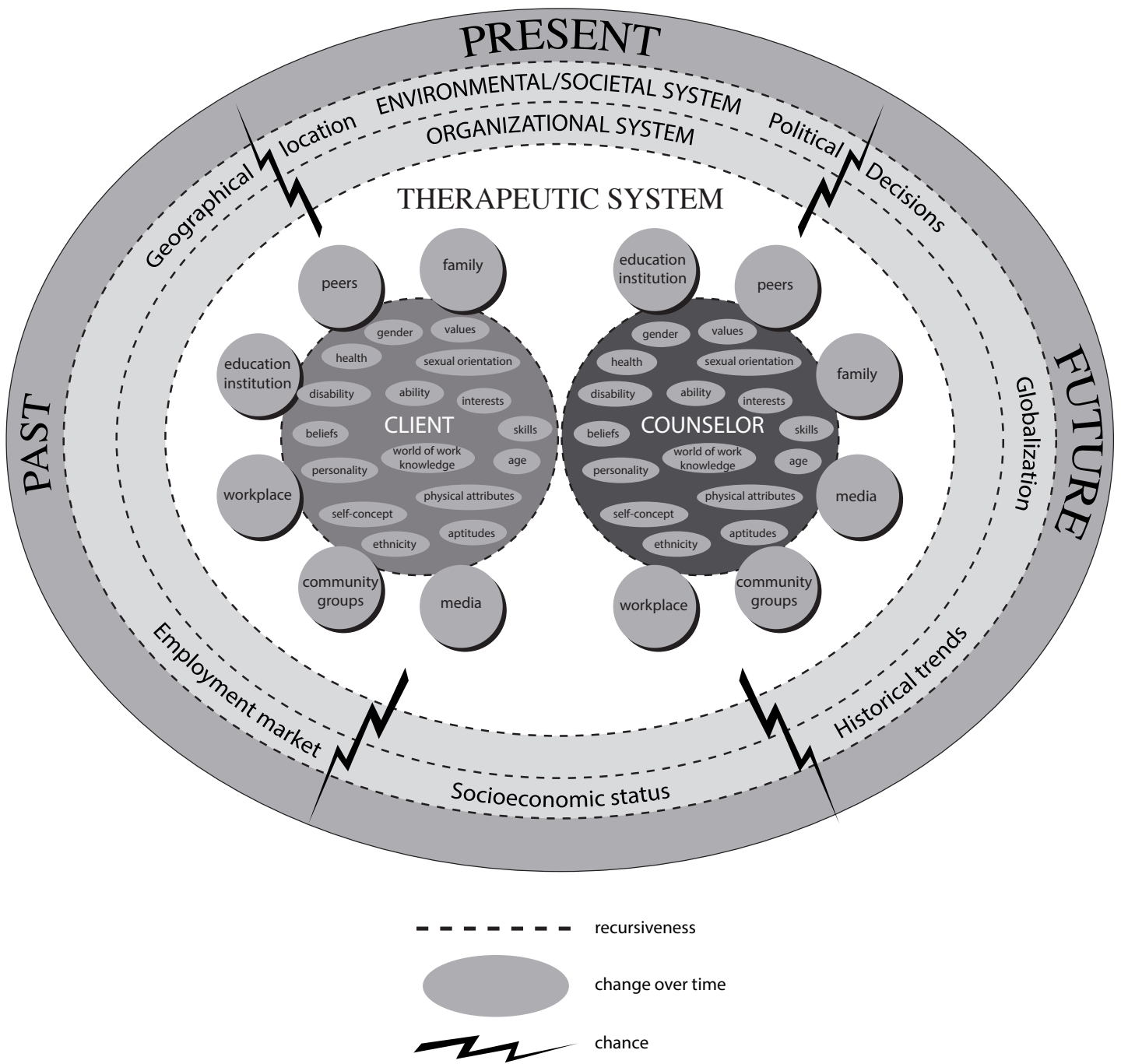


Figure 2. The therapeutic system

STF applications in career assessment. The STF has stimulated the development of several qualitative career assessment instruments as well as a quantitative career measure (McMahon et al., 2015). These theory-based interventions can be used in career counseling and in small group sessions and continue to be tailored to meet the needs of individuals (Reardon, 2017) and diverse groups. These instruments and measures are briefly described in the following subsections, as is their contribution to the integration between theory, research, and practice.

My System of Career Influences (MSCI). The My System of Career Influences (MSCI) qualitative career assessment process in its adolescent (McMahon, Patton, & Watson, 2005a, b; 2017a, b) and adult versions (McMahon, Watson, & Patton, 2013a, b) operationalizes the STF visual and conceptual frameworks (Patton & McMahon, 2014). The development of the MSCI followed criteria suggested for the development (McMahon, Patton, & Watson, 2003; McMahon, Watson, & Patton, 2005) and use (McMahon & Patton, 2002) of qualitative career assessment processes, including that these processes should be grounded in theory.

The development of both MSCI versions involved an extensive process including research and practice that have been described elsewhere (McMahon et al., 2005b, 2017b; McMahon et al., 2013b). The adolescent workbook and facilitator's guide were developed over a four year and three stage process across two nations (Australia and South Africa; McMahon et al., 2005b). Subsequently, the MSCI (adolescent version) has been translated into other languages, including Cantonese (Yuen, McMahon, Jin, Lau, Chan, & Shea, 2009) and German (Schindler & Schreiber, 2015), for research, which has shown promising results. For example, after completing the MSCI, Chinese students found the MSCI easy to comprehend and their MSCI based conversations with a career counsellor valuable in consolidating their career planning and decision making (Yim, Wong & Yuen (2015). The development of the MSCI adult version extended across three nations (Australia, England, and South Africa) and sampled adults in a variety of large public sector, private practice, and private organisational settings (McMahon et al., 2013b). The adult version focused on both men and women from a wide range of occupational structural

levels as well as diverse cultural backgrounds. Similar to the adolescent version, the international applicability of the MSCI (adult) has been recognized, and it has been translated into Italian for research purposes (Sgaramella, 2014; Sgaramella, Ferrari, & Ginevra, 2015). For example, Sgaramella et al. (2015) used the MSCI (adult) with 20 adults with substance use disorders and found that the narratives constructed following the completion of the MSCI may help facilitate the construction of future non-addictive narratives.

The MSCI provides a user's workbook that facilitates a structured step-by-step process through which individuals (in either individual or group settings) reflect on and subsequently better understand the holistic pattern of influences on their career development. All pages of the workbook contain introductory information, a set of instructions, illustrative examples, and space for clients to record their reflections and further individualize their MSCI (McMahon, Patton, & Watson, 2005a, 2017a; McMahon, Watson, & Patton, 2013a). The MSCI's relevance to diverse populations was noted in a recent review (Henfield, 2013).

An increasing body of research highlights the MSCI's usefulness with diverse population groups and career-related issues, demonstrating a strong reciprocal relationship between theory and practice (Sampson, 2017). The MSCI adolescent version has proved useful with disadvantaged (McMahon, Watson, Foxcroft, & Dullabh, 2008) and middle class (Kuit, 2005) South African adolescents as well as with Swiss adolescents who completed the MSCI German version (Schindler & Schreiber, 2015). Comparison of parental and adolescent perceptions of career influences on adolescent career development has been investigated (Collett, 2011). In higher education, McMahon et al. (2012b) demonstrated how other forms of career assessment could be integrated within the metaframework of the MSCI process by describing how the administration of a values card sort was stimulated from a MSCI (adult) conversation between a career counselor and a Black African woman. Case studies have demonstrated how the MSCI can assist adolescents to become more active in the career counseling process and to holistically consider their career decisions (McMahon & Watson, 2008). At a more systemic level, Watson and McMahon (2006) considered the utility of the MSCI in relation to challenges facing career education on the basis of Patton

and McMahon's (2015) conceptualization of the school system. Specifically, the school system encourages and enables practitioners to *map* stakeholders and contextualize their career education programs.

Career Systems Interview (CSI). The Career Systems Interview (CSI; McIlveen, 2003; McIlveen, McGregor-Bayne, Alcock, & Hjertum, 2003) is a semistructured interview process theoretically grounded in the STF. Clients are initially familiarized with the holistic STF diagram (see Figure 1) to establish rapport and background for the CSI. Subsequently, three dimensions of the CSI move from identifying the reason for the initial consultation through to a "relaxed conversation" in which the client reflects on all the STF influences (McIlveen, 2015a). This reflective process is a precursor to the client writing an autobiography, either in the My Career Chapter qualitative assessment process (discussed in the following subsection) or in other forms of career assessment.

In discussing cultural considerations related to the influences of the STF, McMahon et al. (2013b) recommended that individuals progress through the MSCIs systems of influence in an order that suits them rather than progressing from intraindividual influences to the social and environmental-societal influences. Similarly, McIlveen (2015a) proposed that the CSI discussion moves in the reverse order from how influences are identified in the STF because clients may find it easier to discuss environmental-societal influences that are more neutral and less personal. Initial research on a small ($n = 18$) group of undergraduate students using a pre-post experimental-group design indicates promise for using the CSI in career counseling (McIlveen et al., 2003). Findings from the study demonstrated that career counseling underpinned by a breadth of personal inquiry based on systems theory contributed to client improvement on a number of dimensions, including self and environment exploration and attributions for career decision making.

My Career Chapter (MCC). Completion of the CSI will determine the next step of career counselling or assessment (McIlveen, 2015a). The use of the My Career Chapter (MCC; McIlveen, 2006), emanating from a sentence completion process (McIlveen, Ford, & Dun, 2005), is suggested as a logical follow-on to the CSI approach. The goal of the MCC is to assist clients

to write "an autobiography of their career" (McIlveen & Patton, 2007, p. 76) in a semistructured format of seven steps based on the systems of influence identified by the STF. The resultant short story is "proof read" (verbally) and edited (written) (McIlveen, 2015a) by the clients from differing imagined perspectives or voices, such as themselves five years younger, and then as that younger person in written feedback to the older person. Besides reading the autobiography, the client also identifies themes from which to derive meaning. Similar to the MSCIs and its parent framework, the STF, the MCC also offers a metaframework in that other forms of career assessment can also be used but with the proviso that their results are interpreted within the themes identified by the MCC.

Research on the use of the MCC to date suggests that it is useful in career counseling (McIlveen, 2007), a positive experience that can be used with adolescents (McIlveen, Patton, & Hoare, 2007), and a useful reflective-practice tool for career counsellors' professional development that can encourage "reflective practice and self-supervision with regard to facilitating self-reflexivity" (McIlveen & Patton, 2010, p. 149). McIlveen (2015a) reported on further research that aims to develop a shortened version of the MCC.

Career Development Influences Scale. The initial development and validation of the Career Development Influences Scale (Bridgstock, 2007) has been reported. Bridgstock applied the STF to investigate the career decision making of arts students and arts professionals. Using exploratory and confirmatory factor analysis, she found that an initial six-factor structure, based on 20 of the 28 STF influences, produced an eventual stable five factor structure consisting of 19 items across two population groups. Three of the final identified factors related to the STF's individual system (interests and beliefs, skills and abilities, and physical characteristics), and one factor each to the STF's social (interpersonal influences) and environmental-societal (environmental-societal influences) systems. The Career Development Influences Scale could provide a contextual perspective when combined with other quantitative measures of career development (Bridgstock, 2007).

Recommendations for the Future

In 2007, McMahon and Watson suggested areas for future research to maximize the contribution of the STF to theory, research, and practice. These suggestions included diversifying samples, capitalizing on the STF's metatheoretical capabilities through exploring further potential for theoretical integration, strengthening the evidence base of practices grounded in the STF, and further development of career counseling and assessment instruments. It is clear from the research previously described in this chapter that McMahon and Watson's research agenda has been advanced. Other researchers have identified the utility of the STF in guiding research activity. For example, Byrne (2007) used the STF to classify the factors influencing the decision to study speech pathology. The STF elements of learning (i.e., creating a learning environment, the content of learning, and reflection on learning) were applied in a clinical supervision experience that was shown to be beneficial to participants (Hall & LaCroix, 2015). The STF was used by McIlveen (2015b) as the underpinning for his vocational psychology of agriculture framework because it

enables the integration of conceptually different vocational psychology theories. When coherently organized by the systems theory framework, these theories will furnish novel research questions that may populate the research agenda and, ultimately, foster research and development that enhance agriculture's capacity to feed and clothe the world. (p. 157)

As per the discussion on the relevance of integrating theory, research, and practice described by Sampson (2017), the STF continues to guide theory integration, theory-informed practice, and theory-driven research. A strong community of practice, including academic researchers and practitioners from many countries, as advocated by Sampson (2017), continues to work collaboratively to refine the utility of the STF for theorists, researchers, and practitioners, and more importantly for clients. A "useful theory" (Krumboltz, 1994, p. 27) enables us to answer practical questions related to accuracy, responsibility, comprehensiveness, integration, and adaptability. The STF, as a metatheory, fulfills all of Krumboltz's criteria for a "useful theory" through its capacity to accurately describe career

behavior, afford personal responsibility to individuals, take a holistic contextual perspective, integrate and converge with other theories, and evolve over time. The usefulness of the STF is attested to by its practical applications, which are original, theoretically grounded, rigorously developed, and supported by an emergent evidence base. Moreover, the STF has demonstrated its utility in diverse contexts through its practical applications. Further development of evidence-based practical applications of the STF, particularly in diverse contexts, will ensure that its influence will continue to grow.

References

- Bridgstock, R. (2007). Development of a brief measure of career development based on the Systems Theory Framework. *Australian Journal of Career Development, 16* (3), 18–30.
- Byrne, N. (2007). Factors influencing the selection of speech pathology as a career: A qualitative analysis utilising the STF. *Australian Journal of Career Development, 16* (3), 11–18.
- Collett, G. (2011). *Systemic influences on black South African adolescents' career development: Adolescent and parental perspectives*. Unpublished master's dissertation, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.
- Hall, M. E., & LaCroix, J. (2015). Critical career supervision in independent practice: A counselor and supervisor-learning system perspective. *Australian Journal of Career Development, 24*, 136–140.
- Henfield, M. S. (2013). My System of Career Influences. In C. Wood & D. G. Hays (Eds.), *A counselor's guide to career assessment instruments* (6th ed., pp. 499–502). Broken Arrow, OK: National Career Development Association.
- Hermans, H. J. M. (2002). The dialogical self as a society of mind. Introduction. *Theory & Psychology, 12*(2), 147–160.
- Hermans, H. J. M. (2003). The construction and reconstruction of a dialogical self. *Journal of Constructivist Psychology, 16*, 89–130.

- Krumboltz, J. D. (1994). Improving career development from a social learning perspective. In M. L. Savickas & R. W. Lent (Eds.), *Convergence in career development theories: Implications for science and practice* (pp. 9–31). Palo Alto, CA: CPP Books.
- Kuit, W. (2005). *The career development of South African Grade 11 adolescents: A career systems and discursive perspective*. Unpublished master's dissertation, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.
- Lent, R. W. (2017). Integration of theory, research, and practice. In J. P. Sampson Jr., E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 20). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch1>
- McIlveen, P. (2003). *Career Systems Interview*. Unpublished manuscript, University of Southern Queensland, Toowoomba, Australia.
- McIlveen, P. (2006). *My Career Chapter: A dialogical autobiography*. Unpublished manuscript, University of Southern Queensland, Toowoomba, Australia.
- McIlveen, P. (2007). A test for theoretical integration: Systems theory and dialogical self. *Australian Journal of Career Development, 16*(3), 31–37.
- McIlveen, P. (2015a). My Career Chapter and the Career Systems Interview. In M. McMahon & M. Watson (Eds.), *Career assessment: Qualitative approaches* (pp. 123–128). Rotterdam, The Netherlands: Sense.
- McIlveen, P. (2015b). A research agenda for the vocational psychology of agriculture. *Australian Journal of Career Development, 24*(3), 157–165.
- McIlveen, P., Ford, T., & Dun, K. (2005). A narrative sentence-completion process for systems career assessment. *Australian Journal of Career Development, 14*(3), 30–39.
- McIlveen, P., McGregor-Bayne, H., Alcock, A., & Hjertum, H. (2003). Evaluation of a semistructured Career Assessment Interview derived from systems theory framework. *Australian Journal of Career Development, 12*(3), 33–41.
- McIlveen, P., & Patton, W. (2007). Dialogical self: Author and narrator of career life themes. *International Journal for Educational and Vocational Guidance, 7*(2), 67–80.
- McIlveen, P., & Patton, W. (2010). My Career Chapter as a tool for reflexive practice. *International Journal for Educational and Vocational Guidance, 10*(3), 147–160.
- McIlveen, P., Patton, W., & Hoare, P. N. (2007). My Career Chapter: Guidance counsellors' appraisal of its suitability for adolescents. *Australian Journal of Guidance and Counselling, 17*(3), 51–62.
- McMahon, M. (1992). Examining the context of adolescent career decision making. *Australian Journal of Career Development, 1*, 13–18.
- McMahon, M. (1994). *Application of a systems theory framework to the career development of children and adolescents*. Queensland University of Technology: Unpublished Master of Education (Research) thesis.
- McMahon, M. (2005). Career counseling: Applying the systems theory framework of career development. *Journal of Employment Counseling, 42*, 29–38.
- McMahon, M. (2006). Working with storytellers: A metaphor for career counselling. In M. McMahon & W. Patton (Eds.), *Career counselling: Constructivist approaches* (pp. 16–29). Abingdon, Oxon: Routledge.
- McMahon, M., & Patton, W. (1995). Development of a systems theory framework of career development. *Australian Journal of Career Development, 4*, 15–20.
- McMahon, M., & Patton, W. (2002). Using qualitative assessment in career counselling. *International Journal of Educational and Vocational Guidance, 2*(1), 51–66.
- McMahon, M., & Patton, W. (Eds.). (2003). *Ideas for career practitioners: Celebrating excellence in Australian career practice*. Brisbane: Australian Academic Press.
- McMahon, M., & Patton, W. (Eds.). (2015). *Ideas for career practitioners: Celebrating excellence in career practice* (2nd ed.). Brisbane: Australian Academic Press.
- McMahon, M., & Patton, W. (2006). The systems theory framework: A conceptual and practical map for career counselling. In M. McMahon & W. Patton (Eds.), *Career counselling: Constructivist approaches* (pp. 94–109). London: Routledge.
- McMahon, M., Patton, W., & Watson, M. (2003). Developing qualitative career assessment processes. *The Career Development Quarterly, 51*(3), 194–202.
- McMahon, M., Patton, W., & Watson, M. (2004). Creating career stories through reflection: An application of the

- systems theory framework of career development. *Australian Journal of Career Development* 13(3), 13–16.
- McMahon, M., Patton, W., & Watson, M. (2005a). *My System of Career Influences*. Camberwell, Australia: ACER Press.
- McMahon, M., Patton, W., & Watson, M. (2005b). *My System of Career Influences (MSCI). Facilitators' Guide*. Camberwell, Australia: ACER Press.
- McMahon, M., Patton, W., & Watson, M. (2017a). *My System of Career Influences* (2nd ed.). Brisbane, Australia: Australian Academic Press.
- McMahon, M., Patton, W., & Watson, M. (2017b). *My System of Career Influences (MSCI) Facilitators' Guide* (2nd ed.). Brisbane, Australia: Australian Academic Press.
- McMahon, M., & Watson, M. (2007). The systems theory framework of career development: Expanding its research influence. *Australian Journal of Career Development*, 16 (3), 47–54.
- McMahon, M., & Watson, M. (2008). Systemic influences on career development: Assisting clients to tell their career stories. *The Career Development Quarterly*, 56, 280–288.
- McMahon, M., & Watson, M. (2010). Storytelling: Moving from thin stories to thick and rich stories. In K. Maree (Ed.), *Career counselling: Methods that work* (pp. 53–63). Cape Town, South Africa: Juta.
- McMahon, M., & Watson, M. (2012). Story crafting: Strategies for facilitating narrative career counselling. *International Journal for Educational and Vocational Guidance*, 12(3), 211–224.
- McMahon, M., & Watson, M. (2013). Story telling: Crafting identities. *British Journal of Guidance and Counselling*, 41, 277–286.
- McMahon, M., Watson, M., Chetty, C., & Hoelson, C. (2012a). Examining process constructs of narrative career counselling: An exploratory case study. *British Journal of Guidance and Counselling*, 40, 127–141.
- McMahon, M., Watson, M., Chetty, C., & Hoelson, C. (2012b). Story telling career assessment and career counselling: A higher education case study. *South African Journal of Higher Education*, 26(4), 729–741.
- McMahon, M., Watson, M., Foxcroft, C., & Dullabh, A. (2008). South African adolescents' career development through the lens of the systems theory framework: An exploratory study. *Journal of Psychology in Africa*, 18(4), 531–538.
- McMahon, M., Watson, M., & Patton, W. (2005). Developing a qualitative career assessment process: The My System of Career Influences reflection activity. *Journal of Career Assessment*, 13, 476–490.
- McMahon, M., Watson, M., & Patton, W. (2013a). *My System of Career Influences (Adult Version): Participant Workbook*. Brisbane, Australia: Australian Academic Press.
- McMahon, M., Watson, M., & Patton, W. (2013b). *My System of Career Influences (MSCI): Adult Version. Facilitators' Guide*. Brisbane, Australia: Australian Academic Press.
- McMahon, M., Watson, M., & Patton, W. (2014). Context-resonant systems perspectives in career theory. In G. Arulmani, A. Bakshi, F. Leong & T. Watts (Eds.), *Handbook of career development: International perspectives* (pp. 29–42). New York: Springer.
- McMahon, M., Watson, M., & Patton, W. (2015). The systems theory framework of career development: Applications to career counselling and career assessment. *Australian Journal of Career Development*, 24, 148–156.
- Osipow, S. H. (1996). Does career theory guide practice or does career practice guide theory? In M. L. Savickas & W. B. Walsh (Eds.), *Handbook of career counselling theory and practice* (pp. 403–410). Palo Alto, CA: Davies-Black.
- Patton, W. (2007). Connecting relational theory and the systems theory framework: Individuals and their systems. *Australian Journal of Career Development*, 16(3), 38–46.
- Patton, W. (2008). Recent developments in career theories: The influence of constructivism and convergence. In J. A. Athanasou & R. Van Esbroeck (Eds.), *international handbook of career guidance* (pp. 133–156). Springer Science & Media.
- Patton, W. (2015). Career counselling: Joint contributions of contextual action theory and systems theory framework. In R. A. Young, J. Domene, & L. Valach (Eds.), *Counseling and action: Toward life-enhancing work, relationships and identity* (pp. 33–50). Springer Science and Media.
- Patton, W., & McMahon, M. (1997). *Career development in practice: A systems theory perspective*. Sydney, Australia: New Hobsons Press.

- Patton, W., & McMahon, M. (1999). *Career development and systems theory: A new relationship*. Pacific Grove, CA: Brooks/Cole.
- Patton, W., & McMahon, M. (2006). *Career development and systems theory: Connecting theory and practice* (2nd ed.). Rotterdam, The Netherlands: Sense.
- Patton, W., & McMahon, M. (2014). *Career development and systems theory: Connecting theory and practice* (3rd ed.). Rotterdam, The Netherlands: Sense.
- Patton, W., & McMahon, M. (2015). The systems theory framework of career development: 20 years of contribution to theory and practice. *Australian Journal of Career Development*, 24, 141–147.
- Reardon, R. C. (2017). Holland's integration of career theory, research, and practice. In J. P. Sampson Jr., E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 28). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch2>
- Richardson, M. S. (2017). Counseling for work and relationship: A theoretically-grounded and theoretically informed approach to counseling practice. In J. P. Sampson Jr., E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 40). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch3>
- Rogers, C. R. (1951). *Client-centered therapy*. Boston: Houghton-Mifflin.
- Sampson, J. P., Jr. (2017). A cognitive information processing theory for career choices: Challenges and opportunities for integrating theory, research, and practice. In J. P. Sampson Jr., E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 62). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch5>
- Savickas, M. L. (1994). Convergence prompts theory renovation, research unification, and practice coherence. In M. L. Savickas & R. W. Lent (Eds.), *Convergence in career development theories: Implications for science and practice* (pp. 235–257). Palo Alto, CA: Consulting Psychologists Press.
- Savickas, M. L., & Lent, R. W. (Eds.). (1994). *Convergence in career development theories: Implications for science and practice*. Palo Alto, CA: CPP Books.
- Schindler, N., & Schreiber, M. (2015). German version of the My System of Career Influences. *Australian Journal of Career Development*, 24, 173–177.
- Sgaramella, T. M. (2014). Uno strumento qualitativo per il counseling professionale in situazioni complesse: l'intervista My System of Career Influences (MSCI) Adulti [A qualitative instrument for career counselling in complex conditions-My System of Career Influences Interview (MSCI-Adult version)]. *Giornale Italiano di Psicologia dell'Orientamento*, 14/2 -14/3, 47–55.
- Sgaramella, T. M., Ferrari, L., & Ginevra, M. C. (2015). Qualitative career assessment of vulnerable individuals. In M. McMahon & M. Watson (Eds.), *Career assessment: Qualitative approaches* (pp. 231–238). Rotterdam, The Netherlands: Sense Publishers.
- Watson, M., & McMahon, M. (2006). My System of Career Influences: Responding to challenges facing career education. *International Journal of Educational and Vocational Guidance*, 6, 159–166.
- Young, R. A., Valach, L., & Marshall, S. K. (2007). Parents and adolescents constructing career. In V. Skorikov & W. Patton (Eds.), *Career development in childhood and adolescence* (pp. 277–294). Rotterdam, The Netherlands: Sense Publishers.
- Yim, A., Wong, S-W, & Yuen, M. (2015). Qualitative career assessment approaches in Hong Kong: Reflections from a Confucian cultural heritage perspective. In M. McMahon & M. Watson (Eds.), *Career assessment: Qualitative approaches* (pp. 239–246). Rotterdam, The Netherlands: Sense Publishers.
- Yuen, M., McMahon, M., Jin, L., Lau, P. S. Y., Chan, R. M. C., & Shea, P. M. K. (2009). *Chinese research edition of the My System of Career Influences*. Unpublished test materials. Hong Kong, China: University of Hong Kong Faculty of Education.

Chapter 5 - A Cognitive Information Processing Theory for Career Choices: Challenges and Opportunities for Integrating Theory, Research, and Practice

James P. Sampson, Jr.

Florida State University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch5>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from <https://www.youtube.com/watch?v=f1Z1a09Xxm0>

Appreciation is expressed to Emily Bullock-Yowell, Casey Dozier, Janet Lenz, Debra Osborn, Gary Peterson, Robert Reardon, and Sandra Sampson for their comments on an earlier draft of this chapter. Editorial decisions regarding this manuscript were made by Mark Pope.

Correspondence concerning this chapter should be addressed to James P. Sampson, Jr., The Career Center, Florida State University, 110 S. Woodward Ave, Tallahassee, FL 32306. E-mail: jsampson@fsu.edu

Keywords: cognitive information processing theory, collaboration, communities of practice, dissemination, laboratories, policy, practice, research, resources, theory

Beginning in 1971, an approach to career service delivery evolved, first at the Curricular-Career Information Service (CCIS) of the Florida State University (FSU) Counseling Center and later at the FSU Career Center, which intentionally sought to integrate career theory, research, and practice. The *theory* that emerged has become known as the cognitive information processing theory of career problem solving and decision making (Peterson, Sampson, & Reardon, 1991; Sampson, Reardon, Peterson, & Lenz, 2004; & Sampson, 2008). The approach includes both a theory of *vocational behavior* and a theory of *career intervention*. The theory of vocational behavior is derived from cognitive information processing theory and includes the Pyramid of Information Processing Domains (the content of career choice) and the CASVE Cycle (the process of making career choices; Peterson, Sampson, & Reardon, 1991; Sampson, Reardon, Peterson, & Lenz, 2004). The theory of career intervention is also derived from cognitive information processing theory and includes readiness for career decision making (Sampson, Peterson, Reardon, & Lenz, 2000), readiness for career intervention (Sampson, McClain, Musch, & Reardon, 2013), differentiated service delivery (Sampson, Peterson, Reardon, & Lenz, 2000; Sampson, Peterson, Reardon, & Lenz, 2008), assessment

of negative career thoughts (Sampson, Peterson, Lenz, Reardon, & Saunders, 1998), and assessment of the career decision space (Peterson, Leasure, Carr, & Lenz, 2010).

The application of CIP theory in practice has been supplemented by three other theories advanced by Holland, Beck, and Gagné respectively. RIASEC theory (Holland, 1997) has been integrated with CIP theory in both the study of vocational behavior and the delivery of career interventions (Reardon & Lenz, 2015). A cognitive therapy theoretical approach to mental health and mental health services (Beck, 1976; Beck, Emery, & Greenberg, 1985; Beck, Rush, Shaw, & Emery, 1979) was integrated with CIP theory in the development of the Career Thoughts Inventory (CTI) and CTI Workbook (Sampson, Peterson, Lenz, Reardon, & Saunders, 1998). Gagné's (1985) learning and instructional theory was integrated with CIP theory in the theory assumptions and the design of learning resources used in self-help, brief staff-assisted, individual case-managed, and programmatic career interventions (Sampson, 2008).

Research since 1971 has emphasized the study of vocational behavior, career assessment, and career

interventions. CIP theory has guided this research with a strong integration of RIASEC theory. *Practice* has involved the delivery of self-help, brief staff-assisted, and individual case-managed career interventions to high school students, college students, and community adults. Descriptions of the application of theory to practice are provided by Reardon and Lenz (2015; RIASEC theory) and Sampson (2008; CIP theory). Attention has also been paid to integrating career and mental health issues in RIASEC and CIP-based career interventions (Dozier, Lenz, & Freeman, 2016; Lenz, Peterson, Reardon, & Saunders, 2010; Walker & Peterson, 2012).

This chapter explores the integration of theory, research, and practice in the context of two career theories and a series of research studies that have been used to guide practice in a university career center. The chapter begins with the relevance of integrating theory, research, and practice and continues with challenges and opportunities in integration. The chapter ends with recommendations for the future.

Relevance of Integrating Theory, Research, and Practice

Young people and adults who seek help in making career decisions access career resources (assessments, information, and instruction) with or without practitioner assistance as well as career services (brief to intensive) from a variety of public, not-for-profit, and private organizations. The sum of all career resources and services available to young people and adults represents practice in vocational psychology. This practice is influenced to varying degrees by theory and research. In turn, theory and research are influenced by each other and by practice. In examining these interactions, theory guides research in vocational behavior and career interventions through the formulation of research questions, the creation of measures, and the interpretation of results (Sampson et al., 2014). Theory guides practice by helping practitioners conceptualize individuals' concerns, create interventions to meet specific needs, and develop theory-based career assessments, information, and instruction. Research guides the creation and validation of new theory as well as the revision of existing theory. Research also improves practice by providing an evidence base for what works best for individuals with specific needs. Lastly, observations from practice contribute to theory

revision and pose research questions for further inquiry (Sampson et al., 2014). The preceding interactions among theory, research, and practice from Sampson et al. (2014) are depicted in Figure 1.

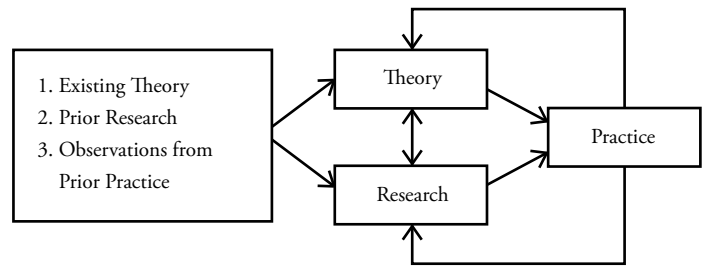


Figure 1. Integrating Theory, Research, and Practice

The preceding figure is not intended to imply that all aspects of theory, research, and practice require integration to maximize our understanding of vocational behavior and to develop effective career interventions. Lent (2017) in this volume noted that “theories do not have to have immediate implications for practice” (p. 21). The same holds true for integrating research and practice. However, I do believe a certain critical mass of integration is required in an applied field such as ours to maximize vocational behavior knowledge and career intervention effectiveness.

Prior literature on integrating theory, research, and practice has focused primarily on (a) the influence of theory on research, (b) the influence of theory on practice, and (c) the influence of research on practice literature (Sampson et al., 2014). These influences are examined in the following sections.

Influence of Theory on Research

The use of career theory to guide the examination of vocational behavior and the establishment of evidence-based practice may be helpful in several ways. Research based on theory can be more systematic in nature and create broader implications (Bringle & Hatcher, 2000). The conceptual basis afforded by theory-driven research increases the likelihood of asking relevant questions and reduces the likelihood of producing unconnected facts (Karr & Larson, 2005). Karr and Larson further explained, “Conglomerations of variables without links to theoretical networks suggesting the specific and significant reasons why they are chosen are essentially meaningless” (p. 301).

Influence of Theory on Practice

Career theory also provides a systematic basis for designing career interventions. Practitioners can use career theory to translate complex vocational behaviors and career development processes into more parsimonious and readily understood concepts that can be more easily applied in practice (Niles & Harris-Bowlsbey, 2017; Sharf, 2013; Shoffner, 2006; Young, Marshall, & Valach, 2007). Theories can suggest hypotheses for practitioners to follow up with clients (Swanson & Fouad, 2015). Practitioners can select more potentially effective interventions by linking theory-based concepts with specific client needs, as well as consider the relative costs in using various theories to deliver interventions (Sampson, Dozier, & Colvin, 2011). Practitioners can also integrate career theory with their local experience in serving individuals to create a customized theory that can be more readily applied in practice (Young et al., 2007). Theory integration can also occur among theories as needed (Patton & McMahan, 2014). Spokane (1991) noted that most career interventions are designed using more than one theory. The reciprocal relationship between theory and practice is evident when actual client concerns in counseling settings are used for testing and refining theories, leading to improvements in both theory and future research (Frazier, Gonzales, & Rudman, 1995). Finally, the importance of using theory to guide practice can be seen in the various career practitioner competency statements that require skill in using theory in developing career interventions (Sampson et al., 2011). A popular, but anonymous quote is relevant here: “Theory without practice is meaningless, but practice without theory is blind.”

Influence of Research on Practice

Research has an important role to play in improving practice (Bringle & Hatcher, 2000). Research on vocational behavior clarifies the factors that shape the career choices of young persons and adults. This research can be used to create new career resources and services. Lebow (1988) noted that research on intervention outcomes helps us select specific services to better meet individual needs. The need to integrate research and practice is increasingly apparent as limited financial resources lead to demands for more evidence-based practice (Antony, 2005; Murray, 2009) as well as

requirements for increased accountability (Goodyear & Benton, 1986; Sampson, 2008).

Challenges in Integrating Theory, Research, and Practice

Despite the apparent advantages, the integration of theory, research, and practice in career development is limited according to our examination of the extent of integration in the 2013 career development journal articles (Sampson et al., 2014). The greatest amount of integration was theory into research at 55% of publications, while the integration of theory into practice and research into practice were both substantially less at 39%. As a result of this limited integration, we believe the full benefits of mutually supporting theory, research, and practice are unrealized. Specific challenges include (a) differences in perspectives among theorists, researchers, and practitioners, (b) relevance of research to practice, and (c) limited availability of information needed to facilitate integration.

Differences in Perspectives Among Theorists, Researchers, and Practitioners

Several authors have suggested that differences among theorists, researchers, and practitioners account for some of the limited integration of theory, research, and practice. Differences appear to exist in interests, language, personality, and training. In terms of *interests*, practitioners appear less concerned about applying theory to practice (Kidd, Killeen, Jarvis, & Offer, 1994; Morrow-Bradley & Elliott, 1986). A second difference relates to *language*. Jepsen (1996) suggested that theorists and practitioners use dissimilar language to describe similar situations. For example, theorists may focus more on conceptual and research terms while practitioners often focus more on problems, information, and interpretations. Goodyear and Benton (1986) noted that researchers use increasingly specialized language not used by practitioners in delivering career interventions. A third difference concerns *personality*. Goodyear and Benton (1986) suggested that the disconnection between researchers and practitioners is likely due to personality differences between individuals who seek work primarily in research versus practice. The final difference concerns *training*. The nature of training may influence the degree to which theory and research are used to guide practice.

Brown (2002) found that social workers, employment counselors/recruiters, human resource specialists, and career service coordinators were less likely to agree that theory and research had informed their practice than was the case for licensed counselors and psychologists. The disconnection among theorists, researchers, and practitioners appears greater between practitioners and theorists and practitioners and researchers. Theorists and researchers appear to collaborate more, as evidenced by our 2013 literature review (Sampson et al., 2014).

Relevance of Research to Practice

A chasm also appears to exist between many researchers and practitioners, with researchers perceiving that their work is dismissed or ignored and practitioners perceiving that research fails to address their clients' needs (Murray, 2009). A key issue here is the relevance of research to practice, as numerous authors have criticized the applicability of research to practice or practitioners (Anderson & Heppner, 1986; Heppner & Anderson, 1985; Howard, 1985; 1986; Gelso, 1979; 1985; Goodyear & Benton, 1986; Lebow, 1988; Murray, 2009; Reardon, Lenz, Sampson, & Peterson, 2011). Several factors may contribute to the reduced relevance to practice, including differences between (a) the settings for research and the settings for counseling (Antony, 2005), (b) the specific questions posed in research and the questions posed in counseling (Gelso, 1985), (c) the constructs used in research and the constructs used in counseling (Gelso, 1985), and (d) the participants used in research and the clients typically encountered in practice (Martin & Martin, 1989).

Limited Availability of Information Needed to Facilitate Integration

The theory and research that practitioners need to improve career interventions are often initially available only in limited outlets, such as costly scientific journals and books or professional conferences requiring expensive travel to obtain the most up-to-date information. While electronic availability is slowly improving with more open access to publications, dissemination of theory and research remains a problem. I believe this is especially true (and a social justice issue) for practitioners serving disadvantaged and marginalized populations in poorly funded organizations around

the globe that have limited budgets for purchasing or accessing publications and sending staff members to conferences. A similar problem exists for practitioners who aren't even part of an organization as they try to serve marginalized populations. Also, the print or Web-based documentation that accompanies career assessments and career information often does not include a description of the theory or research (if any) used in creating the resource. This incomplete description of content development makes it more difficult to evaluate the quality of a given resource and to integrate it with other theory-based career resources and services.

Opportunities for Integrating Theory, Research, and Practice

While challenges exist in integrating theory, research, and practice, opportunities exist as well. Opportunities include the (a) collaboration among theorists, researchers, and practitioners; (b) creation of laboratories for theory, research, and practice; (c) creation of theory-based learning and assessment resources; (d) modification of refereed journal editorial policy; and (e) dissemination of information necessary for integration.

Collaboration Among Theorists, Researchers, and Practitioners

Increasing the collaboration among theorists, researchers, and practitioners is one of the most common recommendations for better integration of theory, research, and practice (Brown, 2002; Duffy, 2017; Flores, 2017; Fouad, 2017; Gati, 2017; Gelso, 1985; Heppner & Anderson, 1985; Herr, 1996; Jepsen, 1996; Loveland et al., 2006; Patton & McMahon, 2014; Reardon et al., 2011; Sampson et al., 2011; Sampson et al., 2014). The challenge in effective collaboration among theorists, researchers, and practitioners is identifying willing participants and learning how to work together in spite of differences in interests, language, personality, and training. Theorists, researchers, and practitioners need to find common ground to form a basis for collaboration. One potential common ground is a shared interest in making a positive difference in the lives of individuals and groups in our society. A second common ground involves shared interest in a particular theory or client population. An essential first step in finding common

ground is acquiring a familiarity with each other's work and respecting one another's relative contributions.

One option for creating common ground and improving the integration of theory, research, and practice is to build communities of practice. Collaboration among theorists, researchers, and practitioners in a community of practice can increase the relevance of research by improving the congruence of settings, questions, constructs, and participants. Communities of practice are defined as "groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger-Trayner & Wenger-Trayner, 2015, p. 1). Crucial characteristics include (a) shared domain of interest; (b) engagement in joint activities, information exchange, and mutual support; and (c) shared practice in terms of experiences, tools, and approaches to problem solving (Wenger-Trayner & Wenger-Trayner, 2015). Booth (2011a) stated, "Simply bringing together practitioners with a common identity and similar interests is not enough to establish an online community of practice. The community must have a reason for its existence; it must have a clear purpose" (p. 2). Tools that can be used to maintain a community of practice include blogs, Wikis, collaborative-document authoring applications, social bookmarking, media libraries, data visualization, social networking, discussion threads, and Webinars (Booth, 2011b). Websites can be used to aggregate these tools. Additional information on creating and maintaining communities of practice from Wenger-Trayner and Wenger-Trayner (2016) can be found online (<http://wenger-trayner.com/faqs>). CIP theory can be used as a case in point for a community of practice.

We realize now that the continued development of CIP theory has occurred over several decades within a community of practice. While we did not utilize all of the potential elements of a community of practice identified above, we do have the core elements of common interest, joint action, shared practice, and a clear purpose of better understanding vocational behavior and creating cost-effective career interventions for large numbers of individuals. As students in our counselor education and counseling psychology programs graduated, they have adapted the CIP theory they had learned in training to fit their local client and organizational needs. These students have also conducted research with and without FSU faculty and staff members as collaborators. The same

practice and research dynamic occurred as conference attendees and as visitors to the FSU Career Center and the Tech Center established and maintained collaborative relationships over time. Visits by FSU faculty and staff members to other states and countries has had a similar effect. Communication has been maintained with e-mail, videoconferencing, and social media. As a result, the vocational behavior career intervention aspects of the theory have evolved. The intellectual capital and energy provided by these varied collaborations has been a driving force in the ongoing development of the CIP approach. Solberg (2017) provides additional examples of communities of practice.

Creation of Laboratories for Theory, Research, and Practice

When Robert Reardon designed the Curricular-Career Information Service (CCIS) at FSU in 1971 for students, he also conceptualized it as a laboratory for developing and examining career interventions and as a facility for training graduate students. Beginning with Holland's theory (1973) and later with CIP theory (Peterson, Sampson, & Reardon, 1991), CCIS provided a laboratory for fully integrating theory, research, and practice. Faculty members involved in intervention development, research, and counselor training were given offices in CCIS and the subsequent Career Center that provided easy and regular access to staff members, graduate students, and clients. In the present FSU Career Center, four current faculty members and two emeritus faculty members have offices where they maintain regular hours and participate in intervention development, research, and counselor training and supervision. Initial funding for this laboratory was provided by FSU and the Kellogg Foundation, with additional grant funding provided by various government agencies, foundations, and professional associations, as well as donations from alumni, friends, and staff, all to support students. An important distinction exists between a laboratory and a field research setting. Theorists and researchers commonly develop interventions and collect data with practitioners in field settings, such as schools, colleges, employment centers, and agencies. However, working in the same laboratory over time, such as a career center or a counseling center, adds an element of stability that allows for the development of more collaborative relationships with service-delivery staff and better access to clients and

archival data collected over years. This model has the potential to be replicated in other counseling psychology or counselor education training programs and career or counseling centers (Leuty et al., 2015).

Creation of Theory-Based Learning and Assessment Resources

Problems were noted by Jepsen (1996) and Goodyear and Benton (1986) that theorists and researchers tend to use different terminology than practitioners. From the beginning of our CIP theory work, we sought to create a common terminology that theorists, researchers, and practitioners can use in delivering career interventions. In translating CIP theory into practice, we followed the lead of Holland (1973; 1997) in creating terminology and resources that can be used directly by clients (Sampson, Peterson, Lenz, & Reardon, 1992). With Gagné's (1985) theory of learning and instruction providing structure, the following resources were created to facilitate the translation of theory to practice: (a) individual learning plans (<http://www.career.fsu.edu/content/download/285314/1984698/ILP.pdf>); (b) resource guides/module sheets for selecting and sequencing career assessments and information (<http://career.fsu.edu/Resources/Module-Sheets>); (c) handouts and exercises on decision making (<http://career.fsu.edu/Tech-Center/Resources/Service-Delivery-Handouts>); and (d) information handouts on various aspects of career decision making, experiential learning, and employment (<http://career.fsu.edu/Resources/Career-Guides>).

These learning resources are used for all three levels of the differentiated service delivery model (self-help, brief staff-assisted, and individual case-managed) (Sampson, 2008). Assessments were also created for use in career interventions to measure negative career thoughts (Sampson, Peterson, Lenz, Reardon, & Saunders, 1998) (<http://career.fsu.edu/Tech-Center/Topics/Career-Theory-Research-and-Practice/Cognitive-Information-Processing-CIP-Theory-Based-approach>) and the career decision space (Peterson, Leasure, Carr & Lenz, 2010) (<http://career.fsu.edu/Tech-Center/Resources/Service-Delivery-Handouts>). Our most extensive translation of theoretical concepts into practice involved creating a CIP-based undergraduate text for a career planning course (Reardon, Lenz, Peterson, & Sampson, 2017) (<https://www.kendallhunt.com/reardon/>). One of the

challenges in integrating research and practice noted previously in this chapter was enhancing the relevance of research so as to improve practice. We have attempted to address the relevance of our work by conducting career intervention research that critically examines the use and efficacy of the above resources (<http://career.fsu.edu/Tech-Center/Resources/Bibliographies>) (See also Brown, 2015).

Modification of Refereed Journal Editorial Policy

Editors of refereed journals have worked diligently to provide theorists, researchers, practitioners, and policy makers with high quality conceptual, descriptive, and empirical literature in vocational behavior and career intervention. Since the available evidence indicated that the integration of theory, research, and practice is not occurring naturally (Sampson et al., 2014), editors for refereed journals need to be more proactive in shaping the manuscripts they receive. With the exception of occasional invited special issues or manuscripts, editors seem to rely on the interests of theorists, researchers, and practitioners to shape the content of a journal. (*The Counseling Psychologist* would be a notable exception here.) Editorial policy needs to be modified to increase content related to integrating theory, research, and practice. This could be accomplished with (a) special issues, (b) regular dedicated sections of journals, and (c) submission guidelines for regular articles including an emphasis on integration (Duffy, 2017; Flores, 2017; Fouad, 2017; Furbish & Smith, 2017; Gati, 2017; Schultheiss, 2017). Ensuring practitioner participation in research will likely require proactive support from journal editors (Duffy, 2017; Flores, 2017). Blustein (1992) provides an integration example where recommendations for practice are based on theory and research. Given that evidence-based practice articles increase research relevancy and provide a natural opportunity for integrating research and practice, manuscripts presenting evidence-based practice (determined by empirical evidence) and best practices (determined by expert judgment) should be proactively solicited (Sampson et al., 2014). Brown (2015), Brown and Roche (2016), and Whiston and Rose (2015) provide helpful recommendations on improving the validity and relevance of the evidence base for career interventions. Attention should also be given to articles that examine the use of the evidence based-practice that we already have, particularly the use of

evidence for career intervention improvement. Finally, the recommendations for journal editorial policy could also be extended to selection criteria for presentations at professional conferences.

Dissemination of Information Necessary for Integration

While the initial dissemination of information about CIP theory used traditional print media (journal articles, books, and book chapters) and presentations at professional meetings with paper handouts, the advent of the Internet in the early 1990s provided theorists, researchers, and practitioners in other locations with easy access to the theory and its application. The focal point for this information dissemination was our research center, the Center for the Study of Technology in Counseling and Career Development (The Tech Center). Given that information and communication technology was one of our research topics, it was natural that we became early adopters of information dissemination via the Internet.

In 1993 we created a Gopher site for the Tech Center. Gopher sites were menu driven Internet pages for locating and distributing documents, which in our case were bibliographies and technical reports. In 1997, we developed our first website for delivering bibliographies, technical reports, and conference presentations. The current Tech Center website includes bibliographies, undergraduate and graduate course resources, conference presentations, service delivery handouts and exercises, technical reports, and training resources (www.career.fsu.edu/Tech-Center). In addition to providing information to anyone interested in our work, the website has also supported sharing information within our community of practice at no cost. A second dissemination strategy has involved posting bibliographies and documents in open-access digital repositories, such as DigiNole (<http://diginole.lib.fsu.edu/repository>) and ResearchGate (<https://www.researchgate.net/>). Future website development, such as social media integration and RSS feeds, could further improve dissemination.

Recommendations for the Future

Given the importance, challenges, and opportunities for integrating theory, research, and practice, the following recommendations are offered:

1. Theorists, researchers, and practitioners should intentionally develop and support communities of practice with the goal of improving the integration of theory, research, and practice, while also supporting communities of practice that develop naturally. Professional associations should collaborate to identify teams of theorists, researchers, and practitioners to participate in communities of practice. Professional associations could maintain directories of communities of practice related to specific theories or client populations. Existing professional association special interest groups might create a community of practice. Finally, professional association websites, social media sites, online journals, newsletters, and presentations might highlight the accomplishments of these communities. Financial support for communities of practice might be provided by grants from publishers, foundations, and agencies, as well as private gifts. Publishers and foundations have provided research support in the past related to specific theories and theory-based measures.
2. Theorists and researchers who hold faculty positions could explore creating laboratories in the career centers and counseling centers of their institutions where collaborative relationships with staff members can result in the co-creation of career resources and services and the examination of evidence-based practice. Theorists and researchers interested in populations served by public, not-for-profit, and profit agencies should explore similar laboratory arrangements.
3. Teams of theorists, researchers, and practitioners should co-create theory-based learning and assessment resources and then examine the efficacy of these resources in practice.
4. Journal editors and their editorial boards should review current editorial policy with regard to promoting the integration of theory, research,

and practice. Options to explore include special issues, regular dedicated sections of journals, and submission guidelines for regular articles that would include an emphasis on integration. Options for promoting evidence-based practice should be explored as well.

5. Each career theorist, or group of theorists, should be encouraged to develop a website that provides bibliographies, documents, and presentations related to their theory, as well as any available videos, service delivery materials, and training resources. These resources should be downloadable, or links to these resources could be made available in digital repositories. Researchers, individually or in groups, who have programs of research in vocational behavior related to individual needs or career intervention outcomes should develop websites that provide bibliographies and documents that might inform practitioners interested in improving their career interventions. Practitioners should identify the theories and research that they have used to design career interventions and include this information in the “About Us” section of their service delivery organization.
6. Policy makers should use external grant funding from government agencies, foundations, and professional associations to stimulate improved integration of theory, research, and practice. Grants can be used to incentivize theorists and researchers to collaborate with practitioners to conduct evidence-based practice research on career intervention outcomes.
7. Developers and publishers of career resources (e.g., print and computer-based assessments, information, and instruction) should include explicit documentation of the theory and research used to create their resources as well as examples of evidence-based practices that use them.

References

- Anderson, W. P., & Heppner, P. P. (1986). Counselor applications of research findings to practice: Learning to stay current. *Journal of Counseling & Development*, 65, 152–155.
- Antony, M. M. (2005). Five strategies for bridging the gap between research and clinical practice. *The Behavior Therapist*, 28, 162–163.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.
- Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York: Guilford Press.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Blustein, D. L. (1992). Applying current theory and research in career exploration to practice. *The Career Development Quarterly*, 41, 174–184.
- Booth, S. (2011a). *Online communities for educators: Guidelines for planning and implementation*. Available from: http://connectededucators.org/wp-content/uploads/2011/03/0143_OCoP-Design-Guidelines-March-2011.pdf
- Booth, S. (2011b). *Technology for online communities of practice*. Available from: http://connectededucators.org/wp-content/uploads/2011/03/0143_Platforms-and-Tools-march-2011.pdf
- Bringle, R. G., & Hatcher, J. A. (2000). Meaningful measurement of theory-based service-learning outcomes: Making the case with quantitative research. *Michigan Journal of Community Service Learning*, Fall, 68–75.
- Brown, C. (2002). Career counseling practitioners: Reflections on theory, research, and practice. *Journal of Career Development*, 29, 109–127. <http://doi.org/10.1023/A:1019916203761>
- Brown, S. D. (2015). Career intervention efficacy: Making a difference in people’s lives. In P. J. Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *APA Handbook of career interventions: Foundations* (Vol. 1, pp. 61–77). Washington, D.C.: American Psychological Association.
- Brown, S. D., & Roche, M. (2016). The outcomes of vocational interventions: Thirty (some) years later. *Journal of Career Assessment*, 24, 26–41.

- Dozier, C., Lenz, J., & Freeman, V. (2016). Using theory-based career assessments to connect career and mental health issues. *Career Planning and Adult Development Journal*, *32*, 100–111.
- Duffy, R. D. (2017). Ensuring quality in theory, research, and practice: *The Career Development Quarterly*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 137). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch13>
- Flores, L. Y. (2017). *Journal of Career Development*: Recommendations for future journal practices for integrating career theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 148). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch15>
- Fouad, N. A. (2017). The role of theory in improving evidence-based career interventions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 77). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch7>
- Frazier, P. A., Gonzales, M. H., & Rudman, L. A. (1995). Evaluating the effectiveness of applying social psychological theory to counseling. *The Counseling Psychologist*, *23*, 691–696.
- Furbish, D., & Smith, A. (2017). Ensuring quality in theory, research, and practice: *Journal of Employment Counseling*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 155). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch16>
- Gagné, R. M. (1985). *The conditions of learning and theory of instruction* (4th ed.). New York: Holt, Rinehart, & Winston.
- Gati, I. (2017). Integrating theory, research, and practice: A viewpoint from a member of the editorial board of the *Journal of Career Assessment*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 141). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch14>
- Gelso, C. J. (1979). Research in counseling: Methodological and professional issues. *The Counseling Psychologist*, *8*, 7–35. <http://doi.org/10.1177/001100007900800303>
- Gelso, C. J. (1985). Rigor, relevance, and counseling research: On the need to maintain our course between scylla and charybdis. *Journal of Counseling & Development*, *63*, 551–553. <http://doi.org/10.1002/j.1556-6676.1985.tb00678.x>
- Goodyear, R. K., & Benton, S. L. (1986). The roles of science and research in the counselor's work. In A. J. Palmo & W. J. Weikel (Eds.), *Foundations of mental health counseling* (pp. 287–308). Springfield, IL: Charles C Thomas.
- Herr, E. L. (1996). Toward the convergence of career theory and practice: Methodology, issues, and possibilities. In M. L. Savickas & W. B. Walsh (Eds.), *Handbook of career counseling theory and practice* (pp. 13–36). Palo Alto, CA: Davies-Black.
- Heppner, P. P., & Anderson, W. P. (1985). On the perceived non-utility of research in counseling. *Journal of Counseling & Development*, *63*, 545–547. <http://doi.org/10.1002/j.1556-6676.1985.tb00676.x>
- Holland, J. L. (1973). *Making vocational choices: A theory of careers*. Englewood Cliffs, NJ: Prentice-Hall.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources, Inc.
- Howard, G. S. (1985). Can research in the human sciences become more relevant to practice? *Journal of Counseling & Development*, *63*, 539–544.
- Howard, G. S. (1986). The scientist-practitioner in counseling psychology: Toward a deeper integration of theory, research, and practice. *The Counseling Psychologist*, *14*, 61–105.
- Jepsen, D. A. (1996). Relationships between developmental career counseling theory and practice. In M. L. Savickas & W. B. Walsh (Eds.), *Handbook of career*

- counseling theory and practice* (pp. 135–154). Palo Alto, CA: Davies-Black.
- Karr, C. A., & Larson, L. M. (2005). Use of theory-driven research in counseling: Investigating three counseling psychology journals from 1990 to 1999. *The Counseling Psychologist*, *33*, 299–326. <http://doi.org/10.1177/0011000004272257>
- Kidd, J. M., Killeen, J., Jarvis, J., & Offer, M. (1994). Is guidance an applied science?: The role of theory in the career guidance interview. *British Journal of Guidance and Counselling*, *22*, 385–403.
- Lebow, J. (1988). Research into practice/practice into research. *Journal of Family Psychology*, *1*, 337–351. <http://doi.org/10.1037/h0084979>
- Lent, R. W. (2017). Integration of theory, research, and practice: A social cognitive perspective. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 20). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch1>
- Lenz, J. G., Peterson, G. W., Reardon, R. C., & Saunders, D. (2010). Connecting career and mental health counseling. *VISTAS Online Journal*, 1–16. Retrieved from http://counselingoutfitters.com/vistas/vistas_2010.htm
- Leuty, M., Bullock-Yowell, E., Womack, A., Schmidtman, E., Paulson, D., Andrews, L. M., & Osborne, L. (2015). The integration of science and practice in one training program: Outcomes of a manualized career counseling group. *Counselling Psychology Quarterly*. <http://doi.org/10.1080/09515070.2015.1053432>
- Loveland, J. M., Buboltz, W. C., Schwartz, J., & Gibson, G. (2006). Content analysis of CDQ from 1994–2003: Implications and trends for practitioners and researchers from a decade of research. *The Career Development Quarterly*, *54*, 256–264.
- Martin, D., & Martin, M. (1989). Bridging the gap between research and practice. *Journal of counseling & development*, *67*, 491–492.
- Morrow-Bradley, C., & Elliott, R. (1986). The utilization of psychotherapy research by practicing psychotherapists. *American Psychologist*, *41*, 188–197.
- Murray, C. E. (2009). Diffusion of innovation theory: A bridge for the research-practice gap in counseling. *Journal of Counseling & Development*, *87*, 108–116. <http://doi.org/10.1002/j.1556-6678.2009.tb00556.x>
- Niles, S. G., & Harris-Bowlsbey, J. (2017). *Career development interventions in the 21st century* (5th ed.). Boston: Pearson.
- Patton, W., & McMahon, M. (Eds.). (2014). *Career development and systems theory: Connecting theory and practice* (3rd ed.). Rotterdam: Sense Publishers.
- Peterson, G. W., Leasure, K. K., Carr, D. L., & Lenz, J. G. (2010). The Decision Space Worksheet: An assessment of context in career decision making. *Career Planning and Adult Development Journal*, *25*, 87–100.
- Peterson, G. W., Sampson, J. P., Jr., & Reardon, R. C. (1991). *Career development and services: A cognitive approach*. Pacific Grove, CA: Brooks/Cole.
- Reardon, R. C., & Lenz, J. G. (2015). *Handbook for using the Self-Directed Search: Integrating RIASEC and CIP theories in practice*. Odessa, FL: Psychological Assessment Resources.
- Reardon, R. C., Lenz, J. G., Peterson, G. W., & Sampson, J. P., Jr. (2017). *Career development and planning: A comprehensive approach* (5th Ed.). Dubuque, IA: Kendall Hunt.
- Reardon, R. C., Lenz, J. G., Sampson, J. P., Jr., & Peterson, G. W. (2011). Big questions facing vocational psychology: A cognitive information processing perspective. *Journal of Career Assessment*, *19*, 240–250.
- Sampson, J. P., Jr. (2008). *Designing and implementing career programs: A handbook for effective practice*. Broken Arrow, OK: National Career Development Association.
- Sampson, J. P., Jr., Dozier, V. C., & Colvin, G. P. (2011). Translating career theory to practice: The risk of unintentional social injustice. *Journal of counseling & development*, *89*, 326–337.
- Sampson, J. P., Jr., Hou, P. C., Kronholz, J., Dozier, C., McClain, M. C., Buzzetta, M., Pawley, E., Finklea, T., Peterson, G. W., Lenz, J. G., Reardon, R. C., Osborn, D. S., Hayden, S. C. W., Colvin, G. P., & Kennelly, E. L. (2014). Annual review: A content analysis of career development theory, research, and practice - 2013. *The Career Development Quarterly*, *62*, 290–326. <http://doi.org/10.1002/j.2161-0045.2014.00085.x>

- Sampson, J. P., Jr., McClain, M. C., Musch, E., & Reardon, R. C. (2013). Variables affecting readiness to benefit from career interventions. *The Career Development Quarterly*, *61*, 98–109. <http://doi.org/10.1002/j.2161-0045.2013.00040.x>
- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., & Reardon, R. C. (1992). A cognitive approach to career services: Translating concepts into practice. *Career Development Quarterly*, *41*, 67–74.
- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1998). The design and use of a measure of dysfunctional career thoughts among adults, college students, and high school students: The Career Thoughts Inventory. *Journal of Career Assessment*, *6*, 115–134.
- Sampson, J. P., Jr., Peterson, G. W., Reardon, R. C., & Lenz, J. G. (2000). Using readiness assessment to improve career services: A cognitive information processing approach. *The Career Development Quarterly*, *49*, 146–174.
- Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling and services: A cognitive information processing approach*. Pacific Grove, CA: Brooks/Cole.
- Schultheiss, D. E. (2017). Integrating theory, research, and practice in vocational psychology: Perspectives of a *Journal of Vocational Behavior* editorial board member. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 166). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch17>
- Sharf, R. (2013). Advances in theories of career development. In W. B. Walsh, M. L. Savickas, & P. J. Hartung (Eds.), *Handbook of vocational psychology*, (4th ed., pp. 3–32). New York and London: Routledge.
- Shoffner, M. F. (2006). Career counseling: Theoretical perspectives. In D. Capuzzi & M. D. Stauffer (Eds.), *Career counseling: Foundations, perspectives, and applications* (pp. 40–55). Upper Saddle River, NJ: Pearson.
- Solberg, V. S. H. (2017). Personal reflections on a career spent creating and sustaining researcher-practitioner collaborations. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 108). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch11>
- Spokane, A. R. (1991). *Career intervention*. Englewood Cliffs, NJ: Prentice-Hall.
- Swanson, J. L., & Fouad, N. A. (2015). *Career theory and practice: Learning through case studies* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Walker, J. V., & Peterson, G. W. (2012). Career thoughts, indecision, and depression: Implications for mental health assessment in career counseling. *Journal of Career Assessment*, *20*, 497–506 <http://doi.org/10.1177/1069072712450010>
- Wenger-Trayner, E., & Wenger-Trayner, B. (2015). *Communities of practice: A brief introduction*. Available from: <http://wenger-trayner.com/introduction-to-communities-of-practice/>
- Wenger-Trayner, E., & Wenger-Trayner, B. (2016). *Frequently asked questions*. Available from: <http://wenger-trayner.com/faqs>
- Whiston, S. C., & Rose, C. S. (2015). Career counseling process and outcome. In M. L. Savickas, W. B. Walsh, & P. J. Hartung (Eds.), *APA handbook of career interventions* (Vol. 1, pp. 43–60). Washington, D.C.: American Psychological Association.
- Young, R. A., Marshall, S. K., & Valach, L. (2007). Making career theories more culturally sensitive: Implications for counselling. *The Career Development Quarterly*, *56*, 4–18.

