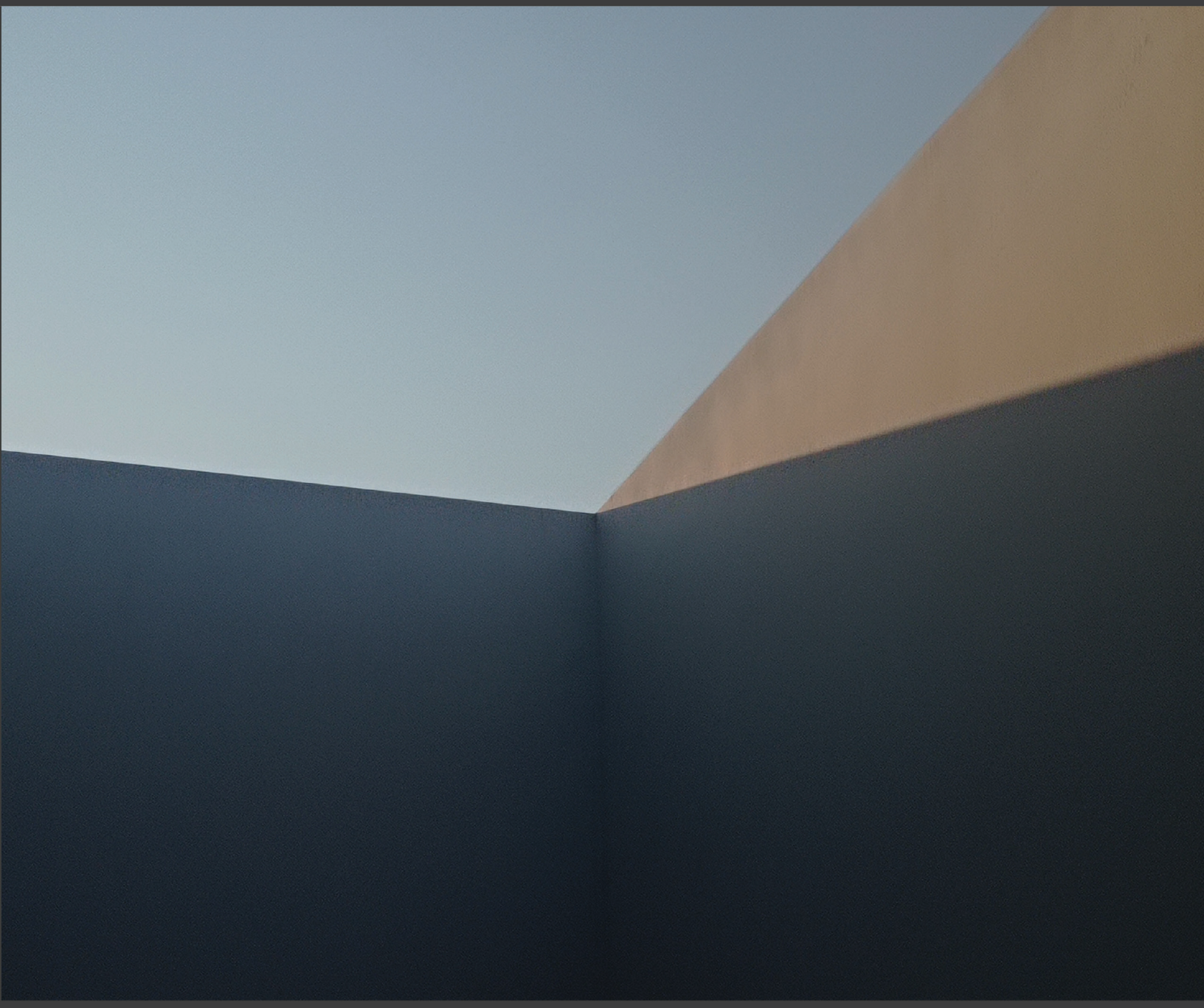
Dissociation and the Dissociative Disorders

Past, Present, Future

Edited by MARTIN J. DORAHY, STEVEN N. GOLD and JOHN A. O'NEIL



Second Edition

SUPPORT MATERIAL

ROUTLEDGE

An excellent successor to the 2009 standard work edited by Dell and O'Neil, this book is again the most complete and up-to-date source of the burgeoning theory, research and clinical practice of dissociation and the dissociative disorders. Diverging perspectives on the construct of dissociation collected together in one volume provide both an invitation for reflection and a foundation to stimulate further development in theory and clinical practice. With valuable contributions from leaders in the field, it is an absolute must for clinicians, researchers, and students interested in trauma and dissociation.

Suzette Boon, PhD, co-author of *Coping with Trauma-related Dissociation* and *Treatment of Trauma-related Dissociation* and author of *Assessment of Trauma-related Dissociation*

Leading voices in the trauma field, Drs. Dorahy, Gold, and O'Neil have created a wonderful and extremely comprehensive review of dissociation and dissociative disorders for clinicians and researchers. This updated and expanded 2nd edition consists of 49 chapters, all written by noted authorities, covering historical and conceptual issues, etiology, phenomenology, neurobiology, assessment, and multiple approaches to treatment. Notably, it unflinchingly articulates the major controversies and unresolved issues in the dissociation field and provides evenhanded synthesis and context whenever possible. Currently the most comprehensive and definitive work in the field, this book is a must-have for anyone studying or treating dissociation. Highly recommended.

John Briere, PhD, Professor Emeritus of Psychiatry & the Behavioral Sciences Keck - University of Southern California School of Medicine. Author of *Treating risky and compulsive behavior in trauma survivors* NY: Guilford, 2019

Dorahy, Gold and O'Neil have mastered the art of "herding cats" in editing an extraordinarily diverse and deeply incisive collection of erudite and wise explorations of dissociative processes, those ubiquitous discontinuities, detachments, compartmentalizations, and disruptions of human relatedness, mental coherence, subjective sense of self, and neurobiological processes that skew experience as if they had a mind of their own. It's not just an exploration of depersonalization, derealization, amnesia, identity confusion and identity alteration. Rather, it is a deep dive into what makes this dissociative world of what is strangely familiar go round and round, and then some. This is a must-read volume that will both challenge and entertain you as a fellow explorer in the land of that which is dissociative. There is something for everyone here, and nearly everything a serious clinician might want to understand as we try to help the people who struggle with complex phenomena and experiences that hide in plain sight. Get it, read it, and ponder it. You will be enriched by your efforts and those of the authors and editors who have poured their hearts into this extraordinary work.

Richard A. Chefetz, M.D., Private Practice, Washington, D.C., Institute of Contemporary Psychotherapy & Psychoanalysis; Authors of *Intensive psychotherapy for persistent dissociative processes: The fear of feeling real*. New York: W.W. Norton, 2015

This revision of *Dissociation and the Dissociative Disorders* closely follows the tradition set by the original. The editors have done a masterful job producing an updated volume primarily devoted to the conceptual/theoretical advances about dissociation and its various expressions and disorders, written by identified experts in the field. The editors note that, at present, the understanding of the underlying principle of dissociation remains unclear and subject to debate among the chapter authors, some of whom hold very discrepant and even incompatible viewpoints. However, it is their hope and the promise of this book that the viewpoints they espouse and the advances they present consolidate in the future to ascertain that elusive underlying principle that may well be multi-factorial and multi-theoretical.

Christine A. Courtois, PhD, ABPP, author, *Healing the Incest Wound: Adult Survivors in Therapy (1988; 2010)*, co-author, *Treating Complex Traumatic Stress Disorders* (2013), co-editor, *The Treatment of Complex Traumatic Stress Disorders* (2012; 2020)

This second edition is an edifying contribution to the field of psychology of trauma and dissociation that has now been updated. The strength of the book lies in its rich tapestry of chapters written by world experts echoing polyvocal ideas from divergent perspectives, using empirical evidence and theoretical developments. The multiple perspectives, whilst all connected, each carry their own distinct voice. Growth is stifled whenever absolutes are made and this book outlines the complexity and comprehensibility of dissociation as examined from different vantage points. The book is inspiring to teachers and students alike and is most welcome to practitioners of all psychological disciplines.

Orit Badouk Epstein, *Attachment based Psychoanalytic Psychotherapist, Editor and Writer, John Bowlby Centre, London*

DISSOCIATION AND THE DISSOCIATIVE DISORDERS

This second edition of the award-winning original text brings together in one volume the current thinking and conceptualizations on dissociation and the dissociative disorders. Comprised of ten parts, starting with historical and conceptual issues, and ending with considerations for the present and future, internationally renowned authors in the trauma and dissociation fields explore different facets of dissociation in pathological and non-clinical guises. This book is designed to be the most comprehensive reference book in the dissociation field and aims to provide a scholarly foundation for understanding dissociation, dissociative disorders, current issues and perspectives within the field, theoretical formulations, and empirical findings. Chapters have been thoroughly updated to include recent developments in the field, including: the complex nature of conceptualization, etiology, and neurobiology; the various manifestations of dissociation in clinical and non-clinical forms; and different perspectives on how dissociation should be understood.

This book is essential for clinicians, researchers, theoreticians, students of clinical psychology psychiatry, and psychotherapy, and those with an interest or curiosity in dissociation in the various ways it can be conceived and studied.

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DISSOCIATION AND THE DISSOCIATIVE DISORDERS

Past, Present, Future

Second Edition

Edited by Martin J. Dorahy, Steven N. Gold and John A. O'Neil

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This book is dedicated to Philip Bromberg, Giovanni Liotti, Susie Farrelly and other great departed explorers of the dissociative mind. They have left powerful maps to help us traverse and further explore confusing territory

CONTENTS

List of Contributors *xiv*
Preface *xxi*
Acknowledgments *xxiii*

Introduction 1
Martin J. Dorahy and Steven N. Gold

PART 1
Historical and Conceptual Issues **11**

1 History of the Concept of Dissociation 13
Onno van der Hart and Martin J. Dorahy

2 The Conceptual Unity of Dissociation: A Philosophical Argument 39
Stephen E. Braude

3 The Traumatic Disintegration Dimension 50
Benedetto Farina and Russell Meares

4 Dissociation Versus Alterations in Consciousness: Related but Different Concepts 66
Kathy Steele, Martin J. Dorahy, and Onno van der Hart

5 The Case for the Study of "Normal" Dissociation Processes 81
Constance J. Dalenberg, Rachel R. Katz, Kenneth J. Thompson, and Kelsey Paulson

6 Dissociation and Resilience 93
Paula Thomson

7 Adaptive Dissociation: A Response to Interpersonal, Institutional, and Cultural Betrayal 98
Alexis A. Adams-Clark, Jennifer M. Gómez, and M. Rose Barlow

8 Dissociative Multiplicity and Psychoanalysis 111
John A. O'Neil

PART 2
Etiological and Developmental Considerations **147**

9 A Developmental Pathways Model of Dissociation 149
Linnea B. Linde-Krieger, Tuppett M. Yates, and Elizabeth A. Carlson

10 The Relationship Between Attachment and Dissociation: Theory, Research, and Clinical Implications 161
Adriano Schimmenti

11 Attachment Trauma and the Developing Right Brain: Origins of Pathological Dissociation and Some Implications for Psychotherapy 177
Allan N. Schore

12 Adverse Childhood Experiences and Dissociative Disorders: A Causal Pathway Based on the Disruptive Impacts of Cumulative Childhood Adversity and Distress-Related Dissociation 209
Michael A. Quiñones

13 Beyond Death: Enduring Incest: The Fusion of Father with Daughter 223
Warwick Middleton

14 Clarifying the Etiology of the Dissociative Disorders: It's Not All About Trauma 238
Paul F. Dell

PART 3
Theoretical Approaches **261**

15 The Theory of Trauma-related Structural Dissociation of the Personality 263
Onno van der Hart and Kathy Steele

16 Discrete Behavioral States Theory 281
Richard J. Loewenstein and Frank W. Putnam

17 The Perceptual Theory of Dissociation 297
Donald B. Beere

18 Contextual Dissociation Theory: The Dual Impact of Trauma and Developmental Deprivation 314
Steven N. Gold

19 The Four-Dimensional (4-D) Model as a Framework for Understanding Trauma-Related Dissociation 327
Paul Frewen, Serena Wong, and Ruth A. Lanius

20 Dissociation and Unformulated Experience: A Psychoanalytic Model of Mind 341
Donnel B. Stern

PART 4
The Dissociative Disorders **353**

21 Dissociation in the ICDs and DSMs 355
John A. O'Neil

22 Dissociative Amnesia and Dissociative Fugue 375
Colin A. Ross

23 Depersonalization/Derealization Disorder 380
Matthias Michal

24 A Grounded Theory of Dissociative Identity Disorder: Placing DID in Mind, Brain, and Body 392
Lauren A. M. Lebois, Chloe S. Kaplan, Cori A. Palermo, Xi Pan, and Milissa L. Kaufman

25 Psychotic Presentations of Dissociative Disorders 409
Vedat Şar

26 The Other in the Self: Possession, Trance, and Related Phenomena 421
Etzel Cardeña, Yvonne Schaffler, and Marjolein van Duijl

27 Dissociative Disorders in Children and Adolescents 433
Joyanna Silberg and Stephanie Dallam

PART 5
Dissociation as a Transdiagnostic Process: Acute and Chronic 449

28 Peritraumatic Dissociation and Chronic Posttraumatic Symptomatology: Thirty Years and Counting 451
Etzel Cardeña and Catherine C. Classen

29 Dissociation and Trauma: Clinical and Research Intersections in PTSD 465
Olga Winkler, Lisa Burback, Suzette Brémault-Phillips, and Eric Vermetten

30 Complex PTSD and Emotion Dysregulation: The Role of Dissociation 481
Julian D. Ford

31 Is Dissociation an Integral Aspect of Borderline Personality Disorder, Or Is It a Comorbid Disorder? 494
Marilyn I. Korzekwa and Paul F. Dell

32 The Nature of Psychotic Symptoms: Traumatic in Origin and Dissociative in Kind? 513
Andrew Moskowitz, Eleanor Longden, Filippo Varese, Dolores Mosquera, and John Read

33 Somatoform Dissociation, Agency, and Consciousness 528
Ellert R. S. Nijenhuis

34 Maladaptive Daydreaming is a Dissociative Disorder: Supporting Evidence and Theory 547
Nirit Soffer-Dudek and Eli Somer

35 Opioid Misuse and Dissociation: Two Powerful Modes of Distress Regulation 564
Eli Somer

36 Dissociative Factors Contributing to Violence and Antisocial Orientations 573
Richard A. Hohfeler

PART 6
Neurobiological and Cognitive Understandings of Dissociation **585**

37 The Defense Cascade, Traumatic Dissociation and the Self: A Neuroscientific Model 587
Frank M. Corrigan, Ulrich F. Lanius and Brenna Kaschor

38 Towards an Ecology of Dissociation in the Context of Trauma: Implications for the Psychobiological Study of Dissociative Disorders 602
Ellert R. S. Nijenhuis

39 The Neurobiology of Dissociation in Chronic PTSD 634
Francesca L. Schiavone and Ruth A. Lanius

40 Subjective Amnesia in Dissociative Identity Disorder: A Dual Path Model Drawing on Metacognitive Beliefs Related to Self and Memory Functioning 643
Martin J. Dorahy

PART 7
Assessment and Measurement **659**

41 Diagnosing the Dissociative Disorders: Conceptual, Theoretical, and Practical Considerations 661
D. Michael Coy and Jennifer A. Madere

42 True Drama or True Trauma? Forensic Trauma Assessment and the Challenge of Detecting Malingering 673
Bethany L. Brand and Laura S. Brown

PART 8
Treatment Considerations and Conceptualizations **685**

43 Encountering the Singularities of Multiplicity: Meeting and Treating the Unique Person 687
Richard P. Kluft

44 Controversies in the Treatment of Traumatic Dissociation: The Phased Model, 'Exposure,' and the Challenges of Therapy for Complex Trauma 713
Pam Stavropoulos and David Elliott

45 The Unconscionable in the Unconscious: The Evolution of Relationality in the Conceptualization of the Treatment of Trauma and Dissociation 728
Elizabeth F. Howell and Sheldon Itzkowitz

PART 9
Treatment Challenges and Therapist Considerations **747**

46 Memory, Trauma and the Therapeutic Encounter 749
Sylvia Solinski

47 Conceptual Foundations for Long-Term Psychotherapy of Dissociative Identity Disorder 770
Richard J. Loewenstein

PART 10
The Future **791**

48 A Research Agenda for the Dissociative Disorders Field 793
Vedat Şar and Colin A. Ross

49 Integrating Dissociation 811
David Spiegel

Index *816*

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PREFACE

Martin J. Dorahy, Steven N. Gold and John A. O'Neil

In 2009, Dell and O'Neil published *Dissociation and the Dissociative Disorders: DSM-V and Beyond*. They prefaced that volume by noting the book had "no real predecessor in the dissociative disorders field" (p. xix). Rather, it came from initiatives set in motion by the International Society for the Study of Trauma and Dissociation (ISSTD) in year 2000 which ultimately had Dell, O'Neil and others grappling to develop a consensus definition of dissociation. It was a task that despite much effort, passion, debate and vision proved unachievable. However, it did lead to a chain of events that eventually culminated in the 2009 opus, which comprised the largest and most comprehensive tome ever dedicated to dissociation.

Knowledge and theory regarding dissociation have continued to expand rapidly since the first edition was published. The continued growth of the study of dissociation and the implications it brings for understanding normal and disordered manifestations, as well as mental illness more broadly, has been a key instigator in the desire to update the original seminal text.

The current volume follows its predecessor in taking primarily a conceptual/theoretical look at dissociation and the dissociative disorders. Much of this work is informed by the most recent scientific findings, where authors have often integrated related and relevant empirical data with their conceptual goal. In many chapters implications for clinical interventions have been touched upon. Yet, consistent with the first edition, this is not a central focus in this revision. Many thorough and noteworthy recent books cover the topic of therapy in great depth. At the same time, some chapters in the current volume address major treatment considerations.

Approximately half the chapters from the first edition have been substantially or completely rewritten to provide a fresh lens on the topic matter under consideration. The subjects covered by several chapters of the first edition remain topical and important, but have not been developed significantly since (e.g., Chronic Relational Trauma Disorder; Dissociative Subtype of Schizophrenia). Consequently, they were not included in the extensively revised second edition. These and other chapters not undergoing revision still stand in the first edition as pillars of scholarly insight into the aspects of dissociation or the dissociative disorders they addressed. Sadly, Giovanni Liotti and Philip Bromberg, who contributed to the first edition, are now deceased. Nonetheless, many of their ideas are captured in new chapters by their colleagues (Adriano Schimmenti; Elizabeth Howell and Sheldon Itzkowitz, respectively). Susie Farrelly, who co-wrote the chapter on dissociation and psychosis in the original volume, passed away while the kindling of this revision was beginning to ignite.

