# Contents

## Part I  NCLT Theory

1. **Introduction to Neurocognitive Learning Therapy** .......................... 3
   - NCLT Is a Unique, Integrative System ........................................ 3
   - Common Core ................................................................. 4
   - The Process of Therapy ....................................................... 5
   - NCLT Is a Model Based on Teaching ........................................ 6
   - NCLT Respects What Is Known About the Conduct of a Therapist .......... 6
   - The Core Principles of NCLT .................................................. 7
     - Semantics ........................................................................... 7
     - New Information Must Be at Odds with Existing Information .......... 8
     - New Information Can’t Be Too Challenging or It Will Be Rejected .... 8
     - New Information Is Appended onto Existing Information .......... 9
     - Automaticity ...................................................................... 10
     - Therapists Knowingly or Unknowingly Provide
       Encouragement, Direction, and Support ..................................... 12
   - Is There an “Aha” Moment in Therapy? ......................................... 17
   - Reward Recognition and Motivation .......................................... 19
   - Reward Recognition Circuity ................................................. 19
   - References ........................................................................... 22

2. **The Theoretical Basis for Neurocognitive Learning Therapy** ............ 25
   - Learning Theory and NCLT ...................................................... 25
   - What Is the Unified Learning Model? ......................................... 25
   - Knowledge ................................................................. 26
   - Motivation ........................................................................... 26
   - General Rules of Learning in NCLT ......................................... 27
   - The Goal of Therapy Is Also Competence ................................... 28
   - Knowledge Acquisition and Working Memory in Therapy ............ 29
   - Core Flexible Networks ......................................................... 30
   - The Connectome and NCLT .................................................... 30
   - The Development of the Connectome and Psychopathology .......... 31
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small World Hubs</td>
<td>32</td>
</tr>
<tr>
<td>Is There Evidence that the Connectome Organizes Itself in Response to Learning?</td>
<td>32</td>
</tr>
<tr>
<td>Algorithms, Practice, Automatization, and NCLT</td>
<td>33</td>
</tr>
<tr>
<td>The Implications of Algorithmic Models for Clinical Practice</td>
<td>34</td>
</tr>
<tr>
<td>Therapy Process in General NCLT in Specific</td>
<td>35</td>
</tr>
<tr>
<td>NCLT and Epigenetics</td>
<td>36</td>
</tr>
<tr>
<td>References</td>
<td>36</td>
</tr>
<tr>
<td>3 Eclecticism Redefined</td>
<td>39</td>
</tr>
<tr>
<td>Why Eclecticism</td>
<td>40</td>
</tr>
<tr>
<td>The Problems with Eclecticism</td>
<td>40</td>
</tr>
<tr>
<td>Integrative Approaches</td>
<td>40</td>
</tr>
<tr>
<td>Integrating Psychotherapy Techniques</td>
<td>40</td>
</tr>
<tr>
<td>Elements of Another Way: Memory Reconsolidation at the Level of the Synapse</td>
<td>41</td>
</tr>
<tr>
<td>Requirements for De-consolidation: Reactivation Plus Mismatch</td>
<td>41</td>
</tr>
<tr>
<td>NCLT and Memory Reconciliation</td>
<td>42</td>
</tr>
<tr>
<td>NCLT Is an Integrative Therapeutic Model</td>
<td>43</td>
</tr>
<tr>
<td>NCLT Integrates All Other Models</td>
<td>43</td>
</tr>
<tr>
<td>References</td>
<td>44</td>
</tr>
<tr>
<td>4 NCLT and Life Course Theory</td>
<td>47</td>
</tr>
<tr>
<td>Life Course Theory</td>
<td>47</td>
</tr>
<tr>
<td>Life Course Theory and Mental Health</td>
<td>49</td>
</tr>
<tr>
<td>NCLT and Life Course Theory</td>
<td>50</td>
</tr>
<tr>
<td>Therapy as a Turning Point</td>
<td>50</td>
</tr>
<tr>
<td>Examples of the Interplay Between Life Course Theory and NCLT Treatment</td>
<td>51</td>
</tr>
<tr>
<td>Depression</td>
<td>51</td>
</tr>
<tr>
<td>Attention Deficit Hyperactivity Disorder</td>
<td>52</td>
</tr>
<tr>
<td>Anxiety-Based Disorders</td>
<td>52</td>
</tr>
<tr>
<td>References</td>
<td>53</td>
</tr>
<tr>
<td>5 Reward Recognition in NCLT Practice</td>
<td>55</td>
</tr>
<tr>
<td>Canon-Bard Theory of Emotion and NCLT</td>
<td>56</td>
</tr>
<tr>
<td>Decision-Making Models, the Importance of Reward, and NCLT</td>
<td>57</td>
</tr>
<tr>
<td>Cue Competition, Blocking, and NCLT</td>
<td>58</td>
</tr>
<tr>
<td>The Relationship of Rewards and Decision Making</td>
<td>59</td>
</tr>
<tr>
<td>A Brief Detour to the Neuroanatomy of Reward Representation</td>
<td>59</td>
</tr>
<tr>
<td>Decision Making</td>
<td>59</td>
</tr>
<tr>
<td>Reward and Decision-Making Network</td>
<td>59</td>
</tr>
<tr>
<td>Deciding About Reward in the Future</td>
<td>60</td>
</tr>
<tr>
<td>The Relationship of Reward Decision Making and Emotion</td>
<td>61</td>
</tr>
<tr>
<td>Putting Theory into Practice</td>
<td>61</td>
</tr>
<tr>
<td>NCLT and Dialectical Behavior Therapy</td>
<td>65</td>
</tr>
<tr>
<td>References</td>
<td>66</td>
</tr>
</tbody>
</table>
6 Memory Reconsolidation and NCLT Practice .......................... 69
   Memory Consolidation ............................................. 70
   Memory Reconsolidation .......................................... 70
   The Linkages Between All Aspects of Memory ..................... 72
   How Is Memory Reconsolidation Used in Therapy? .................. 72
   NCLT and Memory Reconsolidation .................................. 73
   How Do You Know That the New Learning Has Been Consolidated?
     (How Do You Know When You Have Been Successful?) .......... 74
   Generalization Is Essential ....................................... 74
   The Glass Shattering: An Example .................................. 75
   Therapeutic Practice and the NCLT System ......................... 75
   References ............................................................. 76