Chapter 6 - Integration of Theory, Research, and Practice: Using Our Tools to Address Challenging Times

Saba Rasheed Ali

Samantha D. Brown

University of Iowa

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch6>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=SGWX9ajKB_M&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA&index=8

Appreciation is expressed to Emily Bullock-Yowell, Jim Sampson, and Janet Lenz for their comments on an earlier draft of this chapter.

Correspondence should be addressed to Saba Rasheed Ali, Division of Psychological & Quantitative Foundations, 361 Lindquist Center, University of Iowa, Iowa City, IA 52242. E-mail: saba-ali@uiowa.edu

Keywords: 21st century, career counseling, global workforce, global economy, public policy, vocational psychology

We live in challenging times. This is made clear by continuous discussions of the state of the economy, stagnant wages, and lack of gainful employment in different communities across the U.S. Many of these challenges have resulted from the movement of the industrial era into the technological era (Blustein, 2017). Blustein (2017) acknowledges that “one very challenging result of these radical changes in the economy is a declining job market for full-time, stable, and long-term work, which has led to growing levels of underemployment.” Thus, both unemployment and underemployment are concerns for many workers.

Vocational psychologists and career counselors have much to contribute to help workers with these challenges, but it is imperative for the profession to adapt to the challenges of the 21st century workforce. Theories used to understand and describe people’s career development and work experiences are the foundation of vocational psychology. Theories can inform research that can in turn inform practice. While this progression is sometimes viewed as logical and linear, the reality is that theories, research, and practice need to be better integrated so they can address the practical issues facing the global labor force.

Integration implies bidirectional relationships between each of these concepts, such that each informs the other and the process is iterative, not linear. Integration, while challenging, is necessary in order for vocational psychology to both remain relevant and promote positive change for the people it serves. In this chapter, we will discuss how these theories can meet the challenges and opportunities of the 21st century workforce.

Theories Presented

The authors of the section one chapters provide us with in-depth descriptions of how five theories, social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994; 2000), Holland’s theory of person-environment fit (Holland, 1997), counseling for work and relationship (CWR; Richardson, 2017), cognitive information processing theory (CIP; Sampson, 2017), and systems theory framework (STF; Patton & McMahon, 2017), have already integrated theory, research, and practice and how those theories can continue to grow. Despite their differences, all five theories contribute to the field of vocational psychology and to the understanding of careers and work life. These theories have helped and can continue to help people achieve their work-related goals. Further, these theories have also informed vocational

psychology and career counseling practice through research studies, primarily through nonintervention research. The majority of these research studies have furthered our understanding of how the theories apply to the career development of individuals and inform practice with college populations. While this body of work provides a good foundation for the field of vocational psychology, there is still much work to be done with underrepresented populations, such as unemployed and underemployed adults especially given current labor market demands and issues.

Challenges

A significant challenge related to the work lives of individuals is the growing income and wealth disparity that is partly a result of the shifting nature of work, with low skill manufacturing jobs increasingly becoming automated and shifting workers toward lower paying services work (Autor & Dorn, 2013). Job polarization (i.e., growth in high and low income jobs with a decline of typical middle class jobs) has caused economic shifts over the last two decades, resulting in greater income disparities. Katz (2010) described how this shift has been occurring over the last 20 years with high-end, high skill jobs and low wage service jobs seeing strong growth while traditional middle class jobs, such as manufacturing production jobs and middle management positions (such those in the auto and heavy machinery industry), saw little to no growth. Katz argued the following:

The typical high-wage jobs of non-college men and many middle class jobs for those with college training have been hard hit. ...Many job losers from sectors such as construction and manufacturing may face difficulties in making the psychological and financial adjustments as well as gaining the training and education required for the new jobs available in the growing (primarily service) sectors. (p. 6)

The issues of psychological adjustment for individuals required to make the shift is especially poignant for vocational psychologists. Ali, Hoffman, and Fall (2013) suggested three intersectional issues arise when individuals lose their job: a loss of identity, status, and community. Wisman and Pacitti (2014) suggested that one way to reset the economy is by “guaranteeing

employment accompanied by retraining to enable all unemployed workers to become absorbed in the regular workforce” (p. 679). Vocational psychologists’ understanding of the psychological issues related to transitions gives them a unique perspective on job loss. We have theories that provide an understanding of the contextual issues facing workers in the 21st century (e.g., globalization, labor market issues, racism) as well as individual factors (e.g., skills, abilities, cognitive mechanisms). It is a matter of how we use these theories to meet the challenges of workers in the 21st century that will help shape the present and future of vocational psychology.

Opportunities

As stated by Lent (2017) and Reardon (2017), challenges are also opportunities for vocational psychologists to better bridge the gaps between theory, research, and practice. Based on the challenges outlined in the beginning of this chapter and the current state of these theories, this section will describe some of the opportunities that may exist for vocational psychologists’ tools to be used to their fullest extent. This section will highlight two areas of opportunity: publicly engaged scholarship and public policy efforts.

Publicly Engaged Scholarship

Integrating research and practice in a way that better addresses the challenges many clients face in the global economy requires a publicly engaged approach to research and scholarship. Publicly engaged scholarship is a scholarly endeavor that “cuts across instruction, research and creative activities, and service; fulfills unit and university missions; and focuses on collaboration with and benefits to communities external to the university” (Glass, Doberneck, & Schweitzer, 2011, p. 9). Sampson (2017) provided an excellent set of recommendations, and both literally and figuratively showed us a model for the future that has direct relevance to our changing and challenging times. The Florida State University Career Center is an example of an institutional setting that provides service both to university students and the larger community. The center provides theoretically-based services, and the staff regularly conduct research studies to better understand these services and their effects.

Sampson (2017) argues that these types of agencies can serve as “laboratories” where collaborative relationships can live between researchers and practitioners. Solberg and Ali (2017) argue that One-Stop Career Centers that are a part of state workforce development agencies would be a good place for these types of laboratories. Publicly engaged scholarship assumes that everyone, including practitioners, theorists, researchers and the public, is creating the knowledge of practice together. No one owns it, and everyone has a stake in it (Glass, Doberneck, & Schweitzer, 2011).

Public Policy

Lent (2017) articulated the importance of the gap between research and practice and offered a good explanation from an environmental perspective. Researchers and practitioners often do “live” in different environments and may have different interest profiles and, of course, have different presses and expectations. However, Lent suggested an area where both practitioners and researchers might join together: public policy. While no effort is perfect, it is very encouraging to see more interest in public policy among practitioners and researchers alike. The National Career Development Association has been making efforts in this area for years and SVP members are also starting to get active in the policy arena.

One example of an initiative headed by a vocational psychologist (Scott Solberg) is the Massachusetts Institute for College and Career Readiness (MICCR). This is a collaboration between Boston University, MassINC Gateway Cities Innovation Institute, and the Rennie Center for Education Research and Policy, that was developed in close partnership with the Massachusetts Department of Elementary and Secondary Education (MA ESE). Solberg and colleagues initiated MICCR so that communities working to design, implement, and evaluate educational programming would have access to researchers who had expertise in research design and evaluation. MICCR partners senior academic researchers with Massachusetts school district personnel so they can collaborate on evaluation projects important to the school district. MICCR may serve as a model for other areas of need such as helping to improve the delivery of services within workforce development centers. Ali et al. (2017) discuss

how these partnerships could lead to career development researchers and agencies tasked with adult employment services working together to influence local and state policies and help direct funding to services (e.g., career counseling, job training). This type of collaboration can serve to better integrate research, theory, and practice, while also informing lawmakers and members of the public about the value of career services, especially for those at greatest risk in the global economy.

Conclusion

Vocational psychologists have the opportunity to use theories, research, and practice to help workers in the 21st century economy by pursuing further integration of the three areas. As this chapter outlines, theories presented at the 2016 SVP Biennial Conference can help workers better understand the context and skills needed to adapt to the challenges of the 21st century workforce. Additional work is needed to further expand the application of the theories discussed (SCCT, Holland, CIP, CWR, and STF) to underserved populations, such as people facing unemployment and underemployment. Creative approaches are needed to address these concerns, through opportunities such as publicly engaged scholarship and public policy efforts. These opportunities can only be capitalized upon through the combined efforts of theorists, researchers, and practitioners. Addressing the challenges of the global workforce through scholarship based in communities of practice may directly benefit those in need of services as well as help advance the vocational psychology field through the application and refinement of theories, making them more relevant to the real life challenges of individuals who need these services most.

References

- Ali, S. R., Flanagan, S., Pham, A. & Howard, K. A. S. (2017). Translating the career and workforce development knowledge base for practitioners and policy makers. In V. S. H. Solberg & S. R. Ali (Eds.), *Handbook of career and workforce development research, practice, and policy* (pp. 376–398). London: Routledge.

- Ali, S. R., Fall, K., & Hoffman, T. (2013). Life without work: Understanding social class changes and unemployment through theoretical integration. *Journal of Career Assessment, 21*(1), 111–126.
- Autor, D., & Dorn, D. (2013, August 24). How technology wrecks the middle class. *New York Times*. Retrieved from http://opinionator.blogs.nytimes.com/2013/08/24/how-technology-wrecks-the-middle-class/?_r=0
- Blustein, D. L. (2017). Promising career and workforce development practices in supporting the needs of unemployed populations. In V. S. H. Solberg & S. R. Ali (Eds.), *Handbook of career and workforce development research, practice, and policy* (pp. 376–398). London: Routledge.
- Glass, C. R., Doberneck, D. M., & Schweitzer, J. H. (2011). Unpacking faculty engagement: The types of activities faculty members report as publicly engaged scholarship during promotion and tenure. *Journal of Higher Education Outreach and Engagement, 15*(1), 7–30.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments*, (3rd ed.). Odessa, FL: Psychological Assessment Resources, Inc.
- Katz, L. (2010, April 29). *Long-term unemployment in the great recession. Testimony to the Joint Economic Committee, U.S. Congress.*
- Lent, R. W. (2017). Integration of theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 20). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch1>
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*, 79–122.
- Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: a social cognitive analysis. *Journal of Counseling Psychology, 47*(1), 36–49. doi.org/10.1037/0022-0167.47.1.36
- Patton, W., & McMahon, M. (2017). The systems theory framework of career development. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 50). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch4>
- Reardon, R. C. (2017). Holland's integration of career theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 28). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch2>
- Richardson, M. S. (2017). Counseling for work and relationship: A practice-driven theoretical approach. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 40). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch3>
- Sampson, J. P. Jr. (2017). A cognitive information processing theory for career choices: Challenges and opportunities for integrating theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 62). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch5>
- Solberg, V. S. H., & Ali, S. R. (2017). Career and workforce development research, practice, and policy: Synthesis and future directions. In V. S. H. Solberg & S. R. Ali (Eds.), *Handbook of career and workforce development research, practice, and policy* (pp. 399–439). London: Routledge.
- Wisman, J. D., & Pacitti, A. (2014). Ending the unemployment crisis with guaranteed employment and retraining. *Journal of Economic Issues, 48*(3), 679–706. doi.org/10.2753/jei0021-3624480305

Chapter 7 - The Role of Theory in Improving Evidence-Based Career Interventions

Nadya A. Fouad

University of Wisconsin-Milwaukee

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch7>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=6uRKNsL62ds&index=12&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA

Correspondence should be addressed to Nadya A. Fouad, Department of Educational Psychology, PO 413, University of Wisconsin-Milwaukee Milwaukee, WI 53201-0413. E-mail: Nadya@uwm.edu

Keywords: vocational theory, career counseling, career planning and decision making, career development interventions, empirical studies of interventions, recommendations for career practice, science-practice gap

What role does theory have in improving evidence-based career interventions? In this chapter, I will discuss the importance of using theory in interventions, the importance of integrating research in theory development, and the importance of integrating theory, research, and practice together. As Sampson et al.'s, (2014) review of the 2013 career literature demonstrated, the field does not integrate these areas well. They found nearly half of the articles in 2013 focused only on research, a third on theory, and less than a quarter focused on practice. Only 44% integrated theory, research, and practice. And yet, we are scientist-practitioners. Our field is premised on the belief that science informs practice, and practice informs science. As Heesacker and Lichtenburg (2014) pointed out, it is theory that ties science and practice together. Researchers propose, validate, and refine theories, and practitioners apply those theories. In an ideal world, practitioners would then have mechanisms to communicate with researchers about the need for further refinement and development of the theories.

Theory-Based Practice

As I began to consider writing this chapter, I realized my own wake-up call about the importance of theory-based practice. I can still remember the stark feeling of terror as I looked at the clock during my first session with a client during practicum. I had done all

the “right” things my professors had told me to do. I had listened carefully to the presenting problem, I had asked all the questions I was supposed to ask about family, education, background, and goals for counseling. The client had come to the University of Minnesota Student Counseling Bureau for help with choosing a major, and was struggling between the choice he wanted to make and the one his parents wanted him to make. I looked at the clock. All of this had taken only 20 minutes, and I was supposed to sit with him for at least 30 minutes more. I had no idea what to do, or say, or ask next. My supervisor and three of my cohorts were listening in the other room, and I knew I could not say, “Oh well, come back next week when I figure out what to ask you.”

Of course, what I needed to remember (back in 1977) was what theory I was employing to understand his problem and how that would shape my hypotheses and interventions. Did I think he needed information about his interests and how those related to different occupations? If so, Holland's (Holland, 1997; Nauta, 2013) theory would be helpful. Did he need to understand his abilities and needs and choose a good major that would lead to a satisfying career? Did he need help navigating the tension between his needs and his family's? If so, I might use the theory of work adjustment (Dawis & Lofquist, 1984; Swanson & Schneider, 2013). What role did he want work to play in his life relative to other roles? For that, I might use Super's theory (Hartung, 2013; Super, Savickas, &

Super, 1996). Or, if I was facing the situation now, I could use the social cognitive career theory (Lent, 2013; Lent, Brown, & Hackett, 1994) and wonder about his decision making self-efficacy or the outcomes expected of various choices, including the outcomes expected from his parents' evaluation of his choice.

The importance of theory in guiding what practitioners do has been highlighted by scholars writing about psychotherapy practice in general as well as career interventions specifically. Murdock (2017) noted that theories help us “know which stimuli to attend to and which to put in the background” (p. 4). She used a metaphor of a map to suggest that counselors who do not base their interventions on theory are similar to people who set out to drive to the other side of the country without a map. She noted that “counselors who don't use theory may get lost” (p. 4). My much younger self was lost without a theory to guide me.

Krumboltz (1994) also used a map metaphor in stressing the importance of career theories. He highlighted the similarity between maps and theories in that theories represented reality, or some portion of it; they omitted nonessentials to focus on specific behaviors important to the theory; exaggerated some behaviors to make a point; represented the unobservable; and are useful to answer one set of questions. He defined theory as “a simplified representation of some domain constructed so that users can ask questions about that domain with an increased probability of receiving valuable answers” (p. 12). Krumboltz's chapter was written for the 1992 Career Convergence conference, held to present various viewpoints on whether it was time to converge the various career theories into one. The general consensus was it was not possible, at least yet, possibly because each career theory represents a different focus on career behavior. Rereading the chapters in that book reminded me that we have been talking about the need to “heal the theory-practice gap,” as Lent and Savickas (1994) put it, for over 20 years.

In fact, conversations at that conference led Jane Swanson and I to discuss our frustrations in trying to teach career theories to our students. We hypothesized that, in part, students needed to see how to apply various theories and how the discipline of using a theory could help students conceptualize a client's career concerns and be more effective with that client. I could see my own

initial confusion about how to work with a client in my students. We decided to write a case book that would apply one client through all the theories so students could see how choosing a theory was important and led to different emphases. *Career Theory and Practice: Learning Through Case Studies* was first published in 1999, with the third edition published in 2015 (Swanson & Fouad, 1999; 2015). The most consistent feedback we have had from both students and instructors is that the process of applying the same case of Leslie with different theoretical lenses does, indeed, help students appreciate the importance of case conceptualization from a theoretical framework.

Integrating Research into Practice

Consider a scenario in which a career counselor, Jason, has a new client who is presenting with a career concern related to the client's unique identity status (e.g., race/ethnicity, gender, sexual orientation, religion, or a combination of any of these) that Jason has not yet experienced. Jason could ask his colleagues about how to deal with the situation, could continue with his favorite theoretical perspective (SCCT), hoping for the best, or could consult the literature. If there was little research on this concern, imagine that Jason could call the authors of the SCCT model and ask them what they think. Then, imagine that the authors say “Good question! We'll design a study to consider that, call you up to let you know what we find, and revise our theory accordingly.” This does sound far-fetched, but it is, in essence, the model we expect when we suggest practitioners should inform researchers about the real world issues they confront, and for researchers to communicate their findings in ways that make sense to practitioners. Or consider the scenario where the authors of the theory, who do an exemplary job of researching testable hypotheses from the theory, design a mechanism to seek out feedback from practitioners on how the theory works in real life. This seems difficult to do, time consuming, and might not give them the time to continue the exemplary research on the model. But, we still need a way to close the gap.

Murdock (2006) noted several reasons for the science-practice gap. First, our researchers study relatively circumscribed problems that may not relate well to the real world issues clients bring to counseling. Second,

the nature of careful scholarly writing enumerates the limitations of the research, which is important to understand in the context of scholarly inquiry but not necessarily helpful to individuals wanting immediate answers to their client-related questions. In addition, it may be hard to make sense of the many ways problems are defined or studied. Established scholars have a hard time sifting through many studies to come to some conclusions about research in an area, and it may be hard for practitioners to take the time to do that sifting or make sense of the results they find. Sampson, et al. (2014) also noted these as reasons for the research-practice gap, adding that researchers and practitioners use different language, which cannot help solve the communication problem.

I have been concerned about this for many years. In 2001, I wrote about this in a *Journal of Vocational Behavior* article on the future of the field:

Scientists do not talk enough to practitioners and vice versa. Our journals are either filled with sophisticated empirical investigations that do not inform practice, or poorly designed and evaluated career interventions that are not as effective as they could be. Thus, we are a parochial field.

I wrote about this again in 2014 in a *Counseling Psychology Quarterly* article about counseling psychology research, more generally, this time from the perspective of someone who had been a journal editor:

Practitioners do not have an effective mechanism to convey their research questions to scientists and may not necessarily explain the questions in ways that are easily translated to a research study. Researchers may not immediately think of the practical implications of their studies.

Add to this that the publication process is long, adding to the sense of disconnect. I had tried to create an initiative to address this when I was editor of *The Counseling Psychologist*. I created a Practitioner Forum and asked Jeff Prince to edit it. Our idea was that we would solicit ideas for forum on a topic that would be of primary interest to practitioners, invite someone to write on it, and speed the review process up by several weeks by keeping the articles short and practical. We did

have some Forum articles, but it was not the mechanism I envisioned to help address the gap. It was hard to find people to suggest topics and even harder to find people to write those articles. Practitioners are busy, and they clearly did not find this approach valuable.

But the science-practice gap is not a trivial matter. We need to find ways to address this gap, for our scientifically based career interventions are the core value we provide to the public. In fact, to my mind, the greatest threat to our profession is the great number of people who believe they can become a career coach with no training or background. Demonstrating that career counseling is based on sound, scientific evidence is our best way to argue that practitioners need to be trained to provide this service.

Integrating Theory, Practice, and Research

Murdock (2006) advocated for the use of theory in integrating research and practice. Acknowledging the huge amount of research from which to read and choose, she suggests that counselors choose only that research that focuses on their theoretical preferences. If the counselor does not have one particular theoretical perspective, she or he can choose the closest approximation to the issue with the largest body of research. This presumes that research must be theory-based. It also does not address the mechanism for feedback to go the other way, to inform the work of researchers. This is particularly an issue in research on career interventions themselves. If career theories are used to develop interventions, then the people applying those interventions need to have ways to communicate how the intervention did, or did not, work. Was it effective for some clients, and if so, which? Was it effective for some career concerns, and if so, which, and which were less effective? Was it more or less effective at some point in the career counseling process? The answers to these questions might help refine the development of theory as well as the effectiveness of future interventions.

Future Recommendations

I draw my recommendations from several individuals who have written about this recently: Pepler (2016), Heesacker and Lichtenberg (2012), Sampson et al., (2014). Pepler was writing as a Canadian

developmental psychologist. Heesacker and Lichtenberg were writing about counseling psychology research. Sampson et al. were writing about vocational psychology research.

1. Create teams of researchers and practitioners who collaboratively work to identify problems and ways to assess them from within a theoretical perspective.
 - a. Invest time, patience, and energy in the partnership. True partnerships take time to develop, especially with the need to ensure everyone is using the same language to communicate about the issues.
 - b. Investigate how research informs not only practice but policy. A research study in a university career center can be used to demonstrate the need for more resources.
 - c. Recognize that everyone in a partnership must benefit from that partnership. Be open and honest about the benefits needed in each setting.
2. Education and training programs can model this by fostering conversations between supervisors and faculty. Supervisors could be invited in to talk about how the research discussed may or may not be applied to real world problems.
3. Develop mechanisms, perhaps through a website, for practitioners to identify concerns they want future research studies to examine.
4. Develop mechanisms, through conference or newsletters, where researchers and practitioners can talk together about the efficacy of interventions and need for revision of theories.
5. Ensure that articles published in journals emphasize the integration of theory and research, and where appropriate, practice.

References

- Dawis, R. V., & Lofquist, L. H. (1984). *A psychological theory of work adjustment*. Minneapolis: University of Minnesota Press.
- Fouad, N. A. (2001) The future of vocational psychology: Aiming high. *Journal of Vocational Behavior*, 59, 183–191.
- Fouad, N. A. (2014). Future of counseling psychology research. *Counselling Psychology Quarterly*, 26, 227–237.
- Hartung, P. J. (2013). The life-span, life-space theory of careers. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work*. (2nd ed., pp 83–114). New York: Wiley.
- Heesacker, M., & Lichtenberg, J. W. (2012). Theory and research for counseling interventions. In E. M. Altmaier & J.-I. C. Hansen (Eds.), *Oxford library of psychology. The Oxford handbook of counseling psychology* (pp. 71–94). New York: Oxford University Press.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resource.
- Krumboltz, J. D. (1994). Improving career development theory from a social learning perspective. In M. L. Savickas & R. W. Lent (Eds.), *Convergence in career development theories* (pp. 9–31). Palo Alto, CA: Consulting Psychologists Press.
- Lent, R. W. (2013) Social cognitive career theory. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (2nd ed., pp. 151–146). Hoboken, NJ: Wiley.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45, 79–122.
- Lent, R. W., & Savickas, M.L. (1994). Postscript: Is convergence a viable agenda for career psychology? In M.L. Savickas & R. W. Lent (Eds.). *Convergence in career development theories*. (pp. 259–272). Palo Alto, CA: Consulting Psychologists Press.
- Murdock, N. L. (2017). *Theories of counseling and psychotherapy: A case approach*. (4th ed.). New York: Pearson.
- Murdock, N. L. (2006). On science-practice integration in everyday life: A plea for theory. *The*

Counseling Psychologist, 34(4), 548–569. <http://dx.doi.org/10.1177/0011000006288129>

- Nauta, M. M. (2013). Holland's theory of vocational choice and adjustment. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work*. (2nd ed., pp. 55–82). New York: Wiley.
- Pepler, D. (2016). Stepping sideways to move forward: Closing the science–practice gap. *Canadian Psychology/Psychologie canadienne*, 57(1), 44–50. <http://dx.doi.org/10.1037/cap0000046>
- Sampson, J. P., Jr., Hou, P.-C., Kronholz, J. F., Dozier, V. C., McClain, M.-C., Buzzetta, M., Pawley, E. K., Finklea, J. T., Peterson, G. W., Lenz, J. G., Reardon, R. C., Osborn, D. S., Hayden, S. C. W., Colvin, G. P. and Kennelly, E. L. (2014). A content analysis of career development theory, research, and practice—2013. *The Career Development Quarterly*, 62, 290–326. <http://doi.org/10.1002/j.2161-0045.2014.00085.x>
- Super, D. E., Savickas, M. L., & Super, C. M. (1996). The life-span, life-space approach to careers. In D. Brown, L. Brooks, & Associates (Eds.), *Career choice and development* (3rd ed., pp. 121–178). San Francisco: Jossey-Bass.
- Swanson, J. L., & Fouad, N. A. (1999). *Career theory and practice: Learning through cases*. Thousand Oaks, CA: SAGE.
- Swanson, J. L., & Fouad, N. A. (2015). *Career theory and practice: Learning through cases*. Thousand Oaks, CA: Sage (3rd ed.). Thousand Oaks, CA: SAGE.
- Swanson, J. L., & Schneider, M. (2013). Minnesota theory of work adjustment. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (2nd ed., pp. 29–53). New York: Wiley.

Chapter 8 - Meta-Analysis and Evidence-Based Career Practice: Current Status and Future Directions

Steven D. Brown

Loyola University Chicago

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch8>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=hZ9tLR_5rts&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA&index=13

Correspondence should be addressed to Steven D. Brown, School of Education, Loyola University Chicago, 820 N. Michigan Avenue, Chicago, IL 60611. E-mail: sbrown@luc.edu

Keywords: meta-analysis, career choice, job finding, construct redundancy, clinical significance, social justice

The invitation to present at this conference on meta-analyses and career intervention outcome provided me with a timely opportunity to look back at and study the meta-analytic literature that has accumulated since Spokane and Oliver's (1983) seminal meta-analysis. What I learned is that these meta-analyses have yielded some important but limited guidelines for evidence-based career practice, and that there is a great deal more that we still need to know to provide a firm scientific basis for career interventions. I will start by highlighting three general, but important, findings about career intervention effectiveness noted in three of the most recently published meta-analyses (Brown & Ryan Krane, 2000; Liu, Huang, & Wang, 2014; Whiston, Sexton, Lasoff, 1998). The Brown and Ryan Krane (2000) and Whiston et al. (1998) meta-analyses used the same effect size estimates (thus allowing us to compare apples with apples) and provided cumulative knowledge about the effectiveness of career interventions as of 2000. I chose also to include the Liu et al. (2014) meta-analysis because it focused specifically on the outcomes of job finding interventions—interventions that should be of more interest to SVP members than they seem to be. I will then discuss in a bit more detail three directions for future investigation that I think are critical if we are going to achieve evidence-based career intervention practice. Others chapters included in this section will have additional suggestions, and I hope that we can collectively outline some doable directions for future primary as well as meta-analytic research. After all, the

yield from meta-analyses is only as good as the primary research that was synthesized in them.

Current Status

To date, there have been six major meta-analyses on career intervention effectiveness in the published literature (Brown & Ryan Krane, 2000; Liu, Huang, & Wang, 2014; Oliver & Spokane, 1983; Spokane & Oliver, 1988; Whiston, Brecheisen, & Stephens, 2003; Whiston, Sexton, & Lasoff, 1998). All but one of these (Whiston et al., 2003) tended to address the question of whether receiving a career intervention is more effective than not receiving the intervention by selecting studies that compared a career intervention to some kind of no-intervention control (Whiston et al., 2003 compared different intervention modalities). The two meta-analyses conducted by Laurel Oliver and Arnie Spokane, while seminal, predated the rapid growth in knowledge about meta-analytic methodologies that have appeared over the past 20 or so years. Whiston et al. (1998) focused on a broader array of outcomes than did Brown and Ryan Krane (2000), but both corrected for sampling error and small sample bias by using Hedges's *g* as the effect size estimate. Finally, as I already noted, Liu et al. (2014) presented a meta-analysis of job search intervention effectiveness. My summary was developed from the latter three (Brown & Ryan Krane, 2000; Liu et al., 2014; Whiston et al., 1998) meta-analyses.

Collectively, I think that these three meta-analyses have yielded three findings that have important implications for the design of evidence-based career interventions.

Finding #1: Career Interventions are Modestly More Effective than Doing Nothing in Promoting Outcomes Associated with Both Choice-Making and Job Finding

Whiston et al. (1998) and Brown and Ryan Krane (2003) reported Hedges's *gs* of .30 and .34, respectively, with standard errors of .02 (Whiston et al, 1998) and .01 (Brown & Ryan Krane, 2000). The 95% confidence intervals obtained from these two meta-analyses overlap, suggesting that true effect size associated with career interventions for primarily choice-making difficulties is probably between .26 and .36. Thus, it appeared that by 2000, the average client receiving some sort of career intervention achieved from a quarter to about a third of a standard deviation better outcome on measures associated with choice-making difficulties than did persons who receive no interventions, although neither of the meta-analyses corrected for all potential sources of artifact (e.g., measurement error, range restriction) and both employed fixed effects rather than random effects meta-analytic models.

Liu et al. (2014) meta-analyzed (using a random effects model) the result from 47 studies ($n = 9,575$) that compared a job-finding intervention to a no-intervention control using experimental or quasi-experimental designs. The overall odds ratio (*OR*) was 2.67, suggesting that odds of finding a job were 2.67 times higher for participants in job-finding interventions than control or comparison group participants. Thus, it appears that continuing to do what we do will be demonstrably but modestly helpful to the average client seeking help with choice-related and job-finding concerns. However, these meta-analyses have also suggested some strategies that seem to improve the magnitude of career intervention effectiveness.

Finding #2: Several Intervention Components Seem to be Important to Outcome for Both Choice-Making and Job-Finding Interventions

Brown and Ryan Krane (2000) coded for the presence or absence of 18 intervention components

suggested by theory and clinical writings (e.g., use of self-report inventories, values clarification exercises, modeling) and entered these in the last step in a series of weighted least square regressions to predict effect sizes. Results revealed that five specific intervention components (see Table 1) accounted for significant unique variance in effect sizes over and above the variance accounted for by study (publication status), method (e.g., true experiment, quasi-experiment), participant (e.g., gender), and treatment (e.g., group, individual) characteristics—(a) Written Goals, (b) Information on the World of Work, (c) Modeling, (d) Support Building, and (e) Individual Attention to Goals and Assessment Results (or WIMSI as an acronym, suggested to me by John Holland). Further, Brown and Ryan Krane (2000) showed a near linear relationship between the number of these components included in the intervention and effect size, with, for example, an effect size of .99 associated with interventions including three of the components. Thus, these data suggest that including the five critical ingredients, whatever else we might do, will probably yield more potent outcome effects than not including them in interventions for primarily choice-making difficulties.

Table 1. Critical Ingredients of Choice Counseling (Brown & Ryan Krane, 2000) and Job Finding (Liu et al., 2014) Interventions

Choice Counseling	Job Finding
Written Goals	Promoting Goal Setting (<i>OR</i> = 4.67)
Information on the World of Work	Teaching Job Search Skills (<i>OR</i> = 3.32)
Modeling	Improving Self-Presentation (<i>OR</i> = 3.40)
Support Building	Enlisting Social Support (<i>OR</i> 4.26)
Individual Attention (to goals and assessment)	Boosting Self-Efficacy (<i>OR</i> = 3.25)
	Encouraging Proactivity (<i>OR</i> = 5.88)

Note: *OR* = Odds Ratio

Liu et al. (2014) coded for the presence of seven specific intervention components suggested by theory and prior research (e.g., teaching job search skills, improving self-presentation) and found that six of them yielded significantly increased odds ratios when they were included in an intervention. These are also presented in Table 1 along with their respective odds

ratios—teaching job search skills ($OR = 3.32$), improving self-presentation ($OR = 3.40$), boosting self-efficacy ($OR = 3.25$), encouraging proactivity ($OR = 5.88$), promoting goal setting ($OR = 4.67$), and enlisting social support ($OR = 4.26$). Thus, like the five intervention components identified by Brown and Ryan Krane (2000), the odds of finding a job may be substantially enhanced if job finding interventions incorporate these six intervention components.

Finding #3: Goal Setting, Support Building, and Efficacy Enhancement Strategies are Critical Components in Both Choice-Related and Job-Finding Interventions and May Represent Today the Clearest, Meta-Analytically Derived Evidence-Based Practice Guidelines We Have for Career Practitioners in 2016

Finally, I hope you noticed from Table 1 that two specific intervention components emerged as critical in both of these meta-analyses—promoting goal setting and building/enlisting support. There are large bodies of literature on both goal setting and social support that can explain why these two components may be critical to career intervention effectiveness. For example, goals that are clear, specific, and attainable serve to direct individuals' attention, mobilize and sustain their efforts, and promote persistence in the face of obstacles (see Lent & Brown, 2013; Locke & Latham, 1990). Research suggests that support from family, friends, and others has the potential to buffer the negative effects of traumatic events (like job loss), boost context-relevant self-efficacy beliefs, facilitate the ability to translate interests into choices and to find jobs, and help to sustain effort in pursuing difficult tasks (see Lent & Brown, 2013; Wanberg, Glomb, Song, & Sorenson, 2005; Wanberg, Kanfer, & Rotundo, 1999).

Whiston (personal communication, May 2016) is currently updating the Brown and Ryan Krane (2000) meta-analysis and has found that self-efficacy building strategies (most notably strategies to promote career decision making self-efficacy beliefs) have been increasingly included in career interventions over the past 16 years. Whiston (personal communication, May 2016) has also found that efficacy-enhancing strategies represent another critical ingredient of today's choice making interventions. Thus, although some ingredients appear to be uniquely critical for choice-making (e.g.,

information on the world of work) and job-finding (e.g., teaching job search skills) interventions, three strategies (goal setting, support building, and efficacy enhancement) have emerged as critical for both types of interventions. These three intervention components, I think, deserve to be included as potentially critical ingredients in research on interventions targeted at other types of career difficulties as well. For example, might goal setting, support building, and efficacy enhancement be critical for those seeing counselors because of dissatisfaction or unsatisfactoriness at work?

Future Directions

Although there are numerous directions for future research that would inform evidence-based career practices and facilitate more useful future meta-analyses, I would like in the remainder of this chapter to highlight three, the first two of which are seldom mentioned in the literature.

Future Need #1: We Need to Identify Core Outcome Constructs

Although Sue Whiston (Whiston, 2001) has written previously about the need to decide on a core battery of outcome measures for career intervention research, I think that such efforts may be premature because we have to first decide on the core outcome constructs that are measured by extant scales. What I mean by this is that we have many constructs in our literature, each with its own measure or measures, that I think may be empirically redundant—the measures all measure the same thing, despite their titles. As I have written earlier (Brown, 2015), we have to understand that measures of constructs are not constructs themselves—they are always fallible because their scores are influenced by a variety of artifacts, such as sampling and measurement error, sample characteristics, and more. Further, the correlations obtained between any two measures are always attenuated due to the influence of these artifacts—lower than the correlations between the constructs themselves. However, if we correct the correlations for as many sources of artifact as possible, the resulting dis-attenuated correlations represent the relationship between the constructs themselves rather than fallible measures of them. If the dis-attenuated correlation is close to unity, then the two measures,

whatever they might be called, are actually measuring the same thing. For example, in the TCP (Brown, 2015) article, I demonstrated that the dis-attenuated correlation between Jim Sampson and colleague's (Sampson et al., 1996) Decision-Making Confusion scale and John Holland's (Holland, Daiger, & Power, 1980) Vocational Identity scale was $-.91$. The magnitude of this correlation suggests to me that these scales are measuring the same thing.

Similarly, I showed that the Work Volition (Duffy, Diemer, & Jadidian, 2012) and Work Hope (Juntunen, & Wettersten, 2006) scales were largely measuring the same construct, while the Career Concerns (Savickas, 1997) and Future Time Perspective (Shell & Husman, 2001) scales were also empirically redundant. I also found that some items on the Career Optimism Scale (Rottinghaus, Day, & Borgen, 2005) measured the same thing as Work Volition and Work Hope, while other items measured the same thing as Career Concerns and Future Time Perspective. My conclusion was that the Volition and Work Hope scales were both tapping into respondents' confidence in being able to complete career tasks over the life span, while the Concerns and Future Time Perspective scales were measuring respondents' feelings about their futures. The Career Optimism Scale mixed together both confidence and future orientation items.

Regardless of what I think are the common set of constructs measured by these scales, I think that the process of identifying core constructs will facilitate future outcome research and meta-analyses in two ways. First, the process of identifying core constructs will allow us to identify psychometrically sound measures of them (regardless of the measure's title) and thereby allow us to efficiently select appropriate measures. For example, it would be redundant and a waste of clients' time to administer both the Vocational Identity Scale and the Decision-Making Confusion Scale in an outcome study because these are really measures of the same thing. Second, the process would also benefit future meta-analyses by allowing meta-analysts to focus their analyses on the core constructs rather than on measures, many of which are redundant.

In this chapter and a previous article (Brown, 2015), I suggested that construct redundancy could be approached via dis-attenuating bivariate correlations

between scales. Betsy Becker's (2017) chapter in this volume described the MUTOS approach that would also be applicable for addressing questions of construct redundancy. It has the added advantage of ascertaining empirically the degree to which scales that are supposedly measuring the same constructs (by their titles) actually do so (See Becker's example of the self-efficacy measures used in the Brown and Ryan Krane meta-analysis). I also concur with Becker's (2017) suggestion that we create a shared database of information on career intervention effect sizes. This may provide a valuable vehicle for addressing questions of construct redundancy (in addition to its other benefits—See Becker, 2017).

Future Need #2: We Need to Know Whether Career Interventions Actually Make a Difference in the Lives of Our Clients

It is clear from the Brown and Ryan Krane (2000) and Whiston et al. (1998) meta-analyses that career interventions are modestly effective at increasing clients' scores on measures of career maturity, vocational identity (whatever that scale is measuring), career exploration, and more. What is not clear, however, is if clients' lives are improved by gains on these measures. Even including effect size estimates may not necessarily tell us what we need to know—whether the clients' gains made a difference in their lives (i.e., were clinically significant). For example, Jacobson and Truax (1991) illustrated the short-comings of effect size estimates as indices of clinical significance with the following example: Suppose that a weight loss treatment is compared to a no-treatment control condition for persons who are substantially overweight. The results show that the treatment participants lost an average of two pounds, while control participants lost no weight on average. These differences could turn out to be statistically significant and the effect size could be quite large. For example, if the pooled within group standard deviation was 1.00, then Cohen's d would be 2.00, suggesting that participants in the intervention group lost on average two standard deviations more weight than control group participants. But doesn't Cohen's d overestimate the impact of this intervention, and will a two pound weight loss really make a difference in the lives of these clients?

Jacobson and colleagues (Jacobson, Follette, & Revensdorf, 1986; Jacobson & Truax, 1991) introduced

into the psychotherapy outcome literature a method to address clinical significance by estimating the degree to which individual clients moved out of a dysfunctional distribution and into a functional distribution on outcome measures of interest (i.e., do clients become more like nonclients than clients at the end of treatment?). To measure clinical significance, Jacobson and Truax (1991) suggested that a cut-off score (C) could be estimated on outcome measures that would reflect whether a client's posttreatment score is closer to the mean of the distribution of scores obtained by nonclients than by clients (see Brown, 2014; Jacobson & Truax, 1991 for the formula). Jacobson and Truax (1991) also suggested that C should be complemented by ascertaining whether gain scores obtained by clients are statistically reliable and provided a formula for testing for statistically reliable change (RCI—See Jacobson and Truax, 1991). Together, C and RCI would allow counselors to determine for each client whether his or her change was (a) statistically reliable and clinically significant (called recovered by Jacobson and Truax, 1991), (b) statistically reliable only (the posttreatment score is still in the client distribution), (c) unchanged, or (d) statistically reliable in the wrong direction (deteriorated). I illustrated the use of the Jacobson and Truax (1991) method to assess the clinical significance of gains obtained by career clients on the Career Thoughts Inventory (CTI; Sampson et al. 1996) in an earlier chapter (Brown, 2014). I refer the reader to that chapter for the illustration and a more complete description of the Jacobson and Truax (1991) method.

I also introduced in the 2014 chapter and in a 2016 article (Brown & Roche, 2016) another method to address questions of clinical significance that can complement the Jacobson and Truax (1991) method or substitute for it when that method cannot be used. It is also applicable when one wants to compare pretreatment and posttreatment group means for their clinical significance (the Jacobson and Truax method is used to track individual client change). The method simply involves calculating a z score (called z_{cs}) at pretreatment and posttreatment using the treatment group's pretest and posttest means (M_T) and the means (M_N) and standard deviations (SD_N) of a norm group chosen to represent clinical significance. The formula is $z_{cs} = (M_T - M_N) / SD_N$ and addresses the question of whether the treatment group's mean is closer to the norm group mean after treatment than before treatment on the outcome measure (a z_{cs} could also be calculated

on comparison or control group means, if available, to compare the clinical significance of gains demonstrated by treat group versus control participants). A z_{cs} of 0.00 at posttreatment indicates that there were no differences between the means of the treatment and norm group (that clients became very similar to nonclients on this measure after counseling, demonstrating clinical significance).

Brown and Roche (2016) illustrated the use of the method with several examples from the published literature (I also provided additional illustrations in the 2014 chapter), one of which was a study by Masdonati, Massoudi, and Rosier (2009) that compared a four to five session individual career counseling intervention for Swiss adults to a nonequivalent control group. Outcomes were measured with the Career Decision-Making Difficulties Questionnaire (CDDQ; Gati, Krausz, Osipow, 1996) and the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). Using normative data on each scale that we also provided in the 2016 article (Brown & Roche, 2016) for Swiss young adults, we found that at pretreatment, clients displayed substantial decision-making difficulties (compared to the normative sample) on the CDDQ total score ($z_{cs} = +1.48$), and below average levels of life satisfaction ($z_{cs} = -.87$). At posttreatment, the corresponding z_{cs} values were .03 and -.27. These results suggest substantial clinical gains on the CDDQ and some gains on the SWLS. In other words, clients' career decision-making difficulties moved from 1.48 standard deviations higher than Swiss young adults to the norm group mean after four to five sessions of individual career counseling. Their subjective well-being, while improved, remained a quarter of a standard deviation below that of the norm group after counseling. We did not analyze the nonequivalent comparison group's scores for clinical significance because this group did not appear to be an appropriate comparison group since their pretreatment CDDQ and SWLS scores suggested that they had few decision-making difficulties and were already experiencing levels of life satisfaction similar to the norm group.

In summary, I recommend that we routinely begin to analyze outcome data for clinical significance using both the Jacobson methods and a z_{cs} if possible or z_{cs} alone if the combined methods are not possible. Brown and Roche (2016) provided normative data for a

variety of different populations on the CDDQ, SWLS, and two other commonly used measures in the career intervention outcome literature—the short form of the Career Decision-Making Self-Efficacy Scale (CDSE; Betz, Klein, & Taylor, 1996) and the Career Thoughts Inventory (CTI; Sampson et al., 1996). If routinely reported, I can imagine that at some time in the future a meta-analysis of the clinical significance of career interventions would be possible.

Need #3: We Need to Conduct Outcome Research with More Diverse Samples

This need is not new—it has been stated by a number of different authors (too numerous to list here) for years. This admonition, however, is often accompanied by an assumption that interventions developed from current career theories will not work for the poor, marginalized, and under resourced because current career theories assume that clients have a lot of volition and can choose careers freely. The poor and marginalized obviously have less volition and so, the thinking goes, current career theories and interventions derived from them will not work. Unfortunately, this assumption has rarely been tested, but has become so reified that it appears to be the closest thing we have to scientific law in our field. I would recommend that we actually put this assumption to test.

For example, Dik and Hansen (2011) tested whether a volition-like variable (perceived control over one's work) moderated the relationship between person-environment fit (P-E fit; Holland, 1997) and job satisfaction and found just the opposite from what we would expect from current assumptions—that the relationship was stronger for those with less rather than more volition. The relationship for the volitional was actually near zero—suggesting that the degree of fit between the work personalities of the more volitional and their work environments had little to do with their satisfaction. Thus, current P-E fit theories might be less relevant to those with more volition (and more relevant to those with little volition). If replicated, these data suggest that P-E fit interventions might be more impactful for those with less rather than more volition, perhaps because those with more volition have more freedom to find better fitting jobs when things do not work. Stated another way, P-E fit might be more

important to those trapped by limited options than those whose choices are more unfettered. I would also hypothesize that helping clients find fitting work or achieve greater fit in their current work might be more important in today's opportunity limiting economy than ever before. By implication it might also be that P-E fit should be considered as another defining characteristic of decent work (Duffy, Blustein, Diemer, & Autin, 2016). In the end, I really think we need to let the data speak for themselves, but we actually need to have data before they can say anything to us.

Summary

In summary, I think that extant meta-analyses have yielded findings that can be used by career practitioners to improve their work with clients experiencing choice-making and job finding difficulties by ensuring that all critical ingredients suggested by the meta-analyses are included in interventions. Collectively the meta-analyses suggested that goal setting, support-building, and efficacy enhancement strategies might be incorporated in work with all clients, although the universality of these components requires further investigation in samples of clients with other types of career difficulties.

I also think that evidence-based career practice can be advanced by research that identifies core outcome constructs that are measured by extant outcome measures, attends to the clinical significance of gains achieved by clients in career interventions, and tests interventions with more diverse clientele. In relation to the latter, we need more research on intervention effectiveness with the underrepresented, under resourced, and marginalized members of our society rather than continuing to operate on the untested assumption that interventions developed from extant theories will not work for them. To do less could be a social injustice to those who need our services most.

References

- Becker, B. J. (2017). Improving the design and use of meta-analyses of career interventions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and*

- practice in vocational psychology: Current status and future directions* (pp. 95). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch10>
- Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the Career Decision-Making Self-Efficacy Scale. *Journal of Career Assessment, 4*, 47–57.
- Brown, S. D. (2014). Career intervention efficacy. In P. J. Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *APA handbook of career intervention* (Vol. 1, pp. 61–77). Washington, D.C.: American Psychological Association.
- Brown, S. D. (2015). On statistical wizardry, construct proliferation, and other challenges for our science. *The Counseling Psychologist, 43*, 614–628.
- Brown, S. D., & Roche, M. (2016). The outcomes of vocational interventions: Thirty (some) years later. *Journal of Career Assessment, 24*, 26–41.
- Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 195–226). New York: Wiley.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment, 49*, 71–75.
- Dik, B. J., & Hansen, J. C. (2011). Moderation of the P-E fit-job satisfaction relations. *Journal of Career Assessment, 19*, 35–50.
- Duffy, R. D., Blustein, D. L., Diemer, M. A., & Autin, K. L. (2016). The psychology of work theory. *Journal of Counseling Psychology, 63*, 127–148.
- Duffy, R. D., Diemer, M. A., & Jadidian, A. (2012). The development and initial validation of the Work Volition Scale: Student Form. *The Counseling Psychologist, 40*, 291–319.
- Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision-making. *Journal of Counseling Psychology, 43*, 510–526.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Holland, J. L., Daiger, D. C., & Power, P. G. (1980). *My Vocational Situation: Description of an experimental diagnostic form for the selection of vocational assistance*. Palo Alto, CA: Consulting Psychologists Press.
- Jacobson, N. S., Follette, W. C., & Revensdorf, D. (1986). Toward a standard definition of clinically significant change. *Behavior Therapy, 17*, 308–311.
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*, 12–19.
- Juntunen, C. L., & Wettersten, K. B. (2006). Work hope: Development and initial evaluation of a measure. *Journal of Counseling Psychology, 53*, 94–106.
- Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology, 60*, 557–568.
- Liu, S., Huang, J. L., & Wang, M. (2014). Effectiveness of job search interventions: A meta-analytic review. *Psychological Bulletin, 140*, 1009–1041.
- Oliver, L. W., & Spokane, A. R. (1988). Career-intervention outcome: What contributes to client gain? *Journal of Counseling Psychology, 35*, 447–462.
- Masdonati, J., Massoudi, K., & Rosier, J. (2009). Effectiveness of career counseling and the impact of the working alliance. *Journal of Career Development, 36*, 183–203.
- Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The Career Futures Inventory: A measure career-related adaptability and optimism. *Journal of Career Assessment, 13*, 3–24.
- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996). *Career Thoughts Inventory professional manual*. Lutz, FL: Psychological Assessment Resources.
- Savickas, M. L. (1997). Adaptability: An integrative construct for life-span, life-space theory. *The Career Development Quarterly, 45*, 247–259.
- Shell, D. F., & Husman, J. (2001). The multivariate dimensionality of personal control and future time perspective beliefs in academic and self-regulation. *Contemporary Educational Psychology, 26*, 481–506.

- Spokane, A. R. & Oliver, L. W. (1983). Outcomes of vocational intervention. In S. H. Osipow & W. B. Walsh (Eds.), *Handbook of vocational psychology* (pp. 99–136). Hillsdale, NJ: Erlbaum.
- Wanberg, C. R., Glomb, T. M., Song, Z., & Sorenson, S. (2005). Job-search persistence during unemployment: A 10-wave longitudinal study. *Journal of Applied Psychology, 90*, 411–430.
- Wanberg, C. R., Kanfer, R., & Rotundo, M. (1999). Unemployed individuals: Motives, job-search competencies, and job search constraints as predictors of job seeking and reemployment. *Journal of Applied Psychology, 84*, 897–910.
- Whiston, S. C. (2001). Selecting career outcome assessments: An organizational scheme. *Journal of Career Assessment, 9*, 215–228.
- Whiston, S. C., Brecheisen, B. K., & Stephens, J. (2003). Does treatment modality affect career counseling effectiveness? *Journal of Vocational Behavior, 62*, 390–410.
- Whiston, S. C., Sexton, T. L., & Lasoff, D. L. (1998). Career-intervention outcome: A replication and extension of Oliver and Spokane (1988). *Journal of Counseling Psychology, 45*, 150–165.

Chapter 9 - Conducting General Versus Population and Setting-Specific Meta-Analyses

Susan C. Whiston

Indiana University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch9>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=9DWz7QIP2gM&index=14&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA

Appreciation is expressed to Janet Lenz, Jim Sampson, and Emily Bullock-Yowell for their comments on an earlier draft of this chapter.

Correspondence concerning this chapter should be addressed to Susan C. Whiston, Department of Counseling and Educational Psychology, Indiana University, Bloomington, IN 47405-1006. E-mail: swhiston@indiana.edu

Keywords: career intervention, demographic variables, meta-analysis, population-specific meta-analysis, setting-specific meta-analysis

Meta-analysis is an increasingly popular technique that systematically and statistically summarizes the results from research studies in a particular area (Lipsey & Wilson, 2001). Meta-analytic studies can be particularly useful to practitioners because they combine the results from various studies and eliminate the drudgery of sifting through the findings of multiple individual studies. Although meta-analysis can be used to summarize research in multiple areas (e.g., correlational studies), I am going to restrict my comments to intervention studies with a focus on career interventions. Specifically, this chapter will address the issues surrounding conducting general meta-analyses versus population and setting-specific meta-analyses in the career area.

With meta-analysis, a researcher calculates an effect size for each study, typically by subtracting the control group mean from the treatment group mean and dividing by the pooled standard deviation of the groups. Therefore, if the treatment group mean is larger than the control group, the effect size is positive and reflects the degree or magnitude of the treatment group's effect. These effect sizes are weighted, on factors such as sample size, and are combined to produce an average effect size for the intervention studies. The content of the combined intervention studies is important in this process, along with whether it is better to more narrowly restrict studies to specific populations (e.g., African

Americans) or settings (e.g., career development centers) or to more broadly include studies, which will be labeled general meta-analyses.

Certainly there are advantages to having more specific meta-analyses. For example, a career counselor working with African American clients could search databases such as PSYCINFO for meta-analyses of career interventions with African Americans. A recent search of PSYCINFO with the keyword meta-analysis revealed over 16,000 studies. It would be difficult for the career counselor to review each of the studies in the hopes of identifying a meta-analysis pertinent to career counseling. Thereby, a clinician could simply enter the terms African American and career interventions and theoretically identify a meta-analysis, if such a meta-analysis existed, that could inform the clinician on the types of career interventions associated with larger effect sizes. The clinician could then adopt those interventions shown to be most effective with African American clients and provide evidence-based practice. Although such a meta-analysis does not currently exist, the desire for such information is evident as many researchers have called for an exploration of the efficacy of career interventions with ethnic and racial minorities (Fouad, & Kantamneni, 2008; Leong & Flores, 2015). Not only is there a need for specific information regarding the effectiveness of career intervention with racial and ethnic minority clients, but there may also be a need for specific

meta-analyses for other demographics such as gender as we do not know which career interventions may be more effective with men versus women or vice versa. Other demographic variables that might benefit from a specific meta-analysis include socioeconomic status and, in particular, investigating effective career interventions for those in poverty. As Brown (2017) asserts, we do not know what types of interventions work with those who have been marginalized in our society. Although there have been assertions that interventions involving current theories are not applicable, these assertions have not been tested, and there is a need for these types of studies.

In psychotherapy research, many specific meta-analyses have centered on diagnoses such as exploring which interventions are most effective with obsessive-compulsive disorder (e.g., Stein, Spadaccini, & Hollander, 1995; van Blakom et al., 1994). Therefore, vocational psychologists may want to follow in the footsteps of psychotherapy researchers and conduct specific meta-analyses of common career diagnoses. There are, however, no commonly used diagnostic systems in the career area, although there have been calls for such criteria (Rounds, & Tinsley, 1984; Whiston, 2002). Although career issues cover a wide gamut of topics (e.g., work-family conflict, job search, retirement), much of the empirical focus has been on career decision making (e.g., Brown & Rector, 2008; Gati, Krausz, & Osipow, 1996), which may be an area ripe for specific meta-analyses. Sampson (2008) and Sampson, Reardon, Peterson, and Lenz (2004) argued that career interventions should be structured to the type and level of clients' readiness for career decision making. Interestingly, there is not even a specific meta-analysis that has investigated interventions for clients who are indecisive, which means they have chronic problems with career decisions (Salomone, 1982). Sampson, McClain, Musch, and Reardon (2013) identified variables affecting readiness to benefit from career interventions that could serve as a foundation for diagnosing clients who lack readiness for career decision making. Sampson et al.'s schema includes personal characteristics; personal circumstances; limited knowledge of self, options, and decision making; and prior experience with career interventions.

Whereas population-specific meta-analyses are comparatively easy to conduct if there are a sufficient number of studies of career interventions with that population, setting-specific meta-analyses are a little

more complex. An example of a setting-specific meta-analysis would be a study of interventions typically conducted at a career development center. Sometimes career development personnel conduct evaluation studies of the interventions they provide, and it is easy to determine that the study falls under the umbrella of services typically provided by a career development center. Other times, however, researchers may be conducting the study without assistance from career center personnel, making it more difficult to determine if the studied intervention is a service typically provided in a specific setting such as a career development center. Moreover, there is probably debate among career center personnel on what interventions are considered typical services. Therefore, it is difficult to identify the population of studies that should be included in a meta-analysis of career centers, which is also true of other settings (e.g., private practice). The problems associated with conducting setting-specific studies, however, do not diminish the importance of such meta-analyses. A setting-specific meta-analysis, such as one conducted on career centers, could be shared with appropriate administrators to show the effectiveness of such sites. Such a meta-analysis could also influence the provision of services as personnel could provide more interventions associated with large effect sizes and decrease or eliminate interventions with small effect sizes.

Brown and Ryan Krane (2000) stated there was no need for another general meta-analysis of career interventions as there already was sufficient documentation of the effectiveness of career intervention in general. It should be noted that there are three meta-analyses of career interventions in general (i.e., Oliver & Spokane, 1988; Spokane & Oliver, 1983; Whiston, Sexton, & Lasoff, 1998) and no population-specific or setting-specific meta-analyses of career interventions. Cooper and Hedges (2009) disagreed with Brown and Ryan Krane (2000) and suggested that conceptually broad topics frequently benefit from meta-analyses, particularly when there are sufficient studies to contribute to these research syntheses. When making a decision to pursue a conceptually narrow meta-analysis or a broader one, researchers should first consider the target audience for the study. The second consideration concerns the number of studies and whether broadening the topic causes the project to become unwieldy. According to Cooper (2009), one of the advantages of a more general

meta-analysis is that rival hypotheses can often be examined.