The primary foci of this revised edition are to:

1) Update existing chapters of ongoing importance to the field of trauma and dissociation
2) Introduce topics of current and emergent importance to the field.

In the years since the publication of the first edition the study of dissociation, complex trauma and the dissociative disorders has continued to grow rapidly in scientific investigation, conceptual understanding, and treatment approaches. In keeping with the growth of the knowledge base, constructs central to the study of dissociation have been formally recognized by the psychiatric helping professions. For example, in 2013, the DSM-5 offered a dissociative subtype of posttraumatic stress disorder, while the ICD-11 now includes stand-alone diagnoses for both complex PTSD

and partial DID. Developments such as these confer enhanced legitimacy to the study of dissociation. In addition, since 2009, dedicated trauma journals (e.g., *Psychological Trauma*, *Journal of Trauma and Dissociation*, *European Journal of Psychotraumatology*, *Journal of Traumatic Stress*) have increasingly published work on dissociation, and new journals specifically dedicated to the study of trauma and dissociation have been established (e.g., *European Journal of Trauma and Dissociation*). Despite continued disputation of the reality of dissociation in certain quarters, the field is flourishing, extending the existing knowledge base and expanding in new directions.

This book is the sourcebook for the dissociation and dissociative disorders field. It is designed to offer a comprehensive overview of core themes written by world leaders, covering key areas. The content covers introductory, intermediate, and advanced topics in the field of trauma and dissociation, and therefore is designed to be of appeal to those wanting to know more about the field, those new to it, those with more specialized knowledge, and experts wanting the most up-to-date information on a broad range of relevant topics.

The dissociation and dissociative disorders field has long found itself absorbed in fending off external challenges regarding the existence, legitimacy and importance of its topic matter. The book as a whole shows the field developing well beyond defending against attacks from *without*. Instead, differences of perspective and lively collegial discussions demonstrate the spirited deliberations *within* the field as efforts are made to hone and integrate understanding.

We hope *Dissociation and the Dissociative Disorders: Past, Present, Future* generates new theoretical insights, a raft of applied and basic research studies and ongoing debate to help define the boundaries of dissociation from the different theoretical lenses through which it is explored. Finally, we hope that beyond anything else, you, the reader, find in the content things that interest, excite and inspire you.

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INTRODUCTION

Martin J. Dorahy and Steven N. Gold

Dissociation has never quite taken its place in mainstream psychiatry next to accepted symptoms, processes and disorders like depression and depressive disorders, anxiety and anxiety disorders, psychosis and schizophrenia-spectrum disorders. Some constructs, such as depression and anxiety, appear to capture aspects of human experience that largely avoid controversy, are not reliant on swathes of science data to legitimize them and are accepted into the psychiatric and psychological lexicons with considerable ease, even if theories abound about what they actually represent (e.g., Bernaras, Jaureguizar, & Garaigordobil 2019).

Dissociation captures aspects of human experience that haven't been widely accepted in psychological thought, and in a psychiatric sense have been closely linked historically to metaphysical forces (possession by a nefarious agent) or parapsychological accounts (e.g., Alvarado, 2002; Braude, 2000). Many dissociative phenomena strongly contradict widely held assumptions about the nature of human experience and functioning that are assumed to be universal. These include dissociative phenomena that call into question the notions that human autobiographical experience is integrated, that a person's identity is invariably unified and singular, and that consciousness extends relatively consistently to all a person's engagements with their environment. Dissociative phenomena also challenge ideas that a person has unique control and ownership of their body, mind and experiences, a relatively sequential temporal sense of their history and day-to-day episodes in life, and a single (rather than multiple) subjectivity for their body. Dissociative experience, especially at the more extreme end, often challenges Western sensibilities associated with self-determination/autonomy, self-control, and self-agency (e.g., Chirkov, 2008; Markus & Kitayama, 2003), such as when a person under the influence of dissociation appears to engage in behavior without willful initiation or even memory, while at the same time maintaining intact reality testing.

Thus, it's perhaps not surprising that symptoms like amnesia and the existence of dissociative identities have long been disputed. It has been proposed that such symptoms are created by an iatrogenic force that tap into the suggestibility of a vulnerable person rather than something that exists as a true psychobiological manifestation independent of suggestive influences. The veridicality of other manifestations of dissociation arouse skepticism for similar reasons. For example, depersonalization and derealization are completely invisible and subjective with no behavioral signatures, so not easily mapped in a positivist sense. Furthermore, somatoform dissociative symptoms along with experiences that may capture dissociation in a more normative form, including those evident in hypnosis and trance states, have often been studied under other guises (e.g., conversion, somatic symptoms, absorption, altered states of consciousness) without an explicit link to the construct of dissociation.

Yet, despite strong, and at times gale force, head winds, the study of dissociation has generated significant historical and contemporary interest and a credible and rapidly growing empirical and theoretical literature base. Dissociative symptoms are increasingly recognized in non-dissociative disorders (e.g., Lyssenko, Schmahl, Bockhacker, Vonderlin, Bohus & Kleindienst, 2018), and controversy about the existence of specific dissociative disorders, while still evident, has ebbed as scientific data increasingly substantiate their existence and nature (e.g., Dorahy et al., 2014; Loewenstein, 2018; Lynn, Maxwell, Merckelbach, Lilienfeld, Van Heugten-Van der Kloet, & Mickovic, 2019). This book captures both the empirical evidence and theoretical developments that have guided and serve as frameworks for interpreting the research data.

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It will be apparent upon even a cursory overview of the contents of this volume that it does not offer or arrive at a singular, cohesive, unified perspective on dissociation. That place has not been reached in the evolving study of dissociation and may not be possible given the different vantage points from which it is examined. Rather, positions diverge. Collectively, authors do not look through a single lens or speak with a single voice about dissociation. Perhaps this is inevitable, a reflection of the experiential diversity and divergence inherent in the construct of dissociation. As editors, we have neither sought to impose nor aspired to achieve a unified consensus regarding dissociation. It is our conviction that to do so would prematurely foreclose the evolution of our understanding of dissociative phenomena and the processes underlying them. We believe, therefore, that the study of dissociation is best served currently by accepting the ambiguity naturally introduced by the range of perspectives about the topic.

Controversy breeds vibrancy, while vibrancy can fuel controversy. The dynamic interchange between these forces fosters debate and the productive articulation of differences in perspective that promote closer examination and greater determination to provide clarity. No scientific field that hopes to flourish can grow without different perspectives developing, challenging each other, and being tested. The book reflects this vibrant and multifaceted landscape.

Debates and controversies as fundamental as how dissociation should be defined, and which phenomena warrant inclusion under the designation 'dissociation' are addressed throughout these pages. Other questions explored include whether absorption or hypnotizability are innate capacities necessary but not sufficient for major dissociative pathology, or whether, if intense, chronic, relational, and starting early enough, trauma alone (namely abuse) is sufficient. Several chapters examine in varying ways, whether, how, when and to what degree ruptures in attachment are associated with dissociative symptoms and disorders. Some authors question whether an attachment-oriented focus in research, theory and therapy obscures some of the observations and findings from the 1980s associated with complex dissociative presentations, a period which marked a renaissance in the exploration of such disorders. Other areas of exploration center around whether dissociative identity disorder (DID) is a posttraumatic disorder with a similar neurobiological signature to posttraumatic stress disorder (PTSD), whether symptoms traditionally described as psychotic (e.g., hallucinations and delusions) are dissociative in nature, and the extent and type of psychotic symptoms in dissociative presentations. Another central controversy examined is whether therapy for complex trauma and dissociation is most suitably conducted by providing psychological stability before engaging in trauma-focused work or whether only the latter and not the former is needed. Other chapters and themes in the book address the extent to which fear versus betrayal of trust is more closely associated with dissociation, how culture shapes dissociative forms of expression, including adaptive manifestations of dissociation, the degree to which psychometric tools used in forensic and mental health contexts may adequately detect dissociative disorders, and the adaptive and creative nature of dissociation, along with dissociation's transdiagnostic prevalence. In some chapters dissociation refers to both positive and negative symptoms, in other chapters it is more aligned with experiences that capture a shut-down in functioning.

The book-end chapters that hold the content of the revision together have a chronological emphasis in line with the revised subtitle (*Past, Present, Future*). In keeping with this temporal framework, the book is broken up into 10 sections, starting with *Historical and conceptual issues* and ending with future directions and challenges (*The future*).

Part 1: Historical and Conceptual Issues

Opening the book and starting Part 1, Van der Hart and Dorahy contrast the historical understanding and exploration of dissociation with more contemporary directions and definitions. Dissociation was of great interest during the heyday of dynamic psychiatry, when Charcot, Janet, Prince, James and the young Freud were developing insights that formed the basis for much of the subsequent thinking in psychiatry and psychology generally. Early conceptualizations tended to limit dissociation to phenomena that manifested from a specific way in which the mind was organized. Throughout much of the twentieth century dissociation was relegated to the psychiatric/psychological wilderness, yet interest resurfaced in the 1970s and 1980s. Modern conceptualizations of dissociation have typically resiled from mental organization as a delimiter of dissociative phenomena and have focused instead on the phenomena in and of themselves that fit a broader definition of dissociation.

Drawing on his philosophical lens, Braude formulates a single, unified conception of dissociation designed to capture both normal and pathological manifestations. He differentiates dissociation from related psychological phenomena like repression, suppression, and denial, while drawing attention to the loss of interest in hypnotic phenomena in many contemporary dissociation theories. In this chapter expressions of dissociation are not restricted to defensive operations, but also include classic hypnotic phenomena that are evident in both clinical and non-clinical contexts.

Farina and Meares draw on the historical theorizing and research of Pierre Janet, John Hughlings Jackson and Charles Sherrington, along with contemporary neuroscientific findings, to propose a differentiation between disintegration and

dissociation in an effort to provide further conceptual clarity to the field. They argue that dissociation has two forms and ultimately reflects the segregation and compartmentalization of content, much of which was disintegrated. However, such an organizing effort is not universal in the presence of disintegration. Disintegration is associated with coordination and inhibition difficulties of higher-order processes (e.g., related to self and metacognition), evident in most if not all psychopathology, and especially apparent in those exposed to developmental and attachment trauma. Whilst distinct, Farina and Meares note that disintegration and dissociation may be intimately linked and can be hard to neatly conceptually disentangle.

Offering a counter-perspective to the contention that dissociation is a normal common psychological process, Steele, Dorahy and Van der Hart voice concern that the construct of dissociation has become too unwieldly with no specific definition, limiting its conceptual and scientific utility. They proposed that alterations in consciousness should be differentiated from dissociative experiences and confined to the pathological and non-pathological phenomena that reflect dissociation at the level of personality. They argue that clearly differentiating alterations in consciousness from dissociation at the level of personality provides a sharper lens through which to examine both sets of phenomena and how they overlap and differ.

Dalenberg, Katz, Thompson and Paulson use the empirical data, especially that associated with the Dissociative Experiences Scale, to argue that dissociation operates as a normal process that should not be restricted to clinical manifestations. They argue absorption is an important manifestation of dissociation that may constitute the diathesis to the trauma-related stress that produces clinical dissociation (e.g., amnesia). They further contend that this normal form of dissociation is evident in a range of psychiatric presentations beyond the dissociative disorders. Yet, while normal dissociation (absorption) is benign at lower levels, it can manifest at pathological levels.

The argument for dissociation being a normal process not limited to psychopathological expressions is expanded by Thomson, who explores not only how dissociation can be controlled and utilized to enhance artistic and athletic performance, but can also offer resilience against extreme stress. Thomson argues that for those exposed to trauma who have learned to engage and disengage dissociative capacities in the service of goal achievement or performance in extreme contexts, dissociation becomes a tool of resilience and value that provides creative options and new directions.

Adams-Clark, Gómez and Barlow explore the link between betrayal at interpersonal, institutional, and cultural levels, and how such violations of trust impact dissociation. Drawing on the accumulated body of research associated with Betrayal Trauma Theory (Freyd, 1996), they argue that dissociation provides a mechanism for solving contradictory patterns of attaching to an individual, institution or group that betrays trust and violates safety. While this has short-term, adaptive benefits in allowing connection to be maintained when it is needed, it leaves the person vulnerable to long term harm as dissociation impacts on risk assessment and personal safety.

O'Neil delves into dissociative multiplicity, the existence in one human being of multiple centers of consciousness, and the degree to which a range of central psychoanalytic models can account for the genesis and structure of such a mind. Early in his career, Freud abandoned hypnoid hysteria as a central process in neurosis, and psychoanalysis has traditionally paid short shrift to dissociation ever since. While the sophisticated conceptual models representing different schools of psychoanalytic thinking have generally remained inadequate to account for multiplicity, they still shine light on all psychopathology, including the dynamics of every center of consciousness. There has been more routine openness to dissociation, and more success in addressing dissociative multiplicity, in relational psychoanalysis, closely related to object-relations and attachment theories. O'Neil ultimately concludes that dissociative multiplicity requires the prerequisites of disordered attachment and trauma, partially addressed by psychoanalysis, and hypnotizability, largely abandoned by psychoanalysis.

Part 2: Etiological and Developmental Considerations

Part 2 of the book opens with Linde-Krieger, Yates and Carlson's exploration of dissociation from the framework of developmental psychopathology. Their perspective takes as its starting point dissociation as an adaptive process which, depending on its elaborations and influences over the course of development, can become maladaptive. They argue that dissociation is a normal and adaptive component of childhood psychological functioning before greater integration at different organizational levels leads to a reduction in its frequency. When pathological dissociation begins to manifest from its adaptive origins, development progresses towards less integration and resultantly, more dissociative complexity.

Several chapters in the book draw on attachment theory to elucidate their ideas (e.g., Farina & Meares; Schore), but Schimmenti has attachment as his primary focus, noting how it is connected to disintegration (i.e., a collapse in function) and dissociation (i.e., a reorganization of the mind following disintegration, that keeps systems and content segregated). Disorganized attachment is Schimmenti's central focus. He fleshes it out in terms of Bowlby's original

conceptualization of attachment theory, Main and Hesse's identification of the disorganized pattern, and contemporary findings and theorizing. Schimmenti tracks the association between attachment disorganization and dissociation from childhood to adulthood and shows how several of the core psychological symptoms of dissociation can be understood from an attachment lens.

Integrating interdisciplinary perspectives, Schore provides an account of how early relational experiences influence right brain development and provide the basis for dissociative defenses. These dissociative defenses operate in the absence of more adaptive emotional regulation abilities and may become habituated and persist. Interactions with primary caregivers, including those characterized by abuse and neglect, are etched into right hemisphere systems along with dissociation as a last-ditched defensive effort, which is then drawn upon non-consciously in future stressful interpersonal engagements. For Schore, dissociation reflects a parasympathetically-dominant shut-down state, is a counterpoint to hyperarousal and sympathetic activation, and is specifically associated with a vertical loss of connectivity between right hemisphere cortical and subcortical limbic areas.

The experience of traumatic stress has long been associated with dissociative symptoms and disorders. In examining this connection, Quiñones outlines how each of the three categories of Adverse Childhood Experiences (abuse, neglect, household dysfunction) relate to pathological dissociation. From this foundation, Quiñones demonstrates how ACEs give rise to distress, disruption and disconnection that underpin 1) disturbed attachment dynamics, 2) heightened threat and deprivation, and 3) deficits in behavioral and emotional skills. These three factors in turn increase the likelihood of dissociative adaptation in the form of symptoms and disorders.

The existence and prevalence of child sexual abuse challenges the sensibilities of most individuals, including mental health professionals, and widespread acceptance has been very slow in coming. Ongoing incestuous abuse into adulthood has faced even tougher resistance in being recognized, and presents considerable challenges for therapists. Middleton has been at the forefront of raising awareness of this form of abuse, its characteristics, and psychological impacts. He outlines the key features, along with what ongoing incestuous abuse might tell us about the etiology of DID and how complex attachment dynamics meld victims to perpetrators.

In a provocative chapter examining the role of hypnotizability in the development of major dissociative disorders, Dell challenges the field to look beyond trauma as a dominant explanatory pathway. He argues that hypnotizability is the key factor interacting with trauma to produce a dissociative disorder. Without it, he argues, no manner, intensity or chronicity of trauma will produce a dissociative outcome. He also argues that integration failure without the hypnotizability trait will not produce a dissociative disorder.

Part 3: Theoretical Approaches

Part 3 addresses in greater depth and with more specificity, *theoretical approaches* to dissociation and the dissociative disorders. Van der Hart and Steele commence the section by providing an integrated review of their theory of trauma-related structural dissociation of the personality in light of developments over the past 20 years. Central to their model is the understanding that dissociative phenomena are limited to those symptoms which have their origin in dissociation at the level of personality. Their model also deviates from many others, in that it does not view dissociation primarily as a defense. Rather, dissociation first and foremost reflects a failure of integration, that could be caused by several factors (e.g., sleep deprivation, exhaustion, trauma) not motivated by defense, although it may have secondary defensive benefits.

Discrete Behavioral States (DBS) theory is explored by Loewenstein and Putnam with regard to how it helps account for dissociation and the dissociative disorders. The theory itself goes beyond a specific focus on dissociative experiences and disorders, instead integrating them into a broader understanding of human psychological functioning, both at normal and pathological ends. Dissociative experiences capture DBS (e.g., absorption) and also changes in them (e.g., shifting between dissociated DBS). Dissociative disorders reflect pathological states of being that dramatically alter a person's sense of self and their experience of their body, mental functions, and physiological reactivity.

Beere provides a contemporary update on his Perceptual Theory of Dissociation, which stands in stark contrast to structural models of dissociation, by having as a starting point phenomenological exploration. He shows that dissociative symptoms and disorders can be well accommodated in a theoretical framework that privileges the background elements (as opposed to ground and figure components) of identity, mind, body, world, and time. Different dissociative phenomena are associated with loss of one or more of these background elements when attention is profoundly drawn to percepts of crucial significance. From the vantage point of the Perceptual Theory of Dissociation, dissociative phenomena are not isolated to threat and trauma, and are not universally associated with defense and coping.