7 Automaticity ............................................................ 77
   Why Automaticity? ..................................................... 77
   The Role of Automaticity in NCLT Practice ......................... 78
   The Use of Automization in Therapy ................................ 78
   Automaticity, Learning Theory, and Therapy ...................... 78
   Triggers and Their Role in Therapy ................................ 79
   Automatization and the Unconscious ................................ 80
   Questions About the Role of Automatization in Therapy .......... 80
   NCLT Answers to Questions Concerning the Role of Automaticity .. 81
   Automaticity, Learning, and Disease ............................... 81
   A Note About Journaling ............................................. 82
   Automaticity and Small World Hub Algorithms .................... 82
   Algorithmic Efficiency Theories ................................... 82
   The Act Principle ....................................................... 83
   Vertical Brain Implications of Automaticity ....................... 83
   References ............................................................. 84

Part II  The Clinical Practice of Neurocognitive Learning Therapy

8 How to Be an NCLT Therapist .......................................... 89
   NCLT Is Not Eclecticism ............................................. 89
   NCLT Practice Is About the Model .................................. 90
   A Word About Disease and Disorder ................................ 90
   Adaptation .............................................................. 91
   NCLT Practice Teaches the Model ................................... 92
   NCLT Practice Is Eclectic in Tool Selection and Specific in Model ... 92
   The Practice of Therapy .............................................. 93
     How Does an NCLT Therapist Select to What They Will Attend? . 93
     What Meaning Does the Client Give to the Therapists’ Selection? . 94
     What Are the Characteristics of a Good Therapist in General
       and Which of Them Describes the Strength
       of NCLT in Specific? ............................................. 94
Insight Is Not Enough ........................................ 96
Psychotherapy Integration and NCLT .......................... 97
NCLT Therapists Understand that the Therapeutic
  Relationship Is Valuable .................................. 98
How Do You Know When Your Work Is Done? ............... 98
References ................................................................ 99

9 NCLT Therapy: Introductory Considerations ................. 101
Before the First Session ......................................... 101
  When the Client First Arrives ............................... 102
  The Role of History Taking in NCLT Practice ............ 103
Additional Considerations in the First Sessions .............. 103
  The Need to Diagnose ....................................... 103
  Creating the Diagnosis Does Not End the Process
  of Determining What Your Client Needs .................. 105
  Sometimes Just the Knowledge Helps ..................... 106
  Some Initial Considerations About Our Initial Considerations ..... 107
An Important Side Note ........................................... 107
References ................................................................ 119