With any meta-analysis, the concepts being examined should relate to the operational definitions of those concepts. The advantage of starting broad is that the researcher may find a similar concept from another discipline or literature that can be included in the meta-analysis because of its relevant operational definition. As an example, a meta-analytic researcher may be interested in the effectiveness of career assessments. The researcher could initiate the project by only looking at studies of interest inventories and ability assessments but may find values assessments in the literature and want to broaden the meta-analysis to include measures of values. Thus, the robustness of the meta-analysis is increased by the addition of the values assessments. Therefore, Cooper (2009) recommends starting the literature search with the broadest conceptual definition possible in an attempt to include any relevant study and eliminating unrelated studies later.

One of the problems with broad or general meta-analyses is that erroneous conclusions can be drawn when results across studies can be masked by using very broad categories. To complement this conceptual broadness, meta-analysts should be very thorough in their attention to and coding of study characteristics because it is possible to analyze data according to these study characteristics. For example, we may find that the broad area of using career assessments with clients produces positive outcomes, but we may be more interested in whether interest inventories, skills/abilities assessments, or values measures produce the largest effect sizes. This can be accomplished through moderator analyses. One of the advantages of general meta-analysis is the ability to systematically examine several sources of variation in the effectiveness of an intervention. For example, studies A and B may vary simply because of sampling error, differences in the quality of the research, attributes of the participants, intervention variations, or differences among outcome measures (Tickle-Degnen, 2001). As both Becker (2017) and Brown (2017) identify, the quality of the outcome measures used in a meta-analysis is critical to the conclusions that can be drawn from the results. In conducting a meta-analysis, the researcher typically conducts a statistical test of homogeneity to determine whether the differences in the effect sizes are likely due to sampling error (Lipsey & Wilson,

2001). If the results of this test indicate the variation in effect size is due to sampling error, then one simply concludes that this is true, and no further exploration of moderators of the average effect size is needed. For example, if we were doing a meta-analysis of effectiveness of career assessments and the test indicates the effect size was homogeneous, then we would conclude that the variation in effect size is due to sampling error and not differences in whether the assessment was of interest, skills/abilities, or values. If on the other hand, the effect sizes are not homogeneous, then the test of moderator variables can be conducted as the variance in effect sizes is due to something more systematic than sampling error. Therefore, when an indication of heterogeneity of effect sizes exists, the researcher can then investigate whether these differences are due to research methodology, type of participant, intervention characteristics, or outcome measures, assuming that the researcher has adequately coded study information in the desired areas. Hence, analyses of moderator variables allow the researcher to go from general findings to more specific results. For a discussion of moderator analyses and for ways to expand on moderator analyses, please see Becker (2017).

This returns us to the question of whether it is better to start with a specific meta-analysis or to hope for a certain level of specificity in a general meta-analysis using moderator analyses. The answer to this question depends on the research questions of the meta-analyst and the quality of the research being analyzed. Certainly, the features of the research question dictate the preference in specific versus general meta-analysis. For example, for questions related to a certain population, then a more narrowly defined meta-analysis is probably best. As indicated earlier, there are needs for meta-analyses in the career area related to specific populations, and researchers are encouraged to pursue these types of meta-analyses. There are also needs for specific meta-analyses related to particular diagnoses, but there needs to be more consensus within the field regarding a diagnostic system.

On the other hand, there is also a need for general meta-analyses that use moderator analyses. There is probably not a need for another general meta-analysis that simply examines the effectiveness of career interventions generally as that is well established (Oliver & Spokane, 1988; Spokane & Oliver, 1983; Whiston et al., 1998). For an overview of the effectiveness of career

interventions, please see Brown (2017). A good example of a general meta-analysis that used moderator analyses to provide pertinent information is Brown and Ryan Krane (2000). Brown and Ryan Krane looked at the effectiveness of career interventions and then examined the effects of specific types of interventions. They found that certain types of interventions, particularly when used in combination, were associated with larger effect sizes. These ingredients, often referred to as the critical ingredients of career counseling, are as follows: written exercises, individualized interpretation and feedback, occupational information, modeling, and attention to building support. This meta-analysis is somewhat dated and replicating it with current research studies would be a major contribution to the field. Other general meta-analyses that could be useful are moderator analyses that examine variation among outcome measures, type of assessment strategies, length of services, theoretical underpinnings of the interventions, and type of facilitator. It should be noted, however, that coding for moderator analyses is not easy, and clear operational definitions are necessary in these types of meta-analyses.

In conclusion, the answer to the question of whether specific or more general meta-analyses are better is simply that it depends. Certainly the field could benefit from both population-specific and setting-specific meta-analytic studies. The field could also benefit from general meta-analyses in which pertinent moderators are used. One of the problems, however, is the dearth of research studies conducted on career interventions, which hampers the ability to conduct specific meta-analyses or general meta-analyses with germane moderators. Therefore let me conclude this chapter with a call for more research on career interventions. In particular, there is a need for programmatic research that will address what interventions work with which clients, under what circumstances. This is not a novel call, as Fretz (1981) made this same plea 35 years ago, but its relevance and importance continues through today.

References

- Becker, B. J. (2017). Improving the design and use of meta-analyses of career interventions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 95). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch10>
- Brown, S. D. (2017). Meta-analysis and evidence-based career practice: Current status and future directions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 82). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch8>
- Brown, S. D., & Rector, C. C. (2008). Conceptualizing and diagnosing problems in vocational decision making. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (4th ed., pp. 392–407). Hoboken, NJ: John Wiley & Sons Inc.
- Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 740–766). Hoboken, NJ: John Wiley & Sons Inc.
- Cooper, H. (2009). Hypotheses and problems in research synthesis. In H. Cooper, L. V. Hedges, & J. C. Valentine (Eds.), *Handbook of research synthesis and meta-analysis* (2nd ed., pp. 19–35). New York: Russell Sage Foundation.
- Cooper, H., & Hedges, L. V. (2009). Research synthesis as a scientific process. In H. Cooper, L. V. Hedges, & J. C. Valentine (Eds.), *Handbook of research synthesis and meta-analysis* (2nd ed., pp. 4–16). New York: Russell Sage Foundation.
- Fouad, N. A., & Kantamneni, N. (2008). Contextual factors in vocational psychology: Intersections of individual, group, and societal dimensions. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (4th ed., pp. 408–425). Hoboken, NJ: John Wiley & Sons Inc.
- Fretz, B. R. (1981). Evaluating the effectiveness of career interventions. *Journal of Counseling Psychology*, 28(1), 77–90. <http://dx.doi.org/10.1037/0022-0167.28.1.77>
- Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology*, 43(4), 510–526. <http://dx.doi.org/10.1037/0022-0167.43.4.510>

- Leong, F. T. L., & Flores, L. Y. (2015). Career interventions with racial and ethnic minority clients. In P. J. Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *APA handbook of career interventions: Vol. 1 Foundations* (pp. 225–242). Washington, D.C.: American Psychological Association. <http://dx.doi.org/10.1037/14438-013>
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage.
- Oliver, L. W., & Spokane, A. R. (1988). Career-intervention outcome: What contributes to client gain? *Journal of Counseling Psychology*, 35(4), 447–462. <http://doi.org/10.1037/0022-0167.35.4.447>
- Rounds, J. B., & Tinsley, T. J. (1984). Diagnosis and treatment of vocational problems. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (pp. 137–177). New York: Wiley.
- Salomone, P. R. (1982). Difficult cases in career counseling: II. The indecisive client. *Personnel & Guidance Journal*, 60(8), 496–500.
- Sampson, J. P., Jr. (2008). *Designing and implementing career programs: A handbook of effective practice*. Broken Arrow, OK: National Career Development Association.
- Sampson, J. P., Jr., McClain, M., Musch, E., & Reardon, R. C. (2013). Variables affecting readiness to benefit from career interventions. *The Career Development Quarterly*, 61(2), 98–109. <http://dx.doi.org/10.1002/j.2161-0045.2013.00040.x>
- Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling and services: A cognitive information processing approach*. Pacific Grove, CA: Brooks/Cole.
- Spokane, A. R., & Oliver, L. W. (1983). Outcomes of vocational intervention. In S. H. Osipow & W. B. Walsh (Eds.), *Handbook of vocational psychology* (pp. 99–136). Hillsdale, NJ: Lawrence Erlbaum.
- Stein, D. J., Spadaccini, E., & Hollander, E. (1995). Meta-analysis of pharmacotherapy trials for obsessive-compulsive disorder. *International Clinical Psychopharmacology*, 10(1), 11–18.
- Tickle-Degnen, L. (2001). From the general to the specific: Using meta-analytic reports in clinical decision making. *Evaluation & the Health Professions*, 24(3), 308–326. <http://dx.doi.org/10.1177/01632780122034939>
- van Blakom, Anton J. L. M., van Oppen, P., Vermeulen, A. W. A., van Dyck, R., Nauta, M. C. E., & Vorst, H. C. M. (1994). A meta-analysis on the treatment of obsessive compulsive disorder: A comparison of antidepressants, behavior, and cognitive therapy. *Clinical Psychology Review*, 14(5), 359–381.
- Whiston, S. C. (2002). Application of the principles: Career counseling and interventions. *The Counseling Psychologist*, 30(2), 218–237. <http://dx.doi.org/10.1177/0011000002302002>
- Whiston, S. C., Sexton, T. L., & Lasoff, D. L. (1998). Career-intervention outcome: A replication and extension of Oliver and Spokane (1988). *Journal of Counseling Psychology*, 45(2), 150–165. <http://doi.org/10.1037/0022-0167.45.2.150>

Chapter 10 - Improving the Design and Use of Meta-Analyses of Career Interventions

Betsy Jane Becker

Florida State University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch10>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=l-w_bCpzP7M&index=15&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA

Appreciation is expressed to Christopher Thompson for creating Figure 2, to Emily Bullock-Yowell for her comments on an earlier draft of this chapter, and to James Sampson for inviting me to participate in this volume and providing valuable resources.

Correspondence should be addressed to Betsy Jane Becker, Department of Educational Psychology and Learning Systems, Florida State University, Tallahassee, FL 32306-4453. E-mail: bbecker@admin.fsu.edu.

Keywords: meta-analysis, career decision-making self-efficacy, Cronbach's UTOS, generalizability, model-driven meta-analysis, moderators, variation

In this chapter I examine research syntheses and meta-analyses in the area of career interventions and propose a few ideas for improving on the excellent work done to date. I begin with a brief overview of meta-analysis and systematic reviews and consider the kinds of questions that have been asked about career interventions. I also briefly discuss the role of theories in meta-analysis. Beginning with a theoretical model enables the reviewer to assess not only what is well studied, but also what issues or effects are in need of further research. I then introduce a framework for exploring the generalizability of results of meta-analyses. The approach is also useful for planning of future studies. Within each section I draw on meta-analyses in the area of career interventions to illustrate my points.

What is Meta-Analysis?

The term meta-analysis was coined by Glass to mean “the analysis of analyses.... a rigorous alternative to ... casual, narrative discussions of research studies” (1976, p. 3). Meta-analyses draw together series of studies on a well-defined topic, and use quantitative techniques to analyze and understand the diversity of effects found in those studies. Meta-analyses and more generally systematic reviews (Petticrew & Roberts, 2006) involve versions of the same steps we follow in

primary research. Systematic reviews can inform policy and practice alike. Because they are by definition less haphazard than traditional narrative reviews, they also have the potential to be more thorough and less biased.

Similarities between the processes and steps in primary research and those required in meta-analyses have been well described by Cooper (1982) and others (e.g., Cook, Sackett, & Spitzer, 1995). Cooper (1982) laid out five, then later seven steps (e.g., Cooper, 2016) in this process. They are as follows:

1. problem formulation,
2. literature search,
3. extracting information from studies (coding),
4. evaluating quality of the studies,
5. analyzing study results,
6. interpreting the evidence, and
7. public presentation.

At each step the goal is to be thorough, systematic, and clear about the process so that other reviewers can follow the same steps and arrive at essentially the same

point when their review is done. In short, applying replicable procedures in the first four steps should enable the reviewer to collect studies and to characterize the features of studies thought to relate to the outcomes of interest. If the reviewer uses quantitative analyses at Step 5, then the review is often called a meta-analysis or quantitative synthesis.

Problem Formulation: A Focus on Variation and Process

What Works? When, Where, and for Whom?

Many meta-analyses of intervention literatures begin with a very practical goal: to find out “what works.” Often this is not even stated. Oliver and Spokane (1981, 1983; Spokane & Oliver, 1983) as well as Baker and Popowicz (1983) were among the earliest advocates of meta-analysis in the area of career counseling, though they and others (e.g., Fretz, 1981) discuss prior reviews of a narrative nature. Spokane and Oliver (1983) did not lay out specific research questions, simply stating that they intended to “examine the outcomes of ... vocational treatments and draw some conclusions that will be of help to researchers and practitioners” (1983, p. 100). They reported a very large treatment effect of 0.85 standard deviation units.

Obvious additional questions arise, such as for whom do interventions work, what features are associated with successful interventions, and the like. Spokane and Oliver found differences between group, individual, and other treatments but did not study other moderators. Later Oliver and Spokane (1988) noted that intensity and treatment type were confounded in their studies, raising questions about the simplicity of their earlier finding. Spokane and Oliver (1983) and also Oliver and Spokane (1983) strongly argued for using more rigorous methods in future studies and gave a methodological checklist for authors to follow. They also conveyed the importance of complete reporting in primary studies, noting the problems that occur when extracting information for a review (Step 3 above). These early authors faced incompleteness and errors when trying to find information not only on intervention study outcomes, but about the nature of the career interventions, the control conditions, and

their participants. Recent reviews continue to complain about poor reporting (Liu, Huang, & Wang, 2014).

Putting the questions reviewers have asked into a statistical framework, we find that these meta-analysts looked for *main effects* of treatments and possible *interactions* with moderators. If the treatment effect interacts with study itself, the results do not all agree, and we say they are not homogeneous. It has become common to test the null hypothesis of homogeneity, both across all studies and within subsets of studies. However, it is less common to estimate and interpret the degree of variability present in the study collection. Doing so can help us understand how widely the “typical” results can be generalized.

Identifying and testing moderators of the size of the intervention effect is equivalent to asking whether the size of the effect depends on (interacts with) those moderators—the article characteristics, sample characteristics, or treatment features of most interest. Fretz (1981) presaged this idea by calling for career researchers to focus on (client) attribute-treatment interactions in career-intervention research (drawing on Cronbach and Snow’s 1977 work on aptitude treatment interactions in instruction). Likewise Evans and Burck’s (1992) simply stated questions reflect this progression: “What statistical statement can be made about the overall effect size produced by the career education interventions of the 67 studies? What is the relationship between study characteristics and study effect size results?” (p. 65). Over time, series of career studies and meta-analyses of career-intervention studies have addressed several iterations of these basic questions about effect magnitude and what it depends on, with meta-analysts adding to the knowledge base by focusing on different features of the studies at hand.

Moderators also provide potential explanations of variation in effects across studies. This is reflected to a degree in statements about how much variance is explained by certain predictors. For instance, Brown and Ryan Krane (2000) stated, “specific intervention components ... accounted for between 2% and 38% unique variance in effect sizes” (p. 744). However, we usually do not know the amount of between studies variance that was explained in the metric of the effect size.

Tools for Answering How and Why Questions

As useful as it is to know about treatment main effects, it is equally important to learn about how and why career interventions work as they do. Questions may concern the components of and processes behind career interventions (e.g., Whiston, Brecheisen, & Stephens, 2003) and the broader contexts of associated variables that may impact intervention effectiveness, such as age, race/ethnicity, or participant/intervention “fit” (Nichols, 2009). Such inquiries become more salient once interventions have been found to “work” on average. Investigations of this kind are more unusual in career-intervention meta-analyses, but they are possible. I briefly describe two approaches that may be useful to the career field.

Response-surface models. Certainly investigations of program components appear in the career field, such as in meta-analyses by Whiston, Sexton, and Lasoff (1998), Ryan (1999), Brown and Ryan Krane (2000), and Brown et al. (2003). Brown and Ryan Krane listed five “critical ingredients” and found that the number of those critical elements used in an intervention related to the size of the treatment effect. These ingredients have been investigated in a variety of ways since then.

How can we improve the analyses of program components done to date? Rubin (1992) argued that meta-analytic “response-surface” (i.e., regression) models can be used to predict the effect that an optimal study would have produced. For example, we could predict the effect size for a study of a group-counseling intervention with all five critical components identified by Ryan (1999) and with other features such as a high level of intensity, college-aged or adult participants, and so forth. Other possible projections can be obtained for comparison.

While valuable, even a response-surface model that predicts the results of a high quality “five-ingredient intervention” cannot capture all of the potential benefits, or problems, of a real intervention. Thus, findings like Ryan’s list of ingredients or other features included in a response-surface model that is based on the between studies evidence in a meta-analysis can lead to designs for new studies. Those new studies can be organized so features vary within study for stronger evidence on each

intervention component. One might imagine a five-way factorial design in which participants either receive or do not receive each of the five critical ingredients named by Ryan (1999). Additional important factors such as demographics could be used as blocking variables. As Matt and Cook (2009) point out, between studies evidence from meta-analyses is always subject to the threat of confounded moderators, and is weaker than within-study evidence.

Path models. A second modeling approach to how and why questions is exemplified by Sheu and colleagues’ (2010) work in developing meta-analytic models of the roles of various psychological antecedents of career choices. Tracey and Rounds (1993) applied similar ideas to studies of Holland and Gati’s model. Becker (1992, 1995, 2009) and later others (Cheung & Chan, 2005; Viswesvaran & Ones, 1995) have written about the benefits of incorporating theoretically based models into research synthesis. A key benefit is that laying out possible path models forces the meta-analyst to check whether all paths have been studied. Missing correlations between model components suggest relations needing further study.

Such phenomena as counselor-client rapport and the working alliance (Whiston & Rose, 2015) and process variables such as expectations for counseling (Heppner & Heppner, 2003) are potential constructs to be investigated in such a meta-analytic model. Also though few meta-analysts have done so, one can include treatment variables as components in path models. As with Rubin’s response-surface approach, this kind of meta-analysis requires prior knowledge, or prior theory, about the factors important to the outcome of interest.

A Framework for Generalization (MUTOS)

A potential weakness of the typical meta-analysis process is that studies within any research domain seem to be created more or less through happenstance. This is not true for any particular researcher’s collection of studies, which typically represent a program or stream of related work, but taken as a whole, primary research domains and thus meta-analyses in the social sciences are less structured than in some other fields. Registries of primary studies are rare in social science, so the would-be reviewer often does not know what studies exist until

collecting data for a review. Two exceptions to this include the U.S. Institute for Education Sciences What Works Clearinghouse registry of trials in education located at <http://ies.ed.gov/ncee/wwc/references/registries/RCTSearch/RCTSearch.aspx> and Baldwin and Del Re's (2016) creation of an open access data base of effect sizes in the area of psychotherapy (e.g., http://shinyserver.byu.edu/family_therapy/).

Because of the lack of structure and planning in various research domains, a meta-analyst may define a problem of interest only to find that few studies have examined it. Alternatively, because existing studies have no overarching organizational scheme, the meta-analyst might find great diversity (yet also often duplication) in methods, populations, measures, and so on. In the career-intervention domain, primary researchers may have used commonly accepted career development measures, such as the Self-Directed Search and Strong Campbell Interest Inventory, researcher developed and administered questionnaires (e.g., Shevlin & Millar, 2006), or interviews like those used by Thoresen, Hosford, and Krumboltz (1970) to elicit self-reports of information seeking behavior. Participants may be young or old, female or male, or of any socioeconomic background or ethnicity, but these features of participants may not be well described, and analyses may not have explored their import for effectiveness. I next describe an approach that can help identify and understand the impacts of this diversity in research literatures.

An organizing framework can help us to take stock of what is known. I put forward a framework useful for problem formulation, assessment of existing literatures, and planning future studies of career interventions. It is drawn from the work of Cronbach (1982) in the area of program evaluation and has been applied to meta-analysis by Becker (1996) and Matt and Cook (2009). Cronbach's UTOS framework refers to populations of units (Us), treatments (Ts), observing operations (Os), and settings (Ss). These labels refer to possible features of studies. Aloe suggested adding methods (Ms) to Cronbach's scheme to capture the role of the diversity of approaches to study design that appear in most meta-analyses; thus, we have MUTOS (Becker & Aloe, 2016).

In Cronbach's original approach, populations of Us (individuals or groups of participants), Ts, and Os are

the target of inferences. In a particular setting a researcher samples instances from those populations of Us, Ts, and Os in order to generalize to the sampled domain UTOS. S is not sampled because Cronbach viewed S as fixed for a given study. Assuming a study is conducted without serious compromises, assessing whether results are generalizable involves assessing whether and how well that study's results can be extrapolated to what Cronbach calls the "domain of application," or *UTOS. *UTOS can refer to any number of domains—from all instances of interest (e.g., all career interventions), to a narrower domain such as an intervention in a single university career center using a particular measure of a given outcome. *UTOS is not directly observed.

MUTOS in Meta-Analysis

Using MUTOS in the context of meta-analysis can help make the domains of interest explicit, a key aspect of problem formulation and data collection. As noted above, meta-analysts typically try to identify moderators that lead to differences in study results; these may be characteristics of Us, Ts, Os, and Ss. Becker (1996) and Shadish, Cook, and Campbell (2002) argue that analysis of moderators in meta-analysis is akin to evaluating the importance of the specific Us, Ts, Os and Ss that appear across studies.

Because study designs and methods also typically vary in a meta-analysis, the M component represents the range of possible methods beyond what is reflected in Cronbach's O component, which typically includes only diversity in the measures used. If studies use different sampling strategies, analyses, different degrees of attrition, or ways to assign participants to conditions (in treatment-control studies), they have different Ms. By specifying the populations in MUTOS, the meta-analyst outlines inclusion rules for the synthesis. Also, MUTOS suggests what aspects of studies should be evaluated and determined to be relevant (or irrelevant) to the effect of interest, here, to the effects of career interventions.

The use of this organizational framework in meta-analyses differs in one important way from Cronbach's original application to primary studies. Cronbach argued that one should sample the Us, Ts and Os with the target of generalizability (*UTOS) in mind. However, most meta-analyses involve purposive and, ideally, exhaustive collections of studies on a

topic—collections not generated through an explicit sampling design on MUTOS. Acknowledging that random samples are rare in the meta-analysis context, Matt and Cook (2009) argue that inferences in meta-analysis depend on different warrants, not on sampling theory alone. Their work describes in detail those other warrants for generalization.

Campbell's (1969) multiple operationism, the process by which a theoretical construct such as a treatment or outcome is exemplified in multiple ways, is also linked to Cronbach's (1982) idea of sampling from populations of Ts or Os. Each realization of a theoretical entity (here, each M, U, T, O, or S) can differ in terms of theoretically irrelevant characteristics. The incorporation of such "heterogeneous irrelevancies" (Cook, 1991) in the operationalizations of constructs is a key benefit of multiple operationism. Because all Ms, Ts, Os, and so forth are imperfect representations of the constructs they stand for, using multiple instantiations of each construct builds stronger understandings of the phenomena we are studying and increases the potential for generalizability. Brown (2017) has called for future work to identify core constructs, arguing that many measures used in the field may actually be measuring the same thing, despite having different names. The most direct way to accomplish Brown's goal would be to study the array of proposed operations together in a new primary study, as he has done in several cases (Brown, 2015). However, similarities between the effects based on different operationalizations found in a meta-analysis can also suggest communalities in operations not yet examined together in any single study. Whether the potential for generalization across operations is realized in any meta-analysis depends on whether findings appear similar across the many versions of MUTOS.

By including a diversity of Us, Ts, and ways of measuring each construct (different Os), the meta-analyst can better gauge what is common and fundamental to the effect of interest and what is not. Meta-analysis facilitates exploring the impact of multiple operations through examination of a broader range of operations than would appear in any single study (e.g., treatments of different lengths and intensities, measures with different numbers and kinds of items). This fact argues against the idea of total uniformity in the measures used in a field: What if we select one measure, and it somehow does not tap a critical feature of the construct we want to

examine? However, having different operationalizations within and across studies can also add variability and uncertainty to the results.

Using MUTOS to Evaluate Generalizability in Meta-Analysis

How can we use MUTOS with meta-analytic data to assess generalizability? Becker (1996) proposed an analogue to generalizability theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) for meta-analysis that can be used to estimate and model sources of error. Both generalizability and decision studies are possible. Becker and Aloe (2016) expanded on those ideas to propose the following steps for a simple generalizability analysis:

1. Specify desired target of inference by defining MUTOS.
2. Classify study features using MUTOS.
3. Evaluate diversity in Ms, Us, Ts, Os, and Ss.
4. Assess overall heterogeneity of effects.
5. Evaluate empirical variation in results using MUTOS.
6. Assess connections to desired domain of application, *UTOS.

Specify desired target of inference by defining MUTOS. Ideally the meta-analyst begins by using theory and the nature of the problems that guide the review to set out the desired target population, UTOS. Describing the ideal participant populations, types of interventions, and outcomes of interest gives form to inclusion rules for data collection. M is not included here because one makes inferences to the real world, not to a collection of future studies using particular methods. However, rules about what study designs are acceptable would also be set. This step is not illustrated in the example below; it would be completed before the meta-analysis is begun.

The use of MUTOS at the problem-formulation stage connects well to the ideas described by Whiston (2017), who argues that the field of career-interventions would benefit from more "setting-specific" meta-analyses.

Whiston argues that broadly defined meta-analyses allow reviewers to gloss over important category distinctions, an argument made early in the history of meta-analysis by Presby (1978). As Whiston notes, the inclusion of varied collections of diverse contexts and populations requires coding of critical moderators—a task that can be challenging even when coders have strong knowledge of the relevant content.

Classify study features using MUTOS. After studies are collected, part of the data extraction involves coding the levels of MUTOS observed across studies. The key difference from a typical meta-analysis is conceptual—that is, we now explicitly note whether the literature contains information on the range of possible Us, Ts, and so forth, which were outlined earlier. Finding that researchers have not examined certain populations or specific outcomes provides a first opportunity to describe “what is not known.”

Evaluate diversity in Ms, Us, Ts, Os, and Ss. Evaluating the numbers and kinds of instantiations of M, U, T, O, and S in the collection of studies is next. We qualitatively assess how much those instantiations differ, and how well they represent conditions of interest for generalization. Are the participants all upper-level undergraduate students, or are more general samples in the mix? Do the measures used appear to be very similar? Are most or all well-known measures included? These assessments, based on professional judgments, provide information on the potential for dispersion in study results. More diversity in Us, Ts, Os, and Ss means more possible heterogeneity in results, if those features matter. It also means greater potential to generalize widely (e.g., across many different kinds of units, treatments, etc.).

Assess overall heterogeneity of effects. The importance of MUTOS components is evaluated in comparison to the degree of variability in the full collection of study results. The meta-analyst can test homogeneity of effects across all studies, and provide indices of dispersion such as I^2 (Higgins & Thompson, 2002), Birge’s ratio (Birge, 1932), and between studies variance estimates. These overall variance estimates are used with estimated means to compute plausible-values intervals and to graph hypothetical population distributions of effects.

Evaluate empirical variation in results using MUTOS. Against a background of how much the effect sizes vary across studies, we then analyze the study features associated with the MUTOS components to reveal whether each feature relates statistically to the observed study outcomes. This step may sound identical to the moderator analyses used in many career-intervention meta-analyses, but it involves an added step: For each factor of interest, we will estimate the degree of variation that is present, in the scale of the effect size. This, along with tests of significance, plausible-values intervals, and graphic displays, tells us the extent to which each component limits or allows generalizability. We may also assess the joint impacts of all features associated with each MUTOS component.

Assess connections to desired domain of application, *UTOS. Finally, with this knowledge in hand, the meta-analyst (or a reader) can make connections to more particular domains of application, *UTOS. This entails consideration of the contexts to which one wants to generalize. If you are working in an industrial re-training setting and all available information is based on college students, it may be hard to safely generalize the observed findings to your situation. If a widely diverse set of scales has been used in the studies at hand, but they all agree in the results found, it is easy to generalize to situations where any one of those scales has been applied. This work of selecting *UTOS domains would be done after all analyses were complete. I do not illustrate this step in detail below.

Evaluating Variation in Measures for Decision Making Self-Efficacy

The steps above are described in more detail in work by Becker and Aloe (2016); here I demonstrate a hypothetical application and limited analysis using a subset of data from Ryan’s (1999) meta-analysis of career interventions. For this example I selected eight standardized-mean-difference effect sizes for the outcome of decision making self-efficacy, shown in Table 1. The overall results are described briefly to provide a context for the use of MUTOS. In practice the overall assessment of heterogeneity would follow the initial three steps of the process outlined above.

Table 1: Studies of career decision making self-efficacy from Ryan (1999)

Authors	Year	n^T	n^C	g	Scale
Garis & Harris-Bowlsbey	1984	47	15	1.05	SACP
Healy & Mourton	1984	74	99	-0.48	SECMC
Fukuyama et al.	1988	39	38	0.53	CDMSES
Tempestini, Horan & Good	1988	55	11	0.08	SACP
Garis & Niles	1990	87	25	0.40	SACP
Niles & Garis	1990	51	17	0.37	SACP
Luzzo & Taylor	1993	44	44	0.66	CDMSES
Luzzo, Funk & Strang	1996	30	30	0.20	CDMSES

Note: Measures included the Career Decision Making Self-Efficacy Scale (CDMSES), the Self-Assessment of Confidence and Progress in Educational/Career Planning (SACP), and the Self-Estimated Career Management Competencies scale (SECMC). Sample sizes for treated and control samples are n^T and n^C , and g is the uncorrected standardized mean difference from Ryan (1999).

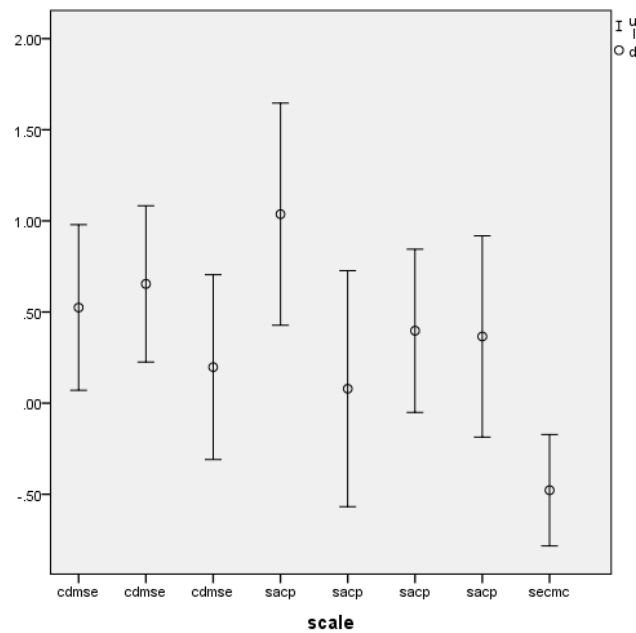


Figure 1. Forest plot of effect sizes from Ryan (1999), sorted by scale used.

Assess Overall Heterogeneity of Effects

Ryan computed the standard test of homogeneity for these studies and found significant between studies variation ($Q(7) = 33.66, p < .05$). Even though this test is significant, and the value of I^2 suggests that 79% of variability in these effects reflects true differences, the forest plot of the effects and their 95% confidence limits in Figure 1 shows overlapping intervals, reflecting a good deal of agreement among the effect sizes.

Ryan did not report a measure of between studies variation; for her data, the weighted DerSimonian and Laird (1986) variance is 0.216. This corresponds to a standard deviation for the full population of effects of 0.464—almost half of a standard-deviation unit. If the effects came from a normal distribution of population effects, 95% of those true values would cover a range of 1.81. Centering the distribution on the appropriate mean effect, which for these data is a random-effects mean of 0.33, 95% of all true intervention effects for decision making self-efficacy fall between -0.58 and 1.22. Figure 2 shows this hypothetical distribution in

the upper portion of the plot with a solid line. The vertical lines in the middle of the plot represent the 95% random-effects confidence interval for the mean of all effects; this covers from just below zero (-0.04) to 0.70, a rather wide range of uncertainty about where the mean effect size is actually situated.

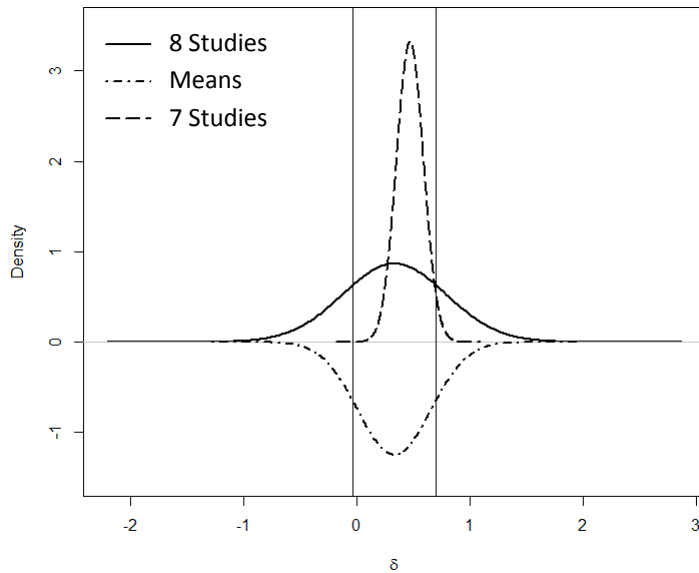


Figure 2. Distributions of population effects (above) and of mean population effects by type of measure used (below). Vertical lines mark the 95% confidence interval for the random effects mean of the eight effects.

Classify Study Features Using MUTOS

To fully apply the MUTOS framework to this data set would require a full reading of all eight articles and consideration of each component. For this demonstration I examine one feature that represents the O component: the decision making self-efficacy measure used.

Evaluate Diversity in Ms, Us, Ts, Os, and Ss

Because I am not familiar with the array of available career decision making self-efficacy measures available, I sought input on whether the set of three measures used in the studies located by Ryan (1999) is diverse. Personal communications from colleagues knowledgeable in the field (Lenz, Osborn, and Sampson) indicated that only the CDMSES was a familiar instrument. Also other versions of included scales exist (e.g., Betz, Klein, & Taylor, 1996), and Lent et al. (2016) have used a newly developed scale tapping this construct. Lastly, only the Career Decision Self-Efficacy

scale appears in the National Career Development Association's *Counselor's Guide to Career Assessment Instruments* (Wood & Hays, 2013).

The included instruments should be inspected for a better evaluation of their diversity, and content experts could judge other aspects such as their reactivity, formats, and so forth. For this example, given that other instruments have been identified, my assessment is that the measures used in the studies in Ryan's synthesis do not cover the full range of possible measures of decision making self-efficacy.

Evaluate Empirical Variation in Results Using MUTOS

In Figure 1 the effect sizes are sorted according to the scale used. It is immediately apparent that the study by Healy and Mourton (1984), the only study which used the Self-Estimated Career Management Competencies scale, shows a rather divergent effect. A chi-square test of differences in means between scales shows that the scale used relates to the size of the effect ($Q_B(2) = 26.85, p < .0001$). In addition, the residual test ($Q_E(5) = 6.82, p > .05$) shows no remaining variability; thus, a fixed-effects model is appropriate. The effects based on each distinct instrument can be considered equal.

Rather than focus on the specific group means for the MUTOS analysis of this O feature, we estimate the degree of variation in the means, using techniques similar to those used above. This reveals a somewhat smaller variance estimate, of 0.102, for between groups variability due to measures used. This variance is just under half the size of the full population variance, with a standard deviation of 0.320. The upside-down distribution in Figure 2 shows the spread of the true means by scale type. The range within which 95% of these means fall runs from -0.30 to 0.96, which is still a fairly broad range; thus, the upper and lower distributions based on all eight studies are both fairly wide. The measure used is important to the size of the effects, and it would not be safe to generalize across all measures of career decision making self-efficacy to make our inferences.

The fact that the Healy and Mourton effect stands out, and has a negative value, suggests closer inspection of their measure. Healy and Mourton's brief description of the Self-Estimated Career Management Competencies (SECMC) scale says that respondents rate their "Career Decision Making, World of Work Information, and Knowledge of Preferred Occupation on four-point scales (1 = upper 25 percent, 2 = upper 50 percent, 3 = upper 75 percent, 4 = lower 25 percent" (1984, p. 58). Placing one's self in a percentile range requires a rating relative to some other distribution of individuals, presumably relative to one's peers. However, not only are the categories confusing because they are not mutually exclusive (e.g., Category 1 is included in the ranges of Categories 2 and 3), but it is not clear what group provides the reference distribution. In addition, it seems like it would be extremely difficult to make such judgments. How does one know how well one's peers make decisions about careers (or how much they know about the world of work or their preferred occupations)?

The SECMC scale clearly behaved differently from the other two. When the effect from Healy and Mourton is omitted, the remaining results become homogeneous ($Q(6) = 6.84, p = .34$) with a mean of 0.47 ($SE = .12$). Also the between studies variance overall decreases to .01, which means 95% of all population effects are projected to fall between 0.28 and 0.66. This distribution is shown as the narrower distribution in the upper half of Figure 2, graphed with a dashed line. Virtually all effects are expected to be positive and moderate in size. If the Healy and Mourton effect is omitted we can be nearly certain that any intervention that examines career decision making will have a positive impact. Effects based on the Career Decision Making Self-Efficacy Scale and the Self-Estimated Career Management Competencies scale are comparable, and findings can be generalized across those two instruments. In addition, the mean of intervention effects can now be described as moderate in size. Most of the between scales (and between studies) variance was due to one unusual result.

Assess Connections to Desired Domain of Application, *UTOS

The last step is to assess the relevance of the results to a desired domain or situation. In this case, with all

studies included, 76% of effects in the population are likely to be positive, but the mean effect is not clearly above zero. Having set aside the unusual scale used by Healy and Mourton, we can easily generalize the findings of this set of seven studies across the other two measures used. The effect of career interventions on decision making self-efficacy is sizeable, at about a half of a standard deviation, and nearly all effects are expected to be positive.

A real application of this approach would also consider a range of other features of the studies. In this data set I also examined the role of publication date and found it did not relate to the size of the effect. Other features would be of more interest, such as the compositions of the samples of participants, the nature of the treatments used, and so on. A complete analysis might find that other features also relate to the size of the treatment effect or are confounded with the scale used.

Conclusions

In this paper I have discussed three ways to incorporate theories and prior expectations about the generalizability of results into a meta-analysis. This is in line with Sampson and colleagues' (2014) call for more attention to the role of theory in building an evidence base for career interventions. Prideaux, Creed, Muller, and Patton (2000) pointed out that some primary studies present theories as putative foundations for their work but do not explicitly link those theories to the interventions they study. Almost half of the studies they reviewed had no clear connection to theory at all. It is possible to build meta-analytic explanations purely empirically, such as with the response-surface modeling approach proposed by Rubin. It uses traditional metaregression methods, but predicts what combinations of study features lead to "optimal" results. Such models can be based on purely empirical findings about coded study moderators. However even this approach benefits from the use of theoretically grounded predictors. Without a basis in theory, we risk building intervention approaches on chance and forego opportunities to improve both theory and practice (Sampson et al., 2014).

A second approach based strongly on theory is meta-analytic path modeling. Approaches based on structural equation modeling in meta-analysis have to

date been largely based on correlational studies, but information about effective treatments can also be incorporated into this framework. Specifying a model before beginning the meta-analysis enables the reviewer to find missing connections, leading to potential future studies. Also, the data from such syntheses reveals which connections are well understood and which have been examined by fewer studies. Meta-analytic path models can also identify mediating variables (e.g., Whiteside & Becker, 2000), which is not possible in syntheses of simple bivariate relations.

The third approach is based on Cronbach's theory of generalizability. Specifying moderators of interest a priori and assessing the diversity of instances for each one is another way to evaluate whether pieces of evidence are missing from the meta-analysis—this is part of assessing what we don't know. The MUTOS approach focuses us on heterogeneity in the effects themselves and in the moderators studied for each MUTOS component. Estimating the amount of variability resulting from differences in these components allows us to make judgments about how widely or narrowly our results can safely be generalized.

In my example using Ryan's (1999) data, a simple, single result could not be safely generalized across the measures of career decision making self-efficacy found by Ryan. In addition, the set of measures did not include all known measures; thus, it was not particularly diverse. A mean effect was estimated across all measures and all studies, but with great uncertainty. Whiston and Rose (2015, p. 55) have called for the standardization of measures used in career studies, but that practice would limit our capacity to assess generalizability across measures. A middle ground might be preferable, where studies include one or two standard measures along with other unique measures chosen by the researcher. Information on the relations among these instruments, along with impact data from the interventions used, will inform us about commonalities among the measures different researchers are using. If all measures are deemed similar and appropriate to retain in a synthesis or in practice, more studies may be needed to get more precise estimates of the mean effect size for a treatment (e.g., Becker, 1996). Our focus on MUTOS and on variance estimation allows us to make that determination.

Let me present a final challenge: Could the field of career-intervention studies consider the creation of a shared database of effect-size information about career interventions, like that proposed by Baldwin and Del Re? Such an effort would allow ongoing assessment of what is known and not known, could be guided and informed by theory, and should provide up to date guidance for practice. Analytic strategies like those described here, along with such a detailed data source of study results, would improve future meta-analyses as well as provide ideas and guidance for design of future studies that target needed information. It is a collaboration worth considering.

References

- * Studies included in the example are marked with an asterisk.
- Baker, S. B., & Popowicz, C. L. (1983). Meta-analysis as a strategy for evaluating effects of career education interventions. *Vocational Guidance Quarterly*, 31(3), 178–186.
- Baldwin, S. A., & Del Re, A. C. (2016). Open access meta-analysis for psychotherapy research. *Journal of Counseling Psychology*, 63(3), 249–260.
- Becker, B. J. (1992). Using results from replicated studies to estimate linear models. *Journal of Educational Statistics*, 17(4), 341–362.
- Becker, B. J. (1995). “Using results from replicated studies to estimate linear models”: Correction. *Journal of Educational and Behavioral Statistics*, 20(1), 100–102.
- Becker, B. J. (1996). The generalizability of empirical research results. In C. P. Benbow & D. Lubinski (Eds.), *Intellectual talent: Psychometric and social issues* (pp. 362–383). Baltimore: Johns Hopkins Press.
- Becker, B. J. (2009). Model based meta-analysis. In H. M. Cooper, L. V. Hedges & J. Valentine (Eds.), *The handbook of research synthesis and meta-analysis* (Vol. 2nd ed., pp. 377–396). New York, NY: Russell Sage Foundation.
- Becker, B. J., & Aloe, A. M. (2016). *Generalizing meta-analytic data using cronbach's (M)UTOS framework*. Unpublished manuscript.

- Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the Career Decision-Making Self-Efficacy scale. *Journal of Career Assessment, 4*, 47–58.
- Birge, R. T. (1932). The calculation of errors by the method of least squares. *Reviews of Modern Physics, 40*, 207–227.
- Brown, S. D. (2015). On statistical wizardry, construct proliferation, and other challenges for our science. *The Counseling Psychologist, 43*, 614–628.
- Brown, S. D. (2017). Meta-analysis and evidence-based career practice: Current status and future directions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 82). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch8>
- Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown and R. W. Lent (Eds.), *Handbook of counseling psychology* (pp. 740–766). New York: Wiley.
- Brown, S. D., Ryan Krane, N. E., Brecheisen, J., Castelino, P., Budisin, I., Miller, M., & Edens, L. (2003). Critical ingredients of career choice interventions: More analyses and new hypotheses. *Journal of Vocational Behavior, 62*(3), 411–428.
- Campbell, D. T. (1969). Definitional versus multiple operationism. *Et al., 2*, 14–17.
- Cheung, M. W.-L., & Chan, W. (2005). Meta-analytic structural equation modeling: A two-stage approach. *Psychological Methods, 10*(1), 40–64.
- Cook, T. D. (1991). Meta-analysis: Its potential for causal description and causal explanation within program evaluation. In G. Albrecht & H. Otto (Eds.), *Social prevention and the social sciences: Theoretical controversies, research problems, and evaluation strategies*. Berlin, Germany and New York, NY: Walter de Gruyter.
- Cook, D. J., Sackett, D. L., & Spitzer, W. O. (1995). Methodologic guidelines for systematic reviews of randomized control trials in health care from the Potsdam Consultation on meta-analysis. *Journal of Clinical Epidemiology, 48*(1), 167–171.
- Cooper, H. M. (1982). Scientific guidelines for conducting research reviews. *Review of Educational Research, 52*(2), 291–302.
- Cooper, H. M. (2016). *Research synthesis and meta-analysis: A step-by-step approach*. Thousand Oaks, CA: Sage.
- Cronbach, L. J. (1982). *Designing evaluations of educational and social programs*. San Francisco: Jossey-Bass.
- Cronbach, L. J., Gleser, G. C., Nanda, H., & Rajaratnam, N. (1972). *The dependability of behavioral measurements: Theory of generalizability for scores and profiles*. New York: Wiley.
- Cronbach, L. J., & Snow, R. E. (1977). *Aptitudes and instructional materials*. New York: Wiley.
- Dersimonian, R., & Laird, N. (1986). Meta-analysis in clinical trials. *Controlled Clinical Trials, 7*, 177–187.
- Evans, J. H., Jr., & Burck, H. D. (1992). The effects of career education interventions on academic achievement: A meta-analysis. *Journal of Counseling & Development, 71*(1), 63–68.
- Fretz, B. R. (1981). Evaluating the effectiveness of career interventions. *Journal of Counseling Psychology, 28*(1), 77–90. [dx.doi.org/10.1037/0022-0167.28.1.77](https://doi.org/10.1037/0022-0167.28.1.77)
- *Fukuyama, M. A., Probert, B. S., Neimeyer, G. J., Nevill, D. D., & Metzler, A. E. (1988). Effects of DISCOVER on career self-efficacy and decision making of undergraduates. *The Career Development Quarterly, 37*, 56–62.
- *Garis, J. W., & Harris-Bowlsbey, J. (1984). Discover and the counselor: Their effects upon college student career planning progress. *ACT Research Report #85*.
- *Garis, J. W., & Niles, S. G. (1990). The separate and combined effects of SIGI or DISCOVER and a career planning course on undecided university students. *The Career Development Quarterly, 38*, 261–274.
- Glass, G. V. (1976). Primary, secondary, and meta-analysis of research. *Educational Researcher, 5*, 3–8.
- *Healy, C. C., & Mourton, D. L. (1984). The effects of an abbreviated Self-Directed Search on the career decision competencies of community college students. *The Vocational Guidance Quarterly, 33*, 55–62.

- Heppner, M. J., & Heppner, P. P. (2003). Identifying process variables in career counseling: A research agenda. *Journal of Vocational Behavior, 62*, 429–452.
- Higgins, J. P. T., & Thompson, S. G. (2002). Quantifying heterogeneity in a meta-analysis. *Statistics in Medicine, 21*, 1539–1558.
- Lent, R. W., Ezeofor, I., Morrison, M. A., Penn, L. T., & Ireland, G. W. (2016). Applying the social cognitive model of career self-management to career exploration and decision-making. *Journal of Vocational Behavior, 93*, 47–57.
- Liu, S., Huang, J. L., & Wang, M. (2014). Effectiveness of job search interventions: A meta-analytic review. *Psychological Bulletin, 140*, 1009–1041.
- *Luzzo, D. A., Funk, D. P., & Strang, J. (1996). Attributional retraining increases career decision-making self efficacy. *The Career Development Quarterly, 44*, 378–386.
- *Luzzo, D. A., & Taylor, M. (1993-1994). Effects of verbal persuasion on the career self-efficacy of college freshmen. *CACD Journal, 14*, 31–34.
- Matt, G. E., & Cook, T. D. (2009). Threats to the validity of generalized inferences. In H. Cooper, L. V. Hedges, & J. C. Valentine (Eds.), *The handbook of research synthesis and meta-analysis* (pp. 537–560). New York: Russell Sage Foundation.
- Nichols, G. C. (2009). *Career interventions in context: A meta-analysis examining the influence of environmental factors on outcome* (Order No. 3367792). Available from ProQuest Dissertations & Theses Global. (305029604). Retrieved from <https://login.proxy.lib.fsu.edu/login?url=http://search.proquest.com/docview/305029604?accountid=4840>
- *Niles, S., & Garis, J. W. (1990). The effects of a career planning course and a computer-assisted career guidance program (SIGI PLUS) on undecided university students. *Journal of Career Development, 16*, 237–248.
- Oliver, L. W., & Spokane, A. R. (1981, August). *Integrative analysis of career counseling outcome research: Some preliminary findings*. Paper presented at the annual meeting of the American Psychological Association, Los Angeles, CA.
- Oliver, L. W., & Spokane, A. R. (1983). Research integration: Approaches, problems, and recommendations for research reporting. *Journal of Counseling Psychology, 30*(2), 252–257.
- Oliver, L. W., & Spokane, A. R. (1988). Career-intervention outcome: What contributes to client gain? *Journal of Counseling Psychology, 35*(4), 447–462.
- Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide*. Malden, MA: Blackwell.
- Presby, S. (1978). Overly broad categories obscure important differences between therapies. *American Psychologist, 33*(5), 514–515.
- Prideaux, L., Creed, P. A., Muller, J., & Patton, W. (2000). A review of career interventions from an educational perspective: Have investigations shed any light? *Swiss Journal of Psychology, 59*(4), 227–239.
- Rubin, D. B. (1992). Meta-analysis: Literature synthesis or effect-size surface estimation? *Journal of Educational Statistics, 17*(4), 363–374.
- Ryan, N. E. (1999). *Career counseling and career choice goal attainment: A meta-analytically derived model for career counseling practice* (Order No. 9930585). Available from ProQuest Dissertations & Theses Global. (304513406). Retrieved from <https://login.proxy.lib.fsu.edu/login?url=http://search.proquest.com/docview/304513406?accountid=4840>
- Sampson, J. P., Jr., Hou, P.-C., Kronholz, J. F., Dozier, V. C., McClain, M.-C., Buzzetta, M., Pawley, E. K., Finklea, J. T., Peterson, G. W., Lenz, J. G., Reardon, R. C., Osborn, D. S., Hayden, S. C. W., Colvin, G. P. and Kennelly, E. L. (2014). A content analysis of career development theory, research, and practice—2013. *The Career Development Quarterly, 62*(4), 290–326.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton Mifflin.
- Sheu, H.-B., Lent, R. W., Brown, S. D., Miller, M. J., Hennesy, K. D., & Duffy, R. D. (2010). Testing the choice model of social cognitive career theory across Holland themes: A meta-analytic path analysis. *Journal of Vocational Behavior, 76*(2), 252–264. <http://doi.org/10.1016/j.jvb.2009.10.015>
- Shevlin, M., & Millar, R. (2006). Career education: An application of latent growth curve modelling to career information-seeking behaviour of school pupils. *British Journal of Educational Psychology, 76*, 141–153.
- Spokane, A. R., & Oliver, L. W. (1983). Outcomes of vocational intervention. In W. B. Walsh & S. H. Osipow

- (Eds.), *Handbook of vocational psychology: Applications* (Vol. 2, pp. 99–136).
- *Tempestini, M. A., Horan, J. J., & Good, R. (1988). The effect of two commercial software programs on indices of career development. *Computers in Human Behavior*, *4*, 167–173.
- Thoresen, C. E., Hosford, R. E., & Krumboltz, J. D. (1970). Determining effective models for counseling clients of varying competencies. *Journal of Counseling Psychology*, *17*(4), 389–375.
- Tracey, T. J., & Rounds, J. B. (1993). Evaluating Holland's and Gati's vocational-interest models: A structural meta-analysis. *Psychological Bulletin*, *113*(2), 229–246.
- Viswesvaran, C., & Ones, D. S. (1995). Theory testing: Combining psychometric meta-analysis and structural equations modeling. *Personnel Psychology*, *48*, 865–885.
- Whiston, S. C. (2017). Conducting general versus population and setting-specific meta analyses. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 90). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch9>
- Whiston, S. C., & Rose, C. S. (2015). Career counseling process and outcome. In P. J. Hartung, M. L. Savickas, & W. B. Walsh, (Eds.) *APA Handbook of career intervention: Vol. 1. Foundations* (pp 43–60). Washington, D.C.: American Psychological Association.
- Whiston, S. C., Sexton, T. L., & Lasoff, D. L. (1998). Career-intervention outcome: A replication and extension of Oliver and Spokane (1988). *Journal of Counseling Psychology*, *45*(2), 150–165.
- Whiston, S. C., Brecheisen, B. K., & Stephens, J. (2003). Does treatment modality affect career counseling effectiveness? *Journal of Vocational Behavior*, *62*(3), 390–410.
- Whiteside, M. F., & Becker, B. J. (2000). The young child's post-divorce adjustment: A meta-analysis with implications for parenting arrangements. *Journal of Family Psychology*, *14*, 1–22.
- Wood, C., & Hays, D. (Eds.). (2013). *A counselor's guide to career assessment instruments* (6th ed.). Broken Arrow, OK: National Career Development Association.

Chapter 11 - Personal Reflections on a Career Spent Creating and Sustaining Researcher-Practitioner Collaborations

V. Scott H. Solberg

Boston University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch11>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=C5B01OKtua8&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA&index=16

Appreciation is expressed to James Sampson, Emily Bullock-Yowell, and Janet Lenz for their helpful feedback on previous drafts.

Correspondence should be addressed to V. Scott H. Solberg, Department of Counseling and Human Development, Boston University, 2 Silber Way, Boston, MA 02215. E-mail: ssolberg@bu.edu

Keywords: researcher-practitioner collaborations, collaborative process, counseling psychology, vocational psychology, career development programs and services, recommendations for practice, schools, students

This chapter offers a personal reflection on the opportunities and challenges associated with engaging in researcher-practitioner collaborations. This type of research falls under the general category of community-based participatory research (CBPR) that was introduced in relation to translating medical research into effective practice (Israel, Eng, Schultz, & Parker, 2005). CBPR methods rely on developing “researcher-practitioner collaborations” in conducting discovery research, as well as designing, implementing, and evaluating innovative career development programs and services. In this context, practitioners refer broadly to school and career counselors, educators, community-based organizations as well as local, state and federal program officers. The chapter explores a number of topics that include the following: (a) challenges and pitfalls that one may encounter when engaging in researcher-practitioner collaborations, (b) ways in which counseling psychology provides the foundational skills for participating in collaborative efforts, (c) my personal motivation for engaging in collaborative efforts, (d) a chronicle of my collaboration efforts, (e) ideas on how to establish a researcher-practitioner collaboration, (f) how to launch a collaborative project, (g) how to expand one's influence and sustain collaborative efforts, and (h) the existential crisis one may experience when conducting researcher-collaborations in low income communities.

Challenges Associated with Engaging in Researcher-Practitioner Collaborations

Before describing strategies to engage in researcher-practitioner collaborations, it is important to acknowledge that there is a myriad of challenges. There is clearly a danger of investing significant time and resources in pursuing researcher-practitioner collaborations that fail miserably. Several researchers describe the complexities of collaborating with community practitioners (Daley, James, Ulrey et al., 2010; Hains & Fouad, 1994; Ross, Loup, Nelson et al., 2010; Strickland, 2006) and the number of ways these efforts can fail. Hains and Fouad (1994) described the challenges they encountered when attempting to implement a randomized problem-solving intervention with lower income and predominately Latino/a and African American high school youth. Their publication offers an excellent postmortem of what can go wrong that includes being undermined by practitioners who do not perceive researchers as credible and working with populations whose range of personal and academic challenges may not enable them to complete the prescribed treatment conditions.

Daley et al. (2010) experienced difficulty finding common agreement about the problem under investigation until efforts were made to create a trusting relationship between the practitioners and researchers.

They also point out the difficulty of practitioners completing human subjects training protocols that often demand a high literacy level and some understanding of the research-world. The most significant challenge they identified was faculty researchers who were unable to compromise and share control for the project design, implementation, and analysis with their practitioner collaborators. For example, in conducting qualitative analyses, some faculty found it difficult to fully value the input of practitioners because they felt their own professional experience was more credible. In the end, Daley et al. acknowledge that sometimes the best scientists are not good candidates for establishing the egalitarian working environment necessary to establish effective researcher-practitioner collaborations.

Another challenge involves whether research-practitioners are valued by one's university or department. While there are some universities and departments that value engaged scholarship, many characterize this type of work as outreach, which can be code for volunteer work. For many it is hard to understand whether and how such activities can be aligned to one's research program and/or that these activities can produce quality research. For others, this type of work takes valuable time away from the office. Junior faculty members face the added danger of losing one or more years trying to launch this type of research, which can have disastrous implications for producing the quality and quantity of publications needed to achieve tenure. In sum, engaging in researcher-practitioner collaborations creates many uncertainties and as many colleagues have made clear to me over the years, researcher-practitioner collaborations are not for everyone.

The Important Role of Counseling Psychology

Until preparing this chapter, I did not fully realize that my career could be characterized as a collection of researcher-practitioner collaborations. Whatever success I may have achieved in developing and sustaining these collaborations is due to my professional training in counseling psychology. Counseling psychology uses a scientist-practitioner model whereby our clinical work with clients is an application of evidence-based methods and strategies. By working with clients in therapy, we learn the tremendous value of listening skills and that our expertise and insight is not as important as our

ability to enable our clients to make meaning from the therapeutic experience. Counseling psychology places a strong value on working towards social justice by focusing efforts on decreasing inequities experienced by low income, high risk, and underrepresented populations. These efforts are informed by an ethical responsibility to use culturally responsive interventions and multicultural communication skills—all of which are necessary when working in community settings. In researcher-practitioner collaborations, the clients are most often individuals who receive services from an organization or system. The goal of working with practitioners is to discover and implement strategies that empower their clients to overcome existing challenges and inequities. From feminist psychotherapy (Enns, 1992) we are encouraged to understand the nature of power and, as “trained professionals,” the importance of redistributing this power using egalitarian strategies that enable practitioners to find their own voice in shaping the discourse and perspectives being offered. From emancipatory communitarianism (Blustein, McWhirter, & Perry, 2005; Prilleltensky, 1997) we are encouraged to address social justice by examining whether and how our strategies empower practitioners to effectively intervene within the context surrounding their clients, enabling clients to successfully navigate their own challenges as they strive to realize their career and life goals. From my experiences, all of these skills and perspectives play an important role in setting the foundation for establishing effective researcher-practitioner collaborations.

Personal Journey with Researcher-Practitioner Collaborations

My engagement with researcher-practitioner collaborations began with a school dropout prevention grant I received while a doctoral student at UC Santa Barbara. Personally, I wonder if being drawn to embracing a researcher-practitioner model naturally evolved from my enjoyment of managing group dynamics, conducting family therapy and group counseling, and having an odd penchant for always accepting the most challenging cases. These experiences enabled me to learn how to attend to verbal, nonverbal, and contextual communication cues simultaneously and to manage conflict, resistance, and challenges in a way that was not perceived as personal and could be reframed to improve the relational dynamics. I remember being concerned that if I did

not collaborate with practitioners that my own cultural identity and privileges associated with being a White male would cloud my interpretation of the problem and results; therefore, such collaborations could enable me to access different perspectives and interpretations. Multicultural skills were especially important when I worked in Milwaukee because I was generally the only White person and only male on a given collaborative team. While reflecting on these experiences, I am also aware that many in counseling psychology are likely more qualified to share their experiences on the topic of researcher-practitioner collaborations, including David Blustein, Nadya Fouad, Larry Gerstein, Maureen Kenny, Michael Mobley, John Romano, Rich Lapan, Karen O'Brien, Ellen McWhirter, Saba Ali, Krista Chronister, Erin Hardin, and Lisa Flores to name a few.