Gold's contextual trauma theory advocates for a particular variation of phase-oriented trauma work. He contends that the prolonged child abuse (PCA) which frequently fosters dissociative psychopathology and complex PTSD almost invariably occurs in a family context that not only provides insufficient support for the attainment of secure attachment, but also fails to supply adequate interpersonal resources needed to foster adaptive psychological development, acculturation, and socialization. According to Gold, dissociation arises from the dual impact on survivors of abuse trauma and restricted psychological development, manifested in the weakening of neuropsychological capacities such as focused attention, resilient memory, and robust integrative functioning. Phase one of tripartite phase-oriented trauma treatment therefore aims to build stabilization and resiliency derived from developmentally remediative forms of intervention.

Frewen, Wong and Lanius argue that their 4-Dimensional (4-D) model of dissociation is an organizing and explanatory framework that accounts for different conceptualizations of dissociation and offers testable hypotheses of its merit. The model addresses trauma-related alterations in consciousness experienced in time, thought, body and emotion, and specifies how these alterations differ from normal waking consciousness in these domains. From their model they demonstrate how dissociation in the form of detachment, compartmentalization and structural dissociation differ.

Stern offers an updated summary of his theory of dissociation, wedded in philosophical and psychoanalytic thought, including his relational frame of reference. Unlike repression, where formulated experience is actively held from awareness, dissociation and the inaccessibility to states of mind it brings is associated with experiences being unformulated in 1) a verbal reflective sense that impedes articulation and meaning, and 2) a nonverbal sense that prohibits realization. He outlines two forms of dissociation, one where unformulated experience is more passively turned away from (*dissociation in the weak sense*) and one where unformulated experience is actively unconsciously avoided, associated with Sullivan's 'not-me' (*dissociation in the strong sense*).

Part 4: The Dissociative Disorders

Part 4 is set in motion with O'Neil's absorbing analysis of the complex, changing and at times conceptually contradictory categorizations of dissociation and dissociative disorders in the histories of the International Classification of Diseases (ICD) and the Diagnostic and Statistical Manual of Mental Disorders (DSM). These classification systems have had periods of conceptual overlap and periods of quite unique positioning of dissociation and the dissociative disorders. They have aligned more closely in recent times but still have differences in where they place and how they conceive of pathological manifestations of dissociation. O'Neil notes that the ICD and DSM by their very nature will always primarily follow rather than lead the field as they draw on empirical data and contemporary conceptualizations. Yet, they both continue to have a central place for dissociation that expands beyond the dissociative disorders.

Dissociative amnesia and dissociative fugue have not escaped controversy in the psychological literature. Yet, as Ross points out, while both are commonly found in complex dissociative disorders like DID, they have attracted sparse attention as circumscribed disorders, and may be relatively rare in isolation. He notes that those with amnesia and no other trauma-related or dissociative psychopathology often do not experience other dissociative symptoms, and so may not be easily detected. In addition, the stressors associated with both amnesia and fugue are milder, briefer and less frequent than those often reported in complex dissociative disorder presentations.

Michal provides a contemporary review of the literature and clinical presentations of depersonalization and derealization, with a central focus on depersonalization/derealization disorder. He notes that despite the symptoms and disorder being relatively common, they are rarely entertained in clinical practice and differential diagnosis, and are often misattributed as psychotic manifestations, or dismissed. Michal argues that depersonalization/derealization reflect both consequences of anxiety in the absence of good regulation and defensive operations to cloak psychological reality. This reality is often associated with early attachment ruptures rather than gross incidences of child abuse and neglect.

DID has never been far from controversy, yet Lebois, Kaplan, Palermo, Pan and Kaufman show that scientifically it is underpinned by a rich and developing neurobiological and psychophysiological empirical base that has predominately focused on differences between dissociative identities, or self-states. They draw on work from grounded cognition to conceptually frame a self-state, and argue that empirical findings demonstrate that DID self-states are "dynamic, distributed networks of brain activity that prepare the body [and mind] to interact with the world in a particular way." They further argue that the findings are aligning with DID as a posttraumatic condition lying on a continuum with PTSD, viewing DID as a "posttraumatic developmental adaptation."

In his exploration of the subtleties of psychosis in dissociative disorders, Şar notes the points of connection, but also, importantly, where they demarcate. He also outlines at what point psychosis begins to become a feature of dissociative disorders, and how symptoms of DID, for example, that might be viewed as psychotic (e.g., belief in other internal

existences – dissociative identities), do not represent psychotic symptoms. Acute reactive dissociative psychosis is one bridge between psychotic psychopathology and dissociative disorders.

Cardeña, Schaffler and Van Duijl provide a nuanced differentiation between various forms of trance and possession in their chapter on Spirit Possession and Trance Phenomena. They also draw distinctions between adaptive, culturally/religiously sanctioned, and socially cohesive experiences and those more consistent with psychopathological manifestations. Dissociation is implicated in both adaptive and psychopathological forms of possession, with the latter being characterized by less control over dissociation and, typically, a history of more traumatic life experiences.

Silberg and Dallam outline advancements made in the understanding, assessment and treatment of dissociation in children and adolescents. In summating the accruing literature in these areas, they then provide a review of the relationship between trauma and dissociation relevant for child and adolescent groups before exploring dissociative manifestations from preschool to adolescents. Dissociative symptoms in these populations are usually not as solidified as in adults, and are therefore less stable and less resistant to change than in adult dissociative disorders.

Part 5: Dissociation as a Transdiagnostic Process – Acute and Chronic

Part 5 starts with an exploration of peritraumatic dissociation (PD), that is, dissociation during or immediately after exposure to a potentially traumatizing event. PD has attracted considerable empirical interest on account of its ability to predict the later development of posttraumatic stress disorder (PTSD). Cardeña and Classen explore the scientific literature on PD. They note that both PTSD and its precursor, acute stress disorder, are not unified psychiatric presentations, but instead may look different across cases, where PD may have a greater or lesser impact and presence depending on the presentation. The predictive ability of PD for later PTSD is explored in the later part of the chapter with both PD and persistent dissociation solid predictors of posttraumatic stress disorder and symptoms, especially more severe manifestations. Yet, the complexities of prediction, the variables at plays and the factors associated with PD, mean simple conclusions are best avoided.

Arguing for the pervasiveness of dissociation in PTSD, Winkler, Burback, Bremault-Phillips and Vermetten show the different manifestations of dissociation in the various symptoms of PTSD. They start with the premise that dissociation is characterized by two related groups of phenomena: the inaccessibility of internal experience and intrusions of this seemingly inaccessible material upon awareness without volitional control. They suggest that the introduction of the dissociative subtype of PTSD in the DSM-5 highlighted the importance of dissociative symptoms in PTSD, but also shone a light on how often other symptoms of PTSD are ignored as dissociative. Demonstrating the different manifestations of dissociation in PTSD, they point to how central dissociation is to the construct of PTSD and to pathological adaptation to traumatic stress generally.

More complicated variants of PTSD have been a conceptual and empirical hotspot since Herman (1992) first conceived of complex PTSD to capture the wider array and more severe symptoms reported by adults experiencing repeated interpersonal or development traumas. Ford explores this complex literature with a specific emphasis on emotion dysregulation that cuts across all formulations, and where dissociation fits. He argues for a dissociative subtype of complex PTSD, modelled on the dissociative subtype of PTSD. Ford draws on empirical and theoretical literatures to argue that not all complex PTSD presentations are characterized by dissociative features.

Korzekwa and Dell take a deep dive into the somewhat elusive relationship between borderline personality disorder (BPD), dissociation and the dissociative disorders. They argue that dissociation is common in BPD but not integral to it. The significant number of BPD patients who experience considerable dissociation present as clinically different from those without such symptoms. Thus, dissociative symptoms color the clinical presentation of BPD. Korzekwa and Dell critically argue that BPD is a neurodevelopmental disorder with dissociation being a developmental outcome in those with the necessary environmental (e.g., trauma), cognitive, genetic and attachment (e.g., major ruptures) factors. DID, on the other hand, has its foundation in the interaction between childhood trauma (including major parental misattunement) and a genetic predisposition for hypnotizability.

Moskowitz, Longden, Varese, Mosquera and Read persuasively argue that many symptoms historically and currently connected to schizophrenia and other psychotic presentations have dissociation at their heart. For example, many of Schneider's first rank symptoms can be understood through the theoretical lens of dissociation. Among their many insights is that the dissociative structure of DID may reduce the level of delusional distortions of traumatic memories, because content can be contained in a dissociative identity. In psychotic disorders, dissociation does not render such content inaccessible, thus delusions may make the origins of traumatic memories less identifiable, with such processes (i.e., delusional explanations) helping to manage the affective and cognitive content.

Somatoform or sensory-motor symptoms represent a confusing set of psychologically-derived phenomena that are inconsistently understood in psychiatric classificatory systems. Using advances from the Theory of Structural Dissociation of the Personality that explore dissociative parts in terms of organism-environment interactions, Nijenhuis provides an incisive and confronting look at somatoform disorders and the symptoms which comprise them, noting that dissociation underpins central somatoform presentations such as conversion. He suggests that trauma, particularly that of a relational nature, is a causal factor in somatoform dissociation and therefore of the somatic symptoms emanating from it.

Soffer-Dudek and Somer outline the recently constituted construct of maladaptive daydreaming (MD) and offer the formulation for its pathological manifestation. Underpinning maladaptive daydreams is dissociative absorption. They argue this is a form of dissociative compartmentalization that may give rise to major dissociative pathology such as DID. Thus, they argue for MD being a dissociative disorder grounded in pathological absorption (i.e., a dissociative absorption disorder). They go on to propose an etiological framework nesting MD along a continuum of agency and control, and arguing its underpinnings are in a diathesis to engage in absorption and imaginative involvement that is positively and/or negatively reinforced (e.g., to avoid stress), creating pathological manifestations.

Somer's chapter on opioid misuse and dissociation explores the thesis that in traumatized individual opioids provide a "chemical dissociation" as a second stage strategy when psychological dissociation breaks down or does not have the capacity to dull intolerable affect and related trauma memories. He sets this chapter in the context of the opioid epidemic in the US and the global pandemic of COVID-19 that swept the world in 2020 and had lasting ripple effects. Opioid use becomes a self-medication dissociation strategy for traumatized and overwhelmed individuals.

After years of working with dissociative processes and disorders in incarcerated individuals, Hohfeler turns his clinically attuned eyes to addressing the relationship between dissociation and antisocial behaviors, particularly violence. He notes how common developmental trauma and dissociation are in those incarcerated, pointing out that dissociation in particular is rarely recognized. Hohfeler explores violence associated with a dissociative disorder, such as dissociative identities organized around violent enactments, as well as the emergence of dissociative disorders through acts of violence. Social, cultural and sub-cultural influences are explored as Hohfeler connects dissociation with rage and antisocial behaviors. He notes how shame and humiliation are potent drivers in such connections.

Part 6: Neurobiological and Cognitive Understandings of Dissociation

Corrigan, Lanius and Kaschor open Part 6 with a detailed outline of the neurobiological underpinnings of the defense cascade, which reflects various, well organized and evolutionarily-sequenced responses to immediate threat (e.g., fight, flight, freeze, collapsed immobility). Of particular interest is the periaqueductal gray (PAG) and the different aspects of it that regulate different basic affect circuits and different defensive responses. The opioid-induced analgesia associated with different defensive engagements is argued to underlie peritraumatic dissociative responses, while structural dissociation reflects a long-term outcome of this neurochemical dissociation associated with distinct circuitry.

In exploring the psychobiology of dissociative disorders, Nijenhuis uses the Theory of Structural Dissociation of the Personality (TSDP) to construct a set of hypotheses that explore findings taken from neuroimaging and other neurophysiological methodologies. He demonstrates that the findings to date are consistent with TSDP and inconsistent with the sociocognitive model of DID that argues suggestibility, fantasy proneness and iatrogenic factors are the primary contributors to DID. He then shifts to exploring the philosophical bases of the connection between brain (matter) and mind, particularly with regard to how findings should be interpreted and how dissociative disorders should be understood.

The dissociative specifier of PTSD, commonly referred to as the dissociative subtype of PTSD (PTSD+DS), was formulated from neurobiological findings. Schiavone and Lanius discuss the original corticolimbic model that sought to provide a neurological conceptualization accounting for how PTSD+DS differed from PTSD. They then build on this foundational work, linking PTSD+DS with the defense cascade. In this exploration they note developments that are coalescing to suggest, with regard to the brain areas implicated and the key features phenomenologically evident, that PTSD+DS can be considered a disorder of sensory integration.

Recent empirical work has begun to question the standard understanding that reported amnesia across dissociative identities is associated with memory processes like retrieval deficits. This challenge has been prompted by work showing that memory representation for which amnesia is reported are accessible, suggesting a subjective rather than objective amnesia. To account for these findings, Dorahy proposes a dual path model for inter-identity amnesia based on metamemory processes associated with 'feeling of knowing' and the initiation and termination of search processes, along with ownership of internal experiences.

Part 7: Assessment and Measurement

The assessment of dissociative disorders is a complex enterprise, owing to factors such as the subtlety of many dissociative manifestations, the possibility of over or under-reporting symptoms, due, for example, to having amnesia for them or malingering them, and the risk of misdiagnosis with other disorders. Part 7 begins with Coy and Madere providing a state-of-the-art explication of the complexity of dissociative assessment. They focus on four leading tools from different traditions of assessment, including structured, semi-structured, and self-report measures. They outline the uses, format, advantages, and challenges in the Office Mental Status Exam for Complex Chronic Dissociative Symptoms and Multiple Personality Disorder, the Dissociative Disorders Interview Schedule, the Structured Clinical Interview for Dissociative Disorders, and the Multidimensional Inventory of Dissociation.

In expanding assessment considerations to challenging populations, Brand and Brown explore the unique difficulties presented when malingering is a possible confound in assessing for dissociative and trauma disorders. They take a hypothesis-generating approach to pose questions that can be assessed by different tools to maximize the probability of accurately detecting true and malingered cases of dissociative disorders. This chapter notes the significant problems of relying on validity measures in some well-established instruments when assessing for dissociative disorders, as they include dissociative symptoms and therefore can produce false positives for malingering. Particular emphasis is given to the Minnesota Multiphasic Personality Inventory-2 and Personality Assessment Inventory, but accurate detection is also drawn from assessing the nuances of a genuine trauma and dissociative disorder symptom profile.

Part 8: Treatment Considerations and Conceptualizations

The assessment and treatment of dissociative identity disorder (DID) brings with it unique challenges not limited to those associated with 1) amnesia's impact on providing a coherent life narrative, 2) actions, ideas and feelings that seems alien, and 3) assessing for and treating difficulties often outside the purview of other practitioners. Part 8, *Treatment considerations and conceptualization*, is initiated with Kluft, in the case study tradition, using carefully detailed clinical material to provide a salutary reminder of the distinctiveness of each case and where generalities and treatment principles exist despite considerable variations of presentations. The chapter also offers caveats on putting too much emphasis on attachment ruptures versus abuse in the development of dissociative pathology, and stresses that posttraumatic symptoms are not a universal feature of DID.

Stavropoulos and Elliott address treatment tensions for therapists working with those experiencing complex trauma presentations, especially with regard to the debate about how quickly trauma-focused work should be implemented and whether a stabilization phase is needed beforehand. They explore the challenges to phase-oriented therapy from 1) exposure therapies for PTSD, that have been extended to complex trauma, and 2) therapy models more designed with complex trauma therapy in mind, but which do not self-identify as phase approaches. They also explore attachment considerations and a treatment modality with this focus that puts less emphasis on trauma exposure in therapy.

The relational school of psychoanalysis has placed great emphasis on the reality of childhood trauma in shaping the internal structure for the human psyche. Dissociation has also played a dominant role in shaping the internal world in much relational thinking, and for some authors is a core feature both in healthy and unhealthy functioning (e.g., Bromberg, 2009). Howell and Itzkowitz explore the relational turn in thinking from Ferenczi, through Sullivan and the interpersonalists, via some object-relations thinkers to the contemporary contributors, where trauma and dissociation have been front and center in both theorizing and clinical application. Dissociated rather than repressed mental content, and horizonal rather than solely vertical psychic organization that characterize relational thinking are outlined in the chapter, and are proposed to give rise to dissociative enactments in both patient and therapist, and the existence of 'not-me' modes of being.

Part 9: Treatment Challenges and Therapist Considerations

Part 9 cherry picks core issues that often create particularly acute challenges for therapists working with complex trauma and dissociative disorders. The complexity of human memory functioning, especially associated with the encoding, consolidation, and retrieval of traumatic experience, in conjunction with the various non-memory processes related to trauma memories (e.g., dissociation), can create conceptual and technical challenges for therapists. In a compelling chapter, Solinski encourages therapists to be informed about the nature of memory and its connection with self and

trauma, topic areas she draws out and explores. The chapter provides a scientific understanding of human memory, in its multiple manifestations, while applying it to clinical presentations in traumatized patients. Trauma memories are influenced by dissociation and resultantly are often fragmented in nature and prone to encoding and retrieval problems (e.g., different degrees of amnesia). Solinski demonstrates from an empirical and conceptual base, using case study material, that memories can be accurate, wholly inaccurate or anything in between.

Therapy with those diagnosed with DID presents innumerable challenges, from those associated with the therapist's faulty reification of dissociative identities to the enactment of trauma dynamics from both patient and therapist. Shame, abandonment, betrayal, attachment drives and defenses against them abound and underpin the self-state organization in DID. Loewenstein systematically addresses these therapeutically thorny issues, pitfalls for therapists and the relational dynamics that characterize the therapeutic journey which need to be addressed in order to avoid treatment failure via direct rupture without repair or endless transference/countertransference repetitions.

Part 10: The Future

A solid, developing, and lasting understanding of dissociation and dissociative disorder is reliant on robust, methodologically sound research and the empirical data it produces. In the final section of the book, Şar and Ross provide a far-reaching review of the studies that would illuminate areas within the field that currently lack or need more supportive research. They make recommendations for research in areas as diverse as the definition of dissociation, the differential diagnostic domain of the dissociative disorders, the presence and nature of dissociative symptoms in non-dissociative disorders and the treatment of dissociation and its pathological manifestations. This chapter is a treasure trove for young as well as seasoned researchers looking for areas to advance the scientific understanding of dissociation, and also offers lay, clinical and theoretical readers an appreciation of the broad domain of dissociation and where gaps lie in empirical knowledge.