10 NCLT Clinical Procedures ....................................... 121
The Third Wave ................................................... 121
Cognitive Behavioral Techniques ............................... 123
  What Is Cognitive Behavior Therapy? ...................... 123
  CBT Is Based on the Idea That Cognitions Cause Feelings 123
  CBT Is Time-Limited .......................................... 124
A Sound Therapeutic Relationship Is Necessary
  for Effective Therapy, but Is Not the Focus ............... 124
  CBT Is a Collaborative Effort Between the Therapist
    and the Client .............................................. 124
  CBT Uses the Socratic Method .............................. 124
  CBT Is Structured and Directive ............................ 124
  CBT Is Based on an Educational Model .................... 125
  CBT/NCLT Similarities and Differences ................... 125
Memory Reconsolidation .......................................... 125
Coherence Therapy .................................................. 126
  Focus on Coherence Therapy ............................... 126
  Discovery in Coherence Therapy ......................... 127
  Integration in Coherence Therapy ......................... 127
Real-Time Recognition .......................................... 127
A Word About Cognitive Disputation ......................... 127
A Case to Consider ............................................... 128
Acceptance and Commitment Therapy ....................... 129
  Acceptance ..................................................... 129
  Cognitive Defusion .......................................... 129
Being Present ....................................................... 130
Self as Context ..................................................... 130
11 Parables and Paradigms ............................................. 135
  Why Stories Are Important ........................................ 135
  Introducing a Patient to NCLT ................................... 136
  The Bear in the Woods Scenario ................................ 137
  Introducing NCLT Principles ..................................... 137
  Using the Bear in the Woods Scenario to Begin
    the Therapeutic Discussion .................................. 138
    Emotional Primacy ............................................. 138
    Cognitive Primacy ............................................. 139
  Why a Bear in the Woods? ........................................ 139
  John and the Bear .................................................. 140
  A Sample Worksheet for the Bear in the Woods .............. 141
  The Bear in the Woods Worksheet ............................... 141
  Using the Template Later On in Therapy ...................... 142
  Therapy Parables .................................................... 142
  A Parable for the Principle That You Can’t Please Everyone .. 143
  The Man, the Boy, and the Donkey ............................. 143
  The Principle That You Can’t Please Everyone So You Might
    As Well Please Yourself ...................................... 144
  Teaching the Principle of Probabilistic Reward Valuation .. 144
  The Fact That Words Do Not Have the Power to Hurt You. . 145
    It Is What You Decide About the Words Being Said That Hurts You . 145
  The Wisdom of Practicing Something Before
    You Are in a Stressful Situation Having to Implement It . 146
  References .................................................................. 147

12 Treating Children with NCLT ................................... 149
  Perspective Taking Is Different in Children ................. 149
  Executive Control Matures ....................................... 150
  Intuition and Its Power over Decision Making Develops over Time . 150
  Working with Children Means Working with Their Families.. 151
  Mike ....................................................................... 152
  Parents and Teachers Are Effective Adjuncts for Therapy .. 154
  Building Resilience ................................................... 155
  Of Slot Machines and Brett: Answering the Question
    How Did My Child Get This Way? ............................ 157
  A Word About Teenagers .......................................... 160
  Margaret ................................................................. 161
  References .................................................................. 166
13 Future Directions ............................................................... 169
  Flexibility Is Problematic as Regards Empirical Validation ........... 170
  Problems with a Flexible Battery in Forensic Context ............... 171
  References ........................................................................ 171

14 Endnote: How We Got Here .................................................. 173
  References ........................................................................ 176

Appendices: Practice Handouts and Forms ................................. 177
  Appendix A: Teacher Orientation to Neurocognitive Learning Therapy ............................................................... 177
    What Is Neurocognitive Learning Therapy? ......................... 177
    What Is the Neurophysiological Basis of NCLT? .................. 178
    NCLT Is a Unique System .................................................. 178
    The Basics of NCLT ......................................................... 179
    The Role of the Educator .................................................. 181
    What Happens in Therapy? ................................................. 182
    The Core Principles of NCLT .............................................. 183
    Automaticity ..................................................................... 185
    The Goal of Therapy Is Also Competence ............................ 191
    Summary .......................................................................... 191

  Appendix B: Parent Orientation to Neurocognitive Learning Therapy ............................................................... 191
    What Is Neurocognitive Learning Therapy? ......................... 192
    What Is the Neurophysiological Basis of NCLT? .................. 192
    NCLT Is a Unique System .................................................. 193
    The Basics of NCLT ......................................................... 193
    Reward Recognition ......................................................... 194
    The Role of the Parent .................................................... 195
    What Happens in Therapy? ................................................. 195
    The Core Principles of NCLT .............................................. 197
    Automaticity ..................................................................... 198
    New Behaviors Are Unstable .............................................. 199
    The Goal of Therapy Is Also Competence ............................ 204
    The Fourth Wave? ............................................................ 205

Index .................................................................................... 207