The two areas I have focused on throughout my career is the transition into high school and the transition from high school to early adulthood. I believe that interventions, programs, and services that enable all youth to graduate from secondary education with the skills and intentions to enter and complete a postsecondary program or degree has the potential of transforming the economic future of youth and the communities in which they live. My focus has been on urban school districts and specifically lower income youth and predominately Latino/a and African American youth. While this has been my focus, I believe that researcher-practitioner collaborations can effectively address a wide range of societal challenges, such as the needs of under and unemployed adults (Blustein, 2013) and challenges reflected throughout the counseling psychology specialties such as health psychology, prevention, ethnic and racial diversity, advancement of women, lesbian, gay, bisexual, transgender issues, and university counseling centers.

Another reason I am attracted to this work is my belief that the field of counseling psychology, and by extension, vocational psychology, is an applied social science whereby the goal of our research efforts is to translate basic science into practice (Dorn, 1984). Personally, I find this translation work challenging, exciting, and rewarding and much richer when practitioners and policy makers are involved. I have found that while a great deal of effort is spent developing and executing the collaboration, quality publications

can be generated to ensure that one is able to meet the conditions necessary for merit, tenure, and promotion.

My researcher-practitioner collaborations revolve around the application of exemplarian action research (Coenen, 1998), which I believe offers a valuable strategy for addressing the complexity involved in creating collaborations that lead to implementing social justice oriented interventions (Solberg, 2003). Developed from Giddens's Structuration Theory (1976, 1993), exemplarian action research involves three phases. The thematic phase involves the process of establishing a shared perspective by engaging in activities that enable researchers and practitioners to learn about each other's world-view regarding the problem being investigated. Once a shared perspective is achieved, the second phase, crystallization, involves the design of new programs, services, or interventions that will address the problem. Finally, the exemplarian phase involves the implementation and evaluation of the program, service, or intervention. I believe that using an exemplarian action research strategy enabled the Achieving Success Identity Pathways program (ASIP; Solberg et. al., 1998) to become effectively implemented in high needs schools (Solberg, 2003; Solberg, Close & Metz, 2001).

Engaging in researcher-practitioner collaborations has made me a better researcher by calling out different ways to interpret data, deepening my understanding of key constructs, and helping me design studies that are more relevant and meaningful to practitioners. At a time when our impact is often being judged by our publication citations (e.g., h-index), engaged scholarship and specifically research-practitioner collaborations offer an opportunity to experience the impact of one's work on both the lives of the practitioners seeking to improve the quality of their programs and services and of the children, youth, and adults being served. For the ASIP program, quasi-experimental studies found that Latino/a and African American students exposed to the program improved with respect to grades, credits earned, and courses passed over those who did not participate (ScholarCentric, n.d.).

Most rewarding, however, are the unrecorded moments. The principal calling to say congratulations when standardized test scores improved. The single teen parent who received a full scholarship to the Milwaukee School of Engineering. The 9th grade class that

successfully petitioned their principal to get a new—more committed—math teacher. The mother who, upon being denied entry at the front of the school, stood in a rainstorm and banged on the back door until the principal finally opened it. “I know it’s too late for my daughter to come in the front door,” she said, “but she says she needs to be here today.” A group of girls during one ASIP classroom conversation using the opportunity to help the teacher and our staff become aware that their fellow student was in an abusive relationship. There are many more stories, but one that stands out is an ASIP facilitated discussion recorded by the *Milwaukee Journal Sentinel*. A male student shared that he had to move from California because people were selling drugs from his home. A female student responded immediately, saying that they also sell drugs from her home, but the key is to decide where you belong, to which she replied, “I belong in this school.” What was not recorded was a follow-up conversation the principal shared with me a week later. The male student in the story asked the principal if he could retake algebra that summer. When the principal told him that he was doing fine in math he replied, “Yes, but I know I can do better.” Most of these stories are from two high schools where students were entering the 9th grade averaging 4th and 5th grade level math and language arts skills. Many were pushed out of other high schools. Nearly all were low income and predominately Latino/a and African American. More recently, schools have inquired as to why my social-emotional learning assessment indicates that their top ranked student is highly at-risk for dropping out (Davis, Solberg, deBaca, & Hargrove, 2014). After being directed to talk to the student, they often find out their best student is facing a number of life challenges, is homeless or, as in a recent case, that they recently tried to commit suicide.

My Chronicle of Researcher-Practitioner Collaborations

The recommendations described in the next three sections are for engaging in researcher-practitioner collaborations. One reason for providing a chronological history of my collaborations is to show that it is possible for collaborative efforts to culminate in publishable research and a research program. My first publications were co-authored with Pete Villarreal, who was director of the Latino/a Educational Opportunity Program (Solberg, Hale, Villarreal, & Kavanaugh, 1993; Solberg,

O’Brien, Villarreal, Kennel, & Davis, 1993; Solberg, Valdez, & Villarreal, 1994). In addition to helping design and collect the student surveys, he and his staff provided a key interpretation of my dissertation data that strengthened the publication value tremendously (Solberg & Villarreal, 1997). With Dennis Nord, Director of Career Services at UC Santa Barbara, we created the career search self-efficacy items and a model for why career search self-efficacy was an important area of focus (Solberg, Good, & Nord, 1994). Dennis also helped me gain access to undergraduates to collect the initial data, while Glenn Good taught me how to use principal components analysis to establish initial construct validity (Solberg, Good, Nord, et al., 1994). In my first faculty position at Loyola University Chicago, Steven Brown explained the important role of testing for mediators and moderators (Solberg, Good, Fischer, Brown, & Nord, 1995).

On internship at the University of Illinois, I sought to replicate some interesting research on Asian American help-seeking patterns (Atkinson & Gim, 1989; Atkinson, Whiteley, & Gim, 1990). Counselors Samira Ritsma and Ann Jolly, fellow intern Shiraz Tata, and I worked with the Asian American student association on the design of the instrument and the student leaders supported our efforts to collect data. While the primary goal of the research was to establish credibility for serving a population that was significantly underrepresented in the counseling center (Sue & Zane, 1987), we also were able to generate two publications (Solberg, Choi, Ritsma, & Jolly, 1994; Solberg, Ritsma, Davis, Tata, & Jolly, 1994). The culmination of these early collaborations launched two lines of research—career search self-efficacy (Solberg, et al., 1994; Solberg, 1998) and social-emotional learning factors associated with academic success (Davis, et al., 2014; Close & Solberg, 2008). More recently, these lines have been integrated in a manner that demonstrates the value of career search self-efficacy as a key mechanism in supporting positive youth development through its direct effects on a number of social-emotional learning skills (Solberg, Howard, Gresham, & Carter, 2012).

My recommendations predominately reference the following researcher-practitioner collaborations from my time at UW Milwaukee, UW Madison, and, more recently, Boston University. ASIP began in 1995 upon my arrival at UW Milwaukee. The project was

initially developed and implemented at the Milwaukee Area Technical College (MATC) and UW Milwaukee as a college transition strategy (Solberg et al., 1998). ASIP involves providing students with personalized bar graphs about key social-emotional learning (i.e., resiliency) skills associated with academic success and conducting authentic conversations and goal setting activities to enable students to develop these skills. In 1998, ASIP was introduced at South Division High School, and the program and instruments were localized for high school and later middle school populations. At South Division, a staff of three provided a classroom intervention every other week to both 9th and 10th grade students (Solberg et al., 2001), and later the program was brought to North Division High School. As funding at South Division High School waned, an entrepreneur reached out and asked to translate ASIP into a curriculum that could be sold to schools and was rebranded as *Success Highways* (Solberg, 2006). I have continued to refine the measures, and with the support of educators in Las Vegas, I was able to create an elementary school version of the assessment. While at South Division, I also received funding from Milwaukee Public Schools District to open an after-school program that we used to further support students with tutoring and to provide access to GED programs for out of school youth. During this time, I began collaborating with the Latino Community Center and eventually became Board President, which enabled me to transfer operations of the afterschool program over to their talented staff.

In 2005, I joined the Wisconsin Center for Education Research (WCER) where I directed Wisconsin Careers, which is most notable for their online career information systems—WisCareers and CareerLocker. While at WCER, I served as a PI on a large-scale project with the Singapore Ministry of Education to localize, implement, and evaluate CareerLocker for their school system (eCareers.sg, n.d.). Concurrently, I received a subcontract with the National Collaborative on Workforce and Disability for Youth (NCWD-Youth) to conduct a national study of individualized learning plans (ILPs; Solberg, Phelps, Haakenson, Durham, & Timmons, 2012). NCWD-Youth is funded by the U.S. Department of Labor's Office of Disability Employment Policy (ODEP) as a national technical assistance center supporting practitioner organizations and state leaders implement career and workforce development programs and services for youth. The initial ILP study lasted four

years and consisted of a range of methods across several studies (Solberg, Wills, Redmond, & Skaff, 2014). A key element was working closely with 14 schools from four states to study their ILP practices and provide technical assistance.

In 2010, the move to Boston University began a relationship with the Rennie Center for Educational Research and Policy as they were also conducting a national policy analysis of ILPs (Rennie Center, 2011). Together we launched the Massachusetts Institute for College and Career Readiness (MICCR) with a researcher-practitioner grant from the U.S. Department of Education's Institute for Education Sciences (IES) in collaboration with MassINC (MassINC, n.d.) and the College and Career Readiness office of the Massachusetts Department of Elementary and Secondary Education (MA DESE, n.d.). MICCR facilitates districts' abilities to engage in evidence-based college and career readiness programs and services by embedding a senior national research fellow with each of the 15 district teams. MICCR Senior Research Fellows are receiving professional development on how to work with schools and make their research relevant to practitioners and policy makers. While not a complete representation of the researcher-practitioner collaborations I have engaged in during my career, the remainder of this paper draws primarily from these experiences to explore strategies to establish, maintain, and scale researcher-practitioner collaborations.

Recommendations for Initiating Researcher-Practitioner Collaborations

The recommendations are divided into three sections. This section describes the initial phase of initiating a researcher-practitioner collaboration, and the subsequent two sections will describe recommendations for launching a specific project and expanding your reputation and sustaining efforts, respectively.

During my interview with the University of Wisconsin-Milwaukee, I explained that I spent my initial years developing a theory and culturally responsive instruments that I hoped to translate into an intervention. As my colloquium came to a close, Professor and Vice Provost Adrian Chan promised that if I was selected, he would help me find a place to conduct the intervention,

which he did. The initial conversation at MATC was with a formal panel of four administrators. During this hour-long meeting, I rambled through my presentation and was interrupted several times to clarify points. After 20 minutes, the lead administrator stated that she had five more minutes before she needed to leave. I froze. Immediately, Adrian took over the conversation and spent the next five minutes brainstorming the next steps and what additional documentation they needed to decide on whether to provide financial support. After the meeting, Adrian gave me feedback on how I responded throughout the whole meeting and was most focused on whether I was able to manage the cultural dynamics of being a young, White male presenting to four African American women senior administrators. I explained that I didn't know what to say when she told me there was only five minutes left, and he responded by saying that was the reason he was in the meeting—to support me in those moments. Thankfully, they did follow up, and this experience led to the collaboration with the student support services staff that launched the initial design and implementation of the Achieving Success Identity Pathways program (ASIP; Solberg et al., 1998).

When establishing research-practitioner collaborations, the art of selling one's ideas or projects may often start with a verbal presentation to someone who knows nothing about our work. What I learned from Adrian is the importance of having a mentor and using the initiating conversations as learning opportunities. Over the past 20 years, I have learned the importance of sending a brief—no more than one or two pages—introduction to the idea prior to the meeting. Below are other strategies that have been helpful.

Don't Talk So Much.

Practice multiple elevator speeches that can generate interest in a one minute, five minute, and 10 minute summary. The one minute summary is for the highest administrators who may only have five minutes for the entire conversation (e.g., superintendents, executive directors, CEOs, governor's staff, state officials, elected officials). Five minutes are for the midlevel staff with whom you can expect 30 minutes for the complete discussion, and 10 minutes is for an hour long discussion. The reason for the brevity is that the goal of

an initiating conversation is to help practitioners develop a clear understanding of how the idea will leverage their interests. A short overview should result in questions from which you are able to more clearly understand the issues pertinent to the practitioner. This allows time to restate or reexamine the initial idea from the practitioners frame of reference. It is important to keep answers short and concise. Often the most important questions (e.g., cost, resources needed) may come later and may not surface at all if too much valuable time is spent offering multiple examples or providing long-winded explanations. Based on my experience with the MATC meeting, I learned the importance of always clarifying how much actual time the individuals have at the start of the meeting to ensure key points are presented to those in positions of authority and decision-making. And it is always encouraging when a meeting that is scheduled for 30 minutes goes a full hour.

Connect Your Idea to National Concerns That Are Valued by the Organization.

During my term as associate dean for research at Boston University, I found that faculty are often experts in their research domain but have trouble linking their work to a larger national context. This is especially important for grant writing but also for connecting with organizations that must engage in evidence-based practice that are likely to have an impact on major societal challenges. A wide range of national concerns can be addressed through career development programs and services including college and career readiness, improving college completion rates, improving high school graduation rates (also test scores, rigor of courses completed), reducing college student debt, increasing employability, supporting local labor market needs, managing unemployment rates, and supporting the future employment outlook among disconnected youth, individuals with disabilities, and court-involved youth and adults. The key is to know which of these or other national concerns are relevant to the practitioners with whom you hope to collaborate.

Don't Play Into "Professor" Stereotypes.

I try to remain consciously aware that the people I am meeting for the first time are likely to hold a range of sentiments toward academia. Being introduced

in terms such as *professor*, *doctor*, *faculty*, *graduate student*, or *doctoral student* may conjure up a range of assumptions. Some of these assumptions are associated with living in elite ivory towers where we actively remain disconnected from the real world—a place where we are paid to know the answers but often fail to be aware of the most relevant questions. Our university's overhead rates on federal grants are perceived as greedy when so many of our community-based organizations struggle to make payroll. When I am in a new audience, I often refer to myself as an “educator” with the hope that the term may invoke a more egalitarian relational base. Ms. Buendia from South Division High School (who was not even 5' tall) always referred to me as “the little professor.” She was awesome. While I personally prefer “Scott,” I recognize that this is a privilege of being a White male who expects to be respected for my social position and expertise. In these settings, I try to remember to introduce my female and colleagues of color as doctor or professor when working with practitioners because I cannot expect they will always receive the level of professional respect they deserve.

Remember that we, as faculty, are often perceived as possessing liberal political beliefs (“we lean to the left”), valuing politically correct speech, and most challengingly—valuing multiculturalism, which many believe is leading to the destruction of our American melting pot ideals (Schlesinger, 1992). In my personal experience, we can find a way to create effective collaborations when we are able to collectively focus on a common goal. At one high school, the principal held strong conservative beliefs that aligned with his Christian values. At one point we had a situation where a gay student was being targeted. The student's counselor asked me to talk with the principal about the situation. The Principal's response was firm and direct: “Do what needs to be done to protect the student.” Whatever his personal beliefs, his number one goal was to ensure success for all his students. As Board President of the Latino Community Center, I learned that many conservative benefactors provided funding for the day-to-day operations of a center that worked with low income young children on the south side of Milwaukee. The Bradley Foundation, a very conservative organization, provided the Center with significant operational funding. While the common goal was to help youth “pull themselves up by their own bootstraps,” there

was a collective understanding that low income youth deserved a “pair of boots” to get started on their journey.

Once an Idea Is Perceived as Valuable, Transition the Discussion to “Next Steps.”

Initiating conversations has three phases: (a) introducing the idea and clarifying details through questions and answers, (b) exploring the feasibility of implementing the idea, and (c) discussing next steps to developing a collaborative effort. In my experience, too much time is spent on the first phase when b and c are the most important part of the conversation. Exploring how to implement the idea allows one to determine whether genuine interest exists. The words “let me get back to you on that,” are a pretty good sign that they may like the idea but are not ready or interested in moving forward.

When ASIP was well underway at MATC, my dean asked me to meet with Milwaukee high school principals to see whether ASIP could address high dropout rates. At the time, the governor was threatening to take over the Milwaukee high schools if they did not show improvement. My professional goal was to get back into middle and high school settings. I bring up this example because it wasn't the South Division High School principal's interest that was important to creating this researcher-practitioner collaboration in a challenging urban high school. What was most important was whether the teachers and educators would be interested. In this case, I met in small groups with educators responsible for 9th and 10th grade youth. The meetings were used to introduce the idea, listen to their feedback, and jointly determine the feasibility of the project. This opportunity led to a long relationship and a personal professional development opportunity that lasted many years.

Sometimes the initiating conversation is not about starting a new project but about increasing one's social capital by making others in key positions aware of our work. A senior physics researcher at Boston University recently sought ideas on how to sustain his work-based learning project focused on supporting STEM skill development and interests among low income and racially and ethnically diverse youth. While very successful at creating a STEM work-based learning

program through NSF funding, no one in the state government or private sector knew of his work. The challenge was figuring out who in the state system to approach. With the move to Boston University and the launch of MICCR, I have had the opportunity to work closely with state officials from the office on College and Career Readiness. This relationship helps me navigate through the complex state system when a faculty member needs to find a state contact. In this case, I was referred to the legislative director for the state superintendent of schools, who was well versed in the state's STEM efforts and was someone whom I had recently met on another state task force. The goal of the meeting was to let her know about the great work the professor was doing—nothing more. It was the first time the professor was having this type of meeting, so we did a lot of preparation related to the length and depth of his introduction for the hour-long meeting. The success of the meeting was that one of the next steps included an invitation to attend a state-level STEM coalition meeting and her interest in connecting us with other state leaders. Hardin Coleman, dean at Boston University's School of Education, refers to the value of this type of interaction as “friend-building” instead of “fund-building” (Personal communication, 2014).

Designing a Collaborative Project

If practitioners express initial interest in one's idea for a collaborative project, the following recommendations are designed to move from the “it's a great idea” phase to the launch of a collaborative project.

Clarifying Roles and Responsibilities

After the initial meeting, it is critical to write down a summary of the project that describes the next steps and the various roles and responsibilities needed to execute those next steps. There are many ways to misunderstand one another, and it is better to verify and clarify specifics at the start. There are rare times when you do meet someone and you realize that you both see the problem and solution in a similar manner.

Using Our Multicultural Counseling Skills to Establish Credibility

As Daley et. al. (2010) described, establishing one's credibility with practitioners is a key initial phase to establishing an effective collaboration. Sue and Zane (1987) described two forms of credibility—achieved and ascribed. In order to develop effective researcher-practitioner collaborations with people who have no idea who we are, there is a need to focus on strategic ways to *achieve* credibility. For the ASIP project in Milwaukee, it was one year before the principal perceived me as credible and two years before credibility was fully achieved among the teachers. After my first year working with the high school, a rumor spread through the school that I was moving away after having promised to work with them for multiple years—in actuality, I was attending APA in San Francisco. A second rumor surfaced that I was holding a meeting with our chancellor to discuss the high school's problems. In fact, as chair of our School of Education's Faculty Assembly, I requested the chancellor to meet with the assembly to explain why, at the governor's request, UW Milwaukee agreed to approve and manage charter schools. Frustrated, I asked each team of teachers at the high school what I needed to do to achieve credibility. They immediately responded that I needed to teach in their classes. So for the next two years, I used spring break to teach two periods of social studies each day. This experience was carefully observed, as teachers often watched from the door. This opportunity enabled me to enter their world-view and understand in more depth the impact of intermittent attendance on the class flow. I revamped my ideas regarding classroom management and by the next year was much better at understanding their world-view and the day-to-day experience of working in a challenging urban school.

And there were other conditions unique to this high school that impacted whether and to what extent educators perceived me as credible. A couple of years prior to my starting at the high school, there had been a traumatic event in the school—a death of a student. Listening to many educators describe this period of time, it seems clear that leading up to this event the school was out of control, with many students in the hallways during class time. One teacher reported to me, though this claim is unsubstantiated, that a gun fell out of someone's backpack during class. Fear of losing control

of the students was a constant theme during my early experiences at the high school, which certainly impacted my ability to create a trusting relationship since I was proposing that we create a personalized learning strategy that gave some control over to the students. For some educators, this strategy felt like losing control and fueled fears that the school could revert back to chaos at any moment.

Because the school was located in the midst of a number of rival gangs, my ability to establish a trusting relationship was also challenged by a constant sense of danger in the community. “Bet you don’t experience this every day in your ivory tower, do ya professor?” the assistant principal said to me one spring as we joined administrators and security outside as school let out. Spring was the time of year when youth were being let out of prison in mass, which upset whatever gang-related peace accords were in place. Security would call out the idling cars down the block that did not belong. No police were present, but cameras were running in case a shooting occurred and the perpetrators needed to be identified. The assistant principal was calling out the fact that I had the option—privilege—to choose whether or not to participate in their experience. It was a reminder that while I could be present and supportive of their experience, I was not completely part of their world, and for some this would forever limit my credibility. It also didn’t help that many educators in the building felt betrayed by an activist who they later found out used his activities at the school as the subject of his dissertation—all the while allegedly being paid by the district. As indicated above, after a year at the school, the principal was the first to openly indicate he trusted my goals and intentions. Upon returning to school in the fall, he called me into his office, gave me a pair of keys and said that from that point forward, he considered me one of his assistant principals.

When a principal from another high school in the northern part of the city asked me to work with her school, she introduced me to the faculty as one who had strategies to improve their school. For the first time, I experienced what it feels like to possess ascribed credibility. As a result, there was much less resistance to working on strategies to create and implement personalized learning strategies. I find that organizations offer much less resistance and more willingness to take risks when we reach a point in which organizations

perceive us as possessing expertise and ideas that will support their mission and needs.

One of the more interesting examples of ascribed credibility occurred when I submitted a grant proposal to the city of Milwaukee. The proposal was to bring gang specialists from the Latino Community Center into the high school during lunch periods to meet with gang members—the school had already divided the lunch periods by gang affiliation to reduce conflict. When we met with city officials, one of the lead committee members stated that as far as he was concerned, if the Latino Community Center had an idea to improve the community, then that was all he needed to give his approval. The strategy paid huge dividends later when a drive-by shooting inflamed the community—we had two students dead and the accusations and rumors among students escalated. Bringing the gang experts to school that day proved critical to de-escalating tensions. By establishing relationships with the students outside of school and during the lunch meetings, these experts were able to manage and redirect student anger and anxiety in ways that de-escalated a very tense school day. Years later when I was at UW Madison, the United Way brought principals in from the region to discuss truancy. One principal shared that he learned about an exciting program from Milwaukee where gang experts work directly with youth in the schools. As a result of his replicating the strategy, he no longer needed safety aides in the school.

Our training in multicultural counseling skills has been my most important tool for achieving credibility. Working with practitioners from various backgrounds and serving specific groups such as Native Americans, African Americans, and Latino/as has enabled me to reframe my perspective on human development and change. For example, in explaining the nature of ASIP in my first days at MATC, I found that the program officers responsible for supporting each racial and ethnic minority group were drawn to ASIP for different reasons. Program officers working with Native American Indian students felt the empowerment component in ASIP was closely aligned with their vision quest, officers working with African American students felt the program focused on finding one’s personal power and perseverance, and officers working with Latino/a students connected with the program around the concept of *respeto*—self-respect and respect for family. I was once asked why I enjoy

working with different cultures both here and abroad, and my answer is that I believe that learning how to frame issues from different cultural contexts helps me perceive the world in more complex ways.

Introduce Ideas that Are Responsive to Practitioner Needs

To spend the time and resources necessary to establish research-practitioner collaborations, it is important that we, as researchers, have ideas that capture practitioner interests while being ready to adapt and modify our ideas based on their ideas and needs. In career development, we have a number of theories focused on career decision-making (Dawis & Lofquist, 1984; Dik & Duffy, 2013; Holland, 1997; Lent, Brown & Hackett, 1994; Phillips, Christopher-Sisk & Gravino, 2001; Sampson, Reardon, Peterson, & Lenz, 2004; Savickas, Nota, Rossier, et al., 2009; Super, 1990; Super, Savickas & Super, 1996). Collectively, these ideas reflect a career decision-making paradigm that began with Parsons (1909). With the concept of self-efficacy becoming more mainstream, I have found that social cognitive career theory is especially simple to translate to funders and practitioners (SCCT; Lent & Brown, 2013; Lent et al., 1992).

As much as our profession values decision-making, our practitioners are being pressed to address a wider range of issues. Career development programs and services can address these issues by embracing a second paradigm that is emerging in our field; a paradigm in which career development and vocational psychology programs and services are believed to optimize positive youth and adult development (Lapan, 2004; Solberg & Ali, 2017a; Solberg, Soresi, Nota et al., 2007). For clinically depressed unemployed adults, the Jobs Project found that career development services decreased symptoms and inoculated adults from future depressive episodes (Vinokur, van Ryn, Gramlich & Price, 1991). Our ILP research found that access to quality career development was associated with the development of a number of important social-emotional learning skills (i.e., resiliency skills) such as goal setting, motivation, and self-efficacy which led to better academic outcomes and stress and health management (Solberg, Howard et al., 2012; Solberg et al., 2014). This concept was described in the ASIP monograph (Solberg et al., 1998), which

focused on college persistence as the key outcome and was subsequently applied to college and career readiness among youth populations (Howard, Ferrari, Nota, et al., 2009; Solberg, Carlstrom, Howard, & Jones, 2007; Solberg et al., 2001; Solberg, Howard, Blustein, & Close, 2002; Solberg, Phelps, et al., 2012). The empirical foundation for designing career development programs and services is supported by efforts to delineate the key ingredients associated with career development program efficacy (Brown & Ryan-Krane, 2000; Howard, Solberg, Kantamneni, & Smothers, 2008; Whiston, Rossier, & Barón, 2017). The latest example is an excellent study by Justin Perry and his colleagues that demonstrated how exposure to career development activities was causally associated with improvement in a variety of academic outcomes (Perry, Wallace, & McCormick, in press).

Create Win/Win Situations

Collaborations must support the collective interests of researchers, graduate students, and practitioners. In my collaboration with NCWD-Youth, using mixed methods to evaluate the promise of career development enabled us to provide conceptual papers (Solberg, Phelps, et al., 2012; Solberg, Richards, vanBruinswaardt, Chen, & Jarukitisakul, 2014) and research manuscripts that met the conditions of peer review (Solberg, Howard et al., 2012). This body of work was also used to develop national career development how-to guides and toolkits that translated these research-based efforts into consumable products for career development practitioners (NCWD-Youth, 2013; Solberg, Wills & Osman, 2013; vanBruinswaardt, Solberg & Jarukitisakul, 2015). For proponents of translation research (Wilson, Brady, & Lesesne et al., 2011), the generation of evidence-based products is a critical step in being able to influence whether practitioners and organizations will adopt career development practices. To have an impact on practice, the key is to balance the need to publish in high impact journals with the need to translate these evidence-based efforts into products that enable organizations to become interested in the design, implementation, and evaluation of career development programs and services. The impact of these products can be assessed using analytics that measure the number of downloads or postings. For example, two products developed with NCWD-Youth (NCWD-Youth, 2013; Solberg et al.,

2013) have been used by state leaders to guide their career development design and implementation efforts (Arizona Department of Education, 2016; Colorado Department of Education, 2014, MA DESE, 2013; Wisconsin Department of Public Instruction, 2016). The ILP How To Guide (Solberg et al., 2013) was identified in a joint letter to school counselors from the U.S. Departments of Education, Labor, and Health and Human Services (2014) as a resource to consider in designing and implementing career development programs and services. More recently, the Council of State Governments (in press) in partnership with the National Conference of State Legislatures convened the National Task Force on Workforce Development for People with Disabilities. Their report encourages states to use the State Guide on Career Development (vanBruinswaardt et al., 2015) and the research on ILPs to guide the development of state policies aimed at ensuring youth with disabilities receive access to quality career development programs and services. Sullivan (2012) cited our research as the foundation for his recommendation that Wisconsin consider implementing ILPs (titled Academic and Career Plans [ACPs]) as one component necessary for maintaining future economic competitiveness. The recommendation was accepted by the Wisconsin legislature, which has mandated ACPs for all middle and high school youth starting in 2017 (Wisconsin State Legislature, 2015).

Leverage Resources and Funding

Funding helps researchers gain access to dedicated time from graduate students, postdoctoral fellows, and researchers (Burrow-Sánchez, Martin, & Imel, 2016). At UW-Madison, I learned about the researcher status as part of WCER and its importance in supporting faculty funding. Researchers are individuals who live from project to project; therefore, they only receive a salary if they acquire grants and contracts that include their services. There is wide variation as to whether researchers have principal investigator status, but the key is that these individuals are often the entrepreneurs who support the success of large research institutions. By connecting with a university or working within a research center or laboratory, researchers become methodology and/or content specialists and are often written into a number of projects.

Funding efforts are most successful when researcher-practitioner teams consist of experts and practitioners who collectively contribute the range of skills necessary to effectively execute the project design and goals. NCWD-Youth and ODEP staff have been instrumental (and patient) in helping me learn how to translate career development efforts into policy and language that is more accessible to practitioners, families, and youth. At times, this work is translated by other subject matter experts to ensure it can be understood by families (PACER, 2014) and youth (see Figure 1; U.S. Department of Labor's Office of Disability Employment Policy, n.d).

For the MICCR project, the collaboration includes Boston University, the Rennie Center for Education Research and Policy, MassINC, and the College and Career Readiness team from the MA DESE (MICCR, n.d. (a)). Each organization offered unique intellectual and operational resources that enabled the project to be successfully implemented. Separate research organizations unaffiliated with universities (e.g., Abt, American Institutes for Research, Education Development Center, WestEd, and others) also provided a range of expertise. Many of these organizations are leading large projects themselves (e.g., regional education laboratories; U.S. Department of Education, Institute for Education Sciences, n.d.) and are interested in how our expertise can leverage additional funding for projects originating from the university.

Bringing Successful Career Development Interventions and Programs Up to Scale

As one's efforts to design and implement successful career development interventions, programs, and services prove successful, new challenges will present themselves with respect to replicating these efforts across multiple settings. Scaling refers to the idea that once an intervention or program has proved its efficacy in one setting, the next phase is to learn how to modify the intervention or program so it can have the same positive outcomes in varied settings. I have had two experiences with bringing efforts to scale. In the first instance, the ASIP program was turned into a commercial product that is distributed nationally. The second instance is the ILP research whereby state leaders and districts are seeking support to design and implement



Figure 1. Shelly Saves the Future. Reprinted with permission. U.S. Department of Labor's Office of Disability Employment Policy (n.d.).

CAREER-EXPLORATION
INCLUDES:

AND THAT IS HOW THE LAW OF INERTIA WORKS.

THANKS FOR APPLYING FOR THE LAB ASSISTANT POSITION!

THIS IS THE CAREER AREA I WANT - NOW WHAT DO I NEED TO DO TO PREPARE MYSELF?

Résumé
Honor Roll Student
Physics Club
2nd place in Science Fair

LEARNING MORE ABOUT YOUR AREA OF INTEREST.

GAINING REAL-LIFE EXPERIENCE IN YOUR AREA OF INTEREST.

FINDING OUT WHAT KIND OF TRAINING YOU NEED TO ACHIEVE YOUR CAREER GOALS.

CAREER PLANNING:

MY CAREER PLAN CHECKLIST

- Choose a few careers I want to learn more about.
- Find out which career is a good fit for me.
- Share my career goal with my family, friends, and advisors.
- Write my résumé. Get feedback!
- Find out what I need to do to get the job I want.
- Find a volunteer or part-time job to gain experience.
- Find a mentor!
- Prepare for my interview.
- Visit schools.

DID YOU KNOW THAT URBAN DEBATERS ARE MORE PREPARED FOR TWENTY-FIRST CENTURY CAREERS?

UNIVERSITY

JOB

TECH SCHOOL

STUDENTS WHO MAINTAIN STEADY PART-TIME WORK EXPERIENCE (LESS THAN 20 HOURS A WEEK) WHILE IN HIGH SCHOOL ARE MORE LIKELY TO HAVE BETTER GRADES AND HIGHER EDUCATIONAL ASPIRATIONS.

STUDENTS WHO GAIN VOLUNTEER EXPERIENCE WHILE IN HIGH SCHOOL ARE MORE LIKELY TO ENTER AND GRADUATE FROM POSTSECONDARY EDUCATIONAL INSTITUTIONS.

YOUR ILP CHECKLIST IS A GREAT WAY TO START PLANNING HOW YOU WILL BUILD YOUR EDUCATION AND EXPERIENCE.

Source: Dávila, A., & Mora, M.T. (2007). Civic engagement and high school academic progress: An analysis using NELS data. The Center for Information & Research on Civic Learning & Engagement.

Staff, J., & Mortimer, J. (2008). Social class background and school-to-work transition. *New Directions in Child and Adolescent Development*, 119, 55-69.

I AM READY FOR THE FUTURE!

BYE BYE IGNORANCE!

WITH AN ILP AND A SUPPORT NETWORK OF FAMILY, EMPLOYERS, TEACHERS, AND FRIENDS, YOU CAN STAY ON TRACK, BE BETTER PREPARED FOR LIFE AFTER HIGH SCHOOL, AND ACHIEVE YOUR GOALS.

MORE INFORMATION ON ILPS CAN BE FOUND AT <http://www.dol.gov/odep/topics/youth/> or <http://www.ncwd-youth.info/ilp>

career development programs that are adapted to the context of their school community and labor market conditions. This section offers recommendations for building capacity among schools and organizations that enable them to provide quality implementation of evidence-based career development programs and services. The recommendations include the need to (a) provide professional development in a team format, (b) use a project management system to track progress of each organization's efforts, and (c) make professional development materials free and highly accessible using webinar technology.

Establish Professional Learning Communities

As ASIP became popular in Wisconsin, the cost structure associated with my hiring, training, and managing staff as well as being stretched across too many schools proved overwhelming. As I was preparing to move to Madison, Wisconsin, I was extremely fortunate that the ASIP program was eventually picked up by an entrepreneur (ScholarCentric, n.d.; Solberg, 2006). Retitled with a more appropriate marketing title—Success Highways—this opportunity enabled the program's core components to be distilled into a manual that could be expanded nationally.

The first hint that ASIP could be replicated was the result of a collaboration that began after Salvatore Soresi, Laura Nota, and Lea Ferrari from the Larios Lab at the University of Padova. They brought the ASIP team to Italy to provide professional development to school psychologists interested in implementing the program. It was rewarding and affirming to see that the strategies could be replicated in a different language and culture. A year later, we presented in a conference in Padova and had the opportunity to meet with our first cohort of psychologists. Midway through our discussion, one male psychologist shared a question. While my Italian is choppy, his tone and inflection were something I had seen before. He felt alone. While ASIP helped him become aware of the positive influence and power educators have, he was the only one in his building aware of this. Looking around the room it was clear why the cohort wanted to meet—they each were having the same experience and had no one to share it with.

One of the reasons ASIP was effectively implemented at the Milwaukee high school was that we worked with smaller learning communities of educators who learned and implemented the activities as teams. At this time, the idea of professional learning communities (PLCs) became popular in schools (DuFour, Dufour & Eaker, 2009; Vescio, Ross & Adams, 2008). PLCs provide a perfect strategy for scaling efforts because it works with a leadership team of educators responsible for collaborating on the program design and coordinating the professional development to other educators. It also provides a common experience that serves as an important support system when trying to gain whole school buy-in for the career development efforts. A national survey of educators conducted by the American Psychological Association also found that PLCs were the preferred method of professional development over attending conferences or individual professional development workshops (Coalition for Psychology in Schools and Education, 2006). Directing states, communities, districts, schools and/or organizations to create a PLC designed to receive professional development and manage the implementation of the career development program and services enables one to provide these services in an efficient and effective manner. With NCWD-Youth, we worked concurrently with 14 schools from four states to support their implementation of ILPs (Solberg et al., 2014). To achieve this, we all met at a hotel in New Orleans where 14 round tables were placed in one large room. In addition to presentations, the teams were provided planning time, with myself and colleagues providing consultation support upon request. Use of a PLC model and recommendations for how to select the members who should be included have been described in the ILP How To Guide (Solberg et al., 2013) and policy brief (NCWD-Youth, 2013). In schools, important members include school counselors, special education and career and technical education administrators, a school administrator (e.g., principal or assistant principal), and a few teacher leaders. Singapore, Wisconsin, Colorado, and Massachusetts have used this strategy to launch their respective ILP efforts as part of their respective full-scale implementation efforts.

Use Project Management Systems to Track Progress

Supporting teams in designing and implementing career development programs and



Project Management System

This template is based on the work of Dr. Scott Solberg at the Massachusetts Institute for College and Career Readiness (<http://sites.bu.edu/miccr/about-miccr/>).

1. Define the Problem

It is always helpful to support the definition of the problem with data, reliable events or observations.

Sample Problem Statement	Data Indicators	Source

2. Design Action Plan Strategies, using SMART goals

Consider using SMART goal planning strategies to keep the focus on performance-based student outcomes.

S = Specific M = Measurable A = Achievable, Attainable R = Relevant, Realistic T = Time period.

Sample SMART Goals

3. Implement the Action Plan Strategies Using a Project Management Plan

Action plan strategies are the activities that are used to improve student outcomes. The activities should be research based, either because they have been found to improve student outcomes, or because the activities include research based strategies that have been found to increase outcomes in related activities. The project management plan should: articulate the tasks that need to be completed for each activity; set a tentative timeline for completion of the activities and tasks; and indicate who is responsible for each task

Goal/ Activity	Description	Planned Start Date	Planned End Date	Responsibility
Goal 1 (of 4)				
Action Plan 1 (of 4)				
Task 1.1				
Task 1.2				
Task 1.3				



Figure 2. MICCR Project Management System

services such as ILPs can be managed more effectively when using a project management system. A simplified system empowers the organization to develop a robust year-long implementation plan (available at MICCR, n.d. (c)). Figure 2 displays three of the sections of the project management system version being used in the MICCR project. The first section identifies the problem related to current performance outcomes that are felt to be improved through the design and implementation of career development programs and services. For teams interested in college and career readiness, example problem statements may record data related to college graduation rates, percentage of students entering a two or four year postsecondary credential or program within the first year following high school graduation, percentage of students completing a career pathways and/or college preparation curriculum, and so forth. The next section directs the team to establish SMART goals (specific, management, achievable, realistic, and time-specific) that are believed to address the problem they identified. Section 3 directs each team to identify an action plan and tasks associated with each action plan that will enable the team to successfully achieve each SMART Goal. Section 3 also helps the team think through the task details of how to mobilize the people and resources within their organization to successfully and effectively implement a given action plan. Teams are also directed to create a communication strategy as one of their action plans by identifying who needs to receive information about the nature and promise of the career development programs and services and what communication format will be used to present that information (see Wisconsin Department of Public Instruction, n.d., for examples of strategies used to communicate the nature and value of their ILP efforts). The likelihood that teams will fully implement their plans is facilitated by creating timelines and identifying team members responsible for each task.

For the MICCR project, the project management system enables our support team to track the progress of the 15 districts. The system is also malleable such that teams can modify their goals, action plans, and tasks in response to new opportunities and challenges. Educators seem especially drawn to the project management system because it is concrete, provides timelines, and identifies who is responsible for each task.

Use Webinars and Websites to Help Organizations Gain Access to Career Development Resources and Materials

Another recommendation to help scale our efforts is to use webinars to generate professional development and implementation resources. By transferring recorded webinars to YouTube, they become easily accessible. Face-to-face convenings are then able to focus primarily on creating strategies to implement the career development program activities. By adding these webinars, as well as other career development resources to our research websites, they become both a means for disseminating our work and increasing its impact as well as a way to build and expand our reputation. For MICCR, we use national webinars to discuss core issues related to college and career readiness and more timely, regional webinars to discuss issues raised by the district teams (these are all available at MICCR, n.d. (b)). For example, William Symonds, co-author of the Pathways to Prosperity Report, was the lead expert on a discussion of career literacy. One of the lead researchers with CASEL, Roger Weissberg, led a conversation on the interface between social-emotional learning and career development. When MICCR districts were interested in the similarities and differences among online career information systems, we held a special webinar that highlighted three vendors who are working with Massachusetts districts.

The website is also important for disseminating products that enable organizations to design their own career development programs and service strategies. As noted, Wilson et al. (2011) describe the importance of products as a means of translating evidence-based practice in ways that facilitate interest and engagement in adopting new practices (e.g., ILPs). Career development products are especially valuable when they offer tangible information on the nature of the practice and ideas on how to implement the practice with quality and fidelity. Two examples of websites focused on disseminating career development products related to ILPs can be found at NCWD-Youth (n.d.) and MICCR (n.d. (c)).

Managing the Existential Crisis

While the bulk of the chapter has focused on the opportunities and policy impact one can have by engaging in researcher-practitioner collaborations, there

is often a personal cost when working in low income and high risk settings. I know many have had similar experiences to what I am describing in this final section and expect that many have also had to address this alone, as there is rarely a professional setting in which to share these experiences.

During my time at South Division High School in Milwaukee, I was certainly in the midst of an existential crisis. It was caused by being faced with the meaninglessness and incomprehension of living in the richest country yet having children who are homeless (or “couch surfing” from place to place) and living in urban war zones due to drug and gang violence. For these youth, school was a safe and secure island. The biggest fear for too many was whether they would make it home alive from school each day. Privileged to work in a university setting, I believe that there is no greater purpose than to work alongside the many amazing practitioners who devote their professional lives to making a difference in these high needs areas of our society. I recognize that I choose to devote my time to high needs schools and that researcher-practitioner collaborations occur in a variety of less challenging settings.

To date, I have not shared the more personal experiences of being at South Division. Part of the reason is due to emotions surrounding events I witnessed or found myself managing. Another part is due to the privilege of being a close part of the daily experience of some of the most amazing educators who make the choice to battle for the lives of youth, knowing full well that the odds are always against them. The challenge in sharing these experiences for me is that there is an intimacy that comes with witnessing the pain, the struggle, and the victories that one can only know through the closeness that occurs in such a collaboration. It has been an honor to have administrators, educators, and policy makers share their often secret world-view with me in what Goffman (1956) refers to as back-stage interactions and to receive what Sue and Zane (1987) referred to as the gifts of their perspective and experiences. The educators at South Division opened me up to seeing the world from their perspective. The result is that expressing empathy with other educators and administrators feels deeper and more authentic because I have changed as a researcher and a person.

For a long time this existential crisis manifested in anger and for a time, difficulty connecting with the day-to-day struggles within the university when so many youth and educators were less than five miles from campus with day-to-day struggles that seemed at the time to be more real and important. Through the years I have learned that many in counseling psychology have been similarly moved as the result of working in urban or other community settings such as Native American reservations and women’s shelters or working with populations of individuals who are court-involved, are chronically unemployed, or have severe mental health or other disability conditions.

One of my most regretful experiences was when a student with a disability from another school was shot and killed a block from our school. He had been suspended and was just hanging out on a street corner during a so called “spring cleaning” period, when gang members are being let out of prison. My regret was not being there to support the teachers who held the child as he died. Working in my office, I knew an event had occurred but could not get any information as to what happened until later. I didn’t listen to my gut that day, which further confirms the fact that we, as faculty, always have the privilege of being involved or not being involved. My response following the tragedy was to work with the special education department to launch an in-school suspension program to ensure that our students with disabilities would never be on the streets. We coordinated efforts with staff who had a special way of being able to work with our most challenging students, using informal strategies that would prevent an out-of-school suspension from being necessary. We added a component to the ASIP intervention for special education classes that presented only one resiliency topic at a time and expanded the strategies we used to discuss and process the topic—this effort became the template we used to distill the program into the Success Highways curriculum. While certainly not a disability expert, I feel privileged to collaborate with ODEP and NCWD-Youth on issues related to designing career development programs and services that support all youth, including youth with disabilities. I am proud of the fact that states are adopting an all means all approach to career development (a few examples include the following: Arizona Department of Education, 2016; Colorado Department of Education, 2014; and Wisconsin

Department of Instruction, 2016. None of it takes away the guilt and pain I continue to bear about not being there that day. I believe the culmination of these experiences has enabled me to embrace the challenges my wonderful son experiences each day to feel normal and accepted.

I believe that building researcher-practitioner collaborations in our most challenging settings takes three qualities: vision, courage, and magic (Solberg, 2009). Vision refers to our theory, research, and methods that are needed to discover new insights into complex challenges and shape the design, implementation, and evaluation of career development programs and services. These efforts take tremendous courage. The educators I worked with were teaching in the most challenging settings imaginable and yet chose to stay because of their dedication to serving their students. So many of the most pressing issues in our community will take equal courage and dedication if one chooses to tackle them. These practitioners often experience pain and suffering from losing more than they win. And they know that if they don't strive to support everyone they care for, then who will? My graduate students and staff who worked alongside me in these settings had that courage. They experienced loss each time they believed in a student who later dropped out, was expelled, or died. Watching talented youth engage in self-defeating behavior is always an emotional challenge. It takes courage to keep working in these settings when you know that tragedy does happen. Emotionally, it takes a toll to keep going when losing youth to gang violence or learning on the first day of the fall term that one of our shining graduates and her mother died in a car crash the weekend after she moved into her college dorm. These events are always jarring. And, perhaps the most important support we can offer is our willingness to bear witness and be affected by these types of events as we support the practitioners working on the frontlines of our communities' most pressing challenges.

And finally, magic. Magic refers to the power of relationships and how, as caring and encouraging adults, we have the power to transform people's lives. Emerson (1887) wrote the following: "Friendship is not the open hand nor the kindly smile, it's the inspiration that comes when one finds someone who believes in them and is willing to trust them." Inspiring others to find the courage necessary to reach their true potential,

whether it be clients or practitioners who have the resources necessary to design programs and services that enable others to reach their true potential, that is the heart and soul of what counseling psychology brings to our collaboration opportunities with fellow researchers and practitioners.

References

- Abt Associates (n.d.). Available at <http://www.abtassociates.com/>.
- American Institutes for Research (n.d.). Available at <http://www.air.org/>.
- Arizona Department of Education (2016). *Arizona ECAP implementation: Administration toolkit*. Author. Retrieved from <https://cms.azed.gov/home/GetDocumentFile?id=56856370aadebe1be4da2bba>.
- Atkinson, D. R. & Gim, R. H. (1989). *Asian-American cultural identity and attitudes toward mental health services*. *Journal of Counseling Psychology*, 36, 209–212.
- Atkinson, D. R., Whiteley, S. & Gim, R. H. (1990). Asian-American acculturation and preferences for help providers. *Journal of College Student Development*, 31, 155–161.
- Blustein, D. L. (2013). *The Oxford handbook of the psychology of working*. New York: Oxford University Press.
- Blustein, D. L., McWhirter, E. H., & Perry, J. C. (2005). An emancipatory communitarian approach to vocational development theory, research and practice. *The Counseling Psychologist*, 33, 141–179.
- Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 740–766). New York: Wiley.
- Burrow-Sánchez, J. J., Martin, J. L., & Imel, Z. E. (2016). Applying for grant funding as a counseling psychologist: From thought to action. *The Counseling Psychologist*, 44, 479–524.
- Close, W., & Solberg, V. S. H. (2008). Predicting achievement, distress, and retention among Lower Income Latino Youth. *Journal of Vocational Behavior*, 72, 31–42.
- Coalition for Psychology in Schools and Education. (2006, August). *Report on the Teacher Needs Survey*. Washington,

- D.C.: American Psychological Association, Center for Psychology in Schools and Education.
- Coenen, H. (1998). On the foundations of a relationship based on equality between the researcher and the researched party in Exemplarian Action Research. In B. Boog, H. Coenen, L. Kuene, & R. Lammerts (Eds.) *The complexity of relationships in action research* (pp. 19–35). Tilburg: Tilburg University Press.
- Colorado Department of Education (2014). ILP toolkit: Process for individual career and academic planning. Available at <https://www.cde.state.co.us/postsecondary/icaptoolkit>.
- Council of State Governments (in press). National Task Force on Workforce Development for People with Disabilities.
- Daley, C. M., James, A. S., Ulrey, E., Joseph, S., Talawyma, A., Choi, W. S., Greiner, K. A. & Coe, M. K. (2010). *Qualitative Health Research*, 20, 697–706.
- Davis, A., Solberg, V. S., de Baca, C., & Hargrove, T. (2014). Use of social-emotional learning skills to predict future academic success and progress toward graduation. *Journal of Education for Students Placed at Risk*, 19, 169–182. <http://doi.org/10.1080/10824669.2014.972506>
- Dawis, R. V., & Lofquist, L. H. (1984). *A psychological theory of work adjustment: An individual differences model and its applications*. Minneapolis: University of Minnesota Press.
- Dik, B. J., & Duffy, R. D. (2013). *Make your job a calling: How the psychology of vocation can change your life at work*. West Conshohocken, PA: Templeton Press.
- Dorn, F. J. (1984). *Counseling as applied social psychology: An introduction to the social influence model*. Springfield, Ill: Charles C. Thomas.
- DuFour, R., & Eaker, B. (2009). New insights into professional learning communities at work. In M. Fullan, M. Fullan (Eds.), *The challenge of change: Start school improvement now!* (2nd ed.) (pp. 87–103). Thousand Oaks, CA US: Corwin Press.
- Ecareers.sg (n.d.). ecareers.sg: Education and Career Guidance. Available at https://ecareers.sg/G_Login_SG/ecareer-sLogin.asp.
- eCareers.sg (n.d.). A glimpse into the ECG Portal -- Secondary/Pre-University. https://www.youtube.com/watch?v=5HdSBr_5-VQ.
- Education Development Center (n.d.). Available at: <https://www.edc.org/>.
- Emerson, R. W. (1887). *Essays* (First Series). Boston: Houghton Mifflin.
- Enns, C. Z. (1992). Toward integrating feminist psychotherapy and feminist philosophy. *Professional Psychology: Research And Practice*, 23, 453–466. <http://doi.org/10.1037/0735-7028.23.6.453>
- Giddens, A. (1976). *Social theory and modern sociology*. Stanford, CA: Stanford University Press.
- Giddens, A. (1993). *New rules of sociological method: A positive critique of interpretive sociologies*. Stanford, CA: Stanford University Press.
- Goffman, E. (1956). *The presentation of self in everyday life*. New York: Doubleday.
- Hains, A. A., & Fouad, N. A. (1994). The best laid plans: Assessment in an inner-city high school. *Measurement & Evaluation in Counseling and Development*, 27, 116–124.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Howard, K. A. S., Ferrari, L., Nota, L., Solberg, V. S. H., & Soresi, S. (2009). The relation of cultural context and social relationships to career development in middle school. *Journal of Vocational Behavior*, 75, 100–108. <http://doi.org/10.1016/j.jvb.2009.06.013>
- Howard, K. A. S., Solberg, V. S. H., Kantamneni, N., & Smothers, M. K. (2008). Designing culturally responsive school counseling career development programming for youth. In H. Coleman & C. Yeh (Eds.), *Handbook of school counseling* (pp. 269–289). New York, Routledge, Taylor and Francis Group.
- Israel, B. A., Eng, E., Schultz, A. J., & Parker, E. A. (2005). *Methods in community-based participatory research for health*. San Francisco: Jossey-Bass.
- Lapan, R. T. (2004). *Career development across the K-16 Years: Bridging the present to satisfying and successful futures*. Alexandria, VA: American Counseling Association.
- Lent, R. W. & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology*, 60, 557–568.

- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*, 79–122.
- Massachusetts Institute for College and Career Readiness (n.d. (a)). Available at <http://sites.bu.edu/miccr/>.
- Massachusetts Institute for College and Career Readiness (n.d. (b)). Events. Available at <http://sites.bu.edu/miccr/miccr-core-initiatives/events/>.
- Massachusetts Institute for College and Career Readiness (n.d. (c)). *Individualized Learning Plans*. Available at: <http://sites.bu.edu/miccr/ccr-resources/research-literature/individualized-learning-plan/>
- Massachusetts Department of Elementary and Secondary Education. (n.d.). *College and Career Readiness*. Retrieved from <http://www.doe.mass.edu/ccr/>.
- Massachusetts Department of Elementary and Secondary Education. (2013). *Massachusetts guide for implementing individual learning plans (ILP): Preparing ALL students for success after high school*. Available at: www.doe.mass.edu/ccr/schoolcounseling/ilpguidance2014.docx.
- MassINC. (n.d.) Retrieved from <http://massinc.org>.
- National Collaborative on Workforce and Disability for Youth. (n.d.). *Individualized Learning Plan*. Available at <http://www.ncwd-youth.info/ilp/>.
- National Collaborative on Workforce and Disability for Youth. (2013). *Using individualized learning plans to produce college and career ready high school graduates*. Washington, D.C.: Institute for Educational Leadership. Retrieved from: <http://www.ncwd-youth.info/ilp/produce-college-and-career-ready-high-school-graduates>.
- ODEP, (n.d.). “Shelly Saves the Future: A Story of Career Development” Informational Comic. Retrieved from <https://www.dol.gov/odep/topics/youth/ShellySaves.htm>.
- PACER. (2014). *Understanding the new vision for career development: The role of family*. Washington DC: NCWD-Youth. Retrieved from <http://www.ncwd-youth.info/understanding-the-new-vision-for-career-development-the-role-of-family>.
- Parsons, F. (1909). *Choosing a vocation*. Boston: Houghton-Mifflin.
- Perry, J. C., Wallace, E. W. & McCormick, M. P. (in press). Making My Future Work: Evaluation of a New College and Career Readiness Curriculum. *Youth & Society*.
- Phillips, S. D., Christopher-Sisk, E. K. & Gravino, K. L. (2001). Making career decisions in a relational context. *Counseling Psychologist, 29*, 193–213.
- Prilleltensky, I. (1997). Values, assumptions, and practices: Assessing the moral implications of psychological discourse and action. *American Psychologist, 52*, 517–535.
- Rennie Center for Education Research & Policy. (2011). *Student learning plans: Supporting every student's transition to college and career*. Cambridge, MA: Rennie Center for Education Research & Policy. Retrieved from <http://dpi.wi.gov/sites/default/files/imce/cte/pdf/studentlearning-plans.pdf>.
- Ross, L. F., Loup, A., Nelson, R. M., Botkin, J. R., Kost, R., Smith, G. R., & Gehlert, S. (2010). The challenges of collaboration for academic and community partners in a research partnership: points to consider. *Journal of Empirical Research on Human Research Ethics, 5*, 19–31. <http://doi.org/10.1525/jer.2010.5.1.19>
- Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling and services: A cognitive information processing approach*. Pacific Grove, CA: Brooks/Cole.
- Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J., Duarte, M. E., Guichard, J., Soresi, S., Esbroeck, R. V., & van Vianen, A. M. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior, 75*, 239–250. <http://doi.org/10.1016/j.jvb.2009.04.004>
- Schlesinger, A. M. (1992). *The disuniting of America: Reflections on a multicultural society*. New York: W.W. Norton.
- ScholarCenteric, (n.d.). *Empirical research supporting success high-ways resiliency assessments and curriculum*. Retrieved from http://www.scholarcenteric.com/wp-content/uploads/2014/03/EmpiricalBrochure_2014.pdf.
- Solberg, V. S. (1998). Assessing career search self-efficacy: Construct evidence and developmental antecedents. *Journal of Career Assessment, 6*, 181–193.
- Solberg, V. S. (2006). *My success roadmap*. Denver, CO: ScholarCenteric.
- Solberg, V. S. H. (2003). Exemplarian action research: Conducting vocational psychology in school settings. *Giornale Italiano Di Psicologia Dell'Orientamento, 5*, 14–25.
- Solberg, V. S. H. (2009, February). *The promise of educational and career guidance: Motivating at risk students to aspire for their future*. Plenary presentation for the

- Singapore Ministry of Education's Education and Career Guidance Conference. Retrieved from <http://test.cew.wisc.edu/docs/research/Presentations%20and%20publications/keynote%20and%20plenary/Paper%20The%20Promise%20of%20Educational%20and%20Career%20Guidance.pdf>
- Solberg, V. S. H. (2017). Career development and its role in maintaining a competitive global economy. In V. S. H. Solberg & S. R. Ali (Eds.) *Handbook of career and workforce development research, practice, and policy*. London: Routledge.
- Solberg, V. S. H. & Ali, S. R. (Eds.) (2017a). *Handbook of career and workforce development research, practice, and policy*. London: Routledge.
- Solberg, V. S. H., & Ali, S. R. (2017b). Career and workforce development research, practice, and policy: Synthesis and future directions. In V. S. H. Solberg & S. R. Ali (Eds.) *Handbook of career and workforce development research, practice, and policy*. London: Routledge.
- Solberg, V. S. H., Carlstrom, A. H., Howard, K.A.S., & Jones, J. E. (2007). Classifying youth at-risk for high school non-completion: Role of exposure to violence and resilience on 9th grade outcomes. *The Career Development Quarterly*, 55, 313–327.
- Solberg, V. S., Good, G., & Nord, D. (1994). Career search efficacy: Ripe for intervention and applications. *Journal of Career Development*, 21, 63–72.
- Solberg, V. S., Good, G., Nord, D., Holm, C., Hohner, R., Zima, N., Heffernan, M., & Malen, A. (1994). On the path to career agency: Construct and discriminant validation of the Career Self-Efficacy Scale. *Journal of Career Assessment*, 2, 111–123. <http://doi.org/10.1177/106907279400200202>
- Solberg, V. S., Choi, K., Ritsma, S., & Jolly, A. (1994). Asian-American college students: It's time to reach out. *Journal of College Student Development*, 35, 296–301.
- Solberg, V. S., Close, W., & Metz, A. J. (2001). Promoting success pathways for middle and high school students: Introducing the Adaptive Success Identity Plan for school counselors: "It's about making school successful for all students." In C. Juntenen & D. Atkinson (Eds.) *Counseling strategies* (pp. 135–157). Thousand Oaks, CA: Sage.
- Solberg, V. S., Good, G. E., Fischer, A. R., Brown, S. E., & Nord, D. (1995). Relative effects of career search self-efficacy and human agency upon career development. *Journal of Counseling Psychology*, 42, 448–455.
- Solberg, V. S., O'Brien, K. M., Villarreal, P., Kennel, R., & Davis, B. (1993). Self-efficacy and Hispanic college students: Validation of the College Self-Efficacy Inventory. *Hispanic Journal of Behavioral Sciences*, 15, 80–95.
- Solberg, V. S., Gusavac, N., Hamann, T., Felch, J., Johnson, J., Lamborn, S., & Torres, J. (1998). The Adaptive Success Identity Plan (ASIP): A career intervention for college students. *Career Development Quarterly*, 47, 48–95.
- Solberg, V. S., Hale, B., Villarreal, P., & Kavanagh, J. (1993). Validation of the College Stress Inventory for use with Hispanic populations: A confirmatory analytic approach. *Hispanic Journal of Behavioral Sciences*, 15, 80–95.
- Solberg, V. S., Howard, K. A. S., Gresham, S., & Carter, E. (2012). Quality learning experiences, self-determination, and academic success: A path analytic study among youth with disabilities. *Career Development for Exceptional Individuals*, 35, 85–96. <http://doi.org/10.1177/0885728812439887>
- Solberg, V. S., Howard, K. A., Blustein, D. L., & Close, W. (2002). Career development in the schools: Connecting school-to-work-to-life. *Counseling Psychologist*, 30, 705–725.
- Solberg, V. S., Phelps, L. A., Haakenson, K. A., Durham, J. F., & Timmons, J. (2012). The nature and use of individualized learning plans as a career intervention strategy. *Journal of Career Development*, 39, 500–514. <http://doi.org/10.1177/0894845311414571>
- Solberg, V. S., Richards, C., vanBruinswaardt, C., Chen, Z., & Jarukitisakul, C. (2014). Supporting students with special needs in their transition from schools to higher education. *Centre for Advancement in Inclusive and Special Education (CAISE Review)*.
- Solberg, V. S., Ritsma, S., Davis, B., Tata, S. P., & Jolly, A. (1994). Asian-American students experience of college and the likelihood of using university counseling centers: A replication and extension. *Journal of Counseling Psychology*, 41, 275–279.
- Solberg, V. S. H., Soresi, S., Nota, L., Howard, K. A. S., & Ferrari, L. (2007). *On the shoulders of giants: Making vocational psychology fit for modern times*. In S. Soresi (Ed.) *Orientamenta Alle Scelte: Rassegne, Ricerche, Strumenti ed Applicazioni*. Florence, Italy: GuintO.S Organizzazioni Speciali.
- Solberg, V. S., Valdez, J., & Villarreal, P. (1994) Social support, stress, and Hispanic college adjustment. *Hispanic Journal of Behavioral Sciences*, 16, 230–239.