The book is closed with Spiegel, a contributor to the dissociative literature since its revitalization in the late 1970s and early 1980s, addressing the degree to which the study of dissociation has been integrated into the scientific literature and is underpinned by a solid scientific foundation. This allows him to address the question of whether dissociation is likely to remain a subject of rigorous empirical and clinical investigation or whether it will fade from interest as it did in the early twentieth century. Spiegel examines the association between dissociation, trauma, basic psychological processes and neurobiological substrates. He concludes that while dissociation is underrecognized and often disrespected as a core psychological/psychiatric process, it continues to be integrated into mainstream studies and thought, with interest waxing, not waning.

Concluding Thoughts

As data accrue about the nature of the underpinnings of dissociation, old debates (e.g., the existence of DID as a naturally occurring diagnostic entity) are settled and herald the rise of new challenges and points of division. Yet, the fundamental questions of what phenomena dissociation does and does not consist of, and the underlying mechanisms and causes responsible for them continue to be grappled with. There appears to be agreement that dissociation reflects the phenomena that come from, and the organization that makes up, a mind that is segregated into different distinct functions and processes (including self processes) that would normally be integrated. Whilst not totally overlapping concepts, dissociation of this kind has been referred to as compartmentalization or structural dissociation.

Debate is more lively and agreement is not universal regarding whether phenomena often described as dissociation that are not captured by compartmentalization or structural dissociation should also be considered dissociative. This debate is unlikely to lessen any time soon, as different theoretical frameworks make solid cases for their respective positions, amass supportive data based on studies underpinned by their definition of dissociation, and have proponents with different degrees of tolerance for accepting single versus multiple underlying psychoneurobiological mechanisms to capture the boundaries of what dissociation is.

There is unquestionably a paradox that a field which seeks to define and explain phenomena characterized by the fragmentation of functioning is itself marked by the disjointedness of divergent and seemingly incompatible viewpoints. However, as mentioned earlier in this introduction, this very quality, rather than being problematic, may be an asset. What seem like irreconcilable viewpoints may eventually be found to capture the richness and intricacy of a network of phenomena that on the surface appear to be divergent, but which may ultimately be found to have an underlying principle that unites them.

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PART 1

Historical and Conceptual Issues

1

HISTORY OF THE CONCEPT OF DISSOCIATION

Onno van der Hart and Martin J. Dorahy

> Dissociation may be regarded as the first fruit of psychopathology. It was a conception built up by a strictly scientific method, it illuminated a vast field of phenomena which had hitherto baffled every attempt at explanation and it opened up the way to therapeutic possibilities in which that control of phenomenal experience which is the ultimate goal of science was abundantly satisfied.
>
> *Bernard Hart (1925, p. 236)*

The study of dissociation in the scientific literature has a long and diverse theoretical and clinical history. Initial observations by the early proponents of animal magnetism and hypnosis led to dissociation being associated with divisions or 'splits' in consciousness—often used interchangeably with terms like personality, mind, psyche, or ego. Whilst not commonly recognized, it is generally understood that consciousness cannot be divided or 'split,' it is indivisible. Rather, such terminology reflects a multiplication of consciousness, instead of an integrated whole, involving two or more separate conscious systems, each with its own first person perspective (Nijenhuis, 2015; O'Neil, 2009). Key here is not a multiplication of a whole person, but a division into multiple organized and self-conscious parts. In more recent years, these parts have been denoted by various labels, such as personality states, identity states, ego states, self-states, dissociative parts, and even aspects.

However, in the historical literature 'personalities' was the most often used term, although it has not always been clear whether the term 'personality' referred to a single entity or dynamic system that is divided into dissociative subsystems (Moskowitz & Van der Hart, 2020), or whether personality referred to something less core to the individual's self-structure where dissociation reflected the multiplication or proliferation of personalities (see O'Neil, Chapter 8, this volume). Using these different metaphors authors were trying to conceptualize the same issue, dissociation at the structural level of the psyche, but they have different starting points (a single personality divided into parts [division metaphor] versus personalities duplicated to provide not parts of one, but one of more [multiplication metaphor]). Given the literature is not always clear, and to avoid favouring one metaphor over the other, we have adopted in this chapter the interchangeable use of the division and multiplication metaphors, with the reader encouraged to utilize the conceptualization that fits for them.

The division of the personality or multiplication of personalities, to which the concept of dissociation referred, was used to explain hysteria and hysterical symptoms, with multiple personality disorder regarded as the most complex form. Although the dominant conception at the time limited dissociation to the psychiatric arena, theoreticians working in other areas began to describe various nonclinical psychological phenomena in terms of dissociation. With the beginning of the twentieth century, psychoanalytic thinking began to produce a change in clinical language and theory. Over time these psychoanalytic innovations brought about a commensurate change in the conceptualization of dissociation.

At the same time that theoretical speculation was producing changes in previous views of dissociation, the original clinical observations that related dissociation to divisions of the personality/multiplication of personalities were being replicated during and after World War I and World War II. As a result, army psychiatrists and other clinicians began to rediscover and to elaborate on earlier theoretical ideas about trauma-generated dissociation and its treatment. The late 1960s saw an increased

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academic interest in altered states of consciousness, which eventually became synonymous with dissociation. During the early 1970s, empirical and theoretical work in cognitive psychology recaptured one of the initial conceptualizations of dissociation (i.e., division of "consciousness"; Hilgard, 1977, 1986). Shortly thereafter, clinical interest in pathological dissociation reignited; this led to the proliferation of ideas, models and empirical directions that are evident today (see Loewenstein, Frewen, & Lewis-Fernández, 2017). In this chapter, we will provide a detailed history of dissociation.

Origins of Dissociation in the Scientific Literature

Dissociation as Division/Multiplication of Personality/Consciousness/Psyche

In Germany, Eberhardt Gmelin (1791) published the first treatise on a case of 'double personality,' and in the same year the Reverend Joseph Lathrop described another case in a letter to Ezra Stiles, the President of Yale University (Carlson, 1981; Crabtree, 1993). In the early nineteenth century, S. L. Mitchill (1816) presented Mary Reynolds, who was to become a famous American case of multiple personality disorder (Ellenberger, 1970; Goodwin, 1987). Before this time, other such cases were reported but were regarded as individuals possessed by devils and demons (e.g., the sixteenth-century case of Jeanne Fery; Bourneville, 1886; cf., Van der Hart, Lierens, & Goodwin, 1996).

The initial observations and investigations of dissociation, however, did not begin with these cases of 'split' personality. Instead, the initial reports of dissociation came from the French pioneers and early investigators of animal magnetism, hypnosis, and 'double personality.'

Amand de Chastenet de Puységur

Franz Anton Mesmer was the father of animal magnetism. In Vienna, he developed his treatment approach of inducing a so-called magnetic (convulsive) crisis. One of his students, Amand-Marie-Jacques de Chastenet, Marquis de Puységur (1751–1825), discovered that some subjects entered a remarkable state of consciousness. In this state, subjects were aware of no one except the magnetizer whose commands they executed; when they emerged from this state, the subjects were amnesic for all that had occurred during the state. Because of its resemblance to natural somnambulism, this induced state was called among other things (e.g., magnetic sleep), *artificial somnambulism* (Crabtree, 2019); much later Braid (1843) was to call this condition "hypnosis."

Puységur and colleagues (including his brothers) quickly became aware that the essence of both somnambulism and artificial somnambulism was a dissociation or multiplication of 'existences' or personalities (Crabtree, 1988, 1993; Van der Hart, 1997). This led Puységur to assert that "La demarcation est si grande, qu'on peut regarder ces deux états comme deux existences differentes": "the line of demarcation [in the personality during artificial somnambulism] is so complete that these two states may almost be described as two different existences" (Crabtree, 1993, p. 42). Puységur pointed out that these two different existences typically exhibited discordant personality traits (Crabtree 1993). He observed that an individual in a somnambulistic state (either natural or artificially-induced) displayed two separate streams of thought and memory, in which, at any particular moment, one stream operated outside conscious awareness (Crabtree, 1988, 1993).

In conjunction with this multiplication of 'existences,' Puységur and colleagues also observed and explained certain discrete dissociative phenomena, especially the psychogenic amnesia that followed hypnotic states (Crabtree, 1988, 1993; Ellenberger, 1970). Puységur observed, "I have noticed that in the magnetic state the patients have a clear recollection of all their doings in the normal state, but in the normal state, they can recall nothing of what has taken place in the magnetic condition" (cited in Forrest, 1999, p. 95; see also Deleuze, 1819).

Jacques Moreau de Tours

Initially, the division of the personality as an integrated whole was not referred to as dissociation. The French psychiatrist, Moreau de Tours (1845), was probably the first to use the term *dissociation* in a manner that is consistent with understandings of the concept as a division of the personality or multiplication of personalities[1] (Crabtree, 1993; Van der Hart & Horst, 1989).

According to Moreau de Tours, who studied the psychological effects of hashish, dissociation—or disaggregation (*désagrégation*)—was the 'splitting off' or isolation of ideas. If ideas had been aggregated, or integrated, they would have become part of the normal harmonious whole. Moreau de Tours' work preceded fictional representations of chemically-induced dissociative states, such as that depicted in the psychological battle between good and evil in Robert Louis Stevenson's *Dr Jekyll and Mr Hyde*. Although Moreau de Tours first dealt with chemically-induced dissociation, he

subsequently studied purely psychological phenomena such as hysterical psychosis (Moreau de Tours, 1865, 1869; Van der Hart, Witztum, & Friedman, 1993).

Gros Jean

Gros Jean (1855), a pseudonym for Paul Tascher (Crabtree, 1993), posited the concept of a secondary personality. Tascher broke new psychological ground with his speculation that certain nervous disorders—specifically, possession states, magnetism, and automatic writing—involved a division or multiplication. Tascher argued that these phenomena derived from the existence of a second personality—capable of "romantic fabrications" and "digressions"—which *concurrently* existed with the ordinary personality. This notion was new; it went well beyond the idea of a multiplication of personalities that was induced by hypnosis or chemicals. Tascher's theory presented a novel means of understanding behaviours that originated outside the conscious awareness of the primary personality.

Hippolyte Taine

Like Tascher, the French philosopher, critic, and historian, Hippolyte Taine (1828–1893), in a major work on psychology, *De l'intelligence*, described automatic writing as involving a profound doubling of existences (Taine, 1878):

> In spiritistic manifestations themselves we have shown the coexistence in the same individual of two thoughts, of two wills, of two distinctive actions, of one of which the subject is conscious, but the other of which he has no consciousness and which he attributes to invisible beings. The human brain is thus a theatre where at the same time several different pieces are played, on different stages of which one is in the spotlight… I have seen a person who, while chatting and singing, wrote complete sentences without looking at the paper, without being conscious of what she wrote… When she reads it she is astonished and sometimes alarmed. The handwriting is quite different from her usual style. The movement of the fingers and pencil is stiff and seems automatic … We certainly find here a doubling of the ego [*dédoublement du moi*], the simultaneous presence of two parallel and independent series, of two centers of action, or, if you wish, two moral persons side by side in the same brain—one on the stage and the other behind the scenes.
>
> *pp. 16–17*

Taine made an important addition to this account, noting that these two 'lives' are neither clearly nor completely separated. Thus, the initial study of dissociative phenomena such as amnesia following artificial somnambulism and automatic writing explained dissociation in terms of a doubling of consciousness. Many nineteenth-century clinicians used this same explanatory dynamic to account for hysteria and hysterical symptoms.

Division or Doubling of Consciousness and Clinical Dissociation: Hysteria and Hysterical Symptoms

By the mid-1800s clinicians were detecting a link between the division into multiple centres of consciousness or personalities in hypnosis and the clinical phenomena of hysteria.[2] In the same work in which he presented his famous DID patient Estelle, Charles Despine (1840) argued that hypnosis was clearly connected to hysteria (Fine, 1988; Kluft, 1986). Similarly, Briquet (1859) reported that most people who were called magnetic somnambules [hypnotics] were hysterical women. Charcot (1887) further developed these ideas when he theorized that hysterical symptoms (e.g., paralyses, contractures) were based on subconscious ideas that had become separated from consciousness. Finally, Pierre Janet came to view somnambulism as paradigmatic for the dissociative nature of hysteria (Van der Hart, 1997; Van der Hart & Friedman, 2019). In other words, Janet considered both somnambulism and hysteria to be based upon a division of the personality (Janet, 1889/2022a,b, 1907).

In the late 1800s, many clinicians and theorists advanced two theses: (1) that dissociation is a division or 'splitting' of the personality or multiplication of centres of consciousness or existences or personalities, and (2) that dissociation underlies hysterical symptoms and hysterical phenomena (Binet, 1890, 1892; Gilles de la Tourette, 1887; Legrand du Saule, 1883; Myers, 1887; Ribot, 1885; Richet, 1884).

In 1888, Jules Janet used the model of 'double personality' to explain dissociative psychological phenomena. Although his model of the 'double personality' left no room for the notion of *multiple* personalities, it offered a succinct model of hysteria. Jules Janet claimed that each person has two personalities, one conscious and one unconscious (*inconçue* = unconceived). In normal individuals, the two personalities are equal and in harmony with each other; in

hysterical patients, the two personalities are unequal and unbalanced. In hysterics, the first personality is incomplete (i.e., exhibits hysterical *losses*, i.e., negative dissociative symptoms; cf. Nijenhuis & Van der Hart, 1999) and the second personality is "perfect."

In 1893, Stéphanie Feinkind, a student of Charcot at the Salpêtrière in Paris, published a treatise on "natural somnambulism" and hysterical attacks in the form of somnambulism. Feinkind argued that both kinds of somnambulism are characterized by "doubling (*dédoublement de la personnalité*) or rather *dissociation of the personality*, in the psychological sense of the word" (p. 139). In both instances, the individual's return from the somnambulistic episode is almost always characterized by forgetfulness (*l'oublie*). That forgetfulness, Feinkind insisted, was "previously explained [*dit*] by the dissociation between two personalities, more or less completely ignorant of each other" (p. 140).

Pierre Janet

Although often assumed, it was not Pierre Janet (1859–1947) who introduced the term "dissociation." However, of the many theorists of dissociation, he unquestionably presented the most detailed and articulate account of the connection between division in the personality/multiplication of personalities (i.e., dissociation) and hysteria (cf., Meares & Barral, 2019; Perry & Laurence, 1984; Putnam, 1989a; Van der Hart & Friedman, 2019; Van der Kolk & Van der Hart, 1989). Originally a philosopher and experimental psychologist, in his position as psychiatrist at the Salpêtrière, Janet became the leading scientist in the study of hysteria. His thesis for the *doctorat ès-lettres*, *L'automatisme psychologique: Essai de psychologie expérimentale sur les formes inférieures de l'activité humaine* (Janet, 1889), can be regarded as history's most important work on dissociation (Nemiah, 1989). An Italian translation appeared in 2013, and an English one in 2022.

Janet considered hysteria to be "an illness of the *personal synthesis*" (Janet, 1907, p. 332). By this, he meant "a form of mental depression [i.e., lowered integrative capacity] characterized by the retraction of the field of consciousness and a tendency to the dissociation and emancipation of the systems of ideas and functions that constitute personality" (Janet, 1907, p. 332). Although Janet was not always explicit about this, he thought that these dissociative "systems of ideas and functions" had their own sense of self, as well as their own range of affect and behaviour (Nijenhuis, 2015). Janet's definition of hysteria makes it clear that he distinguished between retraction of the field of consciousness and dissociation. For him, retraction of consciousness merely implied that individuals have "in their conscious thought a very limited number of facts" (Janet, 1907, p. 307). Nowadays many students of dissociation subsume phenomena related to retraction of the field of consciousness, such as absorption and imaginative involvement, under the label of dissociation.

Janet acknowledged a role for constitutional vulnerability in illnesses of personal synthesis, but he regarded physical illness, exhaustion, and, especially, the vehement emotions inherent in traumatic experiences as being the primary causes of this integrative failure (Janet, 1889/2022a,b, 1909, 1911; cf., Van der Hart & Rydberg, 2019). In linking vehement emotions with their impact on the personality, he notes, "except in the most extreme cases, they do not really destroy the elements of thought; they let them exist but disaggregated, isolated from each other, sometimes up to a point where their functions are almost suspended" (Janet, 1898, p. 475). In keeping with Janet's formulation, the most obvious of these dissociative systems contains traumatic memories, which he originally described as *primary idées fixes* (Janet, 1894b, 1898). These systems consisted of "psychological and physiological phenomena, of images and movements of a multiform character" (Janet, 1919/25, p. 597). When these systems are reactivated, patients are "continuing the action, or rather the attempt at action, which began when the [trauma] happened; and they exhaust themselves in these everlasting recommencements" (Janet, 1919/25, p. 663).

Janet actually observed that dissociative patients alternate between experiencing too little and experiencing too much of their trauma:

> [T]he illness consists of two simultaneous things: 1) the inability of the subject to consciously and voluntarily recall the memories, and 2) the automatic, irresistible and inopportune reproduction of the same memories.
>
> *Janet, 1904/11, p. 528*

Janet (1889, 1904, 1928) observed that, especially when the individual encounters salient reminders of the trauma, traumatic memories/fixed ideas not only may alternate with the habitual personality, but also may intrude upon it.

Janet also drew upon traumatic memories to explain the distinction between the *mental stigmata* and the *mental accidents* that characterize hysteria (Janet, 1893, 1894a, 1907, 1911; cf., Nijenhuis & Van der Hart, 1999). Emphasizing that mind and body are one and the same, he did not make any distinction between dissociation of the mind and dissociation of the body in mental stigmata and mental accidents. And, like his contemporaries, he regarded symptoms pertaining

to movements and sensations as dissociative in nature. The mental stigmata are negative dissociative symptoms that reflect functional losses, such as losses of memory (amnesia), sensation (anæsthesia), and motor control (e.g., paralysis). The mental accidents are positive dissociative symptoms that involve acute, often transient intrusions, such as additional sensations (e.g., pain), movements (e.g., tics) and perceptions, up to the extremes of complete interruptions of the habitual part of the personality. These complete interruptions are due to a different part of the patient's personality that was completely immersed in re-experiencing trauma.