- Solberg, V. S., & Villarreal, P. (1997). Self-efficacy, stress, and social support as predictors of Hispanic college adjustment. *Hispanic Journal of Behavioral Sciences, 19*, 182–201.
- Solberg, V. S., Wills, J., & Osman, D. (2013). Promoting quality individualized learning plans: A “how to guide” focused on the high school years. Washington DC: Institute for Educational Leadership. Retrieved from <http://www.ncwd-youth.info/ilp/how-to-guide>.
- Solberg, V.S., Wills, J., Redmond, K., & Skaff, L. (2014). *Use of individualized learning plans as a promising practice for driving college and career readiness efforts: Findings and recommendations from a multi-method, multi-study effort* (ISBN: 1-933493-46-1). Washington, D.C.: National Collaborative on Workforce and Disability for Youth, Institute for Educational Leadership. Available at <http://sites.bu.edu/miccr/ccr-resources/research-literature/individualized-learning-plan/>.
- Strickland, C. J. (2006). Challenges in community-based participatory research implementation: Experiences in cancer prevention with Pacific Northwest American Indian tribes. *Cancer Control: Journal of the Moffitt Cancer Center, 13*(3), 230–236.
- Sullivan, T. (2012). *The road ahead: Restoring Wisconsin's workforce development*. Retrieved from <http://www.wmep.org/wp-content/uploads/2015/02/sullivanreport.pdf>.
- Sue, S., & Zane, N. (1987). The role of culture and cultural techniques in psychotherapy. *American Psychologist, 42*, 37–45.
- Super, D. E., Savickas, M. L., & Super, C. M. (1996). The lifespan, life-space approach to careers. In D. Brown & L. Brooks (Eds.), *Career choice and development* (3rd ed., pp. 121–178). San Francisco: Jossey-Bass.
- Super, D. E. (1990). A life-span, life-space to approach to career development. In D. Brown & L. Brooke (Eds.). *Career choice and development: Applying contemporary theories to practice* (2nd ed., pp. 197–261). San Francisco: Jossey-Bass.
- Vinokur, A. D., van Ryn, M., Gramlich, E. M., & Price, R. H. (1991). Long-term follow-up and benefit-cost analysis of the Jobs Project: A preventive intervention for the unemployed. *Journal of Applied Psychology, 76*, 213–219.
- U. S. Department of Education, Institute for Education Sciences. (n.d.). *Regional education laboratories*. Retrieved from <http://ies.ed.gov/ncee/edLabs/regions/>.
- U. S. Department of Education. (2014). *Joint letter from the U. S. Departments of Education, Labor and Health and Human Services on their commitment to career development*. Retrieved from <https://www2.ed.gov/about/offices/list/ovae/pi/cte/june-3-2014-dear-colleague-letter-career-counseling.pdf>.
- U. S. Department of Labor, Office of Disability Employment Policy (n.d.). Shelly saves the future: A story of career development. Available at: <https://www.dol.gov/odep/topics/youth/ShellySaves.htm>.
- vanBruinswaardt, C., Solberg, V. S., & Jarukitisakul, C. (2015). *Designing statewide career development strategies and programs*. Washington, D.C.: National Collaborative on Workforce and Disability for Youth, Institute for Educational Leadership. Available at: <http://www.ncwd-youth.info/sites/default/files/>
- Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education, 24* (1), 80–91.
- WestEd (n.d.). Available at: <https://www.wested.org>
- Whiston, S. C., Rossier, J. & Barón, P. M. H. (2017). Evidence based practice in career development interventions. In V. S. H. Solberg & S. R. Ali (Eds.) *Handbook of career and workforce development research, practice, and policy*. London: Routledge.
- Wilson K. M., Brady T. J., & Lesesne, C., on behalf of the NC-CDPHP Work Group on Translation (2011). *An organizing framework for translation in public health: The knowledge to action framework. prevention of chronic disease, 8*(2):A46. Retrieved from http://www.cdc.gov/pcd/issues/2011/mar/10_0012.htm.
- Wisconsin Department of Public Instruction, (n.d.). *Communication and advocacy*. Retrieved from <http://dpi.wi.gov/acp/communication-tools>.
- Wisconsin Department of Public Instruction, (2016). ACP in Wisconsin. Implementing academic and career planning. Retrieved from <http://dpi.wi.gov/sites/default/files/imce/acp/DPI%20Guide%202016%20FINAL.pdf>
- Wisconsin State Legislature. (2015). *Education and employment plans and program*. CR 15-025 No 719. Retrieved from http://docs.legis.wisconsin.gov/code/admin_code/pi/26

Chapter 12 - Summary of Key Elements in Using Theory and Research to Improve Evidence-Based Practice

Patrick J. Rottinghaus

University of Missouri-Columbia

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch12>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=ZKFnjNzhYa0&index=17&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA

Correspondence should be addressed to Patrick J. Rottinghaus, Educational, School, and Counseling Psychology, 16 Hill Hall, University of Missouri, Columbia, MO 65211. E-mail: rottinghausp@missouri.edu

Keywords: evidence-based practice, meta-analysis, outcomes, career interventions, effectiveness, career development, career counseling

This section covered a broad range of concerns related to the integration of theory, research, and practice, including implications for collaboration and policy. Theory-driven work is paramount in vocational psychology and should guide research and practice initiatives. This set of chapters features several ongoing challenges and opportunities that can facilitate the translation of scholarship to inform the development of evidence-based interventions that matter to practice settings and policy decisions. First, Nadya Fouad (2017) examines the overall role of theory and how it can guide efforts to minimize the gap between science and practice. Next, chapters by Steve Brown (2017), Susan Whiston (2017), and Betsy Becker (2017) offer various perspectives on the state of the art in conducting meta-analyses on the outcomes of career development interventions. Finally, Scott Solberg (2017) offers a personal reflection on efforts to link vocational psychology scholarship to specific policy initiatives that require interdisciplinary collaborations. This chapter summarizes important highlights and themes from these chapters, and concludes with five strategies for purposefully connecting theory and research to strengthen evidence-based practice.

Fouad (2017) highlights personal reflections on her experiences bridging gaps between theory, research, and practice. As an important reminder to students, even distinguished leaders in our field once struggled to know how to apply theories to working

with actual clients. Fortunately, theories can work as guiding maps to assist counselors in conceptualizing clients' concerns. Swanson and Fouad's (2015) career text focuses on applying career theories to case studies beyond presenting theories as separate from application with clients. Additionally, Fouad (2017) noted that ongoing attempts to bring together researchers and practitioners can be difficult and requires collaborations involving teams of experts from practice and science settings. Drawing on her experiences editing leading applied psychology journals, Fouad shared examples of creative attempts to bridge the science-practice gap. For example, she initiated the Practitioner Forum during her time as the editor of *The Counseling Psychologist*. Again, hearing a frank discussion that normalizes the challenges our leading scholars face can help future professionals have the courage to build on these efforts by modifying approaches to transferring knowledge between science and practice, guided by theory.

A crucial line of research on career-related outcomes has been the series of initial meta-analyses that demonstrated the effectiveness of career interventions (Oliver & Spokane, 1988; Spokane & Oliver, 1983). Brown (2017) elaborated on three recent meta-analyses that have built upon Oliver and Spokane's fundamental work, including Whiston, Sexton, and Lasoff's (1998) study that found individual counseling was more effective than group modalities. Brown and Ryan Krane (2000) identified common critical ingredients

(i.e., workbooks and written exercises, individualized interpretations and feedback, in-session exploration of occupational information, modeling, and building support). Liu, Huang, and Wang (2014) examined the effectiveness of job search interventions. From these recent investigations, Brown (2017) highlighted three main findings:

1. “Career interventions are modestly more effective than doing nothing in promoting outcomes associated with both choice-making and job finding” (p. 83). Based on results from Whiston et al. (1998) and Brown and Ryan Krane (2000), the 95% confidence interval for true effect sizes range from .26 to .36 for choice making difficulty interventions. Liu et al. (2014) used a random effects model, showing that participants in job search interventions yielded 2.67 times greater odds of obtaining jobs than control groups.
2. “There are several intervention components that seem to be important to outcomes for both choice-making and job finding interventions” (p. 83). Brown highlighted his influential work with Nancy Ryan Krane, demonstrating the five critical intervention components. In addition, Liu et al. (2014) found that the following six components enhance the likelihood of obtaining a job: teaching job search skills, improving self-presentation, increasing self-efficacy, encouraging proactivity, promoting goal setting, and enlisting social support. The focus on job search counseling is not sufficiently attended to in vocational psychology. This is a common reason people seek career counseling services and is a focus of practice. Collaborations between researchers and practitioners could strengthen the literature investigating job seeking strategies and could draw connections to ongoing scholarship of vocational psychology, including vocational interests (Dik & Rottinghaus, 2013), career decision-making (Gati, 2013), and so forth. Moreover, the proactivity aspect struck me as a keystone and as connected to Lent’s (2013) related term, career-life preparedness, given its importance for career planning and adjustment to a changing world of work. According to Lent (2013), preparedness involves “a healthy state of vigilance regarding threats

to one’s career well-being as well as alertness to resources and opportunities on which one can capitalize” (p. 7). A whole set of emerging terms, including proactivity, preparedness, agency, and adaptability, represent a nexus of ideas related to intentionality and the core value of preventative perspectives in counseling psychology. Ultimately, professionals need to embolden clients to capitalize on opportunities and overcome setbacks to build resources of KSAOs through education, experience, and reflection on opportunities in order to best navigate the educational and occupational worlds.

3. “Goal setting, support building, and efficacy enhancement strategies are critical components in both choice-related and job-finding interventions and may represent today the clearest, meta-analytically derived evidence-based practice guidelines that we have for career practitioners” (p. 84). These components are notable in that they emerged as critical across job search and career counseling interventions.

Brown (2017) then highlights three key areas that our field still needs to examine.

- “We need to identify core outcome constructs” (p. 84). Brown points out a number of measurement concerns related to outcome measures, underscoring that “measures of constructs are not the constructs themselves” (p. 84). Whiston’s (2001) call for a core battery to address outcomes is related to this, but Brown reminds us to critically examine shared variance. Fundamental research that clarifies nuances among career assessments must receive significant attention while concurrent outcomes research proceeds to move this literature forward. In addition to traditional outcomes, Solberg (2017) underscores the need to attend to other outcomes beyond career exploration, vocational identity, career maturity, decisional status, and satisfaction, including those relates to college and career readiness.
- “We need to know whether career interventions actually make a difference in the lives of our clients” (p. 85). Beyond statistical significance,

researchers must attend to the clinical significance of interventions (Brown, 2014). Routine use of alternative methods such as those presented by Jacobson and Truax (1991) can afford opportunities for future meta-analytic investigations of clinical significance. Ultimately, the field needs to increase evidence for the effectiveness across career interventions that is relevant to clients, organizations, policymakers, parents, and other stakeholders.

- “We need to conduct outcome research with more diverse samples” (p. 87). This is a frequent call among experts that remains a top priority for the field (Fouad & Kantamneni, 2008; Whiston & Rose, 2015). In the context of discussing meta-analytic research, this is a reminder that the primary studies are the foundation to the entire career development outcomes literature. It is paramount to investigate the effectiveness of interventions for an array of outcomes across diverse samples (e.g., ethnicity, age) and settings (e.g., type of school, region, economic context).

Next, Whiston (2017) expands on these concerns by examining the relative merits of conducting general meta-analyses versus more narrowly defined studies focused on specific populations or settings. Beyond the ongoing need for more studies with racially and ethnically diverse clients, Whiston calls for more studies examining gender and SES. Drawing on the psychotherapy research literature, she also recommends specific studies examining common career-related presenting concerns such as career decision making and work-family conflict, analogous to manualized treatment interventions for anxiety disorders. This more specific approach could mirror the empirically-supported treatment investigations to identify specific intervention components that are more pivotal to achieving successful outcomes that may differ depending on the client’s specific career problem and level of readiness for counseling. Although noting significant challenges to conducting setting-specific meta-analyses, she underscored the potential benefits of such important work, including the capability to identify key interventions that have the largest effect-sizes, which also support accountability to funding sources (e.g., university administrators).

General meta-analyses can help researchers cast a wide net to enhance the robustness of the study. However, this overall approach may mask important conclusions. Coding for specific study characteristics can allow for a more refined attention to testing possible moderators. Whiston (2017) concludes with a call for more systematic research on career interventions. Both general and specific meta-analyses are needed, with particular attention to moderators in order to examine specialized needs across various populations and settings.

Becker (2017) calls for greater attention to using theory to build an evidence base for practice and offers a wealth of information on technical aspects of meta-analyses. She highlights fundamental steps for conducting meta-analyses, including problem formulation and attending to the degree of variability across analyzed studies. By incorporating client-attribute interaction and other moderators into studies, researchers can gain a more refined understanding of treatment effects. She encourages the use of theory-driven meta-analytic path models that can be supplemented with process and treatment variables to identify gaps in the literature and to inform future studies.

To aid in formulating meta-analytic studies, she encourages a strategic organizing framework, MUTOS (Method, Units, Treatments, Observing Operations, and Setting), that was modified from Cronbach’s (1982) UTOS framework. MUTOS demarcates inclusion rules and features of studies that will be analyzed to identify their potential relevance to the particular outcome of interest. The MUTOS framework affords critical attention to possible moderators that are central to differences in results for career intervention outcomes investigations. The *M* component incorporates the range of methods used across studies included in meta-analyses, enabling a focused analysis of variability regarding client sampling, condition assignment, treatment of attrition, and other key aspects analyzed. Becker (2017) provides more details related to the statistical complexity. The upshot is MUTOS enables researchers to gauge core features related to the outcome(s) of interest, take stock of potential moderators, and strategically examine the generalizability of results for particular groups, presenting concerns, and settings.

Becker (2017) concluded with a call for a shared database (cf. Baldwin & Del Re, 2016) that provides

effect sizes of various career interventions. This effort could help organize what is known (and unknown) about the degrees of effectiveness of intervention components to inform theory-building as well as guide practice and future research.

Finally, Scott Solberg (2017) offers personal reflections on decades of experience conducting community-based participatory research in schools. His passion for applying career development science to school settings highlights the impact of vocational psychology scholarship. Solberg's practical strategies for building credibility and establishing egalitarian partnerships with school administrators offer useful strategies to achieve results that matter to communities. In particular, he highlights the need to clarify roles, responsibilities, and objectives throughout the stages of conducting research that can be facilitated by project management systems. This overall process takes courage and patience to establish trust between collaborators, identify needs, and nurture relationships over time to achieve results that inform policy efforts.

Solberg (2017) focuses on relevance and the need for conducting research that connects with larger state and national level concerns. His reflections on several creative collaborations demonstrate how to establish scalable programs that map onto broader initiatives. For example, his ongoing Success Highways project focuses on interventions to build social-emotional learning in support of academic success. Recently, his work on the Massachusetts Institute for College and Career Readiness, in partnership with several agencies, brings together researcher-practitioner partnerships in 15 school districts throughout Massachusetts to address challenges districts face in preparing students for postsecondary transitions. Solberg shares examples of how he has learned to design, implement, and evaluate efforts for schools to facilitate pathways to successful outcomes, including academic remediation, whole school reform, workforce readiness, and so forth. This is a reminder of the importance of career development to outcomes within a national context, such as systemic concerns related to graduation rates, college and career readiness, reducing college student debt, employability, and so forth. We need to increase the evidence base for the effectiveness of career interventions that support positive outcomes for clients and key stakeholders, including schools, policymakers, and parents.

Conclusions and Future Recommendations

It has been a privilege to summarize this set of quality chapters from leading scholars on conducting evidence-based outcomes research in vocational psychology. Since meta-analytic investigations are critical to discovering what works with clients, these papers focus on landmark meta-analyses that demonstrate the overall effectiveness and specific critical components of effective career interventions. Pulling back to the big picture at this meta-meta level provides an opportunity to reflect on broad-based recommendations to push the field forward. The following are five take home points for enhancing evidence-based practice and capturing the dynamic interaction between theory, research, and practice.

1. Nurture ongoing collaborations with researchers and practitioners. Fouad (2017) and Solberg (2017) elaborated on the importance of building meaningful relationships between experts from diverse professional backgrounds. The challenges faced by professionals in schools and other practice settings inherently require interdisciplinary perspectives. Instead of attempting to carve out particular facets within our own separate subdisciplines, which inherently draws on limited perspectives and methods, it is wise to incorporate expertise from those who have faced similar methodological and practical challenges. We need not expect to go it alone! Each of us has particular strengths and perspectives that can inform the broader literature. Organizations such as SVP and NCDA can facilitate connections between professionals with complementary skills who can work together to explore grants that fund research and create strategic dialogs for advancing evidence-based practice.
2. Conduct more intentional studies that examine moderators and applications of theory for diverse groups. Building on the knowledge from prominent meta-analyses of career outcomes concluding that career interventions are effective, there is a critical need to conduct more primary intervention research (Whiston, 2017), especially across diverse samples (Brown, 2017) involving a range of presenting concerns and

- settings. Becker (2017) featured the MUTOS method that enables researchers to examine sources of variability in outcomes across studies, including potential moderators involving client characteristics and features of interventions. Indeed, coordinated efforts to understand what works for whom (Frank & Frank, 1993) under what conditions should be applied more vigorously to career development concerns. As Gordon Paul (1967) astutely asked: “What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances?” (p. 111). Related to Point 1, interdisciplinary teams can offer insights for studying necessary components that support more individualized treatments and their potential scalability. These complex endeavors require an intentional focus on key problems and how they might differ based on the particular needs experienced by diverse clientele across various settings.
3. Create a database of constructs, measures, and research studies as part of an interactive diagnostic system that informs empirically-supported interventions for particular presenting concerns, populations, and settings. This ambitious goal relates to a broader concern: Our field needs to create an organized set of specialized career assessments that are readily available for research and practice purposes. Progress toward this goal would help identify critical factors involved in detecting meaningful change for diverse career counseling objectives. Vocational psychologists can collaborate and bring together pertinent knowledge that is empirically supported and informed by interdisciplinary perspectives on a wide array of career concerns across fields. A community of researchers and practitioners can benefit from a centralized system that not only organizes the existing research, but also brings professionals together to address common goals related to advancing scientifically informed career development interventions. Such a large, collaborative effort can be facilitated by strategic leadership from SVP, NCDA, and funding from state and federal agencies.
 4. Attend to a broader array of outcomes from career development interventions. There are numerous specific outcomes of career interventions that are important to clients beyond traditional outcomes (e.g., decidedness, satisfaction), and these papers highlight the importance of clinical significance and achieving broader life goals such as college and career readiness, subjective well-being, and decent work. In an effort to understand the practical utility of career interventions beyond statistical significance, the field can further enhance connections between research and practice.
 5. Consider implications for the education and training of students and professional development needs for professionals. The connections between science and practice lie at the heart of training programs and are reflected in the emphasis on evidence-based practice. Similar to the general psychotherapy literature’s focus on addressing the effectiveness and efficacy of treatments for particular disorders (e.g., Nathan & Gorman, 2015; Roth & Fonagy, 2005), vocational psychology and career development training programs attend to the scientific base of our interventions. The chapters in this section highlight current knowledge in the vocational psychology and career development fields, while acknowledging key gaps for particular career concerns (e.g., job seeking and life satisfaction) and the efficacy of career interventions for diverse populations. Overall, these efforts must be expanded to create a more specialized set of recommendations informed by rigorous science. In addition to conveying knowledge of career counseling effectiveness studies and research skills to our students, we must establish coordinated systems and resources to translate ideas from the ongoing scientific literature to practice and advocacy efforts. This book serves as a stimulus for vocational psychology and career development professionals that ultimately can advance our efforts to establish quality interventions that meet the diverse needs of individuals in our schools and communities.

References

- Baldwin, S. A., & Del Re, A. C. (2016). Open access meta-analysis for psychotherapy research. *Journal of Counseling Psychology, 63*(3), 249–260. <http://doi.org/10.1037/cou0000091>
- Becker, B. J. (2017). Improving the design and use of meta-analyses of career interventions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 95). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch10>
- Brown, S. D. (2014). Career intervention efficacy. In P. J. Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *APA handbook of career intervention* (Vol. 1, pp. 61–77). Washington, D.C.: American Psychological Association.
- Brown, S. D. (2017). Meta-analysis and evidence-based career practice: Current status and future directions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 82). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch8>
- Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 740–766). New York: Wiley.
- Cronbach, L. J. (1982). *Designing evaluations of educational and social programs*. San Francisco: Jossey-Bass.
- Dik, B. J., & Rottinghaus, P. J. (2013). Assessments of interests. In K. F. Geisinger (Ed.), *American Psychological Association handbook of testing and assessment in psychology* (vol. 2, pp. 325–348). Washington, D.C.: American Psychological Association.
- Fouad, N. A. (2017). The role of theory in improving evidence-based career interventions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 77). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch7>
- Fouad, N. A., & Kantamneni, N. (2008). Contextual factors in vocational psychology: Intersections of individual, group, and societal dimensions. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (4th ed., pp. 408–425). New York: Wiley.
- Frank, J. D., & Frank, J. B. (1993). *Persuasion and healing: A comparative study of psychotherapy*. Baltimore, MD: JHU Press.
- Gati, I. (2013). Advances in career decision making. In W. B. Walsh, M. L. Savickas, & P. J. Hartung (Eds.), *Handbook of vocational psychology* (4th ed., pp. 183–215). New York: Routledge Press.
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*, 12–19. <http://doi.org/10.1037/10109-042>
- Lent, R. W. (2013). Career-life preparedness: Revisiting career planning and adjustment in the new workplace. *The Career Development Quarterly, 61*, 2–14. <http://doi.org/10.1002/j.2161-0045.2013.00031.x>
- Liu, S., Huang, J. L., & Wang, M. (2014). Effectiveness of job search interventions: A meta-analytic review. *Psychological Bulletin, 140*, 1009–1041. <http://doi.org/10.1037/a0035923>
- Nathan P. E., & Gorman J. M. (2015). *A guide to treatments that work* (4th ed.). New York: Oxford University Press.
- Oliver, L. W., & Spokane, A. R. (1988). Career-intervention outcome: What contributes to client gain? *Journal of Counseling Psychology, 35*, 447–462. <http://doi.org/10.1037/0022-0167.35.4.447>
- Paul, G. L. (1967). Strategy of outcome research in psychotherapy. *Journal of Consulting Psychology, 31*, 109–118. <http://doi.org/10.1016/b978-0-08-019506-3.50019-6>
- Roth A. D., & Fonagy P. (2005). *What works for whom: A critical review of psychotherapy research* (2nd ed.). New York: Guilford.
- Solberg, V. S. H. (2017). Personal reflections on a career spent creating and sustaining researcher-practitioner collaborations. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 108).

Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch11>

Spokane, A. R., & Oliver, L. W. (1983). Outcomes of vocational intervention. In S. H. Osipow & W. B. Walsh (Eds.), *Handbook of vocational psychology* (pp. 99–136). Hillsdale, NJ: Erlbaum.

Swanson, J. L., & Fouad, N. A. (2015) *Career theory and practice: Learning through cases*. Thousand Oaks, CA: Sage (3rd ed.). Thousand Oaks, CA: Sage.

Whiston, S. C. (2001). Selecting career outcome assessments: An organizational scheme. *Journal of Career Assessment*, 9, 215–228. <http://doi.org/10.1177/106907270100900301>

Whiston, S. C. (2017). Conducting general versus population and setting-specific meta analyses. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 90). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch9>

Whiston, S. C., & Rose, C. S. (2015). Career counseling process and outcome. In P. J. Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *American Psychological Association handbook of career intervention* (Vol. 1, pp. 43–60). Washington, D.C.: American Psychological Association.

Whiston, S. C., Sexton, T. L., & Lasoff, D. L. (1998). Career-intervention outcome: A replication and extension of Oliver and Spokane (1988). *Journal of Counseling Psychology*, 45, 150–165. <http://doi.org/10.1037//0022-0167.45.2.150>

Chapter 13 - Ensuring Quality in Theory, Research, and Practice: *The Career Development Quarterly*

Ryan D. Duffy

University of Florida

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch13>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=aMR93HDlrls&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA&index=19

Appreciation is expressed to Paul Hartung and the FSU editorial team for their comments on an earlier draft of this chapter. Correspondence should be addressed to Ryan D. Duffy, Department of Psychology, University of Florida, PO Box 112250, Gainesville, FL 32611-2250. E-mail: rduf@ufl.edu

Keywords: publication, integration, theory, research, practice, Career Development Quarterly

As a field, it is imperative that vocational psychology continues to ensure high quality integration of theory, research, and practice. Perhaps no place is more important for this integration to occur from a scholarly perspective than in the journal *The Career Development Quarterly (CDQ)*. *CDQ* is the flagship journal of the National Career Development Association (NCDA). The journal publishes four issues a year, which are received by its entire membership consisting of thousands of career development professionals, most of whom are full time practitioners (NCDA, 2015). Accordingly, articles in *CDQ* have a high degree of visibility to individuals working in a variety of career-related professions. As a member of *CDQ*'s editorial board and as an author of eight articles in the journal in the last ten years, I will discuss ways in which *CDQ* attempts to maintain quality integration, and I will also discuss opportunities to make this integration stronger and more accessible.

The Relevance of Integrating Theory, Research, and Practice

Many journals in vocational psychology are dedicated primarily to research. Given the history and readership of *CDQ*, although most of the articles present research findings, the articles are much more likely have a practice focus. Since 1911, *CDQ* has gone

through various incarnations in terms of structure and title but has always maintained a strong connection to the American Counseling Association and its focus on counseling practice (Pope, 2008). This makes the desired structure and content of *CDQ* somewhat unique. From a foundational level, it is important that authors follow the guidelines of the American Psychological Association's publication manual for the formatting of papers submitted to the journal. Ten years ago, a journal editor told me a piece of wisdom that has stuck with me. He noted that he can reliably tell if the manuscript will be accepted or rejected based on how well the first three pages of a manuscript are formatted (title page, abstract page, and introduction first page). Having reviewed hundreds of manuscripts myself, I can attest to this statement. Because there are a strict set of guidelines on how a paper needs to be formatted, these become ingrained like a second language to journal reviewers. When papers are submitted that deviate from these guidelines, it raises a red flag around the authors' conscientiousness and attention to detail, which often spills over in the meat of the manuscript. Although this formatting point may seem rather minor when discussing larger issues around integration, proper formatting is the first hurdle manuscripts must overcome to make it to publication.

For papers that pass this first hurdle, the integration of theory, research, and practice is extremely

relevant and important. *CDQ* is no different from other vocational journals in that a strong article will be based in some established theory. If someone were to examine some of the most read and most cited empirical papers in *CDQ*, they would likely see that many of these papers start with a few introductory paragraphs and then flow into a section entitled “Theoretical Framework.” Here authors will ground their research ideas in a particular theory, which can legitimize hypotheses and give readers a frame for interpreting the results. As *CDQ* is a practice focused journal, strong papers will both present a theory and focus on its practical components. For example, when presenting social cognitive career theory (Lent, Brown, & Hackett, 1994), authors might discuss meta-analytic findings that support the empirical ideas within the theory (Sheu et al., 2010) while also discussing articles that showcase how constructs such as self-efficacy and outcome expectations can be developed and nurtured in career counseling (Brown & Lent, 1996).

Papers with a strong theoretical base are also often the strongest from a research perspective. Theory often allows for a coherent way of structuring variables that the research can build upon. Strong papers in *CDQ* will present research in a structured way using subheadings; detailing the participants, instruments, and procedure; and eventually presenting the results themselves. The results will document the types of analyses used to examine theory based hypotheses. The analyses will document whether these hypotheses were supported, and the discussion section will be used to elucidate why or why not support exists. Strong articles will use the results and ensuing discussion to build to a final section on practical implications. For articles in *CDQ*, the practical implications section will be substantially longer than in other journals and should be set up in the introduction. Specifically, authors will note in the introduction how the results are geared to inform practice and foreshadow an in-depth connection of research and practice that will occur in the practical implications sections. As is noted in the recently updated author guidelines, “Each manuscript should include implications for practice because *CDQ* is concerned with fostering career development through the design and use of career interventions” (p. 188, *CDQ*, 2016). The seamless connection of each of these three areas—theory, research, and practice—will substantially increase the value of the manuscript, especially in *CDQ*.

The Challenges in Integrating Theory, Research, and Practice

The section above detailed what an ideal manuscript would look like in *CDQ*. It would be a well formatted paper grounded in theory, use a specific method to examine research hypotheses, and tie directly into helpful and practical implications for career practitioners. Although this is ideal, achieving this threshold is extremely difficult. First, the field of vocational psychology has historically been guided by only a handful of theories. On the one hand, this might be because these theories are excellent and capture the entire career development process. On the other hand, these theories may not address all the ways one might research vocational behavior. If this is the case, it may be difficult for many manuscripts to be grounded in an existing theory. Anecdotally, much of the research I do is on the construct of work as a calling (Duffy & Dik, 2013). This construct is not embedded within any vocational theory nor has a theory been developed to date around this construct. Since it cannot be grounded in theory, this often means hypotheses are not as strongly developed and the tie to practice is not as clear.

Second, similar challenges exist in integrating research and practice. Although *CDQ* is a practice focused journal, the vast majority of papers accepted in the journal are research focused and written by individuals whose primary job is to produce research rather than provide practice. These individuals may be disconnected from counseling practice; thus, the research ideas may not be practice oriented and/or the practical implications section may lack interest and creativity. Speaking from personal experience, I know that the practical implications section is always the most difficult section for me to write, as I haven’t done career counseling in over seven years. In fact, when I am working with doctoral students on papers, I usually leave this section for them, as they are more likely to actually be doing face-to-face career counseling.

Finally, even in best case scenarios where an integration of theory, research, and practice exists within a manuscript, the precise ways these ideas can trickle down to the actual work career counselors are doing is a mystery. Reading a journal article is likely not a top priority for busy counseling professionals. Even if there were time and interest from counselors to delve into the

research literature, the applicability of ideas and findings may be tenuous given the uniqueness of a counselor's role and clientele. In sum, all of these factors make true integration of theory, research, and practice challenging, especially for a journal like *CDQ*.

The Opportunities for Integrating Theory, Research, and Practice

One of the strengths of vocational psychology is how well we—theorists, researchers, and practitioners—have integrated theory, research, and practice. Most of our major theories have been supported by quantitative and qualitative research, and these findings have served to revolutionize the ways career counselors help clients make career decisions and be satisfied at work. As the field continues to move forward in maintaining this integration, I believe our greatest opportunity exists in applying this integration to populations who have often been neglected from traditional vocational research. This primarily includes children, adolescents, and adults who do not have much choice in their careers paths, often the result of high levels of economic constraints and/or marginalization experiences (Duffy, Blustein, Diemer, & Autin, 2016).

I see targeting this population as our greatest opportunity because I believe the vast majority of individuals around the world do not have much choice in their career paths and are often pushed to work in unsatisfying, uninteresting, and often dangerous jobs to meet survival needs. What exactly does integrating theory, research, and practice look like for this population? Certainly, the work of David Blustein (Blustein, 2006; Blustein, 2008; Blustein et al., 2008; Duffy et al., 2016) has helped push this conversation forward by developing a new theoretical framework and by challenging vocational psychologists to move beyond the study of the privileged class. However, the critical missing piece to this equation is practice integration. Although our field has greatly improved in theorizing about and researching the work lives of the underprivileged, integration of this theory and research into hands-on-practice with clients is lacking. In my opinion, finding a way to make this integration occur is our greatest opportunity and leads into my proposed future recommendations.

Recommendations for the Future

The missing piece of truly integrating practice into theory and research is the voice of the practitioner. In the United States, for example, we know through research that the vast majority of college students and working adults feel limits in their ability to choose desired career paths (Duffy et al., 2016). As such, the majority of a career counselor's clients likely do not have the privilege of simply selecting desired careers and pursuing them. Rather, compromises are made, and these compromises likely vary given the extent to which clients face economic constraints and/or marginalization. In graduate school, I spent two years providing career counseling at a local community college. My work here, more often than not, involved helping clients find decent work of any kind, with work that matched their values, interests, and skills being a nice—but not expected—bonus. I suspect that this experience is shared by most full-time career counselors, particularly those working outside of a four year college or university.

Hearing the voice of the practitioner is where *CDQ*—the journal focused more on practice than any other—can play an important facilitating role. My first future recommendation is for *CDQ* to publish a special issue that pairs major theorists with full time practitioners. Here articles would be written about how practitioners use specific theories in counseling to work with individuals who have little to no choice in their career paths. Although as a researcher, I might be able to guess how social cognitive career theory or career construction theory is helpful with these types of clients in the real world, these guesses may have little to no connection with what actually happens. Second, building from this special issue, I would like to see *CDQ* commit to publishing one article per issue authored by a full time career counselor who has unique strategies for working with underprivileged clients. This section of the journal could be labeled something like “Practitioner’s Toolkit” or “Practitioner’s Corner,” and I suspect these articles would interest other practitioners in the field. Third, I would like to see a focus on integration specifically delineated in the *Guidelines for Authors* (*CDQ*, 2016). By making this integration a necessary part of manuscript submission—which could be evaluated by reviewers as part of the overall disposition—over time, authors would likely hone their skills in this area, ultimately making for stronger contributions.

As the National Career Development Association's flagship journal, *CDQ* offers the best platform, in my opinion, for showcasing advances in the integration of theory, research, and practice with populations who have often been neglected from vocational research. I hope this chapter will help those seeking to write successful articles for *CDQ* as well as those seeking new strategies for building integration that reaches those who need it most, practitioners.

References

- Blustein, D. L. (2006). *The psychology of working: A new perspective for career development, counseling, and public policy*. NY: Routledge.
- Blustein, D. L. (2008). The role of work in psychological health and well-being: A conceptual, historical, and public policy perspective. *American Psychologist*, 63(4), 228–240. <http://doi.org/10.1037/0003-066X.63.4.228>
- Blustein, D. L., Kenna, A. C., Gill, N., & Devoy, J. E. (2008). The psychology of working: A new framework for counseling practice and public policy. *The Career Development Quarterly*, 56, 294–308. <http://doi.org/10.1002/j.2161-0045.2008.tb00095.x>
- Brown, S. D., & Lent, R. W. (1996). A social cognitive framework for career choice counseling. *The Career Development Quarterly*, 44, 354–366.
- Career Development Quarterly (2016). *Guidelines for authors*. *The Career Development Quarterly*, 64, 188–189.
- Duffy, R. D., Blustein, D. L., Diemer, M. A., & Autin, K. L. (2016). The psychology of working theory. *Journal of Counseling Psychology*, 63, 127–148. <http://doi.org/10.1037/cou0000140>
- Duffy, R. D., & Dik, B. J. (2013). Research on calling: What have we learned and where are we going? *Journal of Vocational Behavior*, 83, 428–436. <http://doi.org/10.1016/j.jvb.2013.06.006>
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79–122. <http://doi.org/10.1006/jvbe.1994.1027>
- National Career Development Association (2015). *FY 2014-15 Annual Report*. http://www.ncda.org/aws/NCDA/asset_manager/get_file/117143.
- Pope, M. (2008). Reclaiming our history: The NCDA journal editors (1911–2011). *The Career Development Quarterly*, 56, 291–293. <http://doi.org/10.1002/j.2161-0045.2008.tb00094.x>
- Sheu, H-B., Lent, R. W., Brown, S. D., Miller, M. J., Hennessy, K. D., & Duffy, R. D. (2010). Testing the choice model of social cognitive career theory across Holland themes: A meta-analytic path analysis. *Journal of Vocational Behavior*, 76, 252–264. <http://doi.org/10.1016/j.jvb.2009.10.015>

Chapter 14 - Integrating Theory, Research, and Practice: A Viewpoint from a Member of the Editorial Board of the *Journal of Career Assessment*

Itamar Gati

The Hebrew University of Jerusalem

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch14>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from <https://www.youtube.com/watch?v=haL6ccTHo20>

Appreciation is expressed to Naomi Goldblum, Shachar Hechtlinger, Nimrod Levin, Yuliya Lipshits-Brazilier, Zehava Masuri, Jim Sampson, Dana Vertsberger, and W. Bruce Walsh, the editor of the *Journal of Career Assessment*, for their comments on an earlier draft of this chapter.

Correspondence should be addressed to Itamar Gati, Department of Psychology, The Hebrew University, Jerusalem 91905, Israel. E-mail: Itamar.gati@mail.huji.ac.il

Keywords: career assessment, Information and Communication-based Technology (ICT), multidimensional career assessment, computerized assessment, interpretation of assessments, incremental validity, career interventions, effectiveness of interventions

Introductory Comments

The *Journal of Career Assessment* (established in 1993) is devoted to research on career issues, with particular attention to the assessment of individuals' characteristics relevant to career counseling and vocational behavior. According to the journal's homepage, it

provides methodologically sound, empirically based studies focusing on the process and techniques by which counselors gain understanding of the individual faced with making informed career decisions. The journal covers the various techniques, tests, inventories, rating scales, interview schedules, surveys, and direct observational methods used in scientifically based practice to provide an improved understanding of career decision-making. (<http://jca.sagepub.com>)

Compared to the *Journal of Career Development* and the *Career Development Quarterly* (see Duffy, 2017; Flores, 2017), which are more practice-oriented, the *Journal of Career Assessment* focuses on the development of theories and the publication of research, like the *Journal of Vocational Behavior* and the *Journal of Employment*

Counseling (see Furbish & Smith, 2017; Schultheiss, 2017). In the spirit of the *Journal of Career Assessment*, this chapter will focus on the challenges of integrating theory, research, and practice, and particularly issues of career assessment. I will explore how the integration of theory, research, and practice can be facilitated by Information and Communication-based Technology (ICT; see also a discussion of challenges in the translation of research into practical applications; Schultheiss, 2017). Detailed information regarding the fundamentals of research planning and execution can be found in Duffy's (2017) concise section on the technicalities involved in writing papers.

The opinions expressed in this chapter derive from my experience as an editorial board member of the *Journal of Career Assessment (JCA)* for more than 10 years, as the author of 15 *JCA* articles, as well as my involvement as an author, editorial board member, or ad-hoc reviewer for the *Journal of Vocational Behavior*, *Journal of Counseling Psychology*, *Career Development Quarterly*, *The Counseling Psychologist*, *British Journal of Guidance and Counselling*, *Journal of Career Development*, and the *International Journal of Educational and Vocational Guidance*. Thus my views do not necessarily

represent those of Professor W. Bruce Walsh, the editor of *JCA*, or any other editorial board member.

The Interplay Among Theory, Research, and Practice

In their annual review for the *Career Development Quarterly*, Sampson et al. (2014) highlighted the need to facilitate the integration of career development theory, research, and practice. The goal of integrating these three factors is producing and disseminating professional knowledge relevant for researchers and practitioners, which is, of course, consistent with the editorial policy of the *JCA*. To achieve this goal, it is important to promote theories and research that can inform and elevate practice. While there are many ways to do so, the focus here is on a few core features. The criteria for high-quality *theories* include (a) testable (and refutable) predictions, (b) stimulating research, and (c) potential for practical implications. For *research*, they include (a) appropriate participants, (b) replicable and generalizable results, and (c) informative conclusions (with implications for both theory and practice). Finally, for high-quality *practice*, the criteria for quality include (a) client satisfaction, (b) transferable interventions, and (c) evidence-based practices.

Promoting relevant theories, research, and practice is often achieved by publishing journal articles. Focusing on the *JCA*, the papers in *JCA* represent all possible combinations of focused, combined, and comprehensive papers. The majority of the papers published in the *JCA* are research-focused. Only a few are purely theoretical (mostly in special issues) and seldom purely practice-oriented (e.g., descriptions of interventions). Papers combining theory and research are quite frequent, while papers combining theory and practice are rare. There are only a small number of comprehensive papers integrating theory, research, and practice—perhaps because such papers are always challenging to write, although they have a greater chance of being published.

Types of career-related assessments. Most studies published in the *JCA* involve career assessments directly or indirectly. Thus, it could be argued that *JCA* is oriented towards the integration of theory and research. I argue that career assessments in themselves can be considered practice-oriented as well. When assessments

are developed in the field through collaboration with practitioners, they allow for testing the interactions among theories, research, and individuals seeking career counseling services. Finally, it is important to acknowledge that assessment too is a facet of practice, since any assessment is in fact an intervention, especially if the client receives feedback.

Career assessments can be unidimensional, focusing on the measurement of a single construct, such as the Occupational Self-Efficacy Scale (Rigotti et al., 2008), job satisfaction (Todorova, Bear, & Weingart, 2014), or the Vocational Identity Scale (Holland, Johnston, & Asama, 1993). The integrated responses of an individual to a unidimensional measure is represented by a single score. However, most career assessments are multidimensional and assign the individual a set of scores. There are three kinds of multidimensional assessments:

- those with an informative total score (e.g., the Career Decision-Making Self Efficacy Scale [Taylor & Betz, 1983], the Career Thoughts Inventory [CTI; Sampson, Peterson, Lenz, Reardon, & Saunders, 1996, 1998], the Career Decision-making Difficulties Questionnaire [CDDQ; Gati, Krausz, & Osipow, 1996]),
- those without a total score (e.g., the Self-Directed Search [SDS; Holland, 1997], the NEO-Big 5 [Costa & McCrae, 1985]),
- and those with an informative partial score that is an aggregate of only some of the scales (e.g., the Career Decision-Making Adaptability score in the Career Decision-Making Profile [Gati & Levin, 2014]).

Opportunities for Integrating Theory, Research, and Practice

Information and communication technology (ICT) has been used to administer and score career assessments, provide career information, and facilitate guidance for more than 40 years (Harris-Bowlsbey, 2013; Sampson & Osborn, 2015). Nowadays, ICT is typically used to provide career assessments, career information, and interventions not only via computers and laptops, but also through tablets and smartphones, which allow access to career-related sites anytime and

anywhere. This section describes the contribution of ICT-based assessments and interventions in facilitating the interplay between theory, research, and practice. Specifically, I review studies that demonstrate the fruitful use of ICTs to facilitate the development and testing of theories, improve assessments and individualized feedback, promote quality research using innovative designs, and implement effective interventions.

The contribution of ICT to facilitating the integration of theory, research, and practice. Career counseling may be viewed as decision counseling, which aims at helping clients make better decisions (Gati, & Levin, 2015; Spokane & Oliver, 1983). The challenge is to evaluate how to use ICT effectively to achieve these goals in individualized career counseling as well as stand-alone interventions. As opposed to flexible, face-to-face individualized career counseling and guidance interventions, ICT-based career guidance and planning systems are highly structured. There are three types of ICT-based career tools: (a) computerized administration of assessments (either with scoring alone or with scoring followed by immediate personalized interpretive feedback [e.g., SDS, CDDQ]), (b) career information databases (e.g., Occupational Outlook Handbook, Bureau of Labor Statistics), and (c) interactive career guidance/planning systems (e.g., SIGI3, EUREKA).

Integrating theory and practice. Transforming a theory into structured ICT-based interventions is challenging, as it requires the meticulous operationalization of theoretical constructs. This promotes clarifying and elaborating the theory as well as designing a testable practice that is a consistent, structured treatment (unlike individualized counseling). For example, theory guides the way Holland's RIASEC typology-based vocational interest inventories are interpreted. Holland (1997) suggested that the three letter Holland code, based on the three types with the highest scores, best represents the individual's vocational personality. However, Gati and Blumberg (1991) proposed an alternative method of interpretation based on career counselors' expert judgments. They found that the client's vocational personality should be represented by a flexible number of types, based on the individual's particular six-scale score profile (e.g., RI rather than RIA for a score profile of 12, 11, 3, 2, 1, 0, for RIASEC, respectively).

Integrating theory and research. One advantage of using ICT in research is access to actual clients—those who are deliberating and about to make a career-related decision and who choose to use a career planning system or career assessment on their own initiative (in contrast to those who participate in research for course credit or for payment as Mechanical Turk participants). Another advantage is that ICT-based systems allow monitoring the interaction and saving a record of it accurately and automatically (the dream of all researchers). Such monitored interactions can then be used to test theories. For instance, Gati and Tikotzki (1989) used such records to test the descriptive validity and the theoretical adequacy of the sequential elimination model for career decision making (Gati, 1986) by analyzing the sequence of pages visited by the system's users. The theoretical rationale of the sequential elimination model for prescreening was also empirically tested by Gati, Gadassi, and Shemesh (2006) in a six-year predictive validity study of the recommendations of *Making Better Career Decisions* (Gati, 1996), an interactive ICT-based career planning system (Gati & Asher, 2001).

Integrating research and practice. One of the potential interfaces between practice and research is evaluating the effectiveness of career interventions. Such evaluations should be tested with several criteria. These may include noting changes in the client's career decision status (Gati, Kleiman, Saka, & Zakai, 2003), assessing any decrease in the client's career decision-making difficulties (Gati, Ryzhik, & Vertsberger, 2013; Gati, Saka, & Krausz, 2001), evaluating the clients' perceptions of the benefit from the intervention (e.g., Gati et al., 2003), and evaluating the client's satisfaction from the chosen field of study or career (Gati et al., 2006).

One frequent use of ICT in career assessments involves administration, scoring, and interpretation. When assessments are administered, research has shown that clients' responses to inventories and questionnaires using ICT-based assessment are equivalent to responses to paper-and-pencil assessments (e.g., SDS; Lumsden, Sampson, Reardon, Lenz, & Peterson, 2004; CDDQ, Gati & Saka, 2001; Kleiman & Gati, 2004). However, ICTs have a significant role in testing the validity and benefit of computerized interpretations of assessments. From the viewpoint of practice, the use of ICT in

assessment amplifies the importance of the question “How do we know that we can rely on the client’s responses? Are they reliable and trustworthy?” In the case of assessing individuals’ career decision-making difficulties, these questions have led to the development of a systematic four-step procedure (Amir, Gati, & Kleiman, 2008) that was tested and validated with career counselors’ expert judgments:

1. ascertaining credibility (using *validity items* and the time required to fill out the questionnaire);
2. estimating the degree of differentiation among the ten CDDQ scales scores;
3. locating the salient, moderate, or negligible difficulties (based on the individual’s absolute and relative scale scores);
4. and determining the need to add *reservations* to the feedback provided (based on doubtful credibility, partial differentiation, or low informativeness).

As Furbish and Smith (2017) noted, such an approach can demonstrate how the integration of theoretically-based interpretive procedures and empirical research can help improve interpretations.

The Challenges of Integrating Theory, Research, and Practice

While the above examples demonstrate the mutual benefits of integrating theory, research, and practice, it is also important to be aware of its challenges for career assessments. On the theory level, the challenges may include explicating the theoretical rationale of assessments, and promoting multidimensional assessments. On the research level, the challenges may include (a) testing the rationale and informativeness of the total score (over and above those of the scale scores), (b) using multiple approaches to assess the quality of measures, and (c) being meticulous about translated or adapted assessments. Lastly, on the practice level, interpretation and meaning are more complex in multidimensional assessments than in unidimensional ones, for both career counselors and clients; thus, effectively incorporating multidimensional assessments into the career counseling practice can be a challenge.

In addition, there are challenges involving the design of ICT-based systems, namely, how to elicit career counselors’ expert knowledge and transform it into computerized interpretations of assessments. Finally, there are challenges involving the effective integration of ICT-based systems and ICT-based assessments (with or without interpretations) into face-to-face career counseling.

Regardless of these challenges, there are unlimited opportunities for using career assessments to facilitate the integration of theory, research, and practice. Assessments can be used to test and refine theories, identify the critical components that contribute to the effectiveness of interventions, and improve practice by providing pertinent information about our clients. Incorporating ICT can help us integrate theory, research, and practice by increasing our access to various groups and appropriately modifying our assessments of their needs (e.g., students trying to choose a major, college seniors looking for a job, adults considering a career change, cross-cultural groups). These groups can then be compared to find their similarities and differences in the assessments used (e.g., Willner, Gati, & Guan, 2015). Also, experts’ knowledge can be translated into structured interventions (e.g., dealing with dysfunctional career thoughts found in the CTI responses [Sampson et al., 1998] and providing recommendations for dealing with specific career decision-making difficulties that emerged in the CDDQ [Amir, Gati, & Kleiman, 2008]). However, theory-based ICT interventions should always be tested for empirical validity as well as practical effectiveness (e.g., which types of difficulties can be reduced by what interventions to which individuals), and the conclusions can and should be used to upgrade interventions and refine the theory.

Recommendations for Journal Editorial Policy

Like the other remarks in this chapter, the following suggestions and recommendations do not necessarily reflect the views of the other *JCA* editorial board members. First, we should encourage refuting aspects of theories, not only confirm them. The utility of a good study that reports disconfirming results is much greater than that of an additional study supporting a theory with another group of participants having some different characteristics. Second, we should encourage

studies that compare and contrast theories (e.g., the cognitive information processing theory [Sampson, Reardon, Peterson, & Lenz, 2004] and the prescreening, in-depth exploration, and choice model [Gati & Asher, 2001]) in terms of their common and distinct features. For example, Rounds and Tracey's meta-analysis (1996), which compared predictions derived from the hexagonal structure of Holland's (1997) RIASEC typology with those derived from the hierarchical-classificatory structure of interests proposed by Gati (1979, 1991), yielded unexpected results. Specifically, although Holland's hexagon fit the structure of vocational interests better in 73 USA samples, the data of 76 samples from 18 other countries fit a hierarchical structure better.

Second, with respect to research, in today's complex world of work, the design and use of multidimensional assessments should be encouraged. ICT makes it possible to design innovative research as well as potentially provide access to appropriate groups of participants. Furthermore, research that tests the *incremental value* of a new measure over and above existing measures should be preferred to studies that only report the associations between the new measure and some vocational or career-relevant variables. Finally, research that reports multiple studies supporting or disconfirming a new measure's theoretical rationale; development; psychometric properties; and construct, concurrent, and (if available) incremental and predictive validity should be encouraged.

Third, with respect to practice, we should not be satisfied with a mere positive effect of the new intervention. Rather, it is important to compare the effects of the new intervention to those of previous ones and to test the incremental value of the new intervention over and above previous interventions. In addition, it is important to pinpoint the specific components of interventions that make the difference (e.g., Brown & Ryan Krane, 2000). Finally, journals should also encourage dialogue—discussions, comments, reactions, and rejoinders in response to published articles. Special issues can facilitate such fruitful interactions, as can conferences, such as the 2016 Society of Vocational Psychology conference at Florida State University.

References

- Amir, T., Gati, I., & Kleiman, T. (2008). Understanding and interpreting career decision-making difficulties. *Journal of Career Assessment, 16*, 281–309. <http://doi.org/10.1177/1069072708317367>
- Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In R. W. Lent & S. D. Brown (Eds.), *Handbook of counseling psychology* (pp. 740–766). New York: Wiley.
- Costa, P. T., & McCrae, R. R. (1985). *The NEO personality inventory: Manual, form S and form R*. Lutz, FL: Psychological Assessment Resources.
- Duffy, R. D. (2017). Ensuring quality in theory, research, and practice: *The Career Development Quarterly*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 137). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch13>
- Flores, L. Y. (2017). *Journal of Career Development*: Recommendations for future journal practices for integrating career theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 148). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch15>
- Furbish, D., & Smith, A. (2017). A view from the editor's desk: Ensuring quality in theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 155). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch16>
- Gati, I. (1979). A hierarchical model for the structure of vocational interests. *Journal of Vocational Behavior, 15*, 90–106. [http://dx.doi.org/10.1016/0001-8791\(79\)90021-6](http://dx.doi.org/10.1016/0001-8791(79)90021-6)
- Gati, I. (1986). Making career decisions: A sequential elimination approach. *Journal of Counseling Psychology, 33*, 408–417. <http://doi.org/10.1037//0022-0167.33.4.408>

- Gati, I. (1991). The structure of vocational interests. *Psychological Bulletin*, *109*, 309–324. <http://doi.org/10.1037/0033-2909.109.2.309>
- Gati, I. (1996). Computer-assisted career counseling: Challenges and prospects. In Savickas, M. L., Walsh, B. W. (Eds.) *Handbook of career counseling theory and practice* (pp. 169–190). Palo Alto, CA: Davies-Black Publishing.
- Gati, I., & Asher, I. (2001). Prescreening, in-depth exploration, and choice: From decision theory to career counseling practice. *The Career Development Quarterly*, *50*, 140–157. <http://doi.org/10.1002/j.2161-0045.2001.tb00979.x>
- Gati, I., & Blumberg, D. (1991). Computer versus counselor interpretation of interest inventories: The case of the Self-Directed Search. *Journal of Counseling Psychology*, *38*, 350–366. <http://doi.org/10.1037//0022-0167.38.3.350>
- Gati, I., Gadassi, R., & Shemesh, N. (2006). The predictive validity of a computer-assisted career decision-making system: A six-year follow-up. *Journal of Vocational Behavior*, *68*, 205–219. <http://doi.org/10.1016/j.jvb.2005.08.002>
- Gati, I., Kleiman, T., Saka, N., & Zakai, A. (2003). Perceived benefits of using an internet-based interactive career planning system. *Journal of Vocational Behavior*, *62*, 272–286. [http://dx.doi.org/10.1016/S0001-8791\(02\)00049-0](http://dx.doi.org/10.1016/S0001-8791(02)00049-0)
- Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology*, *43*, 510–526. <http://dx.doi.org/10.1037/0022-0167.43.4.510>
- Gati, I., & Levin, N. (2014). Counseling for career decision-making difficulties: Measures and methods. *The Career Development Quarterly*, *62*, 98–113. <http://doi.org/10.1002/j.2161-0045.2014.00073.x>
- Gati, I., & Levin, N. (2015). Making better decisions. In P. J. Hartung, M. L. Savickas, and Bruce W. Walsh (Editors-in-Chief), *Handbook of career intervention: Vol. 2. Applications* (pp. 193–207). Washington, D.C.: American Psychological Association.
- Gati, I., Ryzhik, T., & Vertsberger, D. (2013). Preparing young veterans for civilian life: The effects of a workshop on career decision-making difficulties and self-efficacy. *Journal of Vocational Behavior*, *83*, 373–385. <http://doi.org/10.1016/j.jvb.2013.06.001>
- Gati, I., & Saka, N. (2001). Internet-based versus paper-and-pencil assessment: Measuring career decision-making difficulties. *Journal of Career Assessment*, *9*, 397–416. <http://doi.org/10.1177/106907270100900406>
- Gati, I., Saka, N., & Krausz, M. (2001). “Should I use a computer-assisted career guidance system?” It depends on where your career decision-making difficulties lie. *British Journal of Guidance and Counselling*, *29*, 301–321. <http://doi.org/10.1080/03069880124945>
- Gati, I., & Tikotzki, Y. (1989). Strategies for collection and processing of occupational information in making career decisions. *Journal of Counseling Psychology*, *36*(4), 430–439. <http://doi.org/10.1037/0022-0167.36.4.430>
- Harris-Bowlsbey, J. (2013). Computer-assisted career guidance systems: A part of NCDA history. *The Career Development Quarterly*, *61*, 181–185. <http://doi.org/10.1002/j.2161-0045.2013.00047.x>
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments*. Odesa, FL: Psychological Assessment Resources.
- Holland, J. L., Johnston, J. A., & Asama, N. F. (1993). The Vocational Identity Scale: A diagnostic and treatment tool. *Journal of Career Assessment*, *1*, 1–12. <http://doi.org/10.1177/106907279300100102>
- Kleiman, T., & Gati, I. (2004). Challenges of Internet-based assessment: Measuring career decision-making difficulties. *Measurement and Evaluation in Counseling and Development*, *37*, 41–55.
- Lumsden, J. A., Sampson Jr, J. P., Reardon, R. C., Lenz, J. G., & Peterson, G. W. (2004). A comparison study of the paper-and-pencil, personal computer, and Internet versions of Holland’s Self-Directed Search. *Measurement and Evaluation in Counseling and Development*, *37*, 85–94.
- Rigotti, T., Schyns, B., & Mohr, G. (2008). A short version of the Occupational Self-Efficacy Scale: Structural and construct validity across five countries. *Journal of Career Assessment*, *16*, 238–255. <http://doi.org/10.1177/1069072707305763>
- Rounds, J., & Tracey, T. J. (1996). Cross-cultural structural equivalence of RIASEC models and measures.

- Journal of Counseling Psychology*, 43, 310–329. <http://doi.org/10.1037/0022-0167.43.3.310>
- Sampson, J. P., Jr., Hou, P.-C., Kronholz, J., Dozier, C., McClain, M. C., Buzzetta, M., Pawley, E., Finklea, T., Peterson, G. W., Lenz, J. W., Reardon, R. C., Osborn, D. S., Hayden, S. C. W., Colvin, G. P., & Kennelly, E. L. (2014). Annual review: A content analysis of career development theory, research, and practice - 2013. *The Career Development Quarterly*, 62, 290–326. <http://doi.org/10.1002/j.2161-0045.2014.00085.x>
- Sampson, J. P., Jr., & Osborn, D. S. (2015). Using information and communication technology in delivering career interventions. In P. J. Hartung, M. L. Savickas, and B. W. Walsh, *Handbook of career intervention: Vol. 2. Applications* (pp. 57–70). Washington, D.C.: American Psychological Association.
- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996). *Career Thoughts Inventory*. Lutz, FL: Psychological Assessment Resources.
- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1998). The design and use of a measure of dysfunctional career thoughts among adults, college students, and high school students: The Career Thoughts Inventory. *Journal of Career Assessment*, 6, 115–134. <http://doi.org/10.1177/106907279800600201>
- Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling and services: A cognitive information processing approach*. Pacific Grove, CA: Brooks/Cole.
- Schultheiss, D. E. (2017). Integrating theory, research, and practice in vocational psychology: Perspectives of a journal of vocational behavior editorial board member. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 166). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch17>
- Spokane, A. R., & Oliver, L. W. (1983). The outcomes of vocational interventions. In W. B. Walsh, & S. H. Osipow (Eds.), *Handbook of vocational psychology* (Vol. II, pp. 99–136). Hillsdale, NJ: Erlbaum.
- Taylor, K. M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior*, 22, 63–81. [http://doi.org/10.1016/0001-8791\(83\)90006-4](http://doi.org/10.1016/0001-8791(83)90006-4)
- Todorova, G., Bear, J. B., & Weingart, L. R. (2014). Can conflict be energizing? A study of task conflict, positive emotions, and job satisfaction. *Journal of Applied Psychology*, 99, 451–467. <http://doi.org/10.1037/a0035134>
- Willner, T., Gati, I., & Guan, Y. (2015). Career Decision-Making Profiles and Career Decision-Making Difficulties: A cross-cultural comparison among US, Israeli, and Chinese samples. *Journal of Vocational Behavior*, 88, 143–351. <http://doi.org/10.1016/j.jvb.2015.03.007>

Chapter 15 - *Journal of Career Development*: Recommendations for Future Journal Practices for Integrating Career Theory, Research, and Practice

Lisa Y. Flores

University of Missouri

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch15>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from <https://www.youtube.com/watch?v=J3EN4dz7fnI>

Appreciation is expressed to George Gushue and Patrick Rottinghaus for their comments on an earlier draft of this chapter. Correspondence should be addressed to Lisa Y. Flores, Department of Educational, School & Counseling Psychology, University of Missouri, 301 Noyes Hall, Columbia, MO 65211. E-mail: floresly@missouri.edu

Keywords: publishing, professional development, practice, journal articles, career development, research, writing, editors

A Brief History of the *Journal of Career Development*

Established at the University of Missouri-Columbia (MU) in 1972, under the title *Journal of Career Education*, the *Journal of Career Development (JCD)* was one of the first professional journals with a focus solely on vocational topics. *JCD* appeared around the time that the *Vocational Guidance Quarterly*, now known as the *Career Development Quarterly (CDQ)*, and the *Journal of Vocational Behavior (JVB)* were started. In the decade prior to the initiation of these journals, we began to see a shift in federal policies to support vocational education in the schools and to expand the training of vocational educators. For example, the Vocational Education Act of 1963 broadened the scope of vocational education and provided state-level grants to develop vocational schools, expand vocational education in traditional schools, and establish vocational-technical education programs and services for disadvantaged students. Later amendments to the act provided specific funds for each goal and, notably, earmarked funding for expanding vocational education opportunities for students in need (e.g., English language learners, students with disabilities, economically disadvantaged students, students at-risk for dropping out of school).

During this time period, MU's Department of Practical Arts and Vocational Technical Education

(which no longer exists) received funding from the Education Professions Development Act (EDPA) and held regular seminars on vocational education topics (Heppner & Wagner, 2011). *JCD* was established by a group of doctoral students who were funded by EDPA and who participated in these seminars. Thus, *JCD*'s original focus on career education reflected the emphasis in the field on vocational education as vocational education training secured its foothold within schools, increased the training of career education professionals, and expanded to assist individuals with special needs.

Two aspects of *JCD* make it unique from other vocational journals: the editor history and its lack of affiliation to a professional society. First, though *JCD* has had a long history, it has only had three editors. *JCD* did not publish another issue after its initial issue in 1972 until the fall of 1974, with Hercules Kazanas as editor. He was followed by Norm Gysbers who assumed the helm of the journal in the summer of 1978 and continued until 2006. Heppner and Wagner (2011) identify several noteworthy shifts that occurred during Norm's tenure as editor: First, in 1984, he changed the name of the *Journal* to *JCD* to broaden the scope and focus of the journal as well as its audience. Second, in 1985, the publishing side (including copy editing, printing and marketing) was moved to a professional publishing company. The journal has been led by Lisa Flores since the fall of 2006. The second unique aspect about *JCD* is that it is not tied

to a professional society. There are clearly downsides to this (e.g., visibility, submissions, and subscriptions), but there are also advantages such as having the flexibility to take risks on covering a controversial topic in the journal, little pressure to make a profit on the journal, and little pressure to achieve specific metrics for the journal.

Under my leadership of *JCD*, the journal was moved to SAGE publishers and the editorial team structure was expanded to include two associate editors (currently George V. Gushue and Margaret Nauta, and formerly, Erin Hardin). Additionally, the number of journal pages has increased, and the journal has moved from a quarterly to a bimonthly publication. *JCD* is ranked among applied psychology journals and in 2015, had a five-year impact factor of 1.30. (The five-year impact factor is one metric used to assess journal quality and is the average number of times all articles published in *JCD* between 2010–2014 were cited in other publications in 2015.) *JCD*'s articles are most often cited in other career journals, such as *CDQ*, *JVB* and *Journal of Career Assessment* (Chiachanasakul et al., 2011b).

Today, *JCD* covers topics relevant to professionals across a range of disciplines, including counseling, psychology, education, student personnel, human resources, and business management. *JCD* strives to provide the most up-to-date concepts, ideas, and methodology in career development theory, research, and practice. Broad topics that are solicited include, but are not limited to, theoretical approaches and advances, career development across the lifespan, career interventions, career development of diverse populations, and in international contexts, career development in the context of multiple life roles, career and leisure, workplace and workforce issues, career issues in schools, career transitions, and spirituality and career development. Examples of recent topics covered in *JCD* include career decision making difficulties and help-seeking behaviors, the retirement career phase across cultures, occupational health, and predictors of turnover intentions.

Now that the history of *JCD* has been described, next I will discuss how the journal's policies have shaped the integration of theory, research, and practice in vocational psychology.

The Relevance of Integrating Theory, Research, and Practice

To identify where the integration of vocational theory, research, and practice are and are not addressed, a number of documents were reviewed: *JCD*'s description, policies related to manuscript submission and evaluation, and practices for selecting members of the Editorial Board and identifying ad hoc reviewers. *JCD*'s published aims for the journal, which appear on the journal's masthead and website, highlight the centrality of career development research, theory, and practice. The aims statement clearly emphasizes that "practical applications" must be presented in any manuscript submitted for consideration in the journal. An integration of theory, research, and practice is also mentioned in its aims statement and in sample topics that are covered, more often focusing on the implications of career theory or novel research on vocational psychology practice. Thus, *JCD* is explicit in its expectation that manuscripts integrate career theory and practice or career research and practice. This is also reflected in the evaluation that external reviewers use to evaluate a manuscript's contribution to career counseling *practice and research* and contribution to theory.

An analysis of *JCD* publications from its inception through 2007 (Chiachanasakul et al., 2011a) reveals that 33.4% of publications were empirical and 66.6% were non-empirical (e.g., conceptual/theoretical, commentaries, program description/evaluation, literature review). Although the journal largely included non-empirical publications prior to 2007, an analysis across the past 10 years indicates a significant increase in data-based studies and a decrease in non-empirical articles. Today, 80% of publications that appear in *JCD* are empirical. *JCD*'s editorial team expects that all empirical studies be theoretically driven (integration of research and theory) and that all studies address implications for vocational-based practices (integration of research and practice). Prominent theories featured in *JCD*'s publications prior to 2007 include social learning and cognitive theories (35%), life span and development theories (35%), and trait factor theories (4%; Chiachanasakul et al., 2011a). It is rare that a research manuscript will be published if it is not framed in theory or if it does not use the findings to inform practice. So, for the most part, *JCD* largely focuses on articles that integrate research and theory (e.g., "Critical Psychology Perspectives of Work-Based Transitions" and "The Impact

of Attachment on Career-Related Variables: A Review of the Literature and Proposed Theoretical Framework to Guide Future Research”) and research and practice (e.g., “Perceived Career Barriers for Gay, Lesbian, and Bisexual Individuals,” “Career Development Concerns of Recent Immigrants and Refugees,” and “The Career Institute: A Collaborative Career Development Program for Traditionally Underserved Secondary (6-12) School Students”), with some articles addressing an integration of theory and practice (e.g., “Facilitating a Whole-Life Approach to Career Development: The Role of Organizational Leadership” and “Career and Retirement Theories: Relevance for Older Workers across Cultures”). Chiachanasakul and colleagues (2011b) reported that *JCD*’s most cited article prior to 2007 was a piece titled, “The journey of the counselor and therapist: Research findings and perspectives on professional development” (Ronnestad & Skovolt, 2003), reflecting an integration of vocational practice and research.

The Challenges in Integrating Theory, Research, and Practice

There are several challenges to integrating theory, research, and practice in the career development literature. One is the challenge to hear the perspectives of experts across an array of professional roles to enhance the quality of articles. Like most journals, *JCD*’s editorial team, including the editor, associate editors, and editorial board members are largely faculty engaged in research and training. This is true of the authors who submit manuscripts for consideration in *JCD*: They are typically faculty, graduate students, or individuals who have research oriented appointments (Duffy, 2017). It is more difficult to enlist the participation of career counseling practitioners or vocational psychology professionals in other roles to serve as reviewers or to develop manuscripts because these activities are not required for their positions. As faculty, we can make time in our work schedules to serve as reviewers, and evaluating scholarship is expected in our roles. Career practitioners do this on top of their paid positions, and if they do, they sacrifice income or do it without support from their employer to engage in these professional activities during the work day.

The challenge for *JCD* and other journals is to engage more career counseling practitioners—people

in the field who are working with youth and adults and assisting them in their educational or vocational pursuits—to be more involved in shaping the scholarship (either as reviewers or authors) in *JCD* and other vocational journals in ways that apply to practitioners’ day-to-day activities (Duffy, 2017). Our knowledge is limited to the extent that those of us who do research may not be aware of the cutting edge practice concerns or ways in which practice has changed to accommodate modern technological advances or the diverse society in which we live. Thus, the practice implications suggested by researchers conducting the studies may not have the impact we want them to have because of our distance from these activities (Duffy, 2017). As editors and reviewers, we need to be more open to practitioners’ ideas and the valuable contributions they can make to extend our knowledge base. The involvement of a broad range of professionals, especially practitioners, is vital to contribute to the career literature.

Relatedly, there seems to be relatively little collaboration between researchers and practitioners. It is crucial to identify ways that vocational psychology researchers and practitioners can collaborate to strengthen scholarship and address broader issues related to career development.

Biases on the part of editors and reviewers are another challenge. These biases may include favoring research-based studies or certain theories or focusing more on the writing style or mechanics of a paper over the content of a manuscript. Sometimes it is easier to reject articles from individuals who are not strong writers or researchers because of personal biases as to what constitutes good scholarship, and this may disadvantage practitioners, student researchers, and international scholars.

Another challenge, also addressed by Duffy (2017), is that limited career theories are being used in our research. Others have noted that positivist paradigms are most frequently represented in vocational publications (Furbish & Smith, 2017; Schultheiss, 2017), and these theoretical challenges are further heightened by vocational psychology research designed to largely support, rather than refute, existing career theories (Gati, 2017). We can be more open and encouraging of others in using a variety of vocational theories, including theories of *career counseling* (Schultheiss, 2017), and we

can also encourage the application of theories outside of vocational psychology (i.e., social psychology, industrial organizational psychology) in understanding vocational behaviors (Schultheiss, 2017). As an example, some of Eric Deemer's work that has appeared in *JCD* has applied stereotype threat (2014) and regulatory focus theory (2015) to understanding women's STEM career choices.

Finally, in addition to involving more practitioners on editorial boards and research teams, we as researchers can be more involved in practitioner focused professional activities. Examples include attending practitioner-oriented conferences (state conferences, NCDCA, ACA) or engaging in career counseling activities (teaching practicum, supervising students, providing counseling services).

The Opportunities for Integrating Theory, Research, and Practice

There are many opportunities available to address the challenges that we face in integrating vocational theory, research, and practice. One opportunity is to actively encourage practitioners to submit manuscripts to the journal for consideration. Editors and editorial board members can also attend practitioner-oriented professional conferences and solicit submissions from presentations relevant to career practitioners. As chair-elect of the Society of Vocational Psychology, Pat Rottinghaus is working with the National Career Development Association's leaders to bring together research and practice perspectives. Similar efforts in establishing shared initiatives with leaders of other professional organizations can help us advance the integration of career theory, research, and practice in vocational scholarship (Schultheiss, 2017). We can also provide some education about our journals and the submission process at these conferences, highlighting common pitfalls to getting manuscripts published. In sum, actively encouraging practitioners to share their knowledge and inviting papers on career counseling practice topics or other topics that are highly relevant to practitioners is one step to address these concerns.

Challenges to integration can also be addressed by including practitioner scholarship within graduate training programs. In career-related courses and applied experiences, faculty can select more career counseling

readings to underscore the importance of involvement in the literature even if students pursue a practice-focused career.

Another way to tackle these challenges is through special journal issues that focus on the integration of vocational theory, research and/or practice. In 2010, *JCD* featured a special issue that was proposed by Fred Leong, *A Cultural Formulation Approach to Career Assessment and Career Counseling*, that used the DSM-IV-TR's cultural formulation model as a conceptual framework for guiding career counseling practice and assessment. Journal editors can develop or solicit ideas for special issues on integrated topics and also allow practitioners to propose their own ideas for a special issue that integrates practice with theory or research. Efforts can also be made to facilitate joint teams of researchers and practitioners to work together on papers for these special issues.

We can also facilitate collaborations between vocational psychology researchers and practitioners to explore common interests and opportunities for developing projects from the ground up that are informed by those who are most likely to benefit from the research. This can be done by developing links with staff at the college/university career center, school counselors in local districts, practicing psychologists, and educators in vocational education programs and learning about the most pressing issues related to practice. Using participatory action research methods, Drs. Ellen McWhirter, Krista Chronister, and David Blustein are exemplars for how this can be done, and products of their research in communities have appeared in *JCD* (e.g., Blustein et al., 2013; Chronister, Harley, Aranda, Barr & Luginbuhl, 2012; McWhirter, Luginbuhl, & Brown, 2014). It is time consuming to develop these relationships, but these researchers have demonstrated the value of this approach in producing findings that are driven by the needs of the community and that provide rich and meaningful implications for best practices. If we are going to advocate for more community-based research as a way to enhance the quality of our work and to integrate career theory, research, and practice, we must address institutional barriers within colleges and universities that can penalize researchers for engaging in this type of work during a merit review or tenure and promotion review.

Recommendations for the Future

Next, recommendations will be provided for how editorial policies or practices can be changed to better deal with the challenges in integrating vocational theory, research, and practice. The hope is to maximize these opportunities in the future scholarship base of the profession. Most of these recommendations center on ways to involve more practitioners in the publication process as both authors and reviewers to strengthen the integration of practice with both career development research and theory.

1. Explore ways to incentivize reviews. When I speak with other journal editors, it seems that it is becoming harder and harder to solicit ad hoc reviewers and especially hard to include practitioners to serve as members of the editorial board. One approach that we can take is to ask publishers to provide some payment incentive for reviewers. They make a lot of money from the service of scholars; we can seek ways so that reviewers can receive payment or accumulate credits toward purchases from the publisher.
2. Address reviewing activities as a professional expectation/responsibility regardless of one's career path. We can incorporate reviewer training in graduate school and work towards making reviewing activities part of the culture of our profession.
3. Mentor graduate students, practitioners, and early career researchers through the review process. Most journals are open to reviewers inviting someone to co-review a manuscript to receive experience and mentorship through the process from an experienced reviewer. This often results in better reviews while also helping students gain experience. Engaging in review activities might also motivate one to submit their own work for consideration in a journal, as it provides insight into the publication process for reviewers. Journals can solicit parties interested in co-reviewing and encourage editorial board members and ad hoc reviewers to engage in this type of mentoring activity.
4. Encourage more collaborations between vocational psychology researchers and practitioners. This can be done via calls for papers for special issues (Duffy, 2017; Schultheiss, 2017), working conferences that bring researchers and practitioners together to address important professional issues, and by encouraging discussions from both researchers and practitioners about these publications within our journals (Gati, 2017). We need to find ways to incentivize researchers who invest in these collaborations, because it is time consuming and can reduce productivity in other areas, which is highly valued in academic settings.
5. Develop policies whereby authors of submitted manuscripts are expected to review at least one other manuscript in the same year. Expect that any author who submits work for review will serve as a reviewer for other manuscripts submitted to the same journal. As an editor, it is surprising to see individuals submit their own work and expect others to review it, but then turn down invitations to review a manuscript. All journals would need to adopt similar policies for this to work, because such policies might discourage authors from submitting manuscripts to journals that have these policies. At minimum, we need to start developing a culture among authors where they are engaged in the peer review process as reviewers.
6. Consider barriers in the submission process for practitioners and eliminate or reduce them. A review of the submission guidelines for *JCD* reveals potential barriers for practitioners or individuals whose appointment is outside of a college/university.
 - a. Be flexible with length of manuscripts. Allow submissions of small manuscripts (i.e., 5–6 page short reports) that focus on an integration of research, theory, or practice. The standard length of manuscripts at 25–35 pages may prevent people who have good ideas that are publishable, but who do not have time to conduct extensive literature reviews or do not have access to journals to conduct literature reviews.

- b. Do not judge a book by the cover—ease up on publication style formatting for practitioners or other professionals who do not have a psychology background.
 - c. Provide mentoring for practitioners and other professionals who are not familiar with the publication process. Be as transparent as possible about the publishing process, indicate if the journal is open to manuscripts from professionals in the field, and post the actual evaluation forms that reviewers use.
7. Provide awards for the most outstanding contributions that integrate vocational research, theory, or practice. Consider metrics other than an article's citation count for evaluating the impact of practice integrated publications, which may be highly used by practitioners and influence career counseling practice but may not be highly used by other researchers.
 8. Encourage journals to move to open access venues. Our research should be more accessible to the public and to professionals who are not affiliated with colleges and universities that are able to pay the high costs of journal subscriptions. Editors can work with publishing companies to allow certain articles to be available to anyone or to offer open access to journal articles for a specific month of the year.

To conclude, this exercise has provided an opportunity to reflect on *JCD*'s policies and practices and to consider how they shape the content of the work published in the journal, who makes these contributions, and what the professional perspectives are that are represented in these publications. Several limitations have been identified for integrating career theory, research, and practice in *JCD* publications and I look forward to addressing these issues with the editorial team to implement new practices that can enhance the overall quality and scope of the work that appears in the journal.

References

- Blustein, D. L., Barnett, M., Mark, S., Depot, M., Lovering, M., Lee, Y., Hu, Q., Kim, J., Backus, F., Dillon-Lieberman, K., & DeBay, D. (2013). Examining urban students' constructions of a STEM/career development intervention over time. *Journal of Career Development, 40*, 40–67.
- Chiachanasakul, A., He, Y., Chen, H-H., Allen, G. E. K., Khairallah, T. S., & Ramos, K. (2011a). *Journal of Career Development: A 36-year content analysis (1972-2007)*. *Journal of Career Development, 38*, 440–455.
- Chiachanasakul, A., He, Y., Chen, H-H., Allen, G. E. K., Khairallah, T. S., & Ramos, K. (2011b). Progressive trends and impact of the *Journal of Career Development: A citation analysis*. *Journal of Career Development, 38*, 456–478.
- Chronister, K. M., Harley, E., Aranda, C. L., Barr, L., & Luginbuhl, P. (2012). Community-based career counseling for women survivors of intimate partner violence: A collaborative partnership. *Journal of Career Development, 39*, 515–539.
- Deemer, E. D. (2015). Women's science major satisfaction: Regulatory focus and the critical mass hypothesis. *Journal of Career Development, 42*, 60–71.
- Deemer, E. D., Thoman, D. B., Chase, J. P., & Smith, J. L. (2014). Feeling the threat: Stereotype threat as a contextual barrier to women's science career choice intentions. *Journal of Career Development, 41*, 141–158.
- Duffy, R. D. (2017). Ensuring quality in theory, research, and practice: *The Career Development Quarterly*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 137). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch13>
- Furbish, D., & Smith, A. (2017). *Journal of Employment Counseling*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 155). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch16>

- Gati, I. (2017). A viewpoint from a member of the editorial board of the *Journal of Career Assessment*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 141). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch14>
- Heppner, M. J., & Wagner, J. (2011). Norman C. Gysbers: Reflections on three decades as editor of the *Journal of Career Development*. *Journal of Career Development, 38*, 431–439.
- McWhirter, E. H., Luginbuhl, P., & Brown, K. (2014). ¡Apóyenos! Latina/o student recommendations for high school supports. *Journal of Career Development, 41*, 3–23.
- Ronnestad, M. H., & Skovholt, T. M. (2003). The journey of the counselor and therapist: Research findings and perspectives on professional development. *Journal of Career Development, 30*, 5–44.
- Schultheiss, D. (2017). Integrating theory, research, and practice in vocational psychology: Perspectives of a *Journal of Vocational Behavior* editorial board member. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 141). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch17>

Chapter 16 - Ensuring Quality in Theory, Research, and Practice: *Journal of Employment Counseling*

Dale Furbish

Auckland University of Technology

Angie Smith

North Carolina State University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch16>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=yLO3_H0axoU&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA&index=22

Appreciation is expressed to Debra Osborn and Casey Dozier for their comments on an earlier draft of this chapter. Correspondence should be addressed to Dale Furbish, 16 Ngatira Road, Waimauku 0881 New Zealand. E-mail: dale@orcon.co.nz

Dale S. Furbish, School of Education, Auckland University of Technology, Private Bag 92006, Mail Center C 55, Auckland, New Zealand

Keywords: career, integration, theory, research, practice, academic journal, postmodern career theories

This chapter will discuss recent thinking about vocational psychology theory, research, and practice from the perspective of the *Journal of Employment Counseling (JEC)*. It is a perspective that was solicited by the organizers of the Society of Vocational Psychology (SVP), 2016 Biennial Conference held May 16th and 17th 2016 at Florida State University. The overall theme of the conference was “Integrating Theory, Research, and Practice in Vocational Psychology.” Editors of leading academic career journals were invited to present a paper on this topic at the conference and then develop the paper into a book chapter after receiving feedback and comments from conference participants. The authors of this chapter are the editor of the *JEC* (Dale Furbish) and a member of the editorial board (Angie Smith).

The Journal of Employment Counseling

The *JEC* is the official journal of the National Employment Counseling Association, a division of the American Counseling Association. The *JEC* is a relatively small academic journal, averaging four articles per 46-page issue. The aim and scope of the *JEC* are to illuminate theory and practice in employment

counseling, report professional experimentation and research, and examine current client vocational problems as well as the professional concerns of counselors. In 2015, the *JEC* published its 52nd Volume. The *JEC* is a quarterly journal, with issues published in March, June, September, and December. It has a reported impact factor, which is the ratio of *JEC* articles cited in other publications over the past five years to the total number of *JEC* articles, of 0.64 and is ranked 69/76 for applied psychology journals by ISI Journal Citation Reports. The *JEC* attracts articles from international authors. This has not always been the case. Before 2012, the *Journal* had a less diverse author demographic profile. Manuscripts were submitted directly to the editor, and since the *JEC* did not have high international visibility, most of the authors were from North America. However, in 2012 the *JEC* (and most American Counseling Association journals) began using Scholar One (an online portal) for journal administration. Scholar One seems to have given the *JEC* greater visibility, and the number of international author submissions has increased. During 2015, the *JEC* received 40 manuscript submissions, many from authors outside North America. The publication acceptance rate is 55%. The *JEC* Editorial Board has

an international flavor, with representation from Africa, Australasia, Europe, and North America.

The Relevance of Integrating Theory, Research, and Practice

A conceptual framework for examining the integration of theory, research, and practice in vocational psychology was provided by Sampson et al. (2014) as part of their review of articles appearing in the *Career Development Quarterly*.

Antecedents for all three include varying combinations of existing theory, previous research, and observations from previous practice. Theory guides research in vocational behavior by guiding the formulation of research questions, creating measures of various constructs, and interpreting the results. Theory also guides research on career interventions by similarly supporting research questions, measures, and interpretation of findings. Theory guides practice by helping practitioners better understand individuals' concerns; creating appropriate interventions; and developing theory-based assessments, information, and instruction. Research is used in creating and validating new theory. Research also contributes to practice by providing an evidence base for improving career interventions. Finally, observations from practice support ongoing theory revision and provide evidence to further guide future research. (p. 295)

This framework is useful for characterizing the articles that have appeared in the *JEC* between 2012 and 2015. This period was selected because it represents the tenure of the current editor and also reflects the most recent theories, research approaches, and application of career theory by *JEC* authors.

Although *JEC* authors have used a number of theoretical perspectives, positivist paradigms far and away dominate. The most frequently represented theoretical foundations used by *JEC* authors have been trait factor (Burns, 2015; Littman-Ovadia, Zilcha-Mano, & Langer, 2014; Ohler & Levinson, 2012), developmental (Choi et al., 2013; Ronzio, 2012; Wong & Yuen, 2015), happenstance learning theory (Greenleaf, 2014), emotional intelligence (Di Fabio, Bernaud, &

Loarer, 2014; Di Fabio, & Palazzeschi, 2012; Di Fabio, Palazzeschi, & Bar-On, 2012; Jiang, 2014;), cognitive information processing (Bullock-Yowell, Andrews, McConnell, & Campbell, 2012; Bullock-Yowell et al., 2014), and cognitive psychology (Budnick & Santuzzi, 2013; Buttar, 2015; Johnson, 2013; Maddy, Cannon, & Lichtenberger, 2015). Inventories, questionnaires, and surveys were commonly used to collect quantitative data, with some articles reporting psychometric properties of original instruments (del Puerto & Crowson, 2013; Di Fabio, 2014; Elliott & Lopez del Puerto, 2015). Most all of the articles used statistical procedures to analyze and interpret data. The few exceptions used case study designs and employed qualitative analysis (Nunes & Arthur, 2013; Parcover & Swanson, 2013; Rehfuß & Gambrell, 2014). Commonly used statistical procedures include factor analysis, analysis of variance, and regression analysis. Experimental or quasi-experimental designs predominated, with only a few conceptual articles appearing that used constructivist rather than positivist approaches (Brott, 2012; Furbish, 2015; Rausch, 2014).

The *JEC* is an applied journal and its primary readership is members of the National Employment Counseling Association, many of whom are practicing career and employment counselors. Therefore, authors of *JEC* articles are required to discuss the application of the concepts or research appearing in their articles to practice. Editorial board reviewers of manuscripts frequently comment that authors of initial submissions to the *Journal* do not adequately attend to career counseling practice implications. Such feedback is provided to authors who are asked to revise their manuscripts. Therefore, authors must consider practice applications when submitting revised articles. Applications to practice considerations must appear in an article before final acceptance for publication is granted. The potential for articles to inform career practice is therefore the sine qua non for publication in the *JEC*. This philosophy mutually supports the National Career Development Association Code of Ethics, which states that professional career practices are based on rigorous research methodologies (NCDA, 2015).

The Challenges in Integrating Theory, Research, and Practice

McMahon and Patton (2002) assert that logical positivism has dominated the career theory and career practice since their inception in the early 1900s. Indeed, as reflected from the theoretical foundations of *JEC* articles, positivist ontological and epistemological paradigms dominate the theoretical underpinnings for the majority of the *JEC* articles. Positivist positions are frequently considered to reflect scientific approaches to research. The purpose of research, from a positivist position, is to prove or disprove a hypothesis (Mack, 2010). Although some would contend that research hypotheses are not accepted (i.e., only the null, or counter hypothesis is failed to be rejected), positivist approaches to research are built around the discovery of an objective (true) reality. Ontological assumptions (“the claims and assumptions that are made about the nature of social reality, claims about what exists, what it looks like, what units make it up and how these units interact with each other” [Blaikie as cited in Grix, 2004, p. 59,]) are that reality is external to the researcher, the topic of study can be studied independently, and reality can be predicted (Mack, 2010). Positivist research epistemology (“the theory of knowledge embedded in the theoretical perspective and thereby in the methodology” [Crotty, 1998, p. 3]) is generally reflected in *JEC* articles through the use of surveys or inventories to collect quantitative data, statistical analysis of the data, and conclusions formed about careers based on statistical interpretation of the data.

In contrast to the positivist ontology and epistemology positions that have dominated career research reported in the *JEC*, Maree (2013) points to the postmodernist influences of present day career theories. Mack (2010) identifies the ontological assumptions of postmodernist or interpretivist theories. Generally applying this to career notions, career reality is indirectly constructed based on individual interpretation and is subjective. People interpret and make their own meaning of career. Careers are distinctive and cannot be generalized. There are multiple perspectives to a career. Causation in careers is determined by interpreted meanings and symbols. Savickas et al. (2009) identified that the volatile nature of modern economies and work have led to the development of contemporary career theories that center around how individuals use

personal meaning to align subjectively defined values with career. Brott (2004) eschews the goal of scientific certainty embedded in positivist career theories to assert that multiple career realities and truths exist, each person’s life is a story being written and not a set of traits, context is needed to understand individuals and their career behaviors, individual and their careers constantly change, individuals make meaning out of daily activities, and an ongoing influence on career and reality is something that individuals’ co-construct with their environments. The epistemological assumptions associated with research from a postmodernist position are that knowledge is gained through research strategies that “respect the differences between people and the objects of natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action” (Bryman as cited in Grix, 2004, p. 64), knowledge is gained inductively to create theories, knowledge arises from particular situations, knowledge is not reducible to simplistic interpretation, and knowledge is gained through personal experience (Mack, 2010).

Although Sampson et al. (2014) found that a number of articles based on constructivist theory were published in career development journals during 2013 (e.g., Savickas’s life design theory), very few articles appearing in the *JEC* used constructivist theory. Yet, Sampson et al. (2014) did identify that quantitative research methodologies were employed in 81.6% of the 2013 career articles they analyzed. Their finding that journal article authors relied on quantitative research approaches is mirrored in the dominance of quantitative research found in the *JEC*. The supremacy of positivist career theories and research methods in the career literature poses a conundrum for the relationship among contemporary career theory, research, and practice. Duarte and Cardoso (2015) point to the gap between career theories and reality. They point out that understanding contemporary career structures and approaches to career counseling must eschew preconstructed models that are based on notions of certainty and universal principles (the goals in positivist approaches) in favor of career theory and research grounded in human variety and uniqueness. They call for a major shift in the research literature to investigate constructivist career theory and the use of qualitative methodologies that are most consistent with such theories. Use of this premise will most likely stimulate advancements in knowledge that are generated

when theories that best represent contemporary career realities are better understood through application of research that best aligns with the constructivist theory foundation.

Contemporary Career Theories

For research to inform career practice that reflects contemporary career environments, more research that is consistent with the principles of constructivist career theories should be encouraged. While positivist career theory is likely well known to most career researchers and is the foundation of much career research submitted to the *JEC*, researchers also should recognize the contribution of constructivist career theories and employ, when appropriate, qualitative research epistemologies and ontologies consistent with these theories. The emergence of career theories grounded in constructivist principles is a response to contemporary social, political, and environmental conditions that influence modern career patterns. Research to investigate theory refinement and practice application is needed.

Savickas's (2005) life design theory is a major contribution to the development of constructivist career theory. While life design theory seems well known among researchers, other constructivist career models have been designed to reflect the nature of contemporary careers and work. These may not be as familiar to researchers, yet they represent the nexus between theory and practice in the modern career environment. As a starting point to encourage use of constructivist theories and research methodologies to advance the integration of theory, research, and practice, brief summaries of life-long self-construction (Guichard) and systems theory framework (Patton and McMahon) are presented.

Guichard (2015) has developed a model of careers based on constructivist notions of the self and on the relationships between individuals and modern notions of work. He states that this paradigm recognizes individuals as "holders of a certain capital of competencies they must know how to invest in occupational opportunities they must elicit from the settings where they interact and as designers and governors of their lives" (p. 19). His self-construction model (Guichard, 2009) recognizes both the sociological influences and the cognitive (personal) influences that dynamically interact. He believes that

two reflective processes (the "I – me" and the "I – you – s/he") result in an individual's construction of the self and that the specific elements of the constructed self are the foundation of career decisions. For him, the goal of career counseling is "helping individuals develop expectations regarding their future that permit them to integrate their subjective identity forms system from a certain future perspective and to commit themselves to the advancement of this design" (Guichard, 2009, p. 254). Guichard believes this goal is achieved by interviews that help clients map out the different subjective identity forms (SIFs) in which they currently construct themselves. These interviews also help clients become aware of what constitutes each of these SIFs (e.g., actions, interactions, modes, and dimensions of relating to oneself), describe the current organization of their SIFs in order to delineate which are central and which are peripheral, become aware of relationships between these SIFs, elicit some expected occupational or educational SIF they wish to commit to actualizing, find ways (e.g., activities, interactions, resources, etc.) to increase their chances of achieving this design, modify their SIFs if necessary, and commit themselves to its advancement.

Patton and McMahon (2014) have developed the systems theory framework (STF) as a metatheoretical approach that acknowledges the complexity of careers and career decision-making. STF posits three systems (the individual, the social, and the environmental-societal) that structure an individual's career. STF views careers holistically, recognizing that careers are comprised of the influences and interrelationships among multiple life roles (e.g., worker, parent, volunteer, spouse or partner, etc.). The model emphasizes contextual and constructivist elements, stating that careers are constructed and understood by each person. Fundamental elements of STF are the recursive (mutually influential) nature of the three systems, changes in the influences of the various elements within each system, the systems themselves over time, and the role of change or unpredicted influences.

Within each system, a number of identified elements are differentially important and influential to career. The individual system contains personal determinants such as abilities, skills, interests, personality, beliefs, values, and self-concept. The social systems includes family, peers, media, and educational institutions, among others. The environmental-societal

adds the influences of geographic location, governmental policies and decisions, socioeconomic status, the employment market, and globalization.

Blustein, Kenna, Murphy, DeVoy, and DeWine (2005) suggest that qualitative research is shifting from the margins to the center of career psychology inquiry. McMahon and Watson (2006) note that while both modernist and postmodernist research approaches are useful for investigating career theories and their application to practice, postmodernist approaches differ from modernist approaches and render them appropriate for researching contemporary careers. They note the centrality of context and personal agency in constructivist career theories such as STF and suggest research artifacts needed to investigate the links between constructivist career theory and practice. They call for the development of constructivist inspired career counseling processes and instruments that can be investigated through research so as to refine contemporary theory. More research focus on local narratives rather than grand narratives is suggested. Development of research approaches that combine quantitative statistics with postmodern constructs (such as stories) is also suggested. The position of the researcher as a collaborator with the research participants in the research process is characteristic of postmodern research. Further, they emphasize that research participants are viewed as active agents (rather than passive subjects being studied) in the research process and co-construct meaning with the researcher.

Opportunities for Integrating Theory, Research, and Practice

As journal editors and editorial board members, we are dependent upon authors when they select the research paradigm for conducting investigations that are the topic of their articles. Despite our observation that contemporary career theory has emerged from phenomenological philosophies that suggest qualitative research strategies for understanding, validating, and expanding them, our experience has been that authors overwhelmingly continue to rely upon career theories that emerge from the logical positivist perspective and employ quantitative research methods in their research designs. Whether research precedes theory or vice versa, there seems to be disconnection between emerging career

theories and the research methods favored by authors submitting to the *JEC*.

Blustein et al. (2005) recognized the potential of qualitative research methods for offering considerable insights into modern theory, practice, and assessment. Although journal editors have minimal influence upon research approaches or the theories used in articles submitted to their journals, as leaders in the career development profession, we can promote the usefulness of an array of research approaches and the development of career theories that recognize the subjective, phenomenological tenets of our current career environment.

Hayes and Wood (2011) discuss six qualitative research traditions that are useful for researching modern counseling practices and theories. We believe that these approaches are useful for research into career theory and practice. Briefly, Hayes and Wood discuss grounded theory (research questions are constructed to identify processes and patterns with the goal of constructing new models), phenomenology (research questions solicit direct and conscious participants' understanding of their experiences, often through interviews), consensual qualitative research (research questions seek to gain consensus between researchers and participants about participants' experiences), ethnography (research questions seek to identify cultural norms and patterns that mediate experiences), narratology (research questions seek to understand perceptions of experiences through participant narratives), and participatory action research (research questions seek solution-oriented outcomes in a specific context and recognize the reflexivity between participants and the researchers).

One of our frequent observations about the articles submitted to the *JEC* is that authors do not adequately discuss the application or utility of their research for career or employment counseling practice. Employing qualitative research designs (or mixed methods designs that incorporate qualitative and quantitative approaches) could assist the discussion of application. Hunt's (2011) review of the structure of articles that use qualitative designs emphasizes the benefits for discussing practice application from qualitative research. Typically, qualitative research articles provide themes that emerge from the data, and participant quotes are used to support the themes. In this way, participants are given a

“voice,” which is usually absent in quantitative designs. Participant voice provides transition from theory to practice, as it introduces the perspective of those we seek to assist.

Suggestions for Integrating Theory, Research, and Practice

Howard (2016) provided a summary of the papers presented by Duffy (2017); Flores (2017); Furbish and Smith (2017); Gati (2017); and Schultheiss (2017) during Plenary Panel IV “A View from the Editor’s Desk: Ensuring Quality in Theory, Research, and Practice” during the 2016 SVP Conference. She insightfully identified that a unifying theme across the papers was that the integration of career theory, research, and practice is not unidimensional. That is, we should not view that theory is constructed first and in isolation from research and practice. Practice often provides the context for suggesting processes and relationships that can become the foundation of theory and for suggesting research designs to investigate theory. Duffy (2017) points out that the majority of articles appearing in career journals are written by academics who are not actively engaged in career practice. Thus, discussions of applications of research findings in journal articles are often barren. Flores (2017) suggests that encouraging academics to consult practitioners during their research or maintain some direct career counseling practice themselves could provide the conditions for desirable theory, research, and practice integration.

A review of the work settings of most *JEC* authors reveals that the vast majority is similarly employed in academic settings. Universities have been historically mandated to create knowledge, so it is expected that academics generate the research that is the foundation for articles in academic journals such as the *JEC*. Moreover, academics are expected and rewarded by their universities to conduct research in their field and write articles for publication. While some academics in the career field also maintain a practice, workloads and employer expectations usually preclude having the time or energy to apply the theory that they generate to their own practices. This can produce gulfs among the development, research, and application of theory. Yet there is a strong tradition in counseling psychology for the scientist-practitioner model, notably advocated by

Pepinsky and Pepinsky (1954). Pepinsky and Pepinsky promoted the notion that practitioners should apply a scientific process, akin to research, when working with clients. Flores (2017) points out the usefulness of involving practitioners in research. A practitioner’s perspective during the formation of hypotheses to explain clients’ behaviors should be adopted. Such an approach would appear ideal for the development of broader theoretical perspectives, which could be further studied through systematic research, writing, and publication in journals. Yet, as suggested above, most research and academic writing are not conducted by practitioners. This is understandable in that just as academics often do not have time to devote to practice, those in practice often do not have time or motivation (i.e., rewards) to engage in research and academic writing. Further, Brown (1993) and Smaby and Crews (1998) state that practitioners often doubt their academic writing ability and are concerned about the worth or “correctness” of their ideas. Confounding the nexus between research and practice is the finding of Sexton, Whiston, Bleuer, and Waltz (1997) that mental health workers (e.g., social workers, clinical psychologists, psychiatrists, and counselors) are not likely to even read research, yet alone conduct it. Indications are that many practitioners do not see the relevance of research to their practice and instead focus on applying the skills they have developed for addressing client issues. The absence of a theory or research driven approach is notable in some practice settings more than others. For example, Furbish (2011) found that secondary school career advisers in New Zealand tend to not operate from a theory informed approach, but rather view their work as implementing governmental policy with respect to career development. For many career practitioners and career researchers, the integration of research, theory, and practice is compromised by their own priorities and experiences.

Practice provides a rich context for linking research, theory, and practice. However, research raises specters of complex research designs and unfathomable statistical analysis for many practitioners. But, practitioners are, in many ways, the very professionals who can best develop linkages between theory and practice. As Falvey (1991) stated, “(Research) is not an alien activity that academics in laboratories immerse themselves in apart from the reach world of mental health. It is a natural function of every clinician with an inquisitive mind” (p. 622). When research is expanded

to include a wide range of curiosity motivated to “finding out,” as suggested by Lewis (1993), then reflections on every day events in practice provide a myriad of potential research questions. Research grounded in qualitative designs such as case studies, narratives, and personal reflections is especially attractive for quantitative-phobic practitioners. Moreover, engaging in research does not have to result in immediately writing a manuscript for submission to an academic journal or a presenting at a national or international professional conference. Although these outcomes are desirable for sharing and disseminating findings and building theory, less intimidating opportunities to share research should be provided by professional associations, universities, and work places. For example, local or regional symposia, or mini-conferences, organized by a professional association, a university for local practitioners, or an employer for its staff could encourage practitioners to begin engaging in research that would eventually lead to publication. When symposia or mini-conferences emphasize sharing ideas for potential research questions, rather than on completed research, a less threatening environment is created for practitioners. Encouraging practitioners to discuss what they are observing, and to receive feedback and suggestions from colleagues can provide the stimulation for taking the next step towards a practice-informed research design.

Manthei (2004) elaborated steps for practitioners to become researchers. First, practitioners should identify what is capturing their curiosity. Once an issue has been identified, it can become the foundation for a research question. Then, practitioners should consider how they will investigate the question. At this stage, receiving feedback and suggestions from colleagues and experienced researchers will help practitioners formulate a plan for what to do, how to make the plan practical and doable, who will need to be involved, what resources are needed, and how the plan will help answer the question of interest. Manthei recognizes the value of locating a research mentor who can provide guidance, information, support, and inspiration. Often, a barrier to conducting research is lack of follow through. Unanticipated events or changes of priorities can result in abandoning a project. Yet, motivation and adjustments to complete what is started are essential. Completion of a project may not result in an immediate article or presentation. Returning to what has been started develops a useful mindset. Completing a first project provides the impetus

for continuing to engage in systematic investigations of theory and practice through research.

The goal of integrating research, theory, and practice in the *JEC* is confounded by the diversity of *JEC* authors' academic backgrounds and perspectives. The *JEC* solicits a broad range of career topics. As such, the *JEC* attracts authors from management and human resources backgrounds as well as career counseling and psychology. A similar diversity in authors' backgrounds is reported by the editors of other career journals (Duffy, 2017; Flores, 2017; Gati, 2017; Schultheiss, 2017). The range of academic, theoretical, and experiential author backgrounds can result in complications for integrating research and career practice. Some authors have interests other than the application to direct career practice, or they may understand career practice differently than practitioners trained in counseling or psychology. Topics researched by authors from business perspectives, for example, can be useful for career practitioners, but as many of these authors are not career practitioners themselves, they may find formulating the application of their research for career practice difficult. *JEC* reviewers commonly request that authors consider how their research can be applied and that they revise their articles to include this consideration. To guide authors to consider how their research can be the foundation of theory and practice, publishing guidelines, especially in journals whose readership is primary practitioners (e.g., *Career Development Quarterly* and *JEC*), should emphasize how theory and research findings can be translated into practice (Howard, 2017). Flores (2017) notes also that involving practitioners as editorial board members and reviewers can provide useful feedback to authors during the review process.

Duffy (2017), Flores (2017), Gati (2017), and Schultheiss (2017) all recognize the value interdisciplinary and interprofessional collaboration for career research. By involving researchers and practitioners from different academic backgrounds, the opportunity arises to identify how research results can be applied to a diverse range of career practice settings and issues.

Final Thoughts

Modern career patterns and influences are different from the eras during which many career

theories were developed. In order to develop career practices that best reflect theory emerging from contemporary career realities, research that utilizes constructivist approaches is called for. While positivist career theories and quantitative research designs will continue to contribute to career practice, qualitative and mixed methods (combining quantitative and qualitative approaches) are more appropriate when research is based on contemporary constructivist career theory. As journal editors, we should encourage authors to research approaches and theories that reflect the needed shifts in research ontologies and epistemologies. Echoing Howard's (2016) summary of the journal editor's plenary session at the SVP Conference, we as editors should encourage authors to expand their theoretical paradigms, as well as expanding our own. Soliciting articles that are outcomes of interdisciplinary and interprofessional collaboration, cross-cultural, or cross-national can potentially support an expanded theoretical repertoire. We can encourage our students to consider qualitative approaches or mixed methods to their postgraduate research projects. We can also model qualitative approaches in our own research, publications, and conference presentations. Our journals are the conduits for the integration of career theory, research, and practice. Targeted strategies, such as the creation of special journal issues that include research from cross-disciplinary career topics (Schultheiss, 2017) or focus on articles cowritten by academics and practitioners (Flores, 2017) hold promise for promoting the integration of theory, research, and practice. Therefore, we need to ensure, as best we can, that the articles that appear in our journals advance theories and practices that are most appropriate in the contemporary era.

References

- Blustein, D. L., Kenna, A. C., Murphy, K. A., DeVoy, J. E., & DeWine, D. B. (2005). Qualitative research in career development: Exploring the center and margins of discourse about careers and working. *Journal of Career Assessment, 13*, 351–370. <http://doi.org/10.1177/1069072705278047>
- Brott, P. E. (2004). Constructivist assessment in career counseling. *Journal of Career Development, 30*, 189–200.
- Brott, P. E. (2012). A career story approach to management, business, and financial occupations. *Journal of Employment Counseling, 49*, 172–184. <http://doi.org/10.1002/j.2161-1920.2012.00018.x>
- Brown, R. (1993). *Second manual for conducting workshops on postgraduate supervision*. Brisbane, Australia: Queensland Department of Primary Industries.
- Bullock-Yowell, E., Leavell, K. A., McConnell, A. E., Rushing, A. D., Andrews, L. M., Campbell, M., & Osborne, L. K. (2014). Career decision-making intervention with unemployed adults: When good intentions are not effective. *Journal of Employment Counseling, 51*, 16–30. <http://doi.org/10.1002/j.2161-1920.2014.00038.x>
- Bullock-Yowell, E., Andrews, L., McConnell, A. & Campbell, M. (2012). Unemployed adults' career thoughts, career self-efficacy, and interest: Any similarity to college students?. *Journal of Employment Counseling, 49*, 18–30. <http://doi.org/10.1002/j.2161-1920.2012.00003.x>
- Burns, S. T. (2015). Predictive validity of person matching at the scale and discriminate analysis levels. *Journal of Employment Counseling, 52*, 178–191. <http://doi.org/10.1002/joec.12023>
- Budnick, C. J., & Santuzzi, A. M. (2013). Seeking re-employment in nonmetropolitan America. *Journal of Employment Counseling, 50*, 146–153. <http://doi.org/10.1002/j.2161-1920.2013.00033.x>
- Buttar, H. M. (2015). Formation of entrepreneurial career intentions: The role of sociocognitive factors. *Journal of Employment Counseling, 52*, 2–17. <http://doi.org/10.1002/j.2161-1920.2015.00052.x>
- Choi, B. Y., Kim, B., Jang, S. H., Jung, S. H., Ahn, S. S., Lee, S. M., & Gysbers, N. (2013). An individual's work values in career development. *Journal of Employment Counseling, 50*, 154–165. <http://doi.org/10.1002/j.2161-1920.2013.00034.x>
- Crotty, M. (1998). *The foundations of social research*. London, England: Sage Publications.
- delPuerto, C.L., & Crowson, A. (2013). Green construction and energy training program for at-risk individuals: A case study. *Journal of Employment Counseling, 50*, 59–70. <http://doi.org/10.1002/j.2161-1920.2013.00025.x>
- Di Fabio, A. (2014). Intrapreneurial self-capital: A new construct for the 21st Century. *Journal of Employment Counseling, 51*, 98–111. <http://doi.org/10.1002/j.2161-1920.2014.00045.x>

- Di Fabio, A., Bernaud, J.-L., & Loarer, E. (2014). Emotional intelligence or personality in resistance to change? Empirical results in an Italian health care context. *Journal of Employment Counseling, 51*, 146–157. <http://doi.org/10.1002/j.2161-1920.2014.00048.x>
- Di Fabio, A., & Palazzeschi, L. (2012). Organizational justice: Personality traits or emotional intelligence? An empirical study in an Italian hospital context. *Journal of Employment Counseling, 49*, 31–42. <http://doi.org/10.1002/j.2161-1920.2012.00004.x>
- Di Fabio, A., Palazzeschi, L., & Bar-On, R. (2012). The role of personality traits, core self-evaluation, and emotional intelligence in career decision-making difficulties. *Journal of Employment Counseling, 49*, 118–129. <http://doi.org/10.1002/j.2161-1920.2012.00012.x>
- Duarte, M. E., & Cardoso, P. (2015). The life design paradigm - From practice to theory. In L. Nota J. Rossier (Eds.), *Handbook of life design* (pp. 41-58). Boston, MA: Hogrefe.
- Duffy, R. D. (2017). Ensuring quality in theory, research, and practice: *The Career Development Quarterly*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 137). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch13>
- Elliott, J., & Lopez del Puerto, C. (2015). Development of an Attitudes and Intentions Scale for construction skills training programs. *Journal of Employment Counseling, 52*, 131–144. <http://doi.org/10.1002/joec.12011>
- Falvey, J. E. (1991). Rethinking research: Form and function in a clinical curriculum. *Journal of Mental Health Counseling, 13*, 221–35.
- Flores, L.Y. (2017). *Journal of Career Development*: Recommendations for future journal practices for integrating career theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 148). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch15>
- Furbish, D. (2011). The influence of professional standards on New Zealand career development practice. *Australian Journal of Career Development 20*, 10–17.
- Furbish, D. S. (2015). Exploring social justice via résumés. *Journal of Employment Counseling, 52*, 36–47. <http://doi.org/10.1002/j.2161-1920.2015.00055.x>
- Furbish, D., & Smith, A. (2017). A View from the Editor's Desk: Ensuring Quality in Theory, Research, and Practice - *Journal of Employment Counseling*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 155). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch16>
- Gati, I. (2017). A view from the editor's desk: ensuring quality in theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 141). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch14>
- Greenleaf, A. T. (2014). Making the best of a bad situation: Career counseling young adults in the aftermath of the great recession. *Journal of Employment Counseling, 51*, 158–169. <http://doi.org/10.1002/j.2161-1920.2014.00049.x>
- Grix, J. (2004). *The foundations of research*. London, England: Palgrave Macmillan.
- Guichard, J. (2015). From vocational guidance and career counseling to life design dialogues. In L. Nota J. Rossier (Eds.) *Handbook of life design* (pp 11-25). Boston, MA: Hogrefe.
- Guichard, J. (2009). Self-constructing. *Journal of Vocational Behavior, 75*, 251–258.
- Hayes, D., & Wood, C. (2011). Infusing qualitative traditions in counseling research designs. *Journal of Counseling & Development, 89*, 288–295.
- Howard, K. (2016). Summary of plenary panel IV: A view from the editor's desk: Ensuring quality in theory, research, and practice.
- Hunt, B. (2011). Publishing qualitative research in counseling journals. *Journal of counseling & development, 89*, 296–300.
- Jiang, Z. (2014). Emotional intelligence and career decision-making self-efficacy: National and gender differences.

- Journal of Employment Counseling*, 51, 112–124. <http://doi.org/10.1002/j.2161-1920.2014.00046.x>
- Johnson, K. F. (2013). Preparing ex-offenders for work: applying the self-determination theory to social cognitive career counseling. *Journal of Employment Counseling*, 50, 83–93. <http://doi.org/10.1002/j.2161-1920.2013.00027.x>
- Lewis, C. (1993). Making use of research. In R. Bayne & P. Nicolson (Eds.), *Counseling and psychology for health professional*. (pp. 223–36). London, England: Chapman & Hall
- Littman-Ovadia, H., Zilcha-Mano, S. & Langer, E. (2014). Vocational personalities and mindfulness. *Journal of Employment Counseling*, 51, 170–179. <http://dx.doi.org/10.1002/j.2161-1920.2014.00050.x>
- Maddy, L. M., Cannon, J. G., & Lichtenberger, E. J. (2015). The effects of social support on self-esteem, self-efficacy, and job search efficacy in the unemployed. *Journal of Employment Counseling*, 52, 87–95. <http://doi.org/10.1002/joec.12007>
- Manthei, R. (2004). Encouraging counsellors to become active researchers and users of research. *New Zealand Journal of Counselling*, 25, 70–81.
- Maree, J. G. (2013). *Counseling for career construction*. Rotterdam, The Netherlands: Sense.
- Mack, L. (2010). The philosophical underpinnings of educational research. *Polylossia*, 19, 5–11.
- McMahon, M., & Patton, W. (2002). Using qualitative assessment in career counseling. *International Journal for Educational and Vocational Guidance*, 2, 51–66.
- McMahon, M., & Watson, M. (2006). Career research in a post-modern era. *Australian Journal of Career Development*, 15, 26–30.
- NCDA (2015). 2015 NCDA Code of Ethics. Retrieved from http://www.ncda.org/aws/NCDA/asset_manager/get_file/3395
- Nunes, S., & Arthur, N. (2013). International students' experiences of integrating into the workforce. *Journal of Employment Counseling*, 50, 34–45. <http://doi.org/10.1002/j.2161-1920.2013.00023.x>
- Ohler, D. L., & Levinson, E. M. (2012). Using Holland's theory in employment counseling: Focus on service occupations. *Journal of Employment Counseling*, 49, 148–159. <http://doi.org/10.1002/j.2161-1920.2012.00016.x>
- Parcover, J. A., & Swanson, J. L., (2013). Career counselor training and supervision: role of the supervisory working alliance. *Journal of Employment Counseling*, 50, 166–178. <http://doi.org/10.1002/j.2161-1920.2013.00035.x>
- Patton, W., & McMahon, M. (2014). Career development and systems theory. Rotterdam, The Netherlands: Sense.
- Pepinsky, H. B., & Pepinsky, N. (1954). *Counseling theory and practice*. New York, NY: Ronald Press.
- Rausch, M. A. (2014). Contextual career counseling for transitioning military veterans. *Journal of Employment Counseling*, 51, 89–96. <http://doi.org/10.1002/j.2161-1920.2014.00044.x>
- Rehfuss, M. C., & Gambrell, C. E. (2014). Themes that facilitate the success of female counselors in specialty areas. *Journal of Employment Counseling*, 51, 180–191. <http://doi.org/10.1002/j.2161-1920.2014.00051.x>
- Ronzio, C. R. (2012). Counseling issues for adult women in career transition. *Journal of Employment Counseling*, 49, 74–84. <http://doi.org/10.1002/j.2161-1920.2012.00008.x>
- Sampson, J. P., Jr., Hou, P.-C., Kronholz, J., Dozier, C., McClain, M.-C., Buzzetta, M., Pawley, E., Finklea, T., Peterson, G. W., Lenz, J. G., Reardon, R. C., Osborn, D. S., Hayden, S. C. W., Colvin, G. P., & Kennelly, E. L. (2014). Annual review: A content analysis of career development theory, research, and practice - 2013. *The Career Development Quarterly*, 62, 290–326. <http://doi.org/10.1002/j.2161-0045.2014.00085.x>
- Savickas, M. L. (2005). The theory and practice of career construction. In S. Brown & R. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 42–70). New York, NY: John Wiley.
- Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J., Duarte, M. E., Guichard, J., Soresi, S., Esbroeck, R. V., & van Vianen, A. E. M. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, 75(3), 239–250. <http://doi.org/10.1016/j.jvb.2009.04.004>
- Schultheiss, D. E. (2017). Integrating theory, research, and practice in vocational psychology: *Perspectives of a Journal of Vocational Behavior* Editorial Board

- Member. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 166). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch17>
- Sexton, T. L., Whiston, S. C., Bleuer, J. C., & Waltz, G. R. (1997). *Integrating outcome research into counseling practice and training*. Alexandria, VA: American Counseling Association.
- Smaby, M. H., & Crews, J. (1998). Publishing in scholarly journals. Part 1: Is it an attitude or technique? It's an attitude. *Counselor Education and Supervision, 37*, 218.
- Wong, S-W., & Yuen, M. (2015). Super's Work Values Inventory: Issues of subtest internal consistency using a sample of Chinese university students in Hong Kong. *Journal of Employment Counseling, 52*, 29–35. <http://doi.org/10.1002/j.2161-1920.2015.00054.x>

Chapter 17 - Integrating Theory, Research, and Practice in Vocational Psychology: Perspectives of a *Journal of Vocational Behavior* Editorial Board Member

Donna E. Schultheiss

Cleveland State University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch17>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=SiQ_yEokHO8

Appreciation is expressed to Nadya Fouad and Mark Savickas for their comments on an earlier draft of this chapter. Correspondence should be addressed to Donna E. Schultheiss, Department of Counseling, Administration, Supervision, and Adult Learning, Cleveland State University, 2121 Euclid Avenue, Cleveland, OH 44115. E-mail: d.schultheiss@csuohio.edu

Keywords: theory, research, practice, career, vocational psychology, integration, industrial-organizational psychology, research-practice gap, translational research

The fundamental role of the field's academic journals is to disseminate knowledge and contribute to understandings of psychological and vocational phenomenon. Hence, journals report on research that makes a unique contribution to current knowledge so that we can better understand and predict behavior (e.g., cognitions, emotions, development, etc.). Because vocational psychology is an applied science, theory and research are used to inform practice and guide interventions to improve people's lives. We look to our journals to define our field, stimulate innovative thought, and inspire future research endeavors.

Although a generally shared assumption of our profession is that research informs theory and practice, and vice versa, not all vocational psychologists cross these domains in their professional roles and activities. Likewise, each journal contributes a unique perspective and emphasis on this integration. The focus of this chapter is to reflect on how *Journal of Vocational Behavior* (*JVB*) editorial policies shape the integration of theory, research, and practice by examining the relevancy, challenges, and opportunities related to this integration. Suggestions for future directions are also provided. First, a brief introduction to the history and scope of the journal is offered.

History and Scope of the Journal

The *JVB* publishes articles that make a substantive contribution to existing knowledge, have a theoretical grounding, and provide practical relevance. The journal publishes primarily empirical articles and considers conceptual articles if they make a strong theoretical contribution. In 1971, Sam Osipow founded the journal and intentionally named it *Journal of Vocational Behavior*—not Vocational Psychology—to emphasize the aim of publishing research across the lifespan with contributions from sociologists, industrial-organizational psychologists, and human resource personnel. Despite this broad emphasis, contributions were strictly from the perspective of the individual, not the organization (M. L. Savickas, personal communication, February 26, 2016). The journal, which grew from one volume per year to two in 1974, is currently at Volume 93 with six volumes published each year. The current impact factor of 2.59 ranks the *JVB* eighth out of 76 applied psychology journals (Fouad, 2016). The impact factor measures the frequency with which the average article in the journal has been cited in a particular year.

One of the strengths of *JVB* continues to be the breadth of topics it represents. In particular, the journal bridges two distinct, yet related approaches to studying work behavior and environments. The two

broad and overlapping fields of vocational psychology and industrial-organizational psychology both benefit by informing each other of their methods and findings to create a synergy in which an innovative, interdisciplinary science could be cultivated. Articles generally report on research that tests theories, builds upon existing theories, or suggests new theories or understandings of work behaviors and contexts. This is consistent with what Sharf (2013) described as intentional research—that which sets out to test concepts, constructs, or propositions of a theory, as opposed to unintentional research which relates to a theory, but is not specifically designed to test aspects of a theory. Qualitative research that adheres to rigorous research methods contributes knowledge to underexplored areas, thereby contributing to theory building and expanding theories to diverse populations.