Related to primary *idées fixes* (i.e., traumatic memories), were *secondary idées fixes* (i.e., fixed ideas not based on actual events, but nevertheless related to them, such as fantasies or dreams). For example, a patient might develop hallucinations of being in hell secondarily related to an extreme sense of guilt during or following a traumatic experience. Such dissociative episodes were called hysterical psychosis, and more recently relabelled as (reactive) dissociative psychosis (Van der Hart, Witztum, & Friedman, 1993; Van der Hart & Witztum, 2019).

According to Janet, the more an individual is traumatized, the greater is the fragmentation of that individual's personality: "[Traumas] produce their disintegrative effects in proportion to their intensity, duration, and repetition" (Janet, 1909, p. 1556). Janet regarded multiple personality disorder as the most complex form of dissociation and he noted the differences in character, intellectual functioning, and memory among different personalities (Janet, 1907). He observed that certain dissociative parts had access only to their own past experience, while other parts could access a more complete range of the individual's experience. Dissociative parts could be present side by side and/or alternate with each other. Importantly, Janet noted that dissociative parts each had their own first-person perspective or 'sense of self,' a theme explored by World War I psychiatrists, like Mitchell and McDougall (see below).

In short, for Janet, vehement or violent emotions lead to integrative failure which lead to the division of the personality into dissociative "systems of ideas and functions" (Janet, 1907) that had their own phenomenal awareness. These dissociative (sub)systems were not restricted to DID, but occurred in many, less developed forms of hysteria (Nijenhuis, 2015; Van der Hart & Rydberg, 2019). Unlike more psychoanalytic views of dissociation, any defensive purpose this failed integration has is secondary to it rather than teleological of it.

Janet (1898, 1911, 1919/25) developed a phase-oriented three-stage treatment approach *avant la lettre*: (1) *stabilization and symptom reduction*, aimed at raising the patient's integrative capacity; (2) *treatment of traumatic memories*, aimed at the resolution or completion of the unfinished mental and behavioral actions inherent in these traumatic memories; and (3) *personality (re)integration and rehabilitation*, i.e., the resolution of dissociative (sub)systems and fostering of further integrative development (Van der Hart, Brown, & Van der Kolk, 2019). Janet observed that following integration of dissociative (sub)systems, somnambulistic states could no longer be evoked as the structural organization of the person's psyche now was unable to give rise to them.

Alfred Binet

The experimental psychologist Alfred Binet (1857–1911), a contemporary of Janet, was the Director of the Laboratory of Physiological Psychology at the Sorbonne, Paris. Although most recognized as the creator of the first formal test of cognitive ability, Binet is a wrongly forgotten pioneer in the field of dissociation. Ross (1989) has pointed out that his experimental studies on hypnosis addressed what Hilgard (e.g., 1977) later described as the "hidden observer" phenomenon.

Initially Binet (1890) emphasized the 'doubling of consciousness' (i.e., the personality) into parts. However, in 1891 he had clearly broadened his view:

> In general, observers have only noted two different conditions of existence in their subjects; but this number two is neither fixed nor prophetic. It is not perhaps, even usual, as is believed; on looking closely we find three personalities in the case of Félida, and still a greater number in that of Louis V. That is sufficient to make the expression "double personality" inexact as applied to these phenomena. There may be duplication, as there may be division in three, four, etc., personalities.
>
> *Binet, 1892/96, p. 38*

In his excellent experimental studies, Binet confirmed many of the findings established by Janet. He also established that even when "states of consciousness" are unknown to each other, there may take place between them an exchange of perceptions, thoughts, feelings, images, etc. The nature and extent of the information exchanged is still the focus of experimental investigation by contemporary researchers (e.g., Huntjens, Verschuere, & McNally, 2012; Marsh et al., 2018).

Society for Psychical Research in Britain

At the same time that the French were investigating the dissociative basis of hysteria, the British were studying dissociative phenomena under the auspices of the Society for Psychical Research (SPR). In his analysis of the SPR between 1882 and 1900, Alvarado (2002) noted that the study of dissociative phenomena in Britain was largely (though not exclusively) dominated by non-clinical subjects and non-clinical dissociative experiences. In contrast, clinical participants and clinical phenomena constituted the bulk of dissociation studies in France.[3] SPR members vigorously studied hypnosis, mediumship, automatic speaking and writing, telepathy, double and multiple personality, fugue, trance states, creativity, and secondary and subconscious consciousness. These diverse psychological phenomena were believed to be based upon multiplications of existences (i.e., dissociation). For example, Frederic Myers (1887) initially proposed the concept of 'multiplex personality' to explain how multiple personalities and hypnosis derived from the multiplication of personalities. He then proposed that the psychic structure was made up of a supraliminal self that operated at a consciousness level and a subliminal self that operated outside conscious and volitional awareness. Automatic writing, and various other phenomena where explained by one self impinging on the other. In further developing his theoretical ideas, Myers (1903) sought to bring together under his concept of the 'subliminal mind' various phenomena which he believed were characterized by multiplication of personalities, such as hypnotic trance, telepathy, hysteria and creativity (Alvarado, 2002; Crabtree, 2007).

In their studies of hysterical patients, many French clinicians, such as Janet, viewed dissociation (the division of the personality/multiplication of personalities) as a pathological organization or process. However, for British SPR members, dissociation had both pathological and non-pathological expressions. Alvarado (2002) pointed out that SPR literature also placed less emphasis on the connection between dissociation and trauma. As a consequence, it is unclear what proportion of their participants, especially those with profound mediumship ability, acquired their dissociative "skills" courtesy of trauma-induced divisions of their personality.

Nineteenth-century Conceptualizations of Dissociation

It is interesting to note that nineteenth-century literature did not commonly use the term 'dissociation.' Still, famous cases such as Félida X (Azam, 1876a,b, 1887; cf. Hacking, 1995; Van der Hart, Faure, Van Gerven, & Goodwin, 1991) and Louis Vivet (Bouru & Burot, 1888; Camuset, 1882; cf., Faure et al., 1997; Hacking, 1995) were the subjects of intense scientific discussion.

Other terms were often used in lieu of "dissociation." Beginning with Gmelin's (1791) terminology, Table 1.1 provides a comprehensive but not exhaustive list of alternative terms. Many of these concepts are directly related to the division of the personality as an integrated whole. However, in his comments on some of these concepts, O'Neil (1997; see Chapter 8, this volume) argued that they basically refer to two metaphors, one pertaining to a division or 'splitting,' and the other to a doubling or multiplication of consciousness or the personality. As Binet (1890) concluded and modern views have confirmed (e.g., Braude, 1995; Ross, 1989), dissociative personalities may appear separate and even display no conscious awareness of one another. But together these *divided* or *doubled* systems or dissociative parts make up the individual's complete psychological experience, and they may influence each other more than is commonly assumed.

Dissociation in North America

William James

William James was a diligent and eager student of dissociation. He was influenced and richly inspired by the writings of Janet[4] and other French investigators (e.g., Binet, Charcot), as well as by the ideas of SPR members such as Gurney and Frederic Myers. James was the first to convey European ideas about dissociation to American scholars and clinicians.

Although James gave some coverage to dissociation in his magnum opus, *The Principles of Psychology* (1890), his 1896 Lowell lectures on *Exceptional Mental States* (Taylor, 1983) were the culmination of his ideas about the various normal and abnormal manifestations of dissociation. Like many others at the time, James spoke of dissociation in terms of the plurality of consciousness. For example, in Lecture 3 of this series, James began by presenting F. Myers' notion of the subliminal self, where the psyche is represented by 'double (or multiple) consciousness,' one operating above the threshold of awareness and the other (or others) operating simultaneously outside awareness. Drawing on observations from French clinicians, James used 'splits' in consciousness to account for various hysterical (i.e., dissociative) symptoms. These symptoms included visual anæsthesia, that is, a subjective inability to see. James described a case of hysterical blindness in the left eye: "[t]he mind is split in two. One part agrees not to see anything with the left eye alone, while

TABLE 1.1 Terms used to describe dissociation in the eighteenth and nineteenth centuries and the author/s who used them

	Authors	*Alternative terms for dissociation*
1	Puységur, 1784	Two different existences (deux existences différentes)
2	Gmelin, 1791	Exchanged personality (Umgetauschte Persönlichkeit)
3	Dwight, 1818	Two souls
4	Baillarger, 1845 Gros Jean/Tascher, 1855	Intellectual duality (*dualité intellectuelle)*
5	Lemoine, 1855	Schism of the personality (*scission de la personnalité*)
6	Gros Jean/Tascher, 1855 Richet, 1884	Intellectual doubling (*dédoublement intellectuelle*) Doubling of the intelligence (*dédoublement de l'intelligence*)
7	Gros Jean/Tascher, 1855	Intellectual division (*division intellectuelle*)
8	Gros Jean/Tascher, 1855	Intellectual schism (*scission intellectuelle*)
9	Gros Jean/Tascher, 1855	Schism between the will and the over-active organism (*scission entre la volonté et l'organisme suractif*)
10	Gautier, 1858 Baillarger, 1861, 1862 Azam, 1876b Séglas, 1891 Bœteau, 1892 Bourneville, 1892	Doubling of the personality (*dédoublement de la personnalité*)
11	Littré, 1875 Azam, 1887 Binet, 1890 Breuer & Freud, 1893 Hyslop, 1899	Double consciousness *(double conscience)*
12	Azam, 1876a	Doubling of life (*dédoublement de la vie*)
13	Taine, 1878 Delbœuf, 1879	doubling of the ego (*dédoublement du moi*) (also translated as "dual ego" or "doubling of the self")
14	Ribot, 1885 J. Janet, 1888	Double personality *(double personnalité)*
15	Ribot, 1885	Dissolution of the personality
16	Bérillon, 1886	Dissolution of indissoluble phenomena
17	Beaunis, 1887	Doubling of memory and consciousness (*dédoublement de la mémoire et de la conscience*)
18	Myers, 1887 Osgood Mason, 1895	Multiplex personality
19	Janet, 1887	Dissociation of psychological phenomena
20	Bourru & Burot, 1888	Multiple personality
21	Bourru & Burot, 1888	Variations of the personality
22	P. Janet, 1889/2022a,b Binet, 1892	Psychological disaggregation (*désagrégation psychologique*) Disaggregation of psychological elements
23	Binet, 1890	Duplication of personality
24	Dessoir, 1890	Double ego (*Doppel-Ich*)
25	Binet, 1892 Laurent, 1892	Alterations of the personality
26	Binet, 1892/1896; Janet, 1946	Division of personality
27	Laurent, 1892	The existence of secondary states (*états seconds*)
28	Myers, 1893	Subliminal consciousness
29	Bruce, 1895	Dual brain action
30	Osgood Mason, 1895	Duplex personality
31	James, 1896 (in Taylor, 1983)	Alternating personality

the other sees with the right eye perfectly well" (Taylor, 1983, p. 59). In describing this and other cases of anæsthesia, James concluded that "[s]omething sees and feels in the person, but the waking self of the person does not" (p. 60).

Having covered dreams, hypnotism, automatism, and hysteria, James began his fourth lecture by stating: "we are by this time familiar with the notion that a man's consciousness need not be a fully integrated thing … But we must pass now to cases where the division of personality is more obvious" (Taylor, 1983, p. 73). This lecture addressed the topic of multiple personality; in such individuals, there exists intelligent and seemingly independent dissociative personalities.

James favoured Myers' model of subliminal consciousness because, he argued, Myers model could explain both Janet's pathological fragmentations from the primary personality as well as the nonpathological cases of mediumship.

Following James' interest in dissociation, especially its clinical manifestations, Boris Sidis and Morton Prince were probably the most important American clinicians who studied dissociation at the beginning of the twentieth century.

Boris Sidis

Sidis provided a developmental perspective on the ætiology of simultaneous, discontinuous streams of consciousness (Sidis, 1902; Sidis & Goodhart, 1904). In their book, *Multiple Personality: An Experimental Investigation into the Nature of Human Individuality*, Sidis and Goodhart argued that, "under the influence of hurtful stimuli, be they toxic or traumatic in nature, the first stage of functional degeneration may give rise to functional dissociations…" (Sidis & Goodhart, 1904, p. 53). For Sidis and Goodhart, loss of memory was the essential indicator of the dissociative effects of "hurtful stimuli":

> The breaks and gaps in the continuity of personal consciousness are gauged by loss of memory. Mental systems not bridged over by memory are so many independent individualities, and if started on their career with a good supply of mental material, they form so many independent personalities. For, after all, where memory is gone the dissociation is complete.
>
> *p. 44*

Sidis relied on case studies to exemplify his ideas about multiple personality, including a famous case that had been described by his New England contemporary, Morton Prince.

Morton Prince

A keen clinical observer and researcher of dissociation, Prince (1854–1929) is probably best known for his celebrated multiple personality case, Miss Beauchamp (Prince, 1906a). Actually, however, Prince was probably more interested in the unconscious than dissociation. He spent most of his career using the many manifestations of dissociation (e.g., *induced*, such as hypnosis; *spontaneous*, such as dissociative disorders) to undercover and understand the unconscious (Hales, 1975). Although his ideas about dissociation were primarily influenced by the French theories of Pierre Janet, and others (e.g., Charcot), Prince did not uniformly accept all French ideas about dissociation. For example, he was critical of the formulations of dissociation that were offered by Jules Janet and Azam. Prince (1906b) argued that these individuals misunderstood the structural nature of the psyche in patients with hysteria, especially in terms of what constituted the "first" and "second" personalities.

Prince's view was the reverse of that offered by J. Janet and Azam. They considered the "hysteric" personality to be the original or first state, and the "normal" personality to be the dissociated secondary state. Prince (1906b), on the other hand, claimed that the "hysteric" state was the secondary, dissociative, or disintegrated state that was characterized by both positive and negative "physiological" (i.e., somatic) and psychological symptoms. The first or normal personality, according to Prince, displayed no symptoms. In a prescient anticipation of modern thinking, Prince (1906b) argued that these "personalities" (especially the hysteric personality state) were able to 'split' further, thus moving from double to multiple personality. In the case of multiple personality, the personalities of "hysterics" may alternate with one another or with the "normal" personality: "Where there are more than two personalities, we may have two hysteric states successively changing with each other, and it may be, with the complete healthy person [normal personality]" (p. 172).

Like many of his contemporaries (e.g., Janet, 1907; Sidis, 1902; Sidis & Goodhart, 1904), Prince was interested in the structure of personality organization and the divisions ('splits') and multiplications that it manifested. He devoted a great deal of his academic writing to the development of a structural model of personality. This structural model accounted for both the integrated functioning that is evident in the normal population and the disintegrated (dissociated) functioning that he observed in his dissociative patients, such as Miss Beauchamp and B.C.A. (e.g., Prince, 1921, 1924). Prince was one of the first to conceive of dissociation as a mechanism which was not solely pathological, but which could operate as a part of normal psychological functioning (Prince, 1909). However, unlike contemporary ideas of a continuum of dissociative experience that emphasize dissociative phenomenology, Prince remained firmly focused on the structural elements of psychic functioning and how psychological systems and complexes (associated ideas) become disconnected and synthesized.

The structure and dynamics of personality functioning seemed to have a greater interest to Prince than the etiological factors which gave rise to dissociations in the otherwise integrated organization of "unitary complexes and systems" (Prince, 1921, p. 408). According to Prince (1906b), different structural elements of the psyche (i.e., the "hysteric" and

"normal" personality states) in double or multiple personality could be evoked (or caused to alternate) by "the hypnotizing process … or as a result of emotional shock [trauma], … or it may be without demonstrable cause" (p. 174). Prince's greater concern for (a) the structure/dynamics of personality than (b) the ætiology of dissociation, is the reverse of what we see in the contemporary study of dissociation and dissociative disorders. Today, etiological factors seem to attract more attention than the dissociated structure and organization of personality.

Dissociation in British Psychiatry During and After World War I

As noted above, dissociation received much attention in the early twentieth century through the work of F. Myers, Sidis, Prince (e.g., F. Myers, 1903; Prince, 1906a; Sidis, 1902), and others (e.g., W. F. Prince, 1917). Less well-known is the interest of several British Army psychologists, especially Charles Samuel Myers (1916, 1920–21, 1940; cf., Van der Hart, Van Dijke, Van Son, & Steele, 2000; Van der Hart, Nijenhuis, & Steele, 2006).

Charles Myers

Myers (1873–1946) found Janet's dissociation theory of great clinical value for the diagnosis and treatment of traumatized combat soldiers (cf. Van der Hart & Brown, 1992). In reflecting on his clinical experiences with acutely traumatized WWI combat soldiers, Myers (1940) found that the mental condition in which his patients (re)experienced their trauma could best be described as a (dissociative) personality, i.e., an 'emotional' personality. The failure to integrate the various sensory and psychological aspects of horrific experiences had led to a division into an "apparently normal personality" and an "emotional personality."

Myers' conceptual formulation (i.e., of the apparently normal personality and the emotional personality) can be regarded as an important precursor to modern claims that acute stress disorder and posttraumatic stress-disorder are actually dissociative disorders (cf., Chu, 1998; Spiegel & Cardeña, 1991; Nijenhuis, 2015; Van der Hart et al., 2006). Myers described an acutely traumatized patient in a stuperous state as follows:

> At this stage, the normal personality is in abeyance. Even if it is capable of receiving impressions, it shows no signs of responding to them. The recent emotional [i.e., traumatic] experiences of the individual have the upper hand and determine his conduct: the normal has been replaced by what we call the 'emotional' personality. Gradually or suddenly an 'apparently normal' personality usually returns—normal save for the lack of all memory of events directly connected with the shock, normal save for the manifestation of other ('somatic') hysterical disorders indicative of mental dissociation. Now and again there occur alterations of the 'emotional' and the 'apparently normal' personalities, the return of the former being often heralded by severe headache, dizziness or by a hysteric convulsion. On its return, the 'apparently normal' personality may recall, as in a dream, the distressing experiences revived during the temporary intrusion of the 'emotional' personality. The 'emotional' personality may also return during sleep, the 'functional' disorders of mutism, paralysis, contracture, etc., being then usually in abeyance. On waking, however, the 'apparently normal' personality may have no recollection of the dream state and will at once resume his mutism, paralysis, etc.
>
> *p. 66–67*

Following the therapeutic lead of Janet, Myers (1920-21; cf. Van der Hart & Brown, 1992) emphasized the integration of traumatic memories rather than abreaction. This approach implies the integration of both personalities (Myers, 1940).