One specific intent of *JVB* is to communicate how research findings advance theory. Hence, it is important that the theoretical rationale for the study is clearly articulated and closely aligned with the development of hypotheses and that testing the stated hypotheses results in findings that offer specific implications that advance theory (cf. Gati, 2016). The *JVB* primarily publishes empirical research on vocational choice, occupational aspirations, career adaptability, career exploration, job search, organizational socialization, the influences of cultural context, job performance and satisfaction, career success, theories of work adjustment, adult vocational development, organizational commitment and job involvement, multiple role management, work role salience, work-leisure relationship, midlife career change, work transitions, and special issues on topics of interest (Fouad, 2016).

Relevance of Integrating Theory, Research, and Practice

As suggested in the previous section, the integration of theory, research, and practice is central to the field of vocational psychology. This integration is highly relevant, as it can advance knowledge, suggest best practices, and provide a foundation for the education and training of vocational psychologists (Fouad & Jackson, 2013). Theory informs research by guiding the development of testable hypotheses, driving the development of assessment measures, and interpreting

research findings in meaningful ways that suggest areas for the refinement of existing theory and the development of new theories. This research then leads to implications for effective evidence-based practice. The integration of theory and research is integral to the editorial policy of *JVB*. Research published by the journal must be grounded in theory and make a meaningful and unique contribution to theory. Indeed, many have suggested that a strength of the field is its reliance on theory and its strong empirical tradition of pursuing research within the context of theory (Hesketh, 2001; Karr & Larson, 2005; Sampson et al., 2014; Savickas, 2001; Subich, 2001). This led Subich (2001) to conclude that the practice of grounding research in theory has advanced theory and facilitated the construction of a well-organized body of knowledge and widely used assessment tools (cf. Gati, 2016) and counseling methods that are derived from—and linked to—theory.

Theory-driven research is crucial for several reasons. It provides an organized framework from which meaningful questions can be posed, thus reducing the generation of unconnected facts (Karr & Larson, 2005; Meehl, 1978; Strong, 1991). It also fuels a compelling need for research that informs practice by facilitating the development of interventions that address career and life concerns across the life span (Fouad & Jackson, 2013; Karr & Larson, 2005). The integration of theory, research, and practice provides a strategic position from which opportunities for growth and change in the field can occur (Fouad & Jackson, 2013). Examples of such changes include applying existing theories to new populations and developing new theoretical models to explain and predict a broad range of work related behaviors; attitudes; cognitions; and personal, social, and emotional aspects of work life. The development of constructionist and constructivist postmodern perspectives and innovative theories with testable propositions has moved the field forward (cf. Furbish & Smith, 2016). Career construction (Savickas, 2005), life-design (Savickas et al., 2009), and the psychology of working (Blustein, 2006; 2013) are examples of several new vocational theories that have set the stage for innovative lines of research that address the complexity of people's lives within dynamic contexts.

Although the integration of practice with theory and research is relevant to our field, should it be a focus in all of our journals? Although there is value

in both basic and applied research, the extent to which career counseling practitioners view the empirical and theoretical work of vocational psychologists as relevant to their work is unclear (Subich, 2001). Moreover, the connection between theory, research, and practice varies tremendously across journals (e.g., Duffy, 2016; Flores, 2016; Furbish & Smith, 2016; Gati, 2016). *JVB* is generally not a practice journal. Its focus has historically been on theoretically-driven research, not the integration of practice. Other journals (e.g., *Journal of Career Development* and *Career Development Quarterly*), however, have an explicit focus on practice (Duffy, 2016; Flores, 2016).

Challenges in Integrating Theory, Research, and Practice

Despite the long-standing gap between science and practice, challenges remain with regard to where and how the integration of theory, research, and practice should occur (see also Duffy, 2016; Flores, 2016; Furbish & Smith, 2016; Gati, 2016). Theories of vocational behavior are distinct from theories of career counseling. For example, the cognitive information processing approach (Peterson, Sampson, Lenz, & Reardon, 2002) provides a clear framework for translating theory into practice with specific interventions. Whereas, life design (Savickas et al., 2009) provides less explicit suggestions for intervention. There continues to be a need for scientific endeavors that promote new knowledge in a manner that is accessible to practitioners, perhaps through intervention research or a focus on practice-relevant topics (Subich, 2001). A challenge identified by Duffy and Flores is that most published articles are written by those whose main focus is research, not practice. Therefore, practice implications identified in vocational journals are limited to the extent that most authors are not actively engaged in practice activities and may not be as aware of emerging practice concerns (Duffy, 2016; Flores, 2016).

Some (e.g., Subich, 2001) have suggested that our journals' limited attention to practice may be resulting in avoiding important issues in the field, such as intervention research and applications of theories to underserved and disempowered populations (Duffy, 2016). The psychology of working (Blustein, 2013) is

one such theory to emerge that emphasizes an inclusive framework that includes the poor and working class.

Vocational psychology is one discipline that supports practice; there are others. Although some professionals may be active across the three domains of theory, research, and practice, most are likely not (Subich, 2001). The professional roles of vocational psychologists and career counselors are diverse, which has led some to question the relevance of vocational psychology's research questions and paradigms to career counseling practice and the extent to which practitioners need to be engaged in practice-based research. Professional journals may not be conducive to the translation of research to practical applications (Lucas, 1996). Instead, professional organizations, and not necessarily academic journals, may be the locations in which meaningful communication between the disciplines can occur (cf. Fouad, 2001) and where collaborations can be formed to initiate the translation of research into practice.

It has been suggested that we cannot continue to have vocational psychology theories that do not inform industrial/organizational psychology and vice versa. One potential role of *JVB* could be to encourage submissions for special issues that insist on the inclusion of researchers from both disciplines to represent and integrate multiple perspectives (Fouad, personal communication). I will discuss the potential means by which this might be done in the opportunities section to follow.

It is important to continue to make our work more relevant to a broader range of the national and global population. This is reflected in the growing international focus of the journal both in terms of authors and participants across national contexts. Global migration of people and work has given rise to a whole host of new issues and challenges in work lives and workplaces. International collaborations have spurred another area of growth and innovative thinking that is reflected in our manuscripts. These trends have broadened our focus and enriched scholarship, but they have also challenged the integration of theory, research, and practice. Although there are similarities across national boundaries, significant differences are evident that reflect unique cultural and national contexts, particularly related to sociopolitical contexts, economic resources, educational systems, and cultural traditions and values (Nilsson et al., 2007). This inclusivity has

impacted the way we approach research through the recognition and growth of indigenous theories, best practices for the development and validation of measures across national and cultural contexts (e.g., translation procedures, reliability, validity, and measurement invariance issues), and culturally-sensitive and appropriate interventions. We have seen growth in the *JVB* editorial board, which is now more diverse in terms of international members, and expertise in theoretical perspectives and methodologies. Some challenges continue to exist for non-English language scholars, such as barriers to publication and the dissemination of knowledge contained in the journal. There is a current call for manuscripts in *JVB* for a special issue on the vocational behavior of refugees. Topics might include how refugees seek employment, overcome work-related challenges, and navigate their careers.

It has been suggested that as a field we must better articulate career theories that seek to better account for dynamic, nonlinear, contextualized, and diverse work lives (Hartung, 2013). Over the past several decades, we have seen our journals increasingly reflect the diversity of our population. However, intersectional analysis of identities remains relatively limited within research on work and employment relations (McBride, Hebson, & Holgate, 2015). While the term *intersectional* was originally coined to refer to the experiences of Black women's employment experiences (Crenshaw, 1989), contemporary writings have emphasized the intersection of a broader range of identities, oppressions (e.g., ageism, class), and social groupings (e.g., sexuality, disability), yet have largely remained absent from the vocational literature (McBride et al., 2015). Challenges of integrating intersectional perspectives concern both the design and interpretation of research, including questions of whether intersectionality is a paradigm, theory, or methodological approach. Some of these questions include: Is our research sufficiently cautious in the generalizations of our findings? Are we aware of how various methodologies could open up important new lines of inquiry? (McBride et al., 2015). These questions lead to another challenge that includes, but is not limited to, the topic of intersectionality. This challenge concerns how to maintain scientific rigor while being open to the value of postmodern discourse in contemporary theory and research. (See Morrow 2005; 2007 for a discussion of trustworthiness and the rigor of qualitative research). *JVB* currently has a call for manuscripts for a special

issue on understanding the experiences, attitudes, and behaviors of sexual orientation and gender identity minority employees. Specific topics might include the following: sexual identity management at work, methodological advances in studying sexual orientation or gender identity minorities in the workplace, work-life issues, and workplace discrimination, among others.

Postmodern approaches pose challenges for vocational psychology, primarily to its core value as a science (Collin, 2007). Quoting Pepper (1942, p.161), Collin (2007), remarked that contextualism "highlights the open-ended, fluid, and tentative process of meaning-making, confounds the relationships between objectivity and subjectivity, and undermines the basis for traditional analysis." Collin also suggested that postmodern perspectives could contribute to vocational psychology by using qualitative, participative, and interpretative research methods that address issues of diversity by giving voice to those often silenced by traditional methods, attending to context with its interwoven nature and construction of meaning, emphasizing the interactive processes between people, and attending to social justice by uncovering the power and ideology that inform and shape discourses (cf. Schultheiss, 2007a; Schultheiss, 2007b). Admittedly, these postmodern approaches do not share the underlying scientific assumptions of traditional approaches long evident in vocational psychology and evident in our journals. Instead, they represent very different interpretations of work experiences (Collin, 2007). By representing a shift from what is (i.e., a commitment to objective empiricism) to what might be (i.e., a reflection of the complexity, uncertainty, and chaos evident in a postmodern world; Collin, 2007), these underlying epistemological differences are a major barrier to the acceptance of postmodern approaches by vocational psychology.

Opportunities for Integrating Theory, Research, and Practice

One of the most important opportunities that integration can provide is to continue to build on the strength of *JVB* as a journal that publishes theoretically grounded research that empirically tests theories and informs practice (Fouad & Jackson, 2013). Although it is evident that the traditional and still predominant epistemological assumptions that drive current

scholarship are positivistic (Furbish & Smith, 2016), in the past decade, social constructionism, constructivism, and other postmodern perspectives have gained ground (Collin & Patton, 2009). As Furbish and Smith (2016) have argued, the dominance of positivistic research stands in contrast to the relationship between contemporary theory and practice in that contemporary careers and constructivist career counseling approaches are not based on notions of certainty and universal principles. Hence, as Furbish and Smith suggested, there remains a disconnect between emerging constructivist career theories and the predominant research methods followed in most published articles. Indeed, critical theory and critical-ideological approaches have appeared in vocational journals, yet have not gained a stronghold. New paradigms challenge traditional positivist assumptions, but also open up new horizons (Collin & Patton, 2009). Opportunities to expand beyond traditional methods may be particularly relevant as our field increasingly recognizes the diverse intersectional identities of individuals embedded within dynamic global contexts. The opportunity that an intersectional approach offers is a means of understanding the multiplicative effects within these intersections, to better avoid the erasure or conflation of intragroup differences. It also opens the possibility of accounting for voices that are both present and missing from our analyses (McBride et al., 2015).

There are many opportunities in our expanding international focus. It offers a platform for dissemination of a broad view of work lives and work contexts that can contribute to our knowledge in the field and informs our research by enhancing cross-cultural awareness and cooperation as well as the professional training of students (Nilsson et al., 2007). More globally diverse editorial boards contribute new perspectives and worldviews to their reviews, making important contributions to published research. The collective contribution of international scholars and students has fostered an interdisciplinary and international dialogue that has given rise to international research collaborations and jointly sponsored international conferences such as the NCDA-SVP-IAEVG International Symposium (Trusty & Van Esbroeck, 2009; Van Esbroeck, Schultheiss, Trusty, & Gore, 2009b), the Interdisciplinary UK Economic and Social Research Council grant funded seminar series on careers and migration (Cohen, Arnold, & O'Neill, 2011a), and the International Career Adaptability project (Leong & Walsh, 2012). Some of

these international collaborations were multidisciplinary and the focus of *JVB* special issues (Cohen et al., 2011a; Leong & Walsh, 2012). These conferences and publications reflect international dialogues that address the changing needs of workers in the dynamic global economy by disseminating knowledge and generating interdisciplinary solutions to complex global challenges. One area ripe for expansion is the study of careers beyond economically advantaged countries and explanations involving free choice (Cohen, Arnold, & O'Neill, 2011b).

Collaboration among disciplines will continue to hold great value for the generation of new knowledge to effectively address career and work concerns (cf. Van Esbroeck, Schultheiss, Trusty, & Gore, 2009a; Schultheiss & Pennington, 2009; Schultheiss & Van Esbroeck, 2009). Vocational psychology and industrial-organizational psychology benefit from each other's methods and findings, particularly within the dramatic transformation of the global workforce. Individuals' careers do not unfold independently from organizations. Instead, patterns of enablement and restraint are clearly evident as people react to organizational changes that are imposed on them and as they exercise agency over the development of their careers (Arnold & Cohen, 2013). However, despite a view of individual and organizational perspectives as conflicting with one another, evidence is accumulating that indicates that both can operate in relative harmony or cooperation (Arnold & Cohen, 2013). This perspective suggests that thoughtfully designed organizational interventions could encourage, instead of substitute for, individual action. For example, career action centers, which are set up so that individuals take responsibility for the decision to use them or not, seem to enhance a person's sense of career resilience and motivation (Arnold & Cohen, 2013; Brotheridge & Power, 2008). *JVB* has promoted an awareness of this multidisciplinary approach and will continue to do so.

Long recognized as a potentially missed opportunity for the career field, vocational psychology and organizational scholars could be encouraged to invite experts from each field to propose a special issue in which they join together to co-author manuscripts. One such example is a 2011 *JVB* special issue in which interdisciplinary teams wrote seven articles to contribute to our understanding of the complexities associated with careers and migration (Cohen et al., 2011a). This type

of collaboration could help to create a multidisciplinary dialogue grounded in the in-depth knowledge of these two perspectives. It could also take scholars across their traditional boundaries to forge new understandings of the dynamic economic global landscape to better serve individuals and society (Collin & Patton, 2009). One major challenge of accomplishing this is that these two perspectives on careers exist separately, in both their academic and applied activities (Herr, 2009). Herr (2009) suggested a way forward through collaboration, interdisciplinary research, and collaborative pursuit of related lines of inquiry to address joint issues that are problem-focused rather than discipline or theory-based. The assumption is that the disciplines working together would produce added value to both perspectives and to those who benefit from their work. This could help close the gap in perspectives in an increasingly broadened field of work in the global context (Herr, 2009) and make our work more relevant to the broader national and global population (cf. Subich, 2001).

Recommendations for the Future

As the field moves forward, it may be important to encourage vocational and industrial-organizational psychologists to examine their basic assumptions and how they construct knowledge and to encourage them to engage in an open reflective dialogue (Collin, 2007). Together, vocational and industrial-organizational psychologists could capitalize on areas of common interest (e.g., work life concerns, equity and justice, workplace discrimination; Hesketh, 2001). It has been suggested that it is time to both continue to examine and distinguish between established approaches (e.g., lifespan development, interests, values, self-efficacy, choice, and decision making) and new responses (e.g., new constructs such as chaos, complexity and uncertainty, agentic action, story, and relationships) to a changed world (Creed & Hood, 2009; McIlveen, 2009). This would involve research that examines the applicability of existing theories to diverse populations and to those with intersectional identities. To avoid the potential for intersectional experiences to be erased in single category analysis, researchers could improve the extent to which they acknowledge what might be missing from single category analysis and why this might be the case. We can learn from other disciplines that this path forward is not an easy one. However, we can engage in debates

raised by methodological challenges associated with intersectionally sensitive approaches (McBride et al., 2015).

Research can continue to shape the formation of new integrated models for contextual understandings that are more reflective of the dynamic and contemporary world of work and the people in it (cf. Furbish & Smith, 2016). This may push researchers to examine new ways of conceptualizing the work they are doing and how to best proceed with theoretically-driven, testable hypotheses or the application of rigorous qualitative research methodologies.

As others (Duffy, 2016; Flores, 2016; Furbish & Smith, 2016; Gati, 2016) have suggested, journals might propose special issues pairing theorists and researchers with practitioners to facilitate discussion and collaboration. Joint conferences or professional meetings might cultivate this and initiate an interprofessional approach to generating and disseminating applied knowledge.

To further address the research-practice gap, perhaps we can once again borrow from science to facilitate the translation of theoretical concepts and empirical research into practical applications. A rapidly growing field called translational science has developed in response to the substantial delay and barriers between biomedical research and applications of that work to clinical practice and public health. Translation refers to the process of turning scientific observations into interventions that improve the health of individuals and the public. Translational science uses a multidisciplinary and highly collaborative approach to accelerate this transfer. The National Institutes of Health (NIH) funds this work and encourages a focus on cross-functional collaborations between researchers and clinicians. The aim is to transform the translational science process so that new treatments and interventions can be delivered faster to patients and clients (from www.ncats.nih.gov). Translational science is the field of study focused on understanding the scientific and operational principles underlying this translational process (<https://ncats.nih.gov/translation/spectrum>). The process is neither linear nor unidirectional, and each stage of the process builds on and informs the others. These innovative, educational, and training approaches are emerging as multidisciplinary doctoral programs outside of traditional

scientific fields. The goal is to effectively translate basic research into enhanced healthcare outcomes for the entire population, representing a paradigm shift in the delivery of healthcare. Although currently embedded in biomedical research, one might imagine how this model could be imported to psychology, and more specifically, to vocational psychology. The core competencies evident in doctoral psychology training programs mirror those evident in translational science programs with regard to the essential components necessary for bridging the science-practice gap. Indeed, the need for translational research has begun to be noted in contemporary writings in counseling psychology. For example, Hansen (2012) argued for the development of programs of translational research as a means of translating research into meaningful applications.

Finally, Collin and Patton (2009) noted that consideration should be given to reconceptualizing the relationship between vocational psychology and industrial-organizational perspectives by subsuming them under an overarching framework. Similarly, Van Esbroeck (2007, p. 205) argued for the need to bring the various perspectives “under the same roof” and for the home of vocational psychology to be a “house with many rooms...[transcending] the so-called borders, and that the different wings or homes could be converted to include many adjoining rooms with many doors, all under the same roof of one large house.”

A propos to this topic, this chapter ends with a quote about dreams for the future of vocational psychology, offered by Nadya Fouad (2001, p. 189) and cited in Collin’s (2009) introduction to the Collin and Patton edited book on bringing together vocational psychology and organizational perspectives:

An interdisciplinary team of vocational psychologists, sociologists, economists, and anthropologists will test newly developed theoretical constructs to explain contextual factors in vocational behavior. The *Journal of Vocational Behavior* will become the outlet of choice for all related disciplines studying the work-related behavior of individuals.

References

- Arnold, J., & Cohen, L. (2013). Careers in organizations. In W. B. Walsh, M. L. Savickas, & P. J. Hartung (Eds.). *Handbook of vocational psychology* (4th ed., pp. 273–304). New York, N. Y.: Routledge.
- Blustein, D. L. (2006). *The psychology of working: A new perspective for career development, counseling, and public policy*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Blustein, D. L. (Ed.). (2013). *The Oxford handbook of the psychology of working*. New York, NY: Oxford University Press.
- Brotheridge, C. M., & Power, J. L. (2008). Are career centers worthwhile? Predicting unique variance in career outcomes through career center usage. *Career Development International*, 13, 480–496. <http://doi.org/10.1108/13620430810901651>
- Cohen, L., Arnold, J., & O’Neill, M. (Eds.). (2011a). Migration: Vocational perspectives on a complex and diverse transition [Special Issue]. *Journal of Vocational Behavior*, 78(3).
- Cohen, L., Arnold, J., & O’Neill, M. (2011b). Migration: Vocational perspectives on a complex and diverse transition. *Journal of Vocational Behavior*, 78, 321–324. <http://doi.org/10.1016/j.jvb.2011.03.011>
- Collin, A. (2007). Contributions and challenges to vocational psychology from other disciplines: Examples from narrative and narratology. *International Journal of Educational and Vocational Guidance*, 7, 159–167. <http://doi.org/10.1007/s10775-007-9122-8>
- Collin, A. (2009). One step towards realising the multidisciplinary of career studies. In A. Collin & W. Patton (Eds.). *Vocational psychological and organisational perspectives on career: Towards a multidisciplinary dialogue*, p. 3–18). Rotterdam, The Netherlands: Sense Publishers.
- Collin, A., & Patton, W. (Eds.). (2009). *Vocational psychological and organisational perspectives on career: Towards a Multidisciplinary Dialogue*. Rotterdam, The Netherlands: Sense Publishers.
- Creed, P., & Hood, M. (2009). Career development, planning and management from the organisational perspective. In A. Collin & W. Patton (Eds.). *Vocational psychological and organisational perspectives on career: Towards a Multidisciplinary Dialogue*, p. 41–62). Rotterdam, The Netherlands: Sense Publishers.

- Crenshaw, K. (1989). Demarginalizing the intersection of race and sex. *The University of Chicago Legal Forum* 1989: 139–67.
- Duffy, R. D. (2016). Ensuring quality in theory, research, and practice: *The Career Development Quarterly*. In J. Sampson (Chair). *A view from the editor's desk: Ensuring quality in theory, research and practice*. Plenary Session conducted at the Society for Vocational Psychology 2016 Biennial Conference: Integrating Theory, Research, and Practice in Vocational Psychology. Tallahassee, Florida.
- Flores, L. Y. (2016). *Journal of Career Development*: Recommendations for future journal practices for integrating career theory, research and practice. In J. Sampson (Chair). *A view from the editor's desk: Ensuring quality in theory, research and practice*. Plenary Session conducted at the Society for Vocational Psychology 2016 Biennial Conference: Integrating Theory, Research, and Practice in Vocational Psychology. Tallahassee, Florida.
- Fouad, N. (2001). The future of vocational psychology: Aiming high. *Journal of Vocational Behavior*, 59, 183–191. <http://doi.org/10.1006/jvbe.2001.1824>
- Fouad, N. (2016). Editor's introduction. *Journal of Vocational Behavior*, 93, 183–184. <http://doi.org/10.1016/j.jvb.2016.02.013>
- Fouad, N. A., & Jackson, M. A. (2013). Vocational psychology: Strengths, weaknesses, threats, and opportunities. In W. B. Walsh, M. L. Savickas, & P. J. Hartung (Eds.). *Handbook of vocational psychology: Theory, research, and practice* (4th ed., pp. 305–320). New York, N.Y.: Routledge.
- Furbish, D., & Smith, A. (2016). A view from the editor's desk: Ensuring quality in theory, research and practice, *Journal of Employment Counseling*. In J. Sampson (Chair). *A view from the editor's desk: Ensuring quality in theory, research and practice*. Plenary Session conducted at the Society for Vocational Psychology 2016 Biennial Conference: Integrating Theory, Research, and Practice in Vocational Psychology. Tallahassee, Florida.
- Gati, I. (2016). A viewpoint from a member of the editorial board of the *Journal of Career Assessment*. In J. Sampson (Chair). *A view from the editor's desk: Ensuring quality in theory, research and practice*. Plenary Session conducted at the Society for Vocational Psychology 2016 Biennial Conference: Integrating Theory, Research, and Practice in Vocational Psychology. Tallahassee, Florida.
- Hansen, J. C. (2012). Contemporary Counseling Psychology. In E. M. Altmaier & J. C. Hansen (Eds.). *The Oxford handbook of counseling psychology* (pp. 917–922). New York, NY: Oxford University Press, Inc.
- Hartung, P. J. (2013). Career as story: Making the narrative turn. In W. B. Walsh, M. L. Savickas, & P. J. Hartung (Eds.). *Handbook of Vocational Psychology: Theory, Research, and Practice* (4th ed., pp. 33–52). New York, N.Y.: Routledge.
- Herr, E. L. (2009). Foreword. In *Vocational psychological and organisational perspectives on career: Towards a multidisciplinary dialogue* (pp. xi–xii). Rotterdam, The Netherlands: Sense Publishers.
- Hesketh, B. (2001). Adapting vocational psychology to cope with change. *Journal of Vocational Behavior*, 59, 203–212. <http://doi.org/10.1006/jvbe.2001.1826>
- Karr, C. A., & Larson, L. M. (2005). Use of theory-driven research in counseling: Investigating three counseling psychology journals from 1990–1999. *The Counseling Psychologist*, 33, 299–326. <http://doi.org/10.1177/0011000004272257>
- Leong, F. T. L., & Walsh, W. B. (Eds.). (2012). International career adaptability project [Special Issue]. *Journal of Vocational Behavior*, 80(3).
- Lucas, M. S. (1996). Building cohesiveness between practitioners and researchers. In M. L. Savickas & W. B. Walsh (Eds.), *Handbook of career counseling theory and practice*. Palo Alto, CA: Davies-Black.
- McBride, A., Hebson, G., & Holgate, J. (2015). Intersectionality: Are we taking enough notice in the field of work and employment relations? *Work, Employment and Society*, 29, 331–341. <http://doi.org/10.1177/0950017014538337>
- McIlveen, P. (2009). Career development, management, and planning from the vocational psychology perspective. In A. Collin & W. Patton (Eds.). *Vocational psychological and organisational perspectives on career: Towards a multidisciplinary dialogue*, p. 63–89). Rotterdam, The Netherlands: Sense Publishers.
- Meehl, P. (1978). Theoretical risks and tabular asterisks: Sir Karl, Sir Ronald, and the slow progress of soft psychology. *Journal of Consulting and Clinical Psychology*, 46, 806–834. <http://doi.org/10.1037//0022-006x.46.4.806>
- Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology.

- Journal of Counseling Psychology*, 52, 250–260. <http://doi.org/10.1037/0022-0167.52.2.250>
- Morrow, S. L., (2007). Qualitative research in counseling psychology: Conceptual foundations. *The Counseling Psychologist*, 35, 209–235. <http://doi.org/10.1177/0011000006286990>
- Nilsson, J. E., Flores, L. Y., Berkel, L., Schale, C. L., Linnemeyer, R. M., & Summer, I. (2007). International career articles: A content analysis of four journals across 34 years. *Journal of Vocational Behavior*, 70, 602–613. <http://doi.org/10.1016/j.jvb.2007.01.003>
- National Center for Advancing Translational Sciences. *Translational science spectrum*. Retrieved from <https://ncats.nih.gov/translation/spectrum> on April 7, 2016.
- Pepper, S. C. (1942). *World hypotheses*. Berkeley: University of California Press.
- Peterson, G. W., Sampson, J. P., Jr., Lenz, J. G., & Reardon, R. C. (2002). A cognitive information processing approach to career problem solving and decision making. In D. Brown & Associates (Eds.), *Career Choice and Development* (4th ed., pp. 312–372). San Francisco, CA: Jossey-Bass.
- Sampson, J. P., Jr., Hou, P.-C., Kronholz, J., Dozier, C., McClain, M. C., Buzzetta, M., Pawley, E., Finklea, T., Peterson, G. W., Lenz, J. G., Reardon, R. C., Osborn, D. S., Hayden, S. C. W., Colvin, G. P., & Kennelly, E. L. (2014). Annual review: A content analysis of career development theory, research, and practice - 2013. *The Career Development Quarterly*, 62, 290–326. <http://doi.org/10.1002/j.2161-0045.2014.00085.x>
- Savickas, M. L. (2001). The next decade in vocational psychology: Mission and objectives. *Journal of Vocational Behavior*, 59, 284–290. <http://doi.org/10.1006/jvbe.2001.1834>
- Savickas, M. L. (2005). The theory and practice of career construction. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 42–70). Hoboken, NJ: Wiley.
- Savickas, M. L., et al. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, 75, 239–250. <http://doi.org/10.1016/j.jvb.2009.04.004>
- Schultheiss, D. E. P. (2007a). Introduction to the thematic issue: New methods and emerging paradigms in vocational psychology. *International Journal of Educational and Vocational Guidance*, 7, 145–147. <http://doi.org/10.1007/s10775-007-9124-6>
- Schultheiss, D. E. P. (Ed.) (2007b). New methods and emerging paradigms in vocational psychology [Special Issue]. *International Journal of Educational and Vocational Guidance*, 7(3).
- Schultheiss, D. E. P., & Pennington, D. (2009). Problems and needs for interdisciplinary interactions in vocational guidance. *The Career Development Quarterly*, 57, 319–326. <http://doi.org/10.1002/j.2161-0045.2009.tb00117.x>
- Schultheiss, D., & Van Esbroeck, R. (2009). Vocational psychology and career guidance practice: an international partnership. *Career Development Quarterly*, 57, 366–377. <http://doi.org/10.1002/j.2161-0045.2009.tb00123.x>
- Sharf, R. S. (2013). Advances in theories of career development. In W. B. Walsh, M. L. Savickas, & P. J. Hartung (Eds.), *Handbook of vocational psychology: Theory, research, and practice* (4th ed., pp. 3–32.). New York, NY: Routledge.
- Strong, S. R. (1991). Theory-driven science and naive empiricism in counseling psychology. *Journal of Counseling Psychology*, 38, 204–210. <http://doi.org/10.1037/0022-0167.38.2.204>
- Subich, L. (2001). Dynamic forces in the growth and change of vocational psychology. *Journal of Vocational Behavior*, 59, 235–242. <http://doi.org/10.1006/jvbe.2001.1829>
- Trusty, J., & Van Esbroeck, R. (Eds.). (2009). Vocational psychology and career guidance practice: An international partnership [Special Issue]. *The Career Development Quarterly*, 57(4).
- Van Esbroeck, R. (2007). A new disciplinary home for vocational psychology: A house with many rooms. *International Journal of Educational and Vocational Psychology*, 7, 203–206. <http://doi.org/10.1007/s10775-007-9130-8>
- Van Esbroeck, R., Schultheiss, D. P., Trusty, J., & Gore, P. (Eds.). (2009a). An international partnership in vocational psychology and career guidance practice [Special Issue]. *International Journal for Educational and Vocational Guidance*, 9(9).
- Van Esbroeck, R., Schultheiss, D. P., Trusty, J., & Gore, P. (2009b). Introduction to the special issue: An International partnership in vocational psychology and career guidance practice. *International Journal for Educational and Vocational Guidance*, 9, 69–74. <http://doi.org/10.1007/s10775-009-9159-y>

Chapter 18 - The Role of Refereed Journals in Integrating Theory, Research, and Practice

Kimberly A. S. Howard

Boston University

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch18>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=JYpjgVuyeVs&index=24&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA

Appreciation is expressed to Debra Osborn, Casey Dozier, and Jim Sampson for their comments on an earlier draft of this chapter.

Correspondence should be addressed to Kimberly A. S. Howard, School of Education, Boston University, 621 Comm Ave, Rm 401 A, Boston, MA 02215. E-mail: khoward@bu.edu

Keywords: career theory, career research, career practice, integration, editorial policy, interprofessional, interdisciplinary

Plenary IV: “A View from the Editor’s Desk: Ensuring Quality in Theory, Research, and Practice” was chaired by Sylvia Nassar McMillan of North Carolina State University and included five panelists representing the core vocational psychology and career development journals. Specifically, the *Career Development Quarterly* was represented by Ryan Duffy of the University of Florida, the *Journal of Career Assessment* by Itamar Gati of The Hebrew University of Jerusalem, the *Journal of Career Development* by Lisa Flores of the University of Missouri-Columbia, the *Journal of Employment Counseling* by Dale Furbish of Auckland University of Technology and Angie Smith of North Carolina State University, and the *Journal of Vocational Behavior* by Donna Schultheiss of Cleveland State University.

The members of this plenary were charged with the task of reflecting upon how the individual journals they represent can support efforts to integrate theory, research, and practice in vocational psychology and career development. The authors provided journal history or mission information as context for their comments and identified not only the challenges to the theory-research-practice integration, but also recommendations for how to meet these challenges. Several points of convergence emerged across these papers, including four overarching themes that, when taken as a whole, provide a collective vision for refereed journals endeavoring to promote the integration of theory, research, and practice.

Convergence was also apparent in the recommendations offered by these authors, leading to four main suggestions for editorial practice.

Themes

First, there was unanimous support for the goal of integrating theory, research, and practice in our scholarly endeavors. This is likely unsurprising to us, as we are all accustomed to identifying our theoretical framework, detailing the research undertaken, and discussing the implications for practice of our results. At the same time, however, it was also acknowledged by this group of authors that each of these journals may have a differential emphasis or perhaps weight given to these three domains. The emphasis of the scholarship published in a particular journal is based on journal purpose, scope, and audience. For example, the *Journal of Vocational Behavior* (JVB) was created to be an outlet for theory-driven research and as such, emphasizes the empirical side of the integration continuum. The *Career Development Quarterly* (CDQ) and the *Journal of Employment Counseling* (JEC) are the flagship journals of two professional organizations whose memberships are largely practitioners. Thus, these journals emphasize more heavily the explicit translation of research findings or theoretical propositions to the actual practice of career counseling, career education, and/or career intervention.

It was also implied, but not directly stated, in this collection of papers, that we should not understand theory-research-practice integration as a unidirectional process. In other words, we should not assume that the direction of influence begins with theory shaping research, which then informs practice. Rather, the authors implicitly encouraged us to appreciate, and indeed capitalized upon, the potential dynamic interaction of the three. True integration and advancement will require us to allow and expect bidirectional influence. We must harness what we learn from practice to identify meaningful research questions and to refine, revise, and/or revise our theories.

Secondly, despite the unanimous support for the integration of theory, research, and practice, it was also acknowledged that integration has challenges, particularly when it comes to the integration of practice. The authors in this plenary pointed out that most articles published are written by individuals in academic positions who, for the most part, are unlikely to be directly engaged in practice activities or who have been distanced from practice for some time. This is not levied as a personal criticism of academics but rather as an observation and an acknowledgement of the realities of our work lives. Duffy (2017) asserts that the result of our distance from practice is that the implications for practice offered are often “underwhelming and uncreative” and may be of little use to practicing professionals. Further, Flores (2017) points out that it is only by involving practitioners that we will be able to appreciate and respond to cutting edge practice concerns. The authors urged us to not be satisfied with this state of affairs, but to develop strategies that will assist us in expanding our integration of practice into our theory development and our research.

Third, these authors urged us to expand our theoretical paradigms and accordingly, our research methods. This recommendation was not offered to suggest that the established theoretical base of vocational psychology is deficient, rather it was suggested as a recognition that all theories are influenced by the context in which they were embedded when developed. As we grapple as a field to understand and capture the complexity of the human experience and the role of work in this experience, we will benefit from borrowing relevant theories from our disciplinary neighbors and incorporating constructivist and postmodern

perspectives into our work. Indeed, Furbish and Smith (2017) suggest human variety and uniqueness can be best captured by contemporary models such as those described by Savickas (Savickas et al., 2009), Guichard (2009), and McMahon and Patton (2002), while both Schultheiss (2017) and Duffy (2017) identify Blustein’s (2006) psychology of working approach as an example of an innovative attempt to capture the complexity present in people’s lives.

And fourth, while we expand our theoretical repertoire, we must also continue to expand our gaze beyond the populations and issues that have been the traditional focus of vocational psychology. The plenary authors were encouraged by our endeavors to be a global field of study, to think both cross-culturally and cross-nationally, to maintain and expand a truly lifespan perspective, and to grapple with the influence of economic disadvantage. Yet they reminded us that there is still much work to be done if we want to be a field relevant to those for whom choice is limited or perhaps nonexistent, who are navigating work and the work-world while living at the intersection of multiple identities, or who are facing the substantive barriers of oppression, discrimination, and economic disadvantage. The plenary authors offered us encouragement, even a challenge, to continue our endeavors to understand the vast complexity of the human experience.

A collective vision emerged from this set of papers that I would express thusly: Theory-research-practice integration requires dynamic interactionism amongst the three processes. It requires us, as scholars, interventionists, and practitioners, to struggle to both appreciate and understand the nature of work and the development of work identities and behaviors in the context of complex human life, human life that is inextricably embedded in multiple levels of organization. The challenge of theory-research-practice integration is far too involved to be adequately undertaken by any one discipline or any one set of professionals. It will require deliberate and concerted efforts on our part to bridge disciplinary and professional gaps. It will require flexibility in the paradigms that guide our conceptualizations and the methods used to address our questions.

Recommendations

Thankfully, the editors and editorial board members included in this plenary offered several suggestions as to how we can collectively work towards this goal of broader integration. First, quite in line with the themes described above, the panel authors resoundingly recommended the use of collaborations, both interdisciplinary and interprofessional in nature. Schultheiss (2017) suggested that a goal of *JVB* has always been to examine the work experiences of individuals and the nature of workplaces. Continued efforts to encourage joint work between vocational psychologists and organizational psychologists is a key strategy for evolving our theories, and expanding the reach of our research. Duffy (2017), Flores (2017), and Gati (2017) emphasized collaborations with practitioners. At the same time, these authors recognized that it is one thing to suggest collaboration and quite another to foster it. Thus, they offered several concrete suggestions for how to encourage such collaborations, such as identifying special issue ideas of cross-disciplinary topics (Schultheiss, 2017) or framing and designing projects “from the ground up” (Flores, 2017). Gati (2017) even suggested that the information technology many of us use can be a natural conduit for fostering collaboration with practitioners and for developing theory-research-practice feedback loops that can advance our knowledge base and our “best practice” repertoire. In many ways, information and communication technology (ICT) represents a collaborative opportunity waiting to happen.

Next, our panelists suggested that the editorial board could, in fact, be used as a tool for advancing our integration of theory, research, and practice. Schultheiss (2017) suggested that crafting diverse editorial boards can foster international and interdisciplinary perspectives, dialogues, and collaborations. Flores (2017) offered concrete suggestions for how to involve practitioners as board members and reviewers. She suggested that journal editors and editorial board members are responsible not only for recognizing barriers that may keep practitioners from involving themselves in our publishing process, but also for finding creative ways to address these barriers. She suggested that a little outreach can go a long way and offered clear guidance around how we might conduct this outreach.

The third set of recommendations that emerged from these papers focused on our use of theory. Collectively, our panelists suggest that continued advancement in theory refinement will only occur if we broaden the range of theories we use and the ways we use them in our research. Gati (2017) suggested that testing a theory’s propositions is not enough; we must also develop opportunities to refute theories and contrast them. The recommendation to import or apply theories that have been developed and used in complementary areas or disciplines has already been mentioned above. Also suggested was that we consider the benefit of using constructivist and postmodern theories to guide our work. Furbish and Smith (2017) argue persuasively that in order for research to reflect the realities of contemporary work and work environments, constructivist career theories are needed. They encourage the use of theories that are not focused on explaining universals, but are instead capturing the uniqueness and intricacies of the lived experiences and personal meaning making of individuals.

Conclusion

Panel participants agreed that continued efforts to integrate theory, research, and practice in vocational psychology and career development is a worthy goal. Despite the challenges created by our disciplinary silos and the contextually-bound nature of our theories, concerted interdisciplinary and interprofessional endeavors can facilitate a dynamic and productive interaction amongst these three processes. Journal editors can support such efforts by using special issues, carefully crafting a diverse editorial board, encouraging collaborative article authorship, and including in their journals contemporary models and theories of career development and work behavior that attempt to capture the complexity of human life.

References

- Blustein, D. L. (2006). *The psychology of working: A new perspective for career development, counseling, and public policy*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Duffy, R. D. (2017). Ensuring quality in theory, research, and practice: *The Career Development Quarterly*. In

- J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 137). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch13>
- Flores, L. Y. (2017). *Journal of Career Development*: Recommendations for future journal practices for integrating career theory, research, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 148). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch15>
- Furbish, D., & Smith, A. (2017). A view from the editor's desk: ensuring quality in theory, research, and practice - *Journal of Employment Counseling*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 155). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch16>
- Gati, I. (2017). A viewpoint from a member of the editorial board of the *Journal of Career Assessment*. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 141). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch14>
- Guichard, J. (2009). Self-constructing. *Journal of Vocational Behavior*, 75, 251–258.
- McMahon, M., & Patton, W. (2002). Using qualitative assessment in career counseling. *International Journal for Educational and Vocational Guidance*, 2, 51–66.
- Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J., Duarte, M. E., Guichard, J., Soresi, S., Van Esbroeck, R., & van Vianen, A. E. M. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, 75, 239–250. <http://doi.org/10.1016/j.jvb.2009.04.004>
- Schultheiss, D. E. (2017). Integrating theory, research, and practice in vocational psychology: Perspectives of an editorial board member. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz
- (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 166). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch17>

Chapter 19 - Integrating Theory, Research, and Practice: Lessons Learned from the Evolution of Vocational Psychology

David L. Blustein

Boston College

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch19>

The chapter is based on a paper presented at the conference of the Society of Vocational Psychology, May 16–17, 2016, Florida State University, Tallahassee, FL. A video presentation of a preliminary version of this paper may be retrieved from https://www.youtube.com/watch?v=7_eVBqIGoUo&list=PLCsXiACK-LKrVRKb1z_Nw3METZg-SoRFA&index=25

Appreciation is expressed to the very thoughtful input from the editors of this volume for their comments on an earlier draft of this chapter.

Correspondence should be addressed to David L. Blustein, Counseling, Developmental, and Educational Psychology, Campion 315, Boston College, Chestnut Hill, MA 02467. E-mail: David.Blustein@bc.edu

Keywords: vocational psychology; history of career development; psychology of working; historical analysis; critical psychology; career development; theory, research, and practice integration; work volition; career choice privilege

A critical analysis of the history of the relationships among theory, research, and practice in vocational psychology is layered with complex influences that have been examined in depth in some illuminating contributions (O'Brien, 2001; Pope, 2015; Savickas & Baker, 2005). However, selected layers of this history have been obscured and need to be more fully explicated in order to understand the status of our field and its potential to be fully inclusive and relevant in the years to come. In this chapter, I use a historical lens coupled with a critical perspective in unpacking the relationships among theory, research, and practice in career development. Naturally, it is not possible to capture the depth and breadth of the history of our very diverse and rich field in one chapter. As such, I focus on carving out a specific niche among existing histories of vocational psychology by infusing a perspective informed by inclusiveness, social justice, and a broad, macro-level view of our discipline as the optimal lens with which to examine the history of our field. For readers interested in a more detailed analysis of the history of our field, I recommend the highly informative chapter by Savickas and Baker (2005) and a more recent chapter by Pope (2015), which I view as two authoritative accounts of the history of our field.

Goals and Assumptions

The goals of this contribution are to identify the complex nexus of relationships among theory, research, and practice that has characterized our field for over a century. To deepen our knowledge of these relationships, I propose that we expand the scope with which history is understood to encompass the macrolevel forces that have shaped our field. Many of these macrolevel forces have been identified in previous essays about the history of our field, including very thoughtful analyses of how the Industrial Revolution, the two world wars, and the growing role of technology have shaped our field (e.g., O'Brien, 2001; Pope, 2015). As I argue in this chapter, I believe our discipline was seduced by the economic boom of the post-World War II era, resulting in a more limited focus on people who had a relative degree of choice in their work lives.

As in other historical analyses, it is important to acknowledge the values and assumptions that may have shaped the discourse about the relationships among research, theory, and practice in career development. The following points highlight the assumptions that guide this particular historical analysis:

1. In my view, historical analyses are social constructions; therefore, they would benefit from using a social constructionist lens (Stead, 2013). Social constructionism is a perspective that affirms that culture, relationships, and history shape experience and knowledge. (See Stead, 2013, for an excellent overview of social constructionism within vocational psychology.) Like psychology and other social sciences, historical analyses reflect the influences of culture and relationships, which shape how we view the world and how we make meaning of our observations and inferences about life and knowledge (Gergen, 2009).
2. The values that guide my scholarship and practice revolve around expanding the range and impact of vocational psychology. As indicated at the outset, my thinking is framed by my investment in developing theories, practices, and research that will embrace all of those who work and who would like to work (Blustein, 2013).
3. As a scientist-practitioner for over three decades, my perspectives about the history of the relationships among theory, research, and practice have been influenced by my involvement in all three aspects of our field. For example, in my counseling psychology practice during the past decade or so, I have specialized in working with long-term unemployed adults. This experience has significantly affected my values and decisions about research, theory, and practice by underscoring the emotional cost that lack of decent work evokes in people, families, and communities.
4. Following the advice of MacLachlan (2014), I am adopting a macropsychological perspective in this chapter. According to MacLachlan, a macropsychological framework asks the following questions: “What sort of social systems are likely to promote a sense of worth, inclusion and participation, and how can such social systems be created and maintained?” (2014, p. 853). MacLachlan further proposed that macropsychological analyses are designed to “raise new questions about how psychology can influence rather than simply react to the settings

and conditions in which people live” (2014, p. 853).

Following these assumptions, I also believe that economic affordance and constraints have influenced individuals and, more broadly, our professional direction with respect to theory, research, and practice. One of the core positions advanced in this chapter is that economic and social forces shape our social constructions of knowledge and have impacted the direction, focus, and trajectory of our field. I believe this sort of critical analysis of historical trends is particularly needed now, given that we are observing significant growth in precarious work and increasing instability in the workplace (Blustein, 2013; Pope, 2015). Precarious work is becoming a hallmark of the current labor market; according to Standing (2014), precarious work refers to jobs that do not offer stability, fair remuneration, or a commitment to the growth and development of individual workers.

The Elephants in the Vocational Psychology Room

As reflected in existing histories of our field (e.g., O’Brien, 2001; Pope, 2015; Savickas & Baker, 2005), vocational psychology was profoundly affected by the rise of automation in the workplace, which created a vastly diverse array of jobs, many of which required more complex levels of education and training. The growth of jobs in manufacturing and industry had a substantive spillover into auxiliary fields, including education, health care, the public sector, and related fields of commerce and transportation. This boom in the numbers of occupations that existed gave rise to a growing need for people to make informed decisions about their education, training, and the course of their work lives. Other historical influences in Western nations included the expansion of education to include high schools, growing numbers of colleges (including colleges for poor and working class youth), and the involvement of nonprofits (such as the YMCA) and government agencies in the provision of vocational counseling services.

The Growth of Volition in the Marketplace

An underlying issue in the growth of the field was the vast expansion in volition for working people during extended pockets of time within the 20th century (Blustein, 2006; Duffy, Diemer, Perry, Laurenzi,

& Torrey, 2012). Prior to the Industrial Revolution, the array of options that people had in relation to their work lives was quite limited, except for people with a fair degree of social and economic privilege. However, the expansion of the labor market that arose out of the Industrial Revolution soon led to increasing levels of volition throughout many Western nations. To guide these growing numbers of decisions, the fields of vocational guidance and applied psychology evolved, generating theories, research, and practices about how to maximize the satisfaction and productivity of individuals and organizations in the career choice and development process (Pope, 2015).

Building on the Savickas and Baker (2005) and Pope (2015) contributions, my position is that we need to expand our view of historical forces to encompass overt and covert economic forces that have contributed (and continue to contribute) to the shaping of our profession, particularly in relation to access to work and career choice privilege. (Career choice privilege is defined as the having access to resources that promote 21st century education, social capital, and career opportunities, which is manifested in the capacity to make self-determined choices about how to optimally engage in marketplace and caregiving work.) In addition to the obvious social and historical forces that have shaped the theory, research, and practice nexus of our field, I propose that more covert influences have been at play and that these forces have affected how we understand target client populations and their work-based challenges and assets.

Economic Forces Shaping the World of Work

The economic forces that led to the growth in volition, which then facilitated the development of our profession, regrettably did not reach all sectors of the population equally (Blustein, 2006; Pope, 2015). Women, people of color, people with disabling conditions, and others on the social and economic margins were not always the recipients of career choice privilege (Richardson, 1993). At the outset of the development of our field, theories, research, and practices were focused on people who were beginning to experience a growing array of options about work. To respond to this need, Frank Parsons and many of his contemporaries developed models of vocational guidance that were focused on both survival and self-determination (Davis, 1969).

In the first half of the 20th century, the economy was in a great deal of flux, and the prevailing theories reflected this. Indeed, the focus on survival, which was evident in some of early person-environment (PE) fit models (Parsons, 1909), often assumed that poor and working class students and clients were not going to have much opportunity for self-determination in that their options were generally dictated by labor market conditions (Zytowski, 2001). That said, the growth of jobs in the labor market allowed many people to experience some circumscribed choices in their selection of work pathways that would enhance their capacity to survive and, for some, to create lives that were reasonably satisfying. What is interesting is the impact the Great Depression had on the emergence of a rudimentary technology in our field—codified and freely available information about occupations (Pope, 2015). During the Great Depression, the U.S. government authorized and paid for the development of the earliest vocational guidance tools, including the *Dictionary of Occupational Titles*, which morphed into the O*Net nearly 70 years later. During this period, the nascent field of vocational guidance provided resources for individuals whose range of options varied considerably, encompassing people who were unemployed to students at the most privileged secondary schools and colleges in the nation (Savickas & Baker, 2005). The level of theory, research, and practice, however, was starting to tilt toward those with somewhat more options in their lives, as reflected in the emergence of a sophisticated testing culture that framed many vocational guidance practices (Pope, 2015; Reardon, 2017). While some of the tests were widely available, especially those used in personnel selection in the military, the costs of a comprehensive battery of tests became a barrier for many seeking to make their way in the world.

The Social Construction of the Post-World War II Years

Rather than review the massive changes that occurred during World War II, which have been well-documented in many thoughtful analyses of the history of our field (Pope, 2015; Savickas & Baker, 2005), I focus instead on the subtle shift that took place after the war, which I would argue transformed the discourse of our field dramatically for the half a century that followed. As we know from our history (and for some, our lived

experience), many nations in the West, especially those whose infrastructure was not dramatically affected by the war, went through substantial economic booms during the post-World War II years. The average unemployment rate in the United States during the 1950s was in the 4.5% range; however, more notably, the economy grew by 37% during that decade, often known as the decade of prosperity. (Disconcertingly, the unemployment rate for African Americans during the 1950s was approximately 10%, and, at times even higher, during the 1950s. See the following Pew Research Center report at www.pewresearch.org/fact-tank/2013/08/21/through-good-times-and-bad-black-unemployment-is-consistently-double-that-of-whites for more details.)

The post-World War II era within the U.S. was characterized by a growing middle-class, upward mobility, increasing access to higher education, and the growth of professions, many of which were developing hierarchical career paths, albeit primarily for those populations who already had some degree of privilege in our society (Savickas & Baker, 2005). My thesis in this chapter is that this period strongly shaped the discourse in our field about theory, research, and practice. During the 1950s and 1960s, many important theoretical advances were made, including the seminal work by Donald Super, John Holland, Anne Roe, and David Tiedeman, among others. In my view, this economic boom shaped the nature of theory, research, and practice, creating the impression that we were on our way to “the great big beautiful tomorrow” (to quote a song played at one of the exhibits of the 1964-65 World’s Fair in Queens, New York, which captured the unbridled optimism of the American dream during the post-World War II era). While the major scholars in our field no doubt had broad visions and expressed considerable interest in improving the welfare of individuals and communities, their lived experience was likely shaped by their exposure to people who seemed to be on their way up the socioeconomic ladder.

Of course, not everyone was moving up in the 1950s and 1960s. The U.S. and other Western nations still had large pockets of poverty and working people who did not have the skills or social capital to take advantage of the boom economy (Gordon, 1974; Smith, 1983). In this context, I will underscore a point that has been a consistent theme in my work: I do not believe that Super, Holland, Tiedeman, or other brilliant theorists of the

post-World War II sought to develop theories, research, and practices that would intentionally marginalize those who were left out of the boom. Rather, I believe that they were profoundly and, often unwittingly, influenced by broader macrolevel forces that created the feeling that the current reality was true for all (or most) and that the current perceived reality would continue unabated in the future.

So, what happened after our former enemies and allies built up their economic infrastructures? We then had intense competition in the global marketplace and we began to experience much more profound ruptures in the myth of unbridled economic growth. By the early to mid-1970s, the United States was starting to have unemployment rates that reached over 10% with stubborn recessions and inflation that cut into opportunities for people across the economic spectrum (Stiglitz, 2015). Moreover, the purchasing power of the wages of average Americans began to flatten and shrink as the gap grew between the haves and have-nots (Stiglitz 2015).

The economic trends since the era of prosperity have been very different than the golden post-World War II period, a point that was also made very eloquently in Pope’s (2015) chapter. However, the discourse that we have developed as a field, reifying choice, dreams, purpose, self-concept implementation, and well-being at work have remained the steady guiding posts of our practice and, to a lesser extent, our theories and research. What has happened to the focus on helping people manage short-term work-based challenges, such as layoffs and downsizing, as Brown (2017) noted in his chapter in this volume? Where is that literature coming from? How well are our theories and research informing practice for the 21st century?

Critiquing the Career Choice Privilege Discourse

The seeds of a broader and more inclusive vision for career development have always been evident but have often been on the margins of our discourse. Even in the 1970s, there were two articles that I recall reading with great interest, both appearing in the *Personnel and Guidance Journal*, which had a profound influence on me. One article by Charles Warnath (1975) was entitled “Vocational theories: Direction to nowhere,” and

another article by Steve Baumgardner (1977) entitled “Vocational planning: The great swindle.” Both articles openly questioned the prevailing focus on choice and privilege, seemingly influenced by the major economic transformations of the early to mid-1970s when the boom economy ended, leaving many people struggling for survival. In addition, our feminist colleagues bravely took on the major theories by critiquing the White male and middle-class assumptions of Holland’s theory and of Super’s life-span, life-space theory (e.g., Betz & Fitzgerald, 1987). In fact, one might argue that the feminist revolution created the conceptual context that inspired Super to change his theory in 1980, providing us all with a model of how to adapt our work so that it incorporates changes in the intellectual world and socioeconomic structure.

Furthermore, scholars from the world of multicultural counseling and race and culture levied profound critiques of the prevailing discourse, led by two seminal chapters that critiqued existing taken-for-granted assumptions about the field—Edmund Gordon’s (1974) contribution to Edwin Herr’s edited volume and Elsie Smith’s (1983) profoundly wise critique in the first *Handbook of Vocational Psychology*. Soon, other scholars of race and culture, such as Janet Helms, Fred Leong, Lisa Flores, and Nadya Fouad, among others, added to these critiques and helped unpack the cultural hegemony of Western and White belief systems in the world of theory, research, and practice (e.g., Flores, 2013; Fouad & Bingham, 1995; Helms & Cook, 1999; Leong & Flores, 2015).

By the early 1990s, the assumptions and tenets that had been guiding the theory, research, and practice in our field began to feel the impact of more inclusive theories. In 1993, Mary Sue Richardson published her groundbreaking article in the *Journal of Counseling Psychology* on the role of work in people’s lives. This article created a clarion call for a more intellectually diverse perspective in our field, raising questions about the prevailing notions of career choice privilege that had been evident since the post-World War II years. Richardson also identified the inherent problems in maintaining a focus on career as opposed to work, which she argued marginalized many people without access to self-determined hierarchical work lives. Richardson’s current work (2017), as exemplified by her stellar chapter in this volume, continues her creative analysis

of career development, employing a narrative-based perspective that thoughtfully integrates theory, research, and practice.

Another critical movement in the early 1990s was the publication of the monograph on the social cognitive career theory (SCCT) by Lent, Brown, and Hackett (1994). This theory, which gained popularity earlier in our field by identifying the ways that sexism curtails options for women, brought contextual factors to the forefront (Lent, 2017). In addition, SCCT generated much needed research on the ways in which people who had been on the margins of our field managed the complex task of moving from a focus on survival to a focus on self-determination at work.

Moving Forward to a More Inclusive Future

Once we moved into the 21st century, a more concerted level of critique emerged in the discourse of our field. My colleagues and I explicitly sought out perspectives from liberation psychology (i.e., emancipatory communitarian perspective) to clearly critique the existing set of assumptions that still guided our practice and scholarship (Blustein, 2006; Blustein, McWhirter, & Perry, 2005). While many new efforts have been taking place in academic circles and intellectual debates in our field, a review of practice-based journals and career counseling conferences reveals that the prevailing ethos is still one of helping people to choose long-term, hierarchical careers that they will have for many years. Countering this trend are important innovations from Mark Savickas and Paul Hartung (2012) in their career construction theory, which has incorporated the notion of dynamic change into their formulations. In addition, the Florida State University team, who developed cognitive information processing (CIP) theory (Sampson, 2017; Sampson, Reardon, Peterson, & Lenz, 2004), has sought to expand the focus and inclusiveness of their theoretical contributions, culminating in some innovative practice ideas that are informed by, and in turn inform, theory and research.

Despite these important initiatives, I believe that there is a disjuncture between theoretical efforts, current research trends, and work-based counseling practices. While many important critiques have been levied in our discourse, the predominant practice modalities are

still formulated based on the implicit assumptions of preparing people for the “great big beautiful tomorrow.” For example, there is little linkage between the theories we have espoused to guide career practice and the needs of practitioners working in One-Stop career centers, who are left to rely on common sense, accumulated best practices, and increasingly, scholarship from industrial/organizational psychology on best practices in job searches (Brown, 2017; Liu, Huang, & Wang, 2014). I believe that much of the discourse in our field is shaped around a belief that we are still living in the post-World War II economic boom where opportunities abound and where the notion of growth, self-determination, and purpose are the prevailing goals for practice. Moreover, I argue that this state of affairs exists because many of the newer theoretical formulations and research findings have not been well integrated into the practice community. The seeds of this synthesis, however, do exist in the literature, as indicated in the next section.

Embracing Our Past as We Move Forward

In order to move forward as a profession, I propose that we need to do a better job of embracing our past. The work by Parsons and other early leaders in our field was profoundly shaped by the economic forces of their era. Moreover, as the Western world moved into the Great Depression, career counseling practice focused on expanding resources for clients, which would allow them to maximize, as much as possible, their capacity to find stable and decent work (cf. Warnath, 1975). However, to fully move forward, we also need to embrace a wider intellectual world, one constructed of knowledge from both psychology and related social sciences.

It is common knowledge in our field that we are moving into an era of precarious work (Savickas, 2011; Standing, 2014), one resulting in the growth of contract work and less than stable employment (Katz & Krueger, 2016). I believe that the implications of this shift require radical changes in how we conceptualize the relationship among theory, research, and practice. We need to think outside of the box with respect to relevant theory; we are not economists and sociologists. However, if we do not read these bodies of work, we will be left in an intellectual vacuum, without the perspectives needed to design effective interventions for client populations. One promising way of thinking outside of the box is

to develop truly interdisciplinary theories that embrace economic factors and sociological influences. As an exemplar, I believe that the new psychology of working theory (PWT), developed by Duffy, Blustein, Diemer, and Autin (2016), offers an excellent opportunity to shape theory, research, and practice for the new era of precarious work. This theory is designed to embrace the world that we live in now—a world where work is not stable and where access to work is profoundly shaped by macrolevel forces in conjunction with individual psychological attributes.