Thomas Mitchell and William McDougall

Several post-World War I British psychiatrists and psychologists were also very interested in dissociation (e.g., McDougall, Mitchell and Hart). Mitchell (1922) summarized the then current state of knowledge regarding dissociation:

> It is now very generally admitted by psychologists that in some persons consciousness may become split up into two or more parts. The split-off or dissociated portion may be but a fragment of the whole self, or it may be so extensive, so complex, and so self-sufficient as to be capable of all the functions of a personal consciousness. In hysteria we find isolated paralyses or localized anæsthesias which are due to the dissociation of relatively simple ideas, or we may find a splitting so deep, a dissociation of so many kinds of mental activity, that it leads to a complex change of the personality.
>
> *p. 105*

Both Mitchell (1921, 1922) and McDougall (1926) took issue with what they perceived as Janet's mechanistic view of the construct; they thought that Janet was describing separate mental systems that had no 'sense of self.' Mitchell and McDougall's may have derived this understanding of Janet by reading only *The Major Symptoms of Hysteria* (Janet, 1907), which was available in English. In many of his original French publications, Janet had emphasized the sense of self as a basic characteristic of dissociative mental states (e.g., Janet, 1889/2022a,b). Nevertheless, Mitchell and McDougall shone light on an issue that is still difficult to grasp. For Mitchell (1922), that which is dissociated always becomes part of, or forms the basis for, another personality. Discussing Janet's dissociation theory, he wrote:

> [I]t cannot be too often repeated and insisted on that we have absolutely no knowledge of any such isolated mental material. If normally an experience that passes out of consciousness is conserved as a psychical disposition, it is as a psychical disposition of *some* personality. If it is not dissociated, it remains part of the normal personality and retains the privilege of being able to reappear above the normal threshold. But if its passage out of consciousness is accompanied by dissociation, it may continue to exist as an unconscious psychical disposition or as a coconscious experience, and *forms an integral part of some personality which may or may not be wider than that which manifests in waking life.*
>
> *p. 113/4, emphasis added*

In his major work on abnormal psychology, McDougall (1871–1938) concurred with Mitchell:

> [W]e must interpret the minor phenomena of dissociation in the light of the major cases, the extreme cases in which the phenomena lend themselves better to investigation. In all such major cases, we find the dissociated activity to be not something that can be adequately described as an idea or a group or train of ideas, but rather the self-conscious purposive thinking of a personality; and, when we study the minor cases in the light of the major cases, we see that the same is true of them.
>
> *1926, pp. 543/4*

For McDougall, Mitchell, and many others (e.g., Janet, Prince, C. Myers), what was dissociated was not simply an isolated, non-integrated psychological element of an experience (e.g., the memory of the event) that existed in an agent-less vacuum. Rather, what was dissociated formed another personality, with its own sense of self, perceptions, thoughts, feelings, images, etc, within the individual. Why? Because the dissociated material (1) was made up of multiple elements of psychological experience (e.g., memories, emotions, conations, sensations), (2) had a sense of self (e.g., the ability to introspect and the capacity to remember autobiographical experiences knowing that they are one's own) and, (3) operated more or less independently of the dominant personality (or, in the case of DID, operated more or less independently of other personalities). In short, the personality or personalities that were developed by the failure to integrate, perceptions, thoughts, feelings, images, etc., into a unified personality were more or less independent psychobiological organizations that had a sense of self.

Italian Cases of Dissociative Identity Disorder from the Early Twentieth Century

While more commonly recognized in France and Great Britain in the early twentieth century, perhaps because students of dissociation were more versed in French and English writing, cases of dissociative disorder were evident elsewhere. For example, Ellenberger (1970) noted in Italy Morselli's case of Marisa from the early 1900s, where EEG recordings were taken on two of her dissociative identities. Yet, he drew most attention to Morselli's important DID case study of Elena F., published in 1930. Recently, Schimmenti (2017) presented a more extensive description of this case not previously available in the international literature and summarized it as follows:

> The case of Elena has been considered in literature as one of the most remarkable cases of multiple personality ever published. In fact, before treatment, Elena showed alternating French- and Italian speaking personalities, with the Italian personality knowing nothing of her French counterparts. After a difficult treatment involving recovered memories of incestuous attacks by her father, which were proven to be true, Elena fully recovered from her symptoms.
>
> *p. 1*

Schimmenti also discussed Elena's psychoform and somatoform symptoms according to a contemporary perspective on the relationally traumatic origins of dissociation and dissociative identity disorder.

Dissociation in the Psychoanalytic Literature

Josef Breuer and Sigmund Freud

Although it may often be understated, downplayed, or ignored, dissociation takes pride of place as the first identified mechanism of ego defence in psychoanalysis (Vaillant, 1992). In 1893, Breuer and Freud wrote:

> …we have become convinced that *the splitting of consciousness which is so striking in the well-known classical cases under the form of* 'double conscience'[5] *is present in a rudimentary degree in every hysteria, and that a tendency to such a dissociation, and with it the emergence of abnormal states of consciousness (which we shall bring together under the term 'hypnoid'), is the basic phenomena of this neurosis*. In these views we concur with Binet and the two Janets. … These hypnoid states share with one another and with hypnosis … one common feature: the ideas which emerge in them are very intense but are cut off from associative communication with the rest of the content of consciousness.
>
> *p. 12, italics and footnote in original*

Breuer's concept of hypnoid states (see quotation above) was his adaptation of the French expression for somnambulistic states. Yet despite their general agreement with French observations and thoughts, Breuer and Freud (1893) claimed that "splitting of the mind" or "splitting of consciousness" was not related to a constitutional predisposition to mental weakness; but rather that mental weakness was brought about by dissociation. This idea contradicted what was believed to be Pierre Janet's formulation that psychological weakness (manifesting in low integrative capacity) was a biological predisposing factor for the "splitting of consciousness" (i.e., dissociation) that gave rise to hysteria. In passing, it should be noted that it would be an oversimplification of Janet's ideas to concentrate on biological predisposition. As outlined above, Janet was very aware of factors other than biological predisposition that contributed to a lowering of integrative capacity (e.g., physical ill-health). Furthermore, like Breuer and Freud, Janet emphasized the disintegrative effect of the vehement emotions experienced during and after trauma (Van der Hart & Rydberg, 2019).

Freud himself initially perceived dissociation as an ego defence against the intense affect that manifested in hysterical paralysis (Freud, 1893). He also initially gave childhood trauma, especially abuse, a core etiological role in hysteria (Freud, 1896). However, his focal interest in dissociation and abuse were short-lived. Two years later he began to work on his repression model (e.g., Freud, 1895) and turned his attention away from dissociative phenomena in general and multiple nuclei of consciousness in particular[6] (See O'Neil, Chapter 8, this volume). In addition, he quickly came to place great emphasis on the etiological role of instinctual drives and intrapsychic conflict in the development of hysteria and other neurotic forms.

Freud did briefly return to the topic of multiple centers of consciousness in 1912 (cf., Crabtree, 2007), where in his 'a note on the unconscious,' he argues against the existence of a "consciousness of which its owner himself is not aware" (p. 263), preferring to speak of "oscillating between two different psychical complexes which become conscious and unconscious in alternation" (p. 263). It seems he correctly understood that consciousness could not be divided within a single owner, but he did not have room for multiple consciousnesses with different owners. This notion is quite distinct from how DID, for example, is conceptualized, where with multiple centers of consciousness come multiple owners and first person perspectives (see Nijenhuis, 2015, for further and wider discussion).

Discussion of dissociation was largely absent from early twentieth-century psychoanalytic literature (Hart, 1926). However, neither dissociation nor trauma vanished from the rise and evolution of psychoanalytic ideas (e.g., Alexander, 1956); over time conceptualizations of dissociation were developed from psychoanalytic frameworks. Perhaps Erdelyi (1994) said it best when he stated that "dissociationism itself was not abandoned or absorbed, but rather a dissociationism different from Janet's was pursued" (p. 9).

In the psychoanalytic literature, dissociation is often referred to as a defence,[7] be it immature or neurotic (see Vaillant, 1992). From this perspective, integrated functioning temporarily (and defensively) gives way in order to minimize the impact of internal and external stressors.

The core of the difference between this psychoanalytic view of dissociation and the nonpsychoanalytic views that were prevalent in the late nineteenth and early twentieth centuries is the following. Nonpsychoanalytic investigators conceptualized dissociation in terms of two aspects: (1) integrated functioning that temporarily gave way—i.e., integrative failure (Liotti, 2009)—in the face of stressors, and (2) the concomitant development of a separate, 'split off,' psychic organization, personality, or stream of consciousness. This separate organization was made up of the unintegrated or only partly integrated perceptual and psychological elements of the traumatizing event. This psychic organization operated outside of the individual's conscious awareness and could be accessed by various means including hypnosis and automatic writing. It was the division into multiple centers of consciousness or personalities (i.e., dissociation) that

caused such hysterical (dissociative) symptoms as amnesia and contractures. For nonpsychoanalysts, dissociation referred not only to insufficient integration, but also to a psychical organization or structure (i.e., a dissociative psychic organization). Early Freudians, on the other hand, limited their view of dissociation solely to the first aspect (i.e., the process of failed integration, which, for the analysts, was motivated by the ego in the service of defence).

The nonpsychoanalytic understanding of dissociation differed substantially from Freud's general framework and guiding principles. This made direct application from one model to another conceptually difficult (Hart, 1926). A clearer conceptualization of dissociation as a psychical or structural (systemic) organization remained a task for later psychoanalytic writers, such as Ferenczi and several object relations and relational theorists (Tarnopolsky, 2003; Howell & Itzkowitz, 2016; See Howell & Itzkowitz, Chapter 45, this volume).

Sándor Ferenczi

Being schooled in the psychological effects of trauma during his time as a World War I army psychiatrist, Ferenczi was probably the earliest psychoanalytic writer to give serious attention to dissociation. In 1933, Ferenczi noted that dissociation or "splits in the personality" reflecting the structure of the psyche, were related to childhood trauma:

> If the shocks [traumas] increase in number during the development of the child, the number and the various kinds of splits in the personality increase too, and soon it becomes extremely difficult to maintain contact without confusion with all the fragments, each of which behaves as a separate personality yet does not know of even the existence of the others.
>
> *p. 229*

Although he probably overstated the degree of separateness of these dissociative personalities, Ferenczi provided in the early 1930s a rudimentary prototype of the contemporary posttraumatic model of dissociation and DID (e.g., Kluft, 1985; Putnam, 1989b, 1997; Ross, 1989, 1997; Howell & Itzkowitz, 2016). Also, he was the first to distinguish perpetrator introjects in abused individuals, which constitute a major focus in modern dissociative disorder treatment (e.g., Schwartz, 2013).

Ronald Fairbairn

The object relations theorist Fairbairn (1944/1992), argued that dissociation was the basis of hysteria:

> Here it may be added that my own investigations of patients with hysterical symptoms leaves me in no doubt whatever that the dissociation phenomena of 'hysteria' involves a split of the ego fundamentally identical with that which confers upon the term 'schizoid' its etymological significance.
>
> *p. 92*

Thus, for Fairbairn, "dissociation," "schizoid," and "splitting of the ego" were interchangeable terms that referred to a specific type of division in psychic organization.

Bridging Psychoanalysis and Hypnosis: Herbert Spiegel

In 1963, Herbert Spiegel (1963) took up the term *dissociation* and used it in two related, but quite different ways: (1) dissociation as a defensive process, and (2) dissociation as a conceptual framework (i.e., the dissociation-association continuum). In reference to defensive process, Spiegel (1963) viewed dissociation as a "fragmentation process that serves to defend against anxiety and fear (or instinctual demands)" (p. 375). With reference to conceptual framework, Spiegel offered dissociation as one pole on a dissociation-association continuum that subsumed the phenomena explained by repression.

The dissociation-association continuum provided a dynamic model of psychological experience that was not constrained by continual references to instinctual conflict. Spiegel's dissociation-association continuum stretches from (a) evasive defence strategies which minimize anxiety and are associated with constricted awareness, through (b) strategies designed to sustain an adaptive level of awareness, to (c) the resurfacing and (re)integration of dissociated 'fragments' which leads to a more expanded level of awareness, and creativity and growth. Thus, for Spiegel, dissociation referred to (1) the dis-integration of otherwise associated ideas and (2) the constriction of awareness. Spiegel emphasized the defensive rather than the organizational aspects of dissociation.

Psychoanalytic studies of dissociation proliferated in the 1970s (e.g., Gruenewald, 1977; Lasky, 1978) and early 1980s (e.g., Berman, 1981; Marmar, 1980). The psychoanalytic understanding and treatment of dissociation continue to evolve (e.g., Blizard, 2001; Brenner, 2018; Bromberg, 1998, 2017; Chefetz, 1997, 2015; Davies & Frawley, 1994; Howell, 2005, 2011; Howell & Itzkowitz, 2016; Kluft, 2000; Loewenstein & Ross, 1992; O'Neil, 1997; Schwartz, 2013; Stern, 1997, see Chapter 20, this volume).

The Renaissance of Dissociation: Non-Pathological and Pathological Manifestations

Dissociation attracted only minimal attention in the 1940s and 1950s (e.g., Lipton, 1943; Maddison, 1953; Taylor & Martin, 1944), but did produce the famous DID case of "Eve" (Osgood & Luria, 1954; Thigpen & Cleckley, 1954, 1957). The general dearth of interest in dissociation continued during the 1960s even though one clinical paper argued that multiple personality was far more prevalent than generally assumed (Morton & Thoma, 1964). The end of the 1960s, however, was marked by a rise in academic, non-clinical interest in dissociation (or, at least, dissociation-like experiences). Unlike previous work, this new interest led to a broadening of the concept of dissociation; the concept of dissociation began to be applied to experiences that were unrelated to the division of the personality as an integrated whole (or what, at times, had been referred to as 'splits' in the personality), and also to experiences that went beyond dissociation as a defense.

At that time, dissociation was increasingly described in two ways: (1) as a continuum of phenomena that stretched from normal experiences (e.g., daydreaming, hypnotic trance) to clearly pathological experiences (e.g., multiple personality), and (2) as being synonymous with alterations in consciousness. Experiences that fell at the lower end of the dissociation continuum (e.g., daydreaming, trance) exemplified the emerging tendency to equate dissociation with alterations of consciousness. This new view of dissociation paid particular attention to *phenomenal* changes in conscious experience from a normal waking state (as opposed to the earlier focus on structural (systemic) divisions of the personality or multiplications in personalities—which, of course, also have phenomenal correlates).

Some alterations of consciousness may still entail a "breakdown" in integrated functioning,[8] the *sine qua non* of the American Psychiatric Association's (2000) definition of dissociation, and also evident in the DSM-5-TR's characterization of dissociative disorders.[9] For example, during a daydream, the person may not integrate stimuli from the outside world into his or her conscious experience. The crucial point, however, regarding dissociation-as-alterations-of-consciousness is that the origin of the phenomenal experience is *not* derived from a division into personalities, but rather a failure to encode information. That is, a duality or plurality of personalities (or dissociative parts of the personality) is not necessary to have this type of "dissociative" experience. Echoing the thoughts of F. Myers in the nineteenth century, this view of dissociation holds that dissociative experiences are neither the exclusive domain of the clinical world, nor are they restricted to symptoms. However, unlike F. Myers, and others (e.g., M. Prince), this modern view focuses largely on phenomenal expressions rather than underlying psychic organization.

Charles Tart and Arnold Ludwig

In 1969, Charles Tart published his monumental edited volume, *Altered States of Consciousness*. This work outlined the alterations in consciousness that were induced by psychedelic drugs, hypnosis, and meditation. In addition, the volume examined specific altered states of consciousness (ASC) such as depersonalization, derealization, trance states, absorption, and some of the residual effects of such states (e.g., subsequent amnesia). Of most interest to the current discussion is the opening chapter by Arnold Ludwig, a reprinting of his 1966 paper, "Altered States of Consciousness." The importance of this chapter lies in Ludwig's definition of ASC. He does not view ASC as analogous to dissociation, but his definition of ASC is clearly comparable to contemporary understandings of the dissociative continuum. Ludwig defined ASC

> …as any mental state(s), induced by various physiological, psychological or pharmacological maneuvers or agents, which can be recognized subjectively by the individual himself (or by an objective observer of that individual) as representing a sufficient deviation in subjective experience or psychological functioning from certain general norms for that individual during alert, waking consciousness. This sufficient deviation may be represented by a greater preoccupation than usual with internal sensations or mental processes, changes in the formal characteristics of thought, and impairments of reality testing to various degrees.
>
> *p. 11*

In advance of, but consistent with, contemporary continuum ideas, Ludwig (1969) argued, "that ASC might be regarded…as a 'final common pathway' for many different forms of human expression and experience, both adaptive and maladaptive" (p. 20). The year after Ludwig published this idea (1966), West (1967) made similar assertions: Dissociation could be *experienced* in both pathological and non-pathological forms.

In later work, Ludwig (1983) clearly implied a continuum of dissociative experience when he suggested that both daydreams and multiple personality are examples of dissociation. Still, he grappled with two questions: (1) What should fall under the banner of "dissociation?" and (2) Is "dissociation" analogous to ASC?

> …[I]t is difficult to know the extent to which many other altered states of consciousness, such as transcendental meditative states, Yoga, alpha rhythm and peak experiences, should be regarded as examples of dissociation or whether dissociative states should be regarded as a subcategory of altered states of consciousness.
>
> *Ludwig, 1983, p. 94*

The question of what does and what does not constitute dissociation continues to be a source of disagreement; this, in turn, has serious consequences for the definition, theoretical utility, and descriptive value of the concept (e.g., Cardeña, 1994; Dell, 2009).

Recently, Nijenhuis, Van der Hart, and Steele (2002; cf., Nijenhuis & Van der Hart, 2011; Van der Hart et al., 2006) have drawn upon both clinical and basic research to argue that, for the sake of clarity and clinical accurateness, dissociation should revert to its original Janetian understanding. By this they mean that dissociation pertains to the development of two or more parts of the personality that are insufficiently integrated with each other; most of these dissociative parts are characterized by a significant retraction of the field of consciousness. However, there are also other perspectives on these matters that attempt to provide clarity. Yet, if this view were adopted, dissociative episodes and ASC would be distinct psychological phenomena (though they may occur together). However, the relationship between ASC and dissociation of the personality is asymmetrical. Whereas the latter implies the presence of the former (because structural dissociation does not inhibit ASC), ASC do not necessarily imply a dissociation of the personality, or multiplication of personalities.