The PWT (Duffy et al., 2016), unlike most contemporary career development theories, encompasses sociological and economic factors into an interdisciplinary perspective that seeks to explain the work behaviors of all of those who work and who want to work. With the intention of predicting work fulfillment and well-being, Duffy and his colleagues (2016) constructed a model that includes contextual factors such as economic constraints, marginalization, and economic conditions as factors that frame how people navigate work-based transitions, such as the movement from high school to postsecondary education and training. Complementing the focus on contextual factors in the PWT is a mutual focus on psychosocial factors associated with progress in education and career development, such as work volition, social support, proactive personality, and career adaptability. In addition, the theory places the concept of decent work (International Labor Organization, 2008), an aspirational framework about specific core conditions that should define the nature of work for all people around the globe (e.g., fair wages and hours, safe working conditions, access to health care, and congruent organizational values), at the center of the model. People who have access to decent work are thought to be more likely to have their core needs met by work (i.e., needs for survival, social connections, and self-determination), and optimally, more satisfying and fulfilling work lives. As research on the PWT emerges in the next few years, practice implications that link broader macrolevel factors to the individual focus that is detailed in existing career development theories will be explicated and evaluated, providing counselors and clients with new tools to navigate an increasingly complex work environment.

The PWT offers several important lessons for this historical analysis. First, the PWT builds on the earliest model of career choice theory by Parsons by

focusing on dynamic interactions between individual psychological factors and environmental affordances and barriers. Second, the PWT breaks out of the implicit pull of the post-World War II economic boom culture, which shaped so many ideas in our field. This theory, unlike many others that grew out of the belief in unbridled upward mobility, seeks to understand how barriers, economic conditions, and marginalization interface with psychological constructs to shape an individual's path toward a meaningful and decent work life. Third, the PWT offers considerable insights for practice, particularly for those who are balancing short-term needs and longer-term dreams. While practice insights emerging from the psychology of working framework have been articulated in my earlier work (Blustein, 2006), I believe that the full execution of the PWT will lead to important implications for practice for traditional career counselors, therapists providing integrative mental health and work-based interventions, practitioners working at One-Stop Career Centers, and others who are providing resources for individuals facing an increasingly unstable labor market.

Conclusion

In closing, I would like to underscore the importance of not simply identifying the impact of macrolevel forces in the development of our field. Rather, I hope that the core message of this chapter will be understood as identifying how macrolevel influences shape our constructions of what is real and what is important. While I have sounded some concerns about how we develop and sustain discourses in vocational psychology, I am optimistic about the future of our field. I believe the foundations we have established have served and will continue to serve us well. However, it is now time to integrate the critiques of the post-World War II ethos that have dominated much of our practice and develop clear linkages between theory, research, and practice. There are many lessons to be learned from the history of our field; however, the core lesson I have sought to develop in this chapter is that the concerns of those on the margins of our discourse (those who have not had easy access to the great big beautiful grand career narrative) are now the mainstream. Our commitment to integrating theory, research, and practice needs to dignify and relate to the experiences and needs of people

who are increasingly struggling to gain a foothold in the marketplace.

References

- Baumgardner, S. R. (1977). Vocational planning; The great swindle. *Personnel and Guidance Journal*, *56*, 17–22.
- Betz, N. E. & Fitzgerald, L. (1987). *The career psychology of women*. Orlando, Florida: Academic Press, Inc.
- Blustein, D. L. (2006). *The psychology of working: A new perspective for career development, counseling and public policy*. NY: Routledge.
- Blustein, D. L. (Ed.) (2013). *The Oxford handbook of the psychology of working*. NY: Oxford University Press.
- Blustein, D. L., McWhirter, E. H., & Perry, J. C. (2005). An emancipatory communitarian approach to vocational development theory, research, and practice. *The Counseling Psychologist*, *33*, 141–179.
- Brown, S. D. (2017). Meta-analysis and evidence-based career practice: Current status and future directions. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 82). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch8>
- Davis, H. V. (1969). *Frank Parsons: Prophet, innovator, counselor*. Carbondale: University of Southern Illinois Press.
- Duffy, R. D., Blustein, D. L., Diemer, M. A., & Autin, K. L. (2016). The psychology of working theory. *Journal of Counseling Psychology*, *63*, 127–148. <http://doi.org/10.1037/cou0000140>
- Duffy, R. D., Diemer, M. A., Perry, J. C., Laurenzi, C., & Torrey, C. L. (2012). The construction and initial validation of the Work Volition Scale. *Journal of Vocational Behavior*, *80*, 400–411. <http://doi.org/10.1016/j.jvb.2011.04.002>
- Flores, L. (2013). Race and working. In D. L. Blustein (Ed.), *The Oxford handbook of the psychology of working* (pp. 71–84). New York, NY: Oxford University Press. <http://doi.org/10.1093/oxfordhb/9780199758791.013.0001>

- Fouad, N. A., & Bingham, R.P. (1995). Career counseling with racial and ethnic minorities. In W. B. Walsh & S.H. Osipow (Eds.), *Handbook of vocational psychology: Theory, research, and practice* (2nd ed., pp. 331–365). Hillsdale, NJ: Erlbaum
- Gergen, K. J. (2009). *Relational being: Beyond self and community*. New York: Oxford University Press.
- Gordon, E. W. (1974). Vocational guidance: Disadvantaged and minority populations. In E. L. Herr (Ed.), *Vocational guidance and human development* (pp. 452–477). Boston: Houghton Mifflin.
- Helms, J. E., & Cook, D. A. (1999). *Using race and culture in counseling and psychotherapy: Theory and process*. Needham Heights, MA: Allyn & Bacon.
- International Labor Organization. (2008). ILO declaration on social justice for a fair globalization. Retrieved from: http://www.ilo.org/wcmsp5/groups/public/--dgreports/---cabinet/documents/genericdocument/wcms_371208.pdf
- Katz, L. F., & Krueger, A. B. (2016). The rise and nature of alternative work arrangements in the United States, 1995–2015. Retrieved from: https://krueger.princeton.edu/sites/default/files/akrueger/files/katz_krueger_cws_-_march_29_20165.pdf
- Lent, R. W. (2017). Integration of theory, research, and practice: A social cognitive perspective. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 20). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch1>
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, *45*, 79–122. <http://doi.org/10.1006/jvbe.1994.1027>
- Leong, F. T., L. & Flores, L. Y. (2015). Career interventions with racial and ethnic minority clients. In J. P. Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *APA Handbook of Career Intervention, Volume 1: Foundations* (pp. 225–242). Washington, D.C.: American Psychological Association. <http://doi.org/10.1037/14438-013>
- Liu, S., Huang, J. L., & Wang, M. (2014). Effectiveness of job search interventions: A meta-analytic review. *Psychological Bulletin*, *140*, 1009–1041.
- MacLachlan, M. (2014). Macropsychology, policy, and global health. *American Psychologist*, *69*, 851–863.
- O'Brien, K. M. (2001). The legacy of Parsons: Career counselors and vocational psychologists as agents of social change. *The Career Development Quarterly*, *50*, 66–76.
- Parsons, F. (1909). *Choosing a vocation*. Boston: Houghton-Mifflin.
- Pope, M. (2015). Career intervention: From the industrial age to the digital age. In P. Hartung, M. L. Savickas, & Walsh, W. B. *The APA handbook of career intervention* (pp. 3–19). Washington, D.C.: APA.
- Reardon, R. C. (2017). Holland's integration of career research, theory, and practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 28). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch2>
- Richardson, M. S. (1993). Work in people's lives: A location for counseling psychologists. *Journal of Counseling Psychology*, *40*, 425–433.
- Richardson, M. S. (2017). Counseling for work and relationships: A theoretically-grounded and theoretically-informed approach to counseling practice. In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz, (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 40). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch3>
- Sampson, J. P., Jr. (2017). A cognitive information processing theory for career choices: Challenges and opportunities for integrating theory, research, and practice (2017). In J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz, (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions* (pp. 62). Tallahassee, FL: Florida State University. Retrieved from <https://doi.org/10.17125/svp2016.ch5>

- Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling and services: A cognitive information processing approach*. Belmont, CA: Brooks/Cole Thomson Learning.
- Savickas, M. L. (2011). *Career counseling*. Washington, D.C.: American Psychological Association.
- Savickas, M. L., & Baker, D. B. (2005). The history of vocational psychology: Antecedents, origin, and early development. In W. B. Walsh & M. L. Savickas (Eds.), *Handbook of vocational psychology* (3rd ed., pp. 15–50). Mahwah, NJ: Lawrence Erlbaum Associates.
- Savickas, M. L., & Hartung, P. J. (2012). *My career story*. (available via the following link: http://www.vocopher.com/CSI/CCI_workbook.pdf)
- Smith, E. J. (1983). Issues in racial minorities' career behavior. In W. B. Walsh & S. H. Osipow (Eds.) *Handbook of vocational psychology: Vol. 1, Foundations*. (pp. 161–222). Hillsdale, NJ: Erlbaum Associates.
- Standing, G. (2014). *A precariat charter: From denizens to citizens*. New York: Bloomsbury.
- Stead, G. (2013). Social constructionist thought and working. In D. L. Blustein (Ed.), *The Oxford handbook of the psychology of working* (pp. 37–48). New York: Oxford University Press.
- Stiglitz, J. (2015). *The great divide: Unequal societies and what we can do about them*. New York: W.W. Norton & Co.
- Warnath, C. (1975). Vocational theories: Direction to nowhere. *Personnel & Guidance Journal*, 53, 422–428.
- Zytowski, D. (2001). Frank Parsons and the progressive movement. *The Career Development Quarterly*, 50, 57–65.

Chapter 20 - The State of the Art in Integrating Theory, Research, and Practice in Vocational Psychology

James P. Sampson, Jr.

Florida State University

Emily Bullock-Yowell

University of Southern Mississippi

V. Casey Dozier

Florida State University

Debra S. Osborn

Florida State University

Janet G. Lenz

Florida State University

Nathan T. Ross

University of Southern Mississippi

This chapter appears in J. P. Sampson, E. Bullock-Yowell, V. C. Dozier, D. S. Osborn, & J. G. Lenz (Eds.), *Integrating theory, research, and practice in vocational psychology: Current status and future directions*. Tallahassee, FL: Florida State University. <http://doi.org/10.17125/svp2016.ch20>

Appreciation is expressed to Robert Reardon for his comments on an earlier draft of this chapter. Editorial decisions regarding this manuscript were made by Mark Pope.

Correspondence concerning this chapter should be addressed to James P. Sampson, Jr., Department of Educational Psychology and Learning Systems, Florida State University, Tallahassee, FL 32306-4453. E-mail: jsampson@fsu.edu

Keywords: conclusion, content analysis, participants, coding, challenges, recommendations

Conclusion chapters in edited books are often written to provide the editors with an opportunity to offer their perspectives on the chapter authors' various contributions. This concluding chapter takes a different approach. Based on the method used in the 2013 review of career development theory, research, and practice literature (Sampson et al., 2014), this chapter examines the state of the art in integrating theory, research, and practice through a content analysis of the book's preceding 19 chapters. The purpose of this review is to identify the nature and examine the frequencies of the challenges and recommendations for improvement by the authors. The chapter continues with method, results, and discussion.

Method

The method used to conduct the content analysis includes a description of how the main content categories

were established (along with the resulting research question used to guide the analysis), the participants, and the coding process.

Establishment of Content Categories

Chapter authors of section one (theorists) and section three (refereed journal editors and editorial board members) were asked to include the following content in their chapters:

- the relevance of integrating theory, research, and practice (including a statement noting instances where integration was not necessary);
- challenges in integrating theory, research, and practice;

- opportunities for integrating theory, research, and practice;
- and recommendations for the future (how theorists, researchers, practitioners, professional associations, and policy makers can better cope with challenges and maximize opportunities in integrating theory, research, and practice).

Section two chapter authors (researchers) were asked to provide content related to their specific topic as well as recommendations for the future.

Following an initial review of the 19 chapters by the first and second author of this chapter, two decisions were made. First, content on the relevance of integrating theory, research, and practice was omitted from the analysis in favor of more actionable items related to challenges, opportunities, and recommendations. Second, due to the considerable content overlap in the chapters regarding *opportunities* for integrating theory, research, and practice and *recommendations* for the future, content from these categories were combined under the label of recommendations. This led to analyzing data on *challenges* from two groups (theorists and refereed journal editors and editorial board members) and analyzing data on recommendations from three groups (theorists, researchers, and refereed journal editors and editorial board members). Therefore, the research question that guided our analysis was the following: What are the nature and frequencies of challenges and recommendations for improvement in theory, research, and practice integration among a group of experienced vocational psychologists?

Participants

Twenty-two vocational psychologists provided data for this content analysis of 19 book chapters. Although each chapter was written from the perspective of a theorist, researcher, or journal editor/editorial board member, there is considerable overlap in these roles. Almost all of these individuals hold or have held two or three of these roles in the profession. The overlap in roles should provide a deeper and more nuanced understanding of the challenges in integrating theory, research, and practice as well as more comprehensive and viable recommendations for improving integration. Furthermore, the vocational psychologists invited

to contribute chapters were well recognized for their substantive contributions in vocational psychology. The experience and accomplishments of chapter authors contribute to the content validity of the analysis presented in this concluding chapter. The characteristics of chapter authors are as follows: the average length of experience in vocational psychology is 23 years; primary professional titles include professor, department or program chair, and associate dean; authors are from 14 unique locations spanning 11 states in the U.S. and four countries (Australia, Israel, New Zealand, and the United States); and finally, the gender breakdown is 53% male and 47% female.

Coding

To develop the final chapter's content and direction, each book chapter was analyzed and coded. Each mention of a challenge or recommendation for improvement for the vocational psychology field was noted. A table format was used to log each challenge or recommendation for improvement noted as they arose through a detailed chapter content review. If a previously noted challenge or recommendation was mentioned in a later chapter, that was considered a subsequent mention of the previously logged challenge and/or recommendation. A tally was maintained for how many times a challenge or recommendation was mentioned across all book chapters. As most subsequent mentions of a challenge or recommendation were not exactly the same as the initial mention, themes to encompass the general meaning of the challenges and recommendations were developed. These themes were refined and defined to capture as many challenges and recommendations offered across chapters. Several challenges and recommendations were mentioned once and not incorporated into a theme due to the unique nature of the challenge or recommendation.

Results

The content analysis resulted in four challenge themes and eight recommendations for improvement themes that were each mentioned multiple times across multiple chapters. This analysis and discussion of results focused on challenges and recommendations mentioned multiple times. There were several important challenges

and recommendations mentioned once and, while those are not thoroughly discussed in the narrative, they are included in Table 1. Additionally, naming the themes required some judgment, and the resulting names do not fully reflect the nuances associated with each detailed account of individual challenges and recommendations. Therefore, a reference to the chapters in which these themes appear is given so readers can explore the themes in more detail.

Challenges

Unsurprisingly, the most commonly mentioned challenge was difficulties in communication among theorists, researchers, and practitioners. This challenge was mentioned 21 times across Chapters 1, 2, 4, 5, 11, 13, 15, and 17. The second most frequently mentioned challenge, at 12 mentions across Chapters 9, 10, 14, and 17, dealt with difficulties inherent in the methodology or statistical procedures used for studies in the vocational psychology field. This theme addressed issues such as the appropriate way to conduct a meta-analysis, hurdles to adhering to scientific rigor, and the quality of our measurements/assessments. The current state of journals and publishing was the third most common challenge, mentioned seven times across Chapters 2, 13, 15, 16, and 17. Most challenges addressing journals spoke to editorial bias, hurdles to publishing, and difficulty incorporating theory and practice into a research-focused process. The fourth and final challenge spoke to the complexity of integrating theory into practice in light of 21st century changes for the economy and workers. This challenge was mentioned in Chapters 5 and 6.

Recommendations

Like challenges, the most commonly mentioned recommendation for improvement theme was how theorists, researchers, and practitioners could communicate more effectively. This theme was mentioned 32 times across Chapters 1, 2, 4, 5, 7, 11, 12, 13, 14, 15, and 16. Recommendations for improvement related to journals and publishing were mentioned 23 times across Chapters 2, 5, 7, 13, 14, 15, 16, and 17, making this the second most common recommendations for improvement theme. The theme of methodological and statistical use in research was mentioned 18 times across Chapters 3, 4, 8, 9, 10, 14, 16, and 17. The fourth

most common recommendation for improvement theme addressed vocational psychologists' opportunities to better integrate diverse perspectives into the way we practice, conduct research, and develop theory. This theme was mentioned 14 times across Chapters 2, 4, 6, 8, 9, 10, 11, 12, 13, 17, and 19. There was a tie at seven mentions for the fifth most common recommendations theme. These two themes addressed the opportunities for training practitioners and better integration of technology into improvements across research and practice. The training theme was mentioned in Chapters 2, 4, 7, 12, and 15 and the technology theme was mentioned in Chapters 5, 7, 10, 11, and 14. The seventh most common theme dealt with the need to engage the public in our research as well as advocating for policy change to enhance the integration of theory, research, and practice. This theme was mentioned five times across Chapters 1, 5, 6, 7, and 11. The last theme was mentioned two times, appearing in Chapters 9 and 12, and provided suggestions for a diagnostic system for career concerns in the form of a common language or searchable best practices system. Challenge and recommendation themes, as well as those challenges and recommendations mentioned only one time, are paraphrased in Table 1 which follows.

A promising finding of the content analysis revealed that three of the four challenge themes also emerged as recommendation for improvement themes. Therefore, challenge themes that addressed communication among theorists, researchers, and practitioners; methodological and statistical use; and journals and publishing were all paired with multiple recommendations on how to address these challenges.

Discussion

The extent of agreement that was expressed from such a diverse and experienced selection of vocational psychologists regarding challenges and recommendations indicates that there is some consensus regarding the state of the art in integrating theory, research, and practice in vocational psychology. This consensus, while preliminary, helps clarify where we should focus our efforts to achieve the greatest benefit. The overlap between challenges and recommendations also shows that there is some common understanding of issues and opportunities for improvement. The challenge is what to do with the insights we have gained about the integration of theory, research, and practice. As a profession, we

Table 1. Most Frequently Identified Challenges and Recommendations from a Sample of Experienced Vocational Psychologists Regarding in the Integration of Theory, Research, and Practice

Challenges	Recommendations
<ul style="list-style-type: none"> • There are difficulties in communication among theorists, researchers, and practitioners ($n = 21$). • Difficulties are inherent in the methodology and statistical procedures used to study the field of vocational psychology ($n = 12$). • Editorial biases in journals, hurdles to publishing, and difficulties incorporating theory and practice into a research-focused process exist ($n = 7$). • Integrating theory into practice in light of 21st century changes for the economy and workers can be complex ($n = 2$). 	<ul style="list-style-type: none"> • Improve communication among theorists, researchers, and practitioners ($n = 32$). • Improve journals and publishing ($n = 23$). • Improve methodological and statistical approaches in research ($n = 18$). • Improve the integration of diverse perspectives into the way we practice, conduct research, and develop theory ($n = 14$). • Improve training for practitioners ($n = 7$). • Improve the integration of technology across research and practice ($n = 7$). • Improve public engagement in our research, and advocate for changes in policy ($n = 5$). • Improve the diagnostic system for career concerns in the form of a common language or searchable best practices system ($n = 2$).

Challenges and recommendations mentioned once

<ul style="list-style-type: none"> • Theories cannot be copyrighted, limiting the ability of authors to protect their work. • Current academic environments make theory sustainability difficult. • A greater connection between vocational psychology & I/O psychology is needed. • Economic shifts are increasing wealth disparity. • Research-practitioners are not valued in academic environments. • Few conference presentations about Holland but many practitioners use the theory. • The integration of international perspectives is needed. • Information and communication technology-based issues exist. 	<ul style="list-style-type: none"> • Improve the integration of theory into practice in light of 21st century changes for the economy and workers. • Improve integration among vocational and I/O psychologists. • Realize perfect integration cannot occur and we must recognize some limits. • Explore ways to incentivize journal reviews. • Attend to a broader array of outcomes from career development interventions. • Include explicit documentation of theory, research, and evidence-based practice that developers and publishers use to create resources. • Research ways past narrative structures might be impeding forward movement in lives to open inquiry on how forward movement in lives may help to generate healing narratives of the past. • Use language that specifically pulls unpaid care out of the shadows of domesticity and into the realm of work. • Embrace knowledge constructed in psychology and from other related social sciences. • Creation of interdisciplinary theories embracing economic and sociological factors.
---	--

need to act both *individually* and *collectively* if we are to improve the integration of theory, research, and practice in vocational psychology.

Examples of individual action by vocational psychologists to improve the integration of theory, research, and practice could include the following: (a) creating and revising theory that integrates research and practice; (b) conducting research that integrates theory and practice; (c) delivering career services and creating career resources (practice) that integrate theory and research; (d) communicating and collaborating more regularly with practitioners who are not typically involved in creating theory and conducting research; (e) taking advantage of information technology to improve theory, research, and practice integration; (f) emphasizing theory, research, and practice integration when reviewing manuscripts for our journals as editorial board members or when reviewing presentation proposals for our conferences as conference program committee members; (g) emphasizing theory, research, and practice integration when soliciting and selecting manuscripts for our journals as editors or when soliciting and selecting presentation proposals as conference organizers; and (h) emphasizing theory, research, and practice integration when supervising students-in-training and practitioners in the delivery of career services.

Examples of collective action by vocational psychologists to improve the integration of theory, research, and practice might include using our professional associations to (a) improve communication among theorists, researchers, and practitioners; (b) improve theory, research, and practice integration in service delivery standards and accreditation/training standards; (c) influence standards for research that encourage integration; and (d) influence integration in grant application requirements for research.

If we are to be successful in improving the integration of theory, research, and practice in vocational psychology, we need to be consistent, collaborative, and intentional in our efforts. Stronger links among theory, research, and practice can help us as a profession make our theory more comprehensive and applicable, our research more informative and relevant, and our practice more effective and supported.

Reference

- Sampson, J. P., Jr., Hou, P. C., Kronholz, J., Dozier, C., McClain, M. C., Buzzetta, M., Pawley, E., Finklea, T., Peterson, G. W., Lenz, J. W., Reardon, R. C., Osborn, D. S., Hayden, S. C. W., Colvin, G. P., & Kennelly, E. L. (2014). Annual review: A content analysis of career development theory, research, and practice - 2013. *The Career Development Quarterly*, *62*, 290–326. <http://doi.org/10.1002/j.2161-0045.2014.00085.x>

Key Word Index

- 21st century, Ch. 6
 Academic journal, Ch. 16
 Career, Chs. 2, 16, 17
 Career and work, Ch. 3
 Career assessment, Ch. 14
 Career choice, Ch. 8
 Career choice privilege, Ch. 19
 Career counseling, Chs. 3, 4, 6, 7, 12
 Career decision-making self-efficacy, Ch. 10
 Career development, Chs. 3, 4, 12, 15, 19
 Career development interventions, Ch. 7
 Career development programs and services, Ch. 11
 Career Development Quarterly, Ch. 13
 Career interventions, Chs. 9, 12, 14
 Career planning and decision making, Ch. 7
 Career practice, Ch. 18
 Career research, Ch. 18
 Career theory, Ch. 18
 Challenge, Ch. 2
 Challenges, Ch. 20
 Clinical significance, Ch. 8
 Coding, Ch. 20
 Cognitive Information Processing Theory, Ch. 5
 Collaboration, Ch. 5
 Collaborative process, Ch. 11
 Communities of practice, Ch. 5
 Computerized assessment, Ch. 14
 Conclusion, Ch. 20
 Construct redundancy, Ch. 8
 Content analysis, Ch. 20
 Counseling psychology, Ch. 11
 Critical psychology, Ch. 19
 Cronbach's UTOS, Ch. 10
 Demographic variables, Ch. 9
 Dissemination, Ch. 5
 Editorial policy, Ch. 18
 Editors, Ch. 15
 Effectiveness, Ch. 12
 Effectiveness of interventions, Ch. 14
 Empirical studies of interventions, Ch. 7
 Evidence-based practice, Ch. 12
 Generalizability, Ch. 10
 Global economy, Ch. 6
 Global workforce, Ch. 6
 Historical analysis, Ch. 19
 History of career development, Ch. 19
 Holland, Ch. 2
 Identity process, Ch. 3
 Incremental validity, Ch. 14
 Industrial-organizational psychology, Ch. 17
 Information and Communication Technology (ICT), Ch. 14
 Integrating theory, Ch. 4
 Integration, Chs. 1, 13, 16, 17, 18
 Intentional process, Ch. 3
 Interdisciplinary, Ch. 18
 Interpretation of assessments, Ch. 14
 Interprofessional, Ch. 18
 Job finding, Ch. 8
 Journal articles, Ch. 15
 Laboratories, Ch. 5
 Matching, Ch. 2
 Meta-analysis, Chs. 8, 9, 10, 12
 Model-driven meta-analysis, Ch. 10
 Moderators, Ch. 10
 Multidimensional career assessment, Ch. 14
 My System of Career Influences, Ch. 4
 Narrative, Ch. 3
 Narrative career counseling, Ch. 4
 Opportunity, Ch. 2
 Outcomes, Ch. 12
 Participants, Ch. 20
 Personality, Ch. 2
 Policy, Chs. 1, 5
 Population-specific meta-analysis, Ch. 9
 Post-modern career theories, Ch. 16
 Practice, Chs. 1, 5, 13, 15, 16, 17
 Practice integration, Ch. 19
 Professional development, Ch. 15
 Psychology of working, Ch. 19
 Public policy, Ch. 6
 Publication, Ch. 13
 Publishing, Ch. 15
 Qualitative career assessment, Ch. 4
 Recommendations, Ch. 20
 Recommendations for career practice, Ch. 7
 Recommendations for practice, Ch. 11
 Research, Chs. 1, 5, 13, 15, 16, 17, 19
 Research and practice, Ch. 4
 Research-practice gap, Ch. 17
 Researcher-practitioner collaborations, Ch. 11
 Resources, Ch. 5
 RIASEC, Ch. 2
 Schools, Ch. 11
 Science-practice gap, Ch. 7
 SDS, Ch. 2
 Setting-specific meta-analysis, Ch. 9
 Social Cognitive Career Theory, Ch. 1
 Social justice, Ch. 8
 Storytelling, Ch. 4
 Students, Ch. 11
 Systems theory framework, Ch. 4
 Theory, Chs. 1, 5, 13, 16, 17, 19
 Translational research, Ch. 17
 Variation, Ch. 10
 Vocational psychology, Ch. 3, 6, 17, 19
 Vocational Psychology, Ch. 11
 Vocational theory, Ch. 7
 Work volition, Ch. 19
 Writing, Ch. 15

Author Index

- Adams, A., 121, 129,
Ahn, S. S., 156, 162
Alcock, A., 57, 59
Ali, S. R., 74, 75, 76, 117, 128
Allen, G. E. K., 149, 150, 153
Aloe, A. M., 98, 99, 100, 104
Anderson, W. P., 65, 69, 70
Andrew, M. E., 32, 38
Andrews, L., 67, 71, 156, 162
Angus, L. E., 44, 46
Antony, M. M., 64, 65, 69
Aranda, C. L., 151, 153
Arnold, J., 170, 172
Arthur, N., 156, 164
Asama, N. F., 32, 38, 142, 146
Asher, I., 143, 144, 145
Morrison, M. A., 102, 106
Atkinson, D. R., 111, 125
Autin, K. L., 87, 88, 139, 140, 184,
185
Autor, D., 74, 76
Backus, F., 151, 153
Baker, D. B., 179, 180, 181, 182,
187
Baker, S. B., 96, 104
Baldwin, S. A., 98, 104, 132, 134
Bar-On, R., 156, 163
Barnett, M., 151, 153
Barón, P. M. H., 117,
Barr, L., 151, 153
Bauman, Z., 42, 46
Baumgardner, S. R., 182, 185
Bear, J. B., 142, 147
Beck, A. T., 62, 69
Becker, B. J., 85, 88, 92, 93, 97, 98,
99, 100, 104, 107, 130, 132,
133, 135
Benton, S. L., 64, 65, 67, 70
Berkel, L., 168, 170, 174
Bernaud, J.-L., 156, 162
Bertoch, S. C., 31, 38
Betz, N. E., 87, 88, 102, 104, 142,
147, 183, 185
Bingham, R. P., 183, 185
Birge, R. T., 100, 105
Bleuer, J. C., 160, 165
Blumberg, D., 143, 146
Blustein, D. L., 45, 46, 47, 67, 69,
73, 76, 87, 88, 109, 110, 117,
125, 128, 139, 140, 151, 153,
158, 159, 162, 167, 168, 172,
176, 177, 180, 181, 183, 185,
Bonner, M. W., 37, 39
Booth, S., 66, 69
Borgen, F. H., 85, 88
Botkin, J. R., 108, 127
Bowles, S. M., 32, 38
Brady, T. J., 127, 129
Brecheisen, B. K., 82, 89, 107
Brecheisen, J., 97, 105
Bridgstock, R., 57, 58
Bringle, R. G., 63, 64, 69,
Brotheridge, C. M., 170, 172
Brott, P. E., 156, 157, 162
Brown, C., 65, 69
Brown, K., 151, 153
Brown, R., 160, 162
Brown, S. D., 10, 11, 20, 23, 24, 26,
27, 67, 69, 73, 76, 78, 80, 82,
83, 84, 85, 86, 87, 88, 91, 92,
93, 96, 97, 99, 105, 106, 117,
125, 126, 130, 131, 133, 135,
138, 140, 145, 182, 183, 184,
185, 186
Brown, S. E., 111, 128
Buboltz, W. C., 65, 71
Budisin, I., 97, 105
Budnick, C. J., 156, 162
Bullock-Yowell, E., 67, 71, 156, 162
Burck, H. D., 96, 105
Burns, S. T., 156, 162
Burrow-Sánchez, J. J., 118, 125
Buttar, H. M., 156, 162
Buzetta, M., 36, 37, 39, 63, 64, 65,
67, 71, 77, 79, 81, 103, 106,
142, 146, 156, 157, 164, 167,
174
Byrne, N., 58
Byrne, Z. S., 41, 47
Campbell, D. T., 98, 99, 105, 106
Campbell, M., 156, 162
Cannon, J. G., 156, 164
Cardoso, P., 157, 163
Carlstrom, A. H., 117, 128
Carr, D. L., 62, 67, 71
Carter, E., 111, 128
Castelino, P., 97, 105
Chan, R. M. C., 56, 61
Chan, W., 97, 105
Chen, H.-H., 149, 150, 153
Chen, Z., 117, 121, 128
Chetty, C., 53, 54, 60
Cheung, M. W.-L., 97, 105
Chiachanasakul, A., 149, 150, 153
Choi, B. Y., 156, 162
Choi, K., 111, 128
Choi, W. S., 109, 115, 126
Christopher-Sisk, E. K., 117, 127
Chronister, K. M., 151, 153
Clandinin, D. J., 43, 47
Close, W., 110, 111, 112, 117, 125,
128
Coe, M. K., 108, 109, 115, 126
Coenen, H., 110, 125
Cohen, L., 170, 172
Collett, G., 56, 58,
Collin, A., 169, 170, 171, 172
Colvin, G. P., 36, 37, 39, 63, 64,
65, 67, 71, 77, 79, 81, 103, 106,
142, 146, 156, 157, 164, 167,
174, 188, 192
Cook, D. A., 183, 186
Cook, D. J., 95, 105
Cook, T. D., 97, 98, 99, 105, 106
Cooper, H., 91, 92, 93, 95, 105, 106
Cordera, A., 43, 48
Costa, P. T., 142, 145
Creed, P., 103, 106, 171, 172
Crenshaw, K., 169, 172,
Crews, J., 160, 165
Cronbach, L. J., 96, 98, 99, 104,
105, 132, 135
Crosnoe, R., 42, 47
Crotty, M., 157, 162
Crowson, A., 156, 162,
Daiger, D. C., 85, 88
Daiute, C., 43, 47,
Daley, C. M., 108, 109, 115, 126
Dauwalder, J., 117, 127, 157, 164,
176, 178
Davis, A., 111, 127
Davis, B., 111, 128

- Davis, H. V., 181, 185,
 Dawis, R. V., 22, 26, 77, 80, 117,
 126
 Day, S. X., 85, 88
 de Baca, C., 111, 126
 DeBay, D., 151, 153
 Deemer, E. D., 151, 153
 Dekas, K. H., 41, 49
 del Puerto, C. L., 156, 162, 163
 Del Re, A. C., 98, 104, 132, 134
 Depot, M., 151, 153
 Dersimonian, R., 101, 105
 DeVoy, J. E., 139, 140
 DeWine, D., 158, 159, 162
 Di Fabio, A., 156, 162, 163
 Diemer, M. A., 85, 87, 88, 139,
 140, 180, 184, 185
 Diener, E. D., 86, 88,
 Dik, B. J., 41, 47, 87, 88, 117, 126,
 131, 135, 138, 140
 Dillon-Lieberman, K., 151, 153
 Doberneck, D. M., 74, 75, 76,
 Dorn, D., 74, 76
 Dorn, F. J., 110, 126
 Dozier, V. C., 36, 37, 39, 63, 64,
 65, 67, 71, 77, 79, 81, 103, 106,
 142, 146, 156, 157, 164, 167,
 174, 188, 192
 Duarte, M. E., 117, 127, 157, 163,
 164, 176, 178
 Duffy, R. D., 65, 67, 70, 85, 87, 88,
 106, 117, 126, 138, 139, 140,
 141, 145, 150, 152, 153, 160,
 160, 161, 163, 168, 171, 173,
 175, 176, 177, 180, 184, 185,
 DuFour, R., 121, 126
 Dullabh, A., 56, 60
 Dun, K., 57, 59
 Durham, J. F., 112, 117, 128
 Eaker, B., 121, 126
 Edens, L., 97, 105
 Eggerth, D. E., 32, 38
 Elder, G. H., Jr., 42, 47
 Elliott, J., 156, 163
 Elliott, R., 65, 71
 Emerson, R. W., 125, 126,
 Emery, G., 62, 69
 Emmons, R. A., 86, 88
 Eng, E., 108, 126
 Enns, C. Z., 109, 126
 Evans, J. H., Jr., 96, 105,
 Ezeofor, I., M., 102, 106
 Fall, K., 74, 76
 Falvey, J. E., 160, 163
 Faris, E., 36, 39
 Felch, J., 113, 117, 128
 Ferrari, L., 56, 61, 117, 126
 Ferring, D., 40, 45, 49
 Finklea, J. T., 36, 37, 39, 63, 64, 65,
 67, 71, 77, 79, 81, 103, 106,
 142, 146, 156, 157, 164, 167,
 174, 188, 192
 Fischer, A. R., 111, 128
 Fitzgerald, L., 183, 185
 Flanagan, S., 75
 Flores, L. Y., 65, 67, 70, 90, 94, 141,
 145, 160, 161, 162, 163, 168,
 171, 173, 174, 176, 177, 178,
 183, 185, 186
 Follette, W. C., 86, 88
 Fonagy P., 134, 135
 Ford, M., 45, 47
 Ford, T., 57, 59
 Fouad, N. A., 46, 48, 64, 65, 67, 70,
 72, 78, 80, 81, 90, 93, 108, 126,
 130, 132, 133, 135, 166, 167,
 168, 169, 172, 173, 183, 185,
 Foutch, H., 31, 32, 35, 38
 Foxcroft, C., 56, 60
 Frank, J. B., 134, 136
 Frank, J. D., 134, 136
 Frazier, P. A., 64, 70
 Freeman, M., 40, 47
 Freeman, V., 63, 69
 Fretz, B. R., 93, 96, 105
 Fritzsche, B., 30, 32, 35, 38
 Fukuyama, M. A., 101, 105
 Funk, D. P., 101, 106
 Furbish, D. S., 10, 12, 67, 70, 141,
 144, 145, 150, 153, 156, 160,
 163, 167, 168, 169, 170, 171,
 173, 176, 177, 178
 Gadassi, R., 143, 146
 Gagné, R. M., 62, 67, 70
 Gambrell, C. E., 156, 164
 Garis, J. W., 101, 105, 106
 Gati, I., 10, 12, 65, 67, 70, 86, 88,
 91, 93, 131, 135, 142, 143, 144,
 145, 146, 147, 150, 152, 153,
 160, 161, 163, 167, 168, 171,
 173, 177, 178
 Gehlert, S., 108, 127
 Gelso, C. J., 65, 70
 Gergen, K. J., 40, 41, 45, 47, 180,
 186,
 Gibson, G., 65, 71
 Giddens, A., 42, 47, 110, 126
 Gill, N., 139, 140
 Gim, R. H., 111, 125
 Ginevra, M. C., 56, 61
 Glass, C. R., 74, 75, 76,
 Glass, G. V., 95, 105
 Gleser, G. C., 99, 105,
 Glomb, T. M., 84, 89
 Goffman, E., 124, 126,
 Goncalves, M. M., 40, 45, 49
 Gonzales, M. H., 64, 70
 Good, G. E., 111, 128
 Good, R., 101, 107
 Goodyear, R. K., 64, 65, 67, 70,
 Gordon, E. W., 182, 183, 186
 Gore, P., 170, 174
 Gorman, J. M., 134, 135
 Gottfredson, G. D., 34, 38
 Gramlich, E. M., 117, 129
 Gravino, K. L., 117, 127
 Greenberg, R. L., 62, 69
 Greenleaf, A. T., 156, 163
 Greiner, K. A., 108, 109, 115, 126
 Gresham, S., 111, 117, 128
 Griffin, S., 86, 88
 Grix, J., 157, 163
 Guan, Y., 144, 147
 Guichard, J., 158, 163
 Gusavac, N., 113, 117, 128
 Gysbers, N., 156, 162
 Haakenson, K. A., 112, 117, 128
 Hackett, G., 20, 26, 27, 73, 76, 78,
 80, 117, 126, 138, 140, 183,
 186
 Hains, A. A., 108, 126
 Hale, B., 111, 128,
 Hall, M. E., 58
 Hamann, T., 113, 117, 128

- Hansen, J. C., 87, 88, 172, 173
Hansen, J. T., 44, 47
Hargrove, T., 111, 126
Harley, E., 151, 153
Harris-Bowlsbey, J., 64, 71, 101, 105, 142, 146
Hartung, P. J., 22, 26, 77, 80, 169, 173, 183, 187,
Hatcher, J. A., 63, 64, 69
Hayden, S. C. W., 36, 37, 39, 63, 64, 65, 67, 71, 77, 79, 81, 103, 106, 142, 146, 156, 157, 164, 167, 174, 188, 192
Hayes, D., 159, 163
Hays, D., 102, 107
He, Y., 149, 150, 153
Healy, C. C., 101, 102, 103, 105
Hebson, G., 169, 170, 171, 173,
Hedges, L. V., 91, 93
Heesacker, M., 77, 79, 80
Heffernan, M., 111, 128
Helms, J. E., 183, 186
Henfield, M. S. 56, 58
Hennessy, K. D., 97, 106, 138, 140
Heppner, M. J., 97, 105, 148, 153
Heppner, P. P., 65, 69, 97, 105
Hermans, H. J. M., 43, 47, 53, 58
Herr, E. L., 65, 70, 171, 173
Hesketh, B., 167, 171, 173
Higgins, J. P. T., 100, 106
Hjertum, H., 57, 59
Hoare, P. N., 57, 59
Hoelson, C., 53, 54, 60
Hoffman, T., 74, 76,
Hohner, R., 111, 128
Holgate, J., 169, 170, 171, 173
Holland, J. L., 22, 26, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 62, 66, 67, 70, 73, 76, 77, 80, 85, 87, 88, 117, 126, 142, 143, 145, 146
Hollander, E., 91, 94
Holm, C., 111, 128
Hood, M., 171, 172
Horan, J. J., 101, 107
Hosford, R. E., 98, 107
Hoshmand, L. T., 41, 47
Hou, P-C., 36, 37, 39, 63, 64, 65, 67, 71, 77, 79, 81, 103, 106, 142, 146, 156, 157, 164, 167, 174, 188, 192
Howard, G. S., 65, 70
Howard, K. A. S., 75, 111, 117, 126, 160, 161, 162, 163
Hu, Q., 151, 153
Huang, J. L., 82, 83, 84 88, 96, 106, 131, 135, 184
Hunt, B., 159, 163
Husman, J., 85, 89
Imel, Z. E., 118, 125
Ireland, G. W., 102, 106
Israel, B. A., 108, 126
Jackson, M. A., 167, 169, 173
Jacobson, N. S., 85, 86, 87, 88, 131, 135
Jadidian, A., 85, 88
James, A. S., 108, 126
Jang, S. H., 156, 162
Jarukitisakul, C., 117, 118, 121, 128, 129
Jarvis, J., 64, 71
Jepsen, D. A., 64, 65, 67, 70
Jin, L., 56, 61
Johnson, J., 117, 128
Johnson, K. F., 156, 163
Johnson, M. K., 42, 47
Johnston, J. A., 32, 38, 142, 146
Jolly, A., 111, 128
Jones, J. E., 117, 128
Joseph, S., 108, 109, 115, 126
Josselson, R., 40, 43, 44, 47, 48,
Jung, S. H., 156, 162
Juntunen, C. L., 85, 88
Kahnweiler, W., 28, 39
Kanfer, R., 84, 89
Kantamneni, N., 90, 93, 117, 126, 132, 135
Karr, C. A., 63, 70, 167, 173
Katz, L., 74, 76, 184, 186
Kavanagh, J., 111, 128,
Kazdin, A. E., 46, 47
Kempen, H., 43, 47
Kenna, A. C., 139, 140, 158, 159, 162
Kennel, R., 111, 128
Kennelly, E. L., 36, 37, 39, 63, 64, 65, 67, 71, 77, 79, 81, 103, 106, 142, 146, 156, 157, 164, 167, 174, 188, 192
Keskinen, A., 43, 47
Khairallah, T. S., 150, 153
Kidd, J. M., 64, 71
Killeen, J., 64, 71
Kim, B., 156, 162
Kim, J., 151, 153
Kleiman, T., 143, 144, 145, 146
Klein, K. L., 87, 88, 102, 104
Koivuluhta, M., p.43, 47
Kost, R., 108, 127
Krausz, M., 86, 88, 91, 93, 142, 143, 146
Kronholz, J. F. , 36, 37, 39, 63, 64, 65, 67, 71, 77, 79, 81, 103, 106, 142, 146, 156, 157, 164, 167, 174, 188, 192
Krueger, A., 184, 186
Krumboltz, J. D., 58, 59, 78, 80, 98, 107
Kuit, W., 56, 59
LaCroix, J., 58
Laird, N., 101, 105
Lamborn, S., 110, 112, 113, 117, 128
Langer, E., 156, 164
Lapan, R. T., 117, 126
Larsen, R. J., 86, 88
Larson, L. M., 63, 70, 167, 173
Lasoff, D. L., 82, 83, 85, 89, 91, 92, 94, 97, 107, 130, 131, 136
Lau, P. S. Y., 56, 61
Laurenzi, C., 180, 185
Leasure, K. K., 62, 67, 71
Leavell, K. A., 156, 162
Lebow, J., 64, 65, 71
Lee, S. M., 156, 162
Lee, Y., 151, 153
Lent, R. W., 20, 21, 23, 26, 27, 36, 38, 40, 48, 50, 51, 53, 59, 61, 63, 71, 73, 74, 75, 76, 78, 80, 84, 88, 97, 102, 106, 117, 126, 131, 135, 138, 140, 183, 186
Lenz, J. G., 29, 31, 32, 33, 34, 35, 36, 37, 39, 62, 63, 64, 65, 67, 69, 71, 72, 77, 79, 81, 85, 86,

- 87, 88, 91, 94, 103, 106, 117, 127, 142, 143, 144, 146, 147, 156, 157, 164, 167, 168, 174, 183, 186, 188, 192
- Leong, F. T. L., 90, 94, 170, 173, 183, 186
- Lerner, R. M., 41, 48
- Lesesne, C., 117, 123, 129
- Leuty, M., 67, 71
- Levin, N., 142, 143, 146
- Levinson, E. M., 156, 164
- Lewis, C., 160, 164
- Lichtenberg, J. W., 79, 80
- Lichtenberger, E. J., 156, 164
- Lieblich, A., 43, 48
- Linnemeyer, R. M., 168, 170, 174
- Lipsey, M. W., 90, 92, 94,
- Littman-Ovadia, H., 156, 164
- Liu, S., 82, 83, 84, 88, 96, 106, 131, 135, 184, 186
- Loarer, E., 156, 162
- Lofquist, L. H., 77, 80, 117, 126
- Lomas, G. I., 37, 39
- Lopez del Puerto, C., 156, 163
- Loup, A., 108, 127
- Loveland, J. M., 65, 71
- Lovering, M., 151, 153
- Lucas, M. S., 168, 173
- Luginbuhl, P., 151, 153
- Lumsden, J. A., 143, 146
- Luzzo, D. A., 101, 106
- Mack, L., 157, 164
- MacLachlan, M., 180, 186
- Maddy, L. M., 156, 164
- Malen, A., 111, 128
- Manthei, R., 161, 164
- Maree, J. G., 157, 164
- Mark, S., 151, 153
- Marshall, S. K., 53, 61, 64, 72
- Martin, D., 65, 71
- Martin, J. L., 118, 125
- Martin, M., 65, 71
- Masdonati, J., 86, 88
- Massoudi, K., 86, 88
- Matt, G. E., 97, 98, 99, 106
- McAdams, D. P., 41, 43, 44, 48
- McBride, A., 169, 170, 171, 173
- McClain, M-C., 36, 37, 39, 62, 63, 64, 65, 67, 71, 77, 79, 81, 91, 94, 103, 106, 142, 146, 156, 157, 164, 167, 174, 188, 192
- McConnell, A. E., 156, 162
- Mccormick, M. P., 117, 127
- McCrae, R. R., 142, 145
- McGregor-Bayne, H., 57, 59
- McHugh, E. R., 31, 32, 35, 38
- McIlveen, P., 41, 48, 53, 57, 58, 59, 171, 173
- McLeod, J., 44, 46
- McMahon, M., 41, 48, 50, 53, 54, 56, 57, 59, 60, 61, 64, 65, 71, 73, 76, 156, 158, 159, 164, 176, 178
- McWhirter, E. H., 109, 125, 151, 153, 183, 185
- Meade, P., 43, 48
- Meehl, P., 167, 173
- Messer, M. A., 32, 36, 38, 39
- Metz, A. J., 110, 112, 117, 128,
- Metzler, A. E. p. 101, 105
- Millar, R., 98, 106
- Miller, M., 97, 105, 106, 138, 140
- Mohr, G., 142, 146
- Morris, I., 45, 48
- Morrow, S. L., 169, 173
- Morrow-Bradley, C., 64, 71
- Mourton, D. L., 101, 102, 105
- Moya, M., 36, 39
- Mulgan, G., 45, 48
- Muller, J., 103, 106
- Murdock, N. L., 78, 79, 80
- Murphy, K., 158, 159, 162
- Murray, C. E., 64, 65, 71
- Musch, E., 62, 71, 91, 94
- Nanda, H., 99, 105
- Nathan P. E., 134, 135
- Nauta, M. C. E., 91, 94
- Nauta, M. M., 24, 27, 77, 80
- Neimeyer, G. J., 101, 105
- Nelson, R. M., 108, 127
- Neukrug, E. S., 37, 39
- Nevill, D. D., 101, 105
- Nichols, G. C., 97, 106
- Niles, S., 64, 71, 101, 105, 106
- Nilsson, J. E., 168, 170, 174
- Nord, D., 111, 128
- Nota, L., 117, 126, 127, 128, 157, 164, 167, 168, 176, 178
- Nunes, S., 156, 164
- O'Brien, K. M., 111, 128, 179, 180, 186
- Offer, M., 64, 71
- Ohler, D. L., 156, 164
- Oliver, L. W., 82, 88, 89, 91, 92, 94, 96, 106, 130, 135, 143, 147
- O'Neill, M., 170, 172
- Ones, D. S., 97, 107
- Osborn, D. S., 36, 37, 39, 63, 64, 65, 67, 71, 77, 79, 81, 103, 106, 142, 146, 147, 156, 157, 164, 167, 174, 188, 192
- Osborne, L., 67, 71, 156, 162
- Osipow, S. H., 50, 60, 86, 88, 91, 93, 142, 146
- Osman, D., 117, 121, 129
- Palazzeschi, L., 156, 163
- Parcover, J. A., 156, 164
- Parker, E. A., 108, 126
- Parsons, F., 117, 127, 181, 186
- Patton, W., 41, 48, 50, 53, 54, 56, 57, 59, 60, 61, 64, 65, 71, 73, 76, 103, 106, 156, 158, 164, 170, 171, 172, 176, 178
- Paul, G. L., 134, 135
- Paulson, D., 67, 71
- Pawley, E. K., 36, 37, 39, 63, 64, 65, 67, 71, 77, 79, 81, 103, 106, 142, 146, 156, 157, 164, 167, 174, 188, 192
- Penn, L. T., 102, 106
- Pennington, D., 170, 174
- Pepinsky, H. B., 160, 164
- Pepinsky, N., 160, 164
- Pepper, S. C., 41, 48, 169, 174
- Perry, J. C., 109, 117, 125, 127, 180, 183, 185
- Peterson, C. H., 37, 39
- Peterson, G. W., 36, 37, 39, 62, 63, 64, 65, 66, 67, 71, 72, 77, 79, 81, 85, 86, 87, 88, 91, 94, 103, 106, 117, 127, 142, 143, 144, 146, 147, 156, 157, 164, 167, 168, 174, 183, 186, 188, 192
- Petticrew, M., 95, 106
- Pham, A., 75
- Phelps, L. A., 112, 117, 128
- Phillips, S. D., 117, 127

- Popadiuk, N. E., 41, 49
 Pope, M., 137, 140, 179, 180, 181, 182, 186
 Popowicz, C. L., 96, 104
 Powell, A., 30, 32, 35, 38
 Power, J. L., 170, 172
 Power, P. G., 85, 88
 Presby, S., 100, 106
 Price, L., 43, 48
 Price, R. H., 117, 129
 Prideaux, L., 103, 106
 Prilleltensky, I., 109, 127
 Probert, B. S., 101, 105
 Puhakka, H., 43, 47
 Rajaratnam, N., 99, 105
 Ramos, K., 149, 150, 153
 Rausch, M. A., 156, 164
 Reardon, R. C., 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 51, 56, 61, 62, 63, 64, 65, 66, 67, 71, 72, 74, 76, 77, 79, 81, 85, 86, 87, 88, 91, 94, 103, 106, 117, 127, 142, 143, 144, 146, 147, 156, 157, 164, 167, 168, 174, 181, 183, 186, 188, 192
 Rector, C. C., 91, 93
 Redmond, K., 112, 117, 121, 129
 Rehfuß, M. C., 156, 164
 Rehm, M. L., 41, 48
 Reid, H., 46, 48
 Revensdorf, D., 86, 88
 Richards, C., 117, 128
 Richardson, M. S., 40, 43, 45, 46, 48, 49, 51, 61, 73, 76, 181, 183, 186
 Ricoeur, P., 42, 49
 Riessman, C. K., 43, 49
 Rigotti, T., 142, 146
 Ritsma, S., 111, 128
 Roberts, H., 95, 106
 Roche, M., 67, 69, 86, 87, 88
 Rogers, C. R., 54, 61
 Ronnestad, M. H., 150, 154
 Ronzio, C. R., 156, 164
 Rosbruch, N., 43, 48
 Rose, C. S., 67, 72, 97, 104, 107, 132, 136
 Rosier, J., 86, 88
 Ross, D., 121, 129
 Ross, L. F., 108, 127
 Rossier, J., 117, 127, 129, 157, 164, 167, 168, 176, 178
 Rosso, B. D., 41, 49
 Roth, A. D., 134, 135
 Rottinghaus, P. J., 85, 88, 131, 135
 Rotundo, M., 84, 89
 Rounds, J., 91, 94, 97, 107, 144, 146
 Rubin, D. B., 97, 106
 Rudman, L. A., 64, 70
 Rush, A. J., 62, 69
 Rushing, A. D., 156, 162
 Ryan Krane, N. E., 82, 83, 84, 85, 88, 91, 93, 96, 97, 105, 117, 125, 130, 131, 135, 145
 Sackett, D. L., 95, 105
 Saka, N., 143, 146
 Salgado, J., 40, 45, 49
 Salomone, P. R., 91, 94
 Sampson, J. P., Jr. 31, 36, 37, 39, 51, 56, 58, 61, 62, 63, 64, 65, 66, 67, 71, 72, 73, 74, 75, 76, 77, 79, 81, 85, 86, 87, 88, 91, 94, 103, 106, 117, 127, 142, 143, 144, 146, 147, 156, 157, 164, 167, 168, 174, 183, 186, 188, 192
 Santuzzi, A. M., 156, 162
 Sarbin, J. R., 41, 49
 Sargent, A. C., 35, 39
 Saunders, D. E., 62, 63, 67, 71, 72, 85, 86, 87, 88, 142, 144, 147
 Savickas, M. L., 20, 21, 23, 27, 41, 46, 49, 50, 51, 61, 77, 78, 80, 81, 85, 89, 117, 127, 129, 157, 158, 164, 166, 167, 168, 174, 176, 178, 179, 180, 181, 182, 183, 184, 186, 187
 Schaeffer, C., 40, 45, 48, 49
 Schafer, R., 44, 49
 Schale, C. L., 168, 170, 174
 Schindler, N., 56, 61
 Schlesinger, A. M., 114, 127
 Schmidtman, E., 67, 71
 Schneider, M., 77, 81
 Schnuelle, L., 35, 39
 Schreiber, M., 56, 61
 Schultheiss, D., 45, 49, 67, 72, 141, 147, 150, 151, 152, 154, 160, 161, 162, 164, 169, 170, 174, 176, 177, 178
 Schultheiss, S. S., 30, 39
 Schultz, A. J., 108, 126
 Schwartz, J., 65, 71
 Schweitzer, J. H., 74, 75, 76
 Schyns, B., 142, 146
 Sexton, T. L., 82, 83, 85, 89, 91, 92, 94, 97, 107, 130, 131, 136, 160, 165
 Sgaramella, T. M., 56, 61
 Shadish, W. R., 98, 106
 Shanahan, M. J., 42, 47
 Sharf, R., 64, 72, 167, 174
 Shaw, B. F., 62, 69
 Shea, P. M. K., 56, 61
 Shell, D. F., 85, 89
 Shemesh, N., 143, 146
 Sheu, H.-B., 21, 27, 97, 106, 138, 140
 Shevlin, M., 98, 106
 Shoffner, M. F., 64, 72
 Skaff, L., 112, 117, 121, 129
 Skovholt, T. M., 150, 154
 Smaby, M. H., 160, 165
 Smith, A., 67, 70, 141, 144, 145, 150, 153, 160, 163, 167, 168, 169, 170, 171, 173, 176, 177, 178
 Smith, E. J., 182, 183, 187
 Smith, G. R. p.108, 127
 Smothers, M. K., 117, 126
 Snow, R. E., 96, 105
 Solberg, V. S., 66, 72, 75, 76, 110, 111, 112, 113, 117, 121, 124, 125, 126, 127, 128, 129, 130, 131, 133, 135
 Song, Z., 84, 89
 Sorenson, S., 84, 89
 Soresi, S., 117, 126, 127, 128, 157, 164, 167, 168, 176, 178
 Spadaccini, E., 91, 94
 Spangar, T., 43, 47
 Spitzer, W. O., 95, 105
 Spokane, A. R., 29, 30, 36, 39, 64, 72, 82, 88, 89, 91, 92, 94, 96, 106, 130, 135, 143, 147
 Standing, G., 180, 184, 187

- Stead, G., 180, 187
 Steger, M. F., 41, 47
 Stein, D. J., 91, 94
 Stephens, J., 82, 89, 97, 107
 Stiglitz, J., 182, 187
 Strang, J., 101, 106
 Strickland, C. J., 108, 129
 Strong, S. R., 167, 174
 Subich, L., 167, 168, 171, 174
 Sue, S., 111, 115, 124, 129
 Sullivan, T., 118, 129
 Summer, I., 168, 170, 174
 Summers, F., 45, 49
 Super, C. M., 77, 81, 117, 129
 Super, D. E., 77, 81, 117, 129
 Swanson, J. L., 64, 72, 77, 78, 81, 130, 135, 156, 164
 Talawyma, A., 108, 115, 126
 Tata, S. P., 111, 128
 Taylor, K. M., 87, 88, 102, 104, 142, 147
 Taylor, M., 101, 106
 Tempestini, M. A., 101, 107
 Thompson, S. G., 100, 106
 Thoresen, C. E., 98, 107
 Tickle-Degnen, L., 92, 94
 Tikotzki, Y., 143, 146
 Timmons, J., 112, 117, 128
 Tinsley, T. J., 91, 94
 Todorova, G., 142, 147
 Torres, J., 110, 112, 113, 117, 128
 Torrey, C. L., 180, 185
 Tracey, T. J., 97, 107, 144, 146
 Truax, P., 85, 86, 88, 131, 135
 Trusty, J., 170, 174
 Tunick, R. H., 32, 38
 Ulrey, E., 108, 109, 115, 126
 Valach, L., 53, 61, 64, 72
 Valdez, J., 111, 128
 Valsiner, J., 40, 45, 49
 van Blakom, J. L. M., 91, 94
 van Dyck, R., 91, 94
 Van Esbroeck, R., 117, 127, 157, 164, 170, 172, 174, 176, 178
 van Oppen, P., 91, 94
 van Ryn, M., 117, 129
 van Vianen, A. E. M., 117, 127, 157, 164, 167, 168, 176, 178
 vanBruinswaardt, C., 117, 118, 128, 129
 Vedeler, D., 40, 45, 49
 Vermeulen, A. W. A., 91, 94
 Vescio, C., 43, 48
 Vescio, V., 121, 129
 Villarreal, P., 111, 128
 Vinokur, A. D., 117, 129
 Viswesvaran, C., 97, 107
 Vorst, H. C. M., 91, 94
 Wagner, J., 148, 153
 Walker, J. V., 63, 72
 Wallace, E., 45, 49, 117, 127
 Walsh, W. B., 170, 173
 Walz, G. R., 160, 165
 Wampold, B. E., 46, 49
 Wanberg, C. R., 84, 89
 Wang, M., 82, 83, 84, 88, 96, 106, 131, 135, 184, 186
 Warnath, C., 182, 184, 187
 Watson, M., p. 41, 48, 53, 54, 56, 57, 59, 60, 61, 159, 164
 Weingart, L. R., 142, 147
 Weinrach, S., 28, 30, 39
 Wenger-Trayner, B., 66, 72
 Wenger-Trayner, E., 66, 72
 West, L., 46, 48
 Wettersten, K. B., 85, 88
 Whiston, S. C., 67, 72, 82, 83, 84, 85, 89, 91, 92, 94, 97, 99, 104, 107, 117, 129, 130, 131, 132, 133, 136, 160, 165
 Whiteley, S., 111, 125
 Whiteside, M. F., 104, 107
 Willner, T., 144, 147
 Wills, J., 112, 117, 121, 129
 Wilson K. M., 117, 123, 129
 Wilson, D. B., 90, 92, 94
 Womack, A., 67, 71
 Wong, S-W., 56, 61, 156, 65
 Wood, C., 102, 107, 159, 163
 Wrzesniewski, A., 41, 49
 Yim, A., 56, 61
 Young, R. A., 41, 49, 53, 61, 64, 72
 Yuen, M., 56, 61, 156, 165
 Zakai, A., 143, 146
 Zane, N., 111, 115, 124, 129
 Zener, T. B., 35, 39
 Zilcha-Mano, S., 156, 164
 Zima, N., 111, 128
 Zittoun, T., 40, 45, 49
 Zytowski, D., 181, 187