Henri Ellenberger and the 1970s

A remarkably rich and fertile volume that regenerated clinical interest in dissociation was published in 1970—Henri Ellenberger's monumental monograph, *The Discovery of the Unconscious*. In a highly detailed and stunning piece of scholarship, which provided a detailed overview of many historic DID cases, Ellenberger reintroduced the modern reader to Pierre Janet and his dissociative model of hysteria. Ellenberger demonstrated the importance of Janet's ideas not only to his contemporaries, but also to the evolution of dynamic psychiatry. *The Discovery of the Unconscious* has influenced both clinical and non-clinical scholars and researchers; it continues to be a valuable source of historical information today.

At least four significant developments occurred in the early 1970s: (1) the publication of Sybil (Schreiber, 1973); (2) the publication of several papers that outlined treatment approaches for multiple personality disorder (MPD; e.g., Allison, 1974; Bowers et al., 1971; Gruenewald, 1971; Howland, 1975); (3) the publication of one of the first controlled attempts to examine the transfer of cognitive experiences across so-called dissociative barriers in MPD (Ludwig, Brandsma, Wilbur, Benfeldt, & Jameson, 1972); and (4) with the publication of Hilgard's neo-dissociation theory, mainstream cognitive psychology became seriously interested in dissociation.

Ernest Hilgard

Coming from a long background in hypnosis research (Hilgard, 1973), and being captivated by the secular interests in altered states of consciousness that were occurring at that time, Hilgard became deeply interested in dissociation. In 1974, he induced in highly hypnotizable students analgesia for cold-pressor pain (i.e., from immersion of an arm in ice-cold water). To his initial surprise, Hilgard discovered that he could use automatic writing or talking to communicate with a "subconscious" part of the individual that reported feeling the pain and discomfort that the hypnotized person did not feel. Hilgard (1977) later referred to this "subconscious" part as the "hidden observer" (see also Hilgard, 1992).

From this and further experiments with hypnosis, Hilgard developed his neo-dissociation theory, which explicitly acknowledged the influence of Janet in particular, and other early investigators of dissociation who had identified "vertical splits in consciousness" that seemed to account for various psychiatric and psychological phenomena. Yet, unlike classic models of dissociation that emphasized (1) structural divisions of the personality (2) in order to understand

the phenomena of hypnosis, somnambulism, and hysteria, neo-dissociation theory emphasized (1) mental activities or structures (2) in order to explain the simultaneous or near-simultaneous performance of different activities such as automatic writing and monitoring unfelt pain. Janet called such consciously unwilled activities as automatic writing, *psychological automatisms*, orginating from deliberate actions from other personalities.

For neo-dissociation theory, mental structures (rather than personality structures) and their ostensibly concurrent yet somewhat independent functioning were the focus of attention. However, both neo-dissociation theory and classic dissociation theory addressed the misapprehension that the mind is unitary. Otherwise, their respective concentration on cognitive structures and personality structures were in keeping with the dominant discourse of their times.

Unlike previous models of dissociation, neo-dissociation theory brought into the domain of dissociation the simultaneous performance of two cognitive activities (e.g., driving a car while simultaneously being deeply absorbed in a daydream or conversation). Turning to more clinical phenomena, Hilgard (1973) argued that because neo-dissociation theory was focused on the simultaneous operation of control processes it might provide a framework for understanding multiple personality, which he called an example of "dissociation *par excellence*" (p. 216, italics in original). Following Hilgard's lead, Kihlstrom has used neo-dissociation theory to understand various manifestations of clinical dissociation (e.g., Kihlstrom, 1992a, 1992b; Kihlstrom, Tataryn, & Hoyt, 1993).

During the 1970s, academic and non-clinical interest in dissociation gave way to a significant rejuvenation of clinical interest in dissociation. Like much of the nineteenth-century *fin-de-siècle* interest in dissociation, the study of clinical dissociation in the late 1970s focused primarily on multiple personality. A rapidly growing number of cases of multiple personality were identified in North America. In the absence of suitable outlets for exchange (i.e., dedicated conferences and journals on dissociation), clinicians communicated their ideas, thoughts and experiences informally, in what Ross (1997) and others have called an oral tradition (e.g., letters, telephone correspondence, generic conferences). Kluft (2003) has provided a personalized account of the clinical developments and enthusiasm that characterized that time. Greaves (1993) has described the skepticism in mainstream psychiatry evoked by the rejuvenation of clinical interest in multiple personality.

1980 and Beyond

Without doubt, 1980 was a watershed year for the study of dissociation. Not only did that single year see the publication of several articles on MPD (e.g., Bliss, 1980; Coons, 1980; Rosenbaum & Weaver, 1980), including Greaves' (1980) classic review, but the DSM (1980) moved to a phenomenological classification of psychiatric illness in which the dissociative types of hysterical neurosis were grouped with depersonalization under a new major heading: Dissociative Disorders. The 1980 publications were soon followed by various other pioneering articles and books (e.g., Crabtree, 1985; Putnam, 1989b; Ross, 1989), and especially a series written by Richard Kluft in which he highlighted the link between dissociation and hypnosis (e.g., Kluft, 1982, 1983, 1984a,b).

The consolidation of the Dissociative Disorders in DSM-III, however, came at a cost; the conversion type of hysterical neurosis, which represented somatoform expressions of dissociation, so central to earlier conceptualizations of dissociation, was regrouped under another new major heading, Somatoform Disorders, together with somatoform conditions not classically considered as dissociative. The DSM-5 has gone some way to mending this artificial division by including alterations in sensory-motor functioning (i.e., somatoform dissociation; Nijenhuis, 1999) as part of the diagnostic criteria for DID. A further issue with DSM-III was that its focus on phenomenology shifted attention (1) away from the structure or organization of the personality/psyche, and (2) onto observable or reported symptoms (i.e., phenomena), such that in the dissociation field dissociative phenomena became disconnected from their structural origins. This development was paralleled by a tendency to substitute the term 'multiple personalities' for concepts such as 'personality states,' 'identity states,' 'ego states,' 'self-states,' 'dissociative parts,' or even 'aspects' (cf. Moskowitz & Van der Hart, 2020).

Despite the sidelining of somatoform expressions of dissociation and the shift of emphasis away from the structure of personality/psyche, DSM-III had an immense and salutary impact on the study of dissociation. Because the phenomenological view is not tied to an underlying structure/organization, dissociation became understood more broadly as a psychologically-derived "breakdown" in normal integrated functioning. This focus on phenomenology supported the growing trend to conceptualize dissociation along a continuum that stretched from (1) phenomena that represented basic everyday "breakdowns" in integrated functioning like daydreams to (2) severe pathological "breakdowns" in integrated functioning, such as symptoms and disorders (e.g., Braun, 1988).

Based on discrete phenomenological experiences, self-report dissociation questionnaires began to be developed during the mid-1980s.[10] These measures have tended to focus on a wide range of phenomena that are regarded as

dissociative in contemporary thinking. As one of the authors of the Dissociative Experiences Scale (DES) notes: "The definition of dissociation incorporated into the DES was intentionally broad. The authors attempted to include as wide a range of items as possible in the DES. … Consequently, the authors included many different kinds of *experiences* that had been previously *associated* with dissociation" (Carlson, 2005, p. 42, italics added). Most measures of dissociation have not been restricted to assessing phenomena that originate from a dissociative personality structure (which was the focus of attention for scholars of dissociation until contemporary times). The Somatoform Dissociation Questionnaire (SDQ-20) is one of few exceptions in this regard, because its authors derived the scale directly from symptoms which manifest from one or more dissociative parts of the personality (Nijenhuis et al., 1996; see Chapter 33, this volume).

Measures of *peritraumatic dissociation* (e.g., Peritraumatic Dissociative Experiences Questionnaire, Marmar, Weiss, & Metzler, 1997) are even further removed from the historical understanding of dissociation as division/multiplication, but fit with more phenomenological approaches towards dissociation. Trait dissociation measures like the DES include items that tap the influence of one personality on another (e.g., identity alteration; voice hearing, for example Mazzotti et al., 2016). Peritraumatic measures, however, tend to focus primarily on narrowing of the field of consciousness, alterations in sensory perception, and the activation of multiple streams of consciousness. Peritraumatic dissociation researchers do not deny dissociative division of the personality, which may be derived from dissociative episodes at the time of a trauma (see Marmar, Weiss, & Metzler, 1997). However, such instruments assess phenomenological experiences that occur around the time of a trauma (i.e., during or immediately after). As such they (1) do not fully capture the phenomena that are associated with dissociative divisions of the personality (because such phenomena may not start until *after* the trauma, *once* the personality has been multiplied), and (2) peritraumatic phenomena may be unrelated to the development of dissociative identities and may represent mere alterations of consciousness (e.g., seeing the world as a fog).

The development and use of dissociation questionnaires provided a basis for the empirical examination of clinically observed developmental, affective, experiential, and environmental correlates of dissociation (e.g., Coons & Milstein, 1986; Putnam, Guroff, Silberman, Barban, & Post, 1986). Moreover, because many self-report measures of dissociation are based on the continuum model of dissociation, hypotheses that were drawn from clinical cases of dissociation could be legitimately tested in large, non-clinical samples. In addition, the continuum model suggests that the findings from non-clinical studies of dissociation could enlighten clinical understanding. In short, the combination of (1) dissociation questionnaires and (2) the recent dominance of the continuum model have allowed an integration of clinical and non-clinical research and theory.

However, both (a) the continuum model and (b) questionnaires that are based upon that model may create obstacles to a clear understanding of the concept of dissociation, as they remove a discernible structural foundation for, and therefore a clearly defined set of, dissociative phenomena.[11] Most forefathers of the study of dissociation employed a much narrower domain of dissociative phenomena that was limited to those experiences that resulted from a dissociative structure that gave rise to the multiplication of personalities. The many phenomena that are considered to be "dissociative" by the continuum model (and which are assessed by most dissociation questionnaires) have many different psychological origins (Holmes et al., 2005). The original domain of dissociative phenomena had just one psychological origin—division of the personality into dissociative parts and the multiplication of centers of consciousness.

Changes in the Concept of Dissociation: Progress in Understanding or Conceptual Drift?

The concept of dissociation in the eighteenth, nineteenth and early twentieth centuries related to a division of the personality/multiplication of personalities. This division/multiplication was best illustrated by actions that were performed outside the personal awareness of the individual. Initially, it was thought to be due to artificial somnambulism (e.g., the Marquis de Puységur). As the psychological phenomena resulting from a division/multiplication began to be appreciated, clinicians came to understand hysterical symptoms and hysterical neurosis in terms of dissociation. Janet was the first to recognize the connection between hysterical divisions/multiplications and exposure to traumatizing events[12] (see Dorahy & Van der Hart, 2007 for an historical analysis of the link between trauma and dissociation). In the case of traumatic stress, Janet believed that an alternate ego or personality was created, which was composed of the unintegrated psychological and behavioral elements of the trauma.

According to Janet, dissociation as a division of the personality/multiplication of personalities could be caused by traumatizing events or severe illness. He understood hysterical symptoms as dissociative in nature. He could access the hidden personalities responsible for these symptoms using artifical somnambulism, automatic writing or related interventions. Janet viewed dissociation and dissociative phenomena as forms of psychological pathology. Several of his contemporaries (e.g., F. Myers, M. Prince) did not restrict dissociative phenomena to clinical symptoms and expressions. Yet, they still conceptualized dissociation in structural terms. The careful clinical observations of the classic

historical cases map-on very neatly to the phenomena evident today in dissociative disorders, particularly DID (Van der Hart, 2016).

Yet, the latter half of the twentieth century increasingly presented a much broader version of dissociation. As noted above, several sources contributed to this change: (1) the study of altered states of consciousness (e.g., Ludwig, 1966; Tart, 1969) and the subsequent acceptance of a dissociative continuum which came to equate almost any altered state of consciousness with dissociation; (2) DSM-III's strict adherence to non-conceptual, phenomenological descriptions of mental disorders; and (3) dissociation questionnaires that used *phenomena* rather than *structure* as their starting point. Those phenomena encompassed a broad range of clinical and non-clinical experiences that were believed to exemplify a "breakdown" in integrated functioning.

Despite being ill-defined, almost any psychologically-derived "breakdown" in integrated functioning was considered to exemplify "dissociation." These included episodes of selective inattention, where the stimuli 'split-off" from conscious awareness are irrelevant to the task at hand or the experience being retrieved (Meares & Barral, 2019). Everyday non-clinical "breakdowns" in integrated functioning were conceptualized as operating on the same psychological continuum as the most pathological expressions of dissociation. This heterogeneous version of dissociation led to an inevitable result—the implicit hypothesis that different "dissociative" phenomena had different causes (Holmes et al., 2005) and correlates. Some nonpathological alterations in perceptual experience were considered to have many possible causes. Other "dissociative" phenomena were believed to be due to the operation of simultaneous independent streams of consciousness. Finally, pathological phenomena such as amnesia or dissociative identities were explained as being due to a trauma-induced division/multiplication. So-called "breakdowns" in integrated functioning were the basis from which dissociative phenomena were derived and understood.

Historically, structural divisions between personalities or centers of consciousness were the basis from which dissociative phenomena were derived and understood. The broader understanding of dissociation, which does not have conceptual linkages to the original descriptions of Janet and others, brought with it a variety of disadvantages, the most serious being a fuzzy, all-encompassing meaning (Frankel, 1994; Marshall, Spitzer, & Liebowitz, 1999; Meares, 2012) and a concomitant lack of clearly definable phenomenological boundaries (Cardeña, 1994; Dell, 2009; Nijenhuis & Van der Hart, 2011; Van der Hart, Nijenhuis, Steele, & Brown, 2004). Arguably, this conceptual confusion about what dissociation is has not reduced in the past decade, despite diverse efforts to provide clarity about specific understandings (e.g., Chefetz, 2015; Frewen & Lanius, Howell & Itzkowitz, 2016; Meares, 2012; Nijenhuis, 2015, 2019; Ross, 2013; Van der Hart et al., 2004). The widening breadth and increased complexity of the construct from historical times, efforts to measure it in conceptually diverse ways and the impact divergent understandings of dissociation have on neurobiological, psychological, somatic and social functioning, along with the different theoretical lens that can be brought to bear on it, may render it unlikely that a unified, universally-accepted conceptualization of dissociation is possible. As Braude (1995) has noted, "we needn't assume that dissociation is a neat enough concept to be captured by a single, crisp, and comprehensive philosophical or scientific analysis" (p. 94). Nonetheless, it behoves researchers and theoretician working in the dissociative field to be clear how they are utilizing the term (Dell, 2009).

The question that theorists in the field of dissociation grapples with is whether it makes sense to refer to a large diversity of principles and phenomena by one name, and do the benefits of this approach outweigh the costs.

Contemporary Understandings and Challenges

This review and analysis of the history of the concept of dissociation has identified at least five important portrayals of dissociation: (1) dissociation was first utilized to describe a particular psychological organization (i.e., a division of personality or ego that gave rise to personalities or egos); (2) dissociation was reinterpreted by Freud and others as a defense (and is often subsumed under the concept of repression by psychoanalytic thinkers); (3) dissociation has been viewed as a process, which, for example, characterizes the initial division of the personality into dissociative parts following trauma and also the switching between dissociative identities; (4) dissociation came to be seen as a very broad set of experiences and symptoms that are characterized by a so-called "breakdown" in integrated psychological functioning; and (5) today, dissociation is widely believed to lie on a continuum (or continua) that stretch from normal experiences to pathological symptoms.

From our analysis of the historic and contemporary literatures, explanation of dissociation from its birth as a topic of scientific investigation till just after the middle of the twentieth century drew on a structural understanding where personality was divided/multipled into dissociative identities which manifest dissociative symtoms. At least two important versions of this structural conceptualization of dissociation were present: (1) hypnotically-induced divisions of the personality, and (2) trauma-induced divisions of the personality.

The hypnotic version of the structural conceptualization of dissociation applies to divisions of personality or multiplications in consciousness, that are (1) hypnotically-induced by either self or other, and (2) transient in nature. The leading examples where dissociation is induced by another are (1) the eighteenth and nineteenth-century studies of artificial somnambulism[13] and hypnosis, and (2) Hilgard's studies of the 'hidden observer' phenomenon. Self-induced (hypnotic) divisions/multiplications are probably best exemplified by mediums, such as those studied by members of the Society for Psychical Research in Britain. Following the hypnotic-induction procedure, the minds of these mediums divided into multiple 'streams of consciousness' that have a first person perspective. In mediums who acquired their skills through the use of auto-hypnosis, at least one 'stream of consciousness' operated outside his or her awareness. While for many mediums that stream could regularly be called upon, the divided psychic organization or structure was nonetheless transient in nature. That is, when the hypnotic state was terminated, the structural organization of the psyche also changed (i.e., the separate streams of consciousness were no longer easily accessible and were not spontaneously triggered while negotiating the environment, as is the case with trauma-induced structural dissociation. Rather, the hypnotic induction activated a structural dissociation, no matter how frequent it occurred, where this temporary organization remitted after the trance ended). It is essential to note that hypnotically-induced divisions of mind (and their accompanying hypnotic phenomena) are not the exclusive domain of the clinical world; such hypnotically-induced divisions of mind reflect a capacity that is possessed by many normal and healthy individuals. Dell (2017) has recently rekindled interest in the autohypnosis hypothesis of pathological (structural) dissociation. He concludes that hypnosis is a trait priming the development of dissociative disorders in the presence of trauma and other necessary factors (see Dell, Chapter 14, this volume).

The structural conceptualization of trauma-induced dissociation applies to a posttraumatic division of the personality into dissociated parts that are either (1) avoidant (phobic) of traumatic memories, or (2) fixed in these traumatic memories. Prominent historical scholars of clinical dissociation (e.g., Janet and C.S. Myers) espoused this view, which saw acute divisions/multiplications solidified and maintained through what in current times would be called affect dysregulation, and intense fear of mental content and external stimuli (i.e., Janet's phobia of traumatic memory; Van der Hart & Rydberg, 2019). This posttraumatic dissociative personality structure generates dissociative symptoms; these dissociative symptoms are both positive and negative, psychoform (cognitive-affective) and somatoform (sensorimotor). Thus, in contrast to the hypnotic structural version of dissociation, the posttraumatic structural version of dissociation refers only to psychopathology. The divisions of the personality/multipications of personalities which characterize dissociative psychopathology are relatively fixed and stable, and crucially have their own sense of self or first-person perspective (Nijenhuis, 2015), which differentiates them from other constructs, like states, complexes and schemas that are hypothesized to be present in healthy individuals (Moskowitz & Van der Hart, 2020; Nijenhuis, 2017). The memory composition, emotional range and behavioral patterns of self-conscious dissociative parts remain highly organized and divided. In the absence of effective treatment, the dissociated functioning of these parts will continue. In contemporary times this trauma-induced narrow version of dissociation is evident in theories accounting for dissociative identity disorder (Kluft, 2013), Bromberg's structural organization of the self *following* exposure to traumatizing events (Bromberg, 2009), Meares' (2012) dissociative theory of borderline personality, and Van der Hart et al.'s structural theory of dissociation of the personality (Nijenhuis, 2015; Van der Hart et al., 2006), to name a few. These frameworks have different foci and emphases, and to a greater or lesser extent overlap with Janet's theory, but each views trauma as central to division or dissociation at the level of personality or self, and each refer to phenomena that emanate from such a division.[14]

The two versions of the structural conceptualization of dissociation are not mutually exclusive and both apply the term *dissociative* only to the phenomena produced by the divided mind or divided personalities, and therefore dissociative phenomena have a single origin (i.e., division in the personality/multiplication of personalities).

Since the 1980s the structural conceptualization of dissociation, while still dominant as an account of DID, has been overshadowed and largely set aside in favour of a phenomenologically-based conceptualization of dissociation, where phenomena are grouped together under the term 'dissociation' based on being characterized by a failure to integrate or be aware of different elements of psychological experience or the environment. One root of this phenomenological understanding is the continuum model of dissociation which focuses on the *phenomena* themselves (rather than on their putative underlying ætiology, or the structural foundation which gives rise to them). The phenomenological conceptualization of dissociation is quite eclectic with regard to the ætiology of these phenomena. They may be due to (1) parallel 'streams of consciousness,' (2) a narrowing of the field of consciousness, (3) alterations in conscious experience, (4) defensive efforts to restrict conscious awareness, (5) a posttraumatic, divided/multipled personality structure, and so on.

Accounts of dissociation drawn from this perspective have generated an immense body of important clinical and experimental research, and lead to the clinically useful but conceptually fraught DSM-5 diagnosis of dissociative PTSD (i.e., the dissociative subtype of PTSD, APA, 2013), i.e., "PTSD with dissociative symptoms" (Dorahy & Van der Hart,

2015; Nijenhuis, 2017). Some conceptualizations of dissociation are narrow and exclude (typically positive) dissociative phenomena (e.g., flashbacks), perceiving dissociation more akin to 'shutdown' (e.g., hypoarousal, dorsal vagal collapse); others conceive of dissociation as very expansive, capturing a wide range of phenomena associated with a breakdown of integration that is exemplified in the concept of a dissociative continuum. While these vastly different views impact on the precision of the construct of 'dissociation' (e.g., Marshall, Spitzer, & Liebowitz, 1999), they have lead to a growing interest in phenomena described as dissociation in clinical and non-clinical populations. Significant efforts have been made to develop rich models of dissociation that offer more conceptual clarity and a tighter focus on dissociation than broad sweeping breakdowns in integrated functioning, even though their foundation does not lie in dissociation at the level of personality division/multiplication (e.g., Chefetz, 2015; Frewen & Lanius, 2015; Gold, 2020).

Conclusion

In conclusion, the dissociation field has experienced a shift from it roots. Historical formulations of dissociation had divisions of the personality/multiplication of personalities as the essence of dissociation and manifestations from such a structure delimited the positive and negative dissociative phenomena. Each dissociative structure had its own first-person perspective and sense of self, akin to awareness of its own existence. Alterations of consciousness were not considered dissociative in nature. Many contemporary formulations of dissociation have tended to take a broader approach based on phenomenological definitions in terms of what constitutes dissociative symptoms and experience, and their origins may differ. It may be difficult, or even undesirable, to reconnect these formulations with historical conceptualizations. Thus, scholars and clinicians need to be clear in how they are conceptualizing dissociation.

Clarity may be assisted by clearly differentiating and defining the following ambiguous terms and how they relate to one another: dissociation, personality, consciousness, identity, state (i.e., mental state, state of consciousness, ego state, identity state, self-state), alter personality, dissociative personality and dissociative parts of the personality (cf., Nijenhuis, 2015). Because many of these terms are effectively synonymous, it would probably be helpful to decide which terms are the preferred ones (e.g., Moskowitz & Van der Hart, 2020). Despite the current challenges around conceptual clarity, and perhaps as result of them, the study of dissociation continues to grow and expand.

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Notes

1 Despite the fact that dissociative phenomena were recognized well before 1812 (e.g., in the 1791 cases of multiple personality, Crabtree, 1993; or Mary Reynolds, the first American case of 'double personality,' S.L. Mitchell, 1816; S.W. Mitchell, 1888; see also Van der Hart, Lierens, & Goodwin, 1996, for a retrospective 16th century case of dissociative identity disorder, DID), the American physician, Benjamin Rush, devoted a chapter of his 1812 psychiatric text to what he named "dissociation." This may be the earliest medical use of the term (Carlson, 1986). Rush used the term to refer to patients who were "flighty," "hairbrained," or "a little cracked." According to Rush, dissociation came from "an association of unrelated perceptions, or ideas, from the inability of the mind to perform the operations of judgment and reason." Such dissociation was seen in patients with "great volubility of speech" and "rapid bodily movements."

2 In the clinical domain, dissociation was also linked to other disorders. For example, James (1995) noted that in the early 1860s, both Maury's (1861) famous study on dreams and Baillarger's (1862) review of this study proposed that certain psychotic patients were characterized by a doubling of the personality (*dédoublement de la personnalité*). Not long after, Littré's (1875) article on *double conscience* used the concept of dissociation to describe depersonalization.

3 However, some cases of clinical dissociation were reported by British physicians, such as the extreme case of H.P. (Bruce, 1895). Bruce attributed the radically different behaviors observed in two distinct states to alterations in the dominance of left and right hemispheres. Around this time, the British physician John Hughlings Jackson was developing his understanding of dissociation (see Meares, 2012). Hacking (1991) has presented several clinical cases of dissociation in Britain from the period of 1815–1875.

4 James' admiration for Janet's work is explicit in his 1894 review of Janet's ideas in which he suggested that "every psychologist should make their acquaintance" (p. 198).

5 The French term for 'dual consciousness.'

6 Erdelyi (1985) has argued that Freud used the terms repression and dissociation interchangeably.

7 Dissociation as a *defence* in psychoanalytic thinking can be distinguished from dissociation as *insufficient psychological capacity for integrated functioning* (e.g., Liotti, 2009). In the latter Janetian sense, dissociation may come to have a secondary defensive value.

However, unlike the psychoanalytic understanding, Janet's dissociation does not occur for the primary purpose of psychic defence (i.e., ego-derived expulsion or 'splitting off' of noxious internal experience).

8 In the contemporary dissociation literature the term "breakdown" is used synonymously with the term "disruption." It remains unclear exactly what these terms actually mean. For example, is a state of absorption in a book or television program accurately categorized as a "breakdown" or "disruption" in integrated processing in the same way as a failure to integrate traumatizing elements of an event? On account of their ambiguity these terms are often loosely applied and utilized.

9 Dissociative disorders in DSM-5 (APA, 2013) are characterizes by a disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior" (p. 291).

10 Many self-report measures of dissociation now exist, with common as well as more recent ones, including the Dissociative Experiences Scale (Bernstein & Putnam, 1986; Carlson & Putnam, 1993); the Multidimensional Inventory of Dissociation (MID; Dell, 2006); Multiscale Dissociation Inventory (MDI; Briere, 2002); the Somatoform Dissociation Questionnaire (Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1996), The Dissociation Tension Scale (Stiglmayr et al., 2010); Dissociative Symptoms Scale (Carlson et al., 2018), The Detachment and Compartmentalization Inventory (Butler, Dorahy & Middleton, 2019).

11 The problem of conceptual ambiguity in the contemporary understanding of dissociation has been identified before and one solution was sought with the DES-Taxon (DES-T). The DES-T is a subset of DES items which emerged statistically from studies of patients with dissociative and non-dissociative disorders. Taxon items represent a statistically derived cluster of symptoms experienced by those with a dissociative illness but not by individuals with a non-dissociative illness. The DES-T offered a measure of pathological dissociation as opposed to nonpathological dissociation. However, some pathological symptoms in the taxon model are not per se related to underlying division/multiplication and may have their foundation in other psychological sources; for example, some episodes of severe depersonalization (e.g., DES item 12: "some people have the experience of feeling that their body does not seem to belong to them"). With its basis in phenomena and not underlying psychological structure, the Taxon model does not provide an effective resolution to conceptual ambiguity in the modern understanding of dissociation.

12 In contemporary times the association between trauma and dissociation, and DID more specifically, has been a battle ground of vigorous debate, that has pitted the so-called trauma model against the so-called socio-cognitive model. On the one hand, trauma is argued as a primary (though not only) variable in the development of dissociative symptoms and some disorders, while on the other trauma is wrested from having explanatory value, and sleep disruptions, cognitive failures, suggestibility, fantasy proneness, social influences and iatrogenic factors are commandeered to account for a person believing they were traumatized or having a dissociative disorder (e.g., Boysen & VanBergen, 2013; Dalenberg et al., 2012; Kate, Hopwood, & Jamieson, 2020; Lynn, Lilienfeld, Merckelbach, Giesbrecht, & Van der Kloet, 2012). Increasing efforts are being made to bring together trauma and socio-cognitive influences for the development of dissociation and the dissociative disorders (e.g., Şar & Öztürk, 2013; Somer, 2016) or find areas of connection for where they might meet (e.g., Lynn et al., 2019).

13 We would hold that not all cases of artificial somnambulism displayed the induction of a transient division of personality, that is evident in hypnosis. In several classic cases of artificial somnambulism (e.g., Puységur's case of Victor Race) it seems that more stable dissociative parts of the person were evoked. Cases such as this are consistent with trauma-induced divisions of the personality as a whole.

14 It should be noted that Bromberg (e.g., 1998, 2009, 2017) views the healthy self as characterised by adaptive and fluid self-states partitioned by dissociation, but following traumatic relational experiences that compromise adaptive functioning, these self-states become further isolated so they exist more independently and produce a range of dissociative phenomena.

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2

THE CONCEPTUAL UNITY OF DISSOCIATION

A Philosophical Argument

Stephen E. Braude

Psychologists and psychiatrists have studied dissociative phenomena since the late nineteenth century. However, they demonstrate surprisingly little agreement about what dissociation is and about which phenomena exemplify it. Of course, many agree that certain florid phenomena count as dissociative – for example, fugue states and dissociative identity disorder (DID). But when mental health professionals tackle the topic of dissociation theoretically and attempt to define it, they do so in ways that often conflict with one another, and (perhaps most surprising of all) they tend to overlook a large and important class of phenomena. Historically – and contrary to what the recent clinical literature would lead one to believe – most (if not all) hypnotic phenomena have been regarded as dissociative (see, e.g., Gauld, 1992; Van der Hart & Dorahy, Chapter 1, this volume).

In the late nineteenth and early twentieth centuries, researchers of hypnosis were trying to study systematically the same sorts of subconscious mental divisions they believed occurred spontaneously in hysteria and to some extent in somnambulism. Indeed, some considered hypnotically-induced systematized anesthesia or negative hallucination to be *paradigmatic* instances of dissociation. Yet when clinicians now try to analyze dissociation, they typically ignore hypnotic phenomena and focus primarily on dissociation as it relates to trauma.

Despite evidence to the contrary (e.g., Crabtree, 1993, Braude, 1995; Van der Hart & Dorahy, 2009), historians of psychology usually credit Pierre Janet with having originated the concept of dissociation, although he regularly used the term "désagrégation" instead. But what matters is that Janet focused on a distinctive and relatively limited type of trauma-induced psychopathology, one which he considered to be a kind of weakness, a failure (in the face of disturbing events) to integrate parts of consciousness and maintain conscious unity.

However, thinking about trauma and psychological fragmentation has evolved in the century since Janet tackled the subject. Contemporaries of Janet – for example, James, Binet, Myers, Liègeois, and Sidis – also recognized an apparent causal link between trauma and dissociative pathology. But they tended to agree that the processes Janet was describing from cases of hysteria (including conversion disorder and double consciousness) were also at work in a wider variety of phenomena, drawn not just from psychopathology but also from experimental psychology and even everyday life (see e.g., Binet, 1896; Myers, 1903; Sidis, 1902). And along with that, they tended to view dissociation not as a weakness, but as a kind of capacity (not necessarily maladaptive) to sever familiar links with one's own mental states.

Significantly, this evolution of the concept of dissociation happened quite rapidly. Other turn-of-the-twentieth century researchers, interested at least as much in hypnosis as in psychopathology, were eager to explore the ways in which hypnotic states seemed to produce a kind of division or doubling of consciousness, or creation of seemingly autonomous sets of mental processes (for a quick history of these developments, see Braude, 1995; Van der Hart & Dorahy, Chapter 1, this volume. For a more detailed account, see Gauld, 1992). As Messerschmidt (1927) eventually made clear, these apparent divisions weren't as fully autonomous as they seemed. But that didn't undermine the view that the phenomena in question could arise either experimentally or spontaneously or, for that matter, pathologically or nonpathologically.

These nonpathological (including hypnotic) contexts, in which the concept of dissociation has historically played an important role, tend to be neglected by most clinicians. Given their pressing clinical concerns, perhaps that is not

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surprising. However, trying to grasp dissociation by considering it only as a disorder, as something pathological and of importance only (or primarily) to psychotherapy, is as misguided as trying to understand immaturity by focusing only on its relevance to marriage counselling. Moreover, examining what pathological and nonpathological dissociative phenomena have in common may bring clarity to other issues, such as the difference (if any) between dissociation and apparently similar or related concepts – in particular, repression.

In a fairly recent development, some clinicians have examined the concept of dissociation by using diagnostic surveys like the Dissociative Experiences Scale (DES; Carlson & Putnam, 1993) and the Multiscale Dissociation Inventory (MDI; Briere, 2002) – to consider how dissociative symptoms cluster. These survey instruments were designed as screening devices, to assess the presence or absence of phenomena already believed by the test designers to be dissociative. However, in subsequent studies of thousands of survey results, researchers have occasionally seemed to aim for something more ambitious – namely, to determine more precisely *what dissociation is*. But data of the sort elicited by these surveys can't tell us what the *concept* of dissociation is. After all (as I noted above), the surveys look only for symptoms *antecedently judged as relevant by their designers*, who are limited by their selective grasp of the history of the concept. What they most clearly tend to neglect are the many nonpathological hypnotic phenomena that have been considered dissociative (Dalenberg et al., Chapter 5, this volume), but which simply fall outside the purview of the surveys.

In some cases, the studies in question are even more problematical than these remarks might suggest. For example, Briere et al. (2005) apply the MDI to determine whether dissociation is a multidimensional construct, and they conclude that it is, and that "the notion of 'dissociation' as a general trait was not supported" (p. 221). Apparently, then, the authors see themselves as trying to settle the issue of what sort of thing dissociation is, *generally speaking*. Indeed, on the basis of their survey they claim that "the term dissociation may be a misnomer to the extent that it implies a single underlying phenomenon" (p. 230). We'll consider shortly whether dissociation can in fact be regarded as a single underlying phenomenon. But for now, I want only to observe that Briere et al. can't possibly have shown that it isn't (quite apart from concerns about using survey instruments for conceptual analysis). Briere et al. purport to uncover what dissociation is on the basis of a survey that tracks relationships among a handful of factors – of course, factors they antecedently determined to be relevant. Moreover, one of those factors is *identity dissociation* and, obviously, one can't analyze the concept of dissociation by appealing to that very concept. Thus, if Briere et al. are (as it seems) trying to analyze the concept of dissociation, their attempt is blatantly circular.

So I believe we need to do some conceptual and methodological housecleaning. I agree with Cardeña (1994; also Nijenhuis, 2015; Prince, 1905) that when clinicians attempt to characterize dissociation, they tend either to exclude too much or include too much. However (and apparently unlike Cardeña), I think it may be possible to pull together many of the varied intuitions about and approaches to dissociation and come up with a single, general, and useful characterization of dissociation (e.g., not just traumatic dissociation) that covers both its pathological and nonpathological forms, including many of those once deemed important but largely ignored today. I shall attempt to define a single inclusive concept of dissociation that rests only on reasonable and recurrent assumptions distilled from more than a century's literature on the subject. I start by identifying specific assumptions underlying typical uses of the term "dissociation," then see if they can be stated plausibly, and then see whether we can extract from them a definition that has both generality and utility.[1] To be clear, this is not to deny the importance of more specialized uses of "dissociation" (primarily in clinical contexts). Rather, it's an effort to see how successfully we can craft a general definition of the term, useful in both clinical and nonclinical contexts, and ranging over both pathological and nonpathological cases.

Assumptions

We can begin with an observation about terminology. The term "dissociation" can be used in a number of different ways, but in the present context two in particular deserve our attention. First, "dissociation" can pick out an occurrent state (i.e., the state of being dissociated), and second, it can pick out a disposition or ability to dissociate (i.e., a capacity to experience occurrent dissociative states). As we will see again shortly, in this respect the term "dissociation" parallels many other psychological terms. For example, the term "empathy" has both occurrent and dispositional senses. In the former, it picks out the discernible mental state of experiencing empathy; in the latter it picks out the disposition or capacity to experience such states.

This observation leads to the first assumption underlying the concept of dissociation: that dissociation is not simply an occurrent psychological condition or state, but also something for which we may have a capacity – in fact, a capacity that

may have both positive and negative personal consequences. This seems to be a sensible move away from Janet's view of dissociation as a failure of integration, and it's continuous with the way we treat a great many other areas of human cognition and performance. It is also why we can sensibly ask whether everyone can dissociate, and to what degree. So the first assumption is the capability assumption.

Capability Assumption

Dissociation is one of many capacities people have – that is, it's one of many things which (at least some) people are able to do. So, in that respect, dissociation is analogous to, for example, irony, patience, indignation, dishonesty, kindness, sarcasm, self-deception, empathy and sensuality. Although my list of other capacities here was restricted to psychological attributes that people express in varying degrees and with respect to which some people are clearly either impaired or gifted, notice that the issue here is not whether the capacity to dissociate must be cognitive or even whether it's subject to voluntary control. As far as we need to suppose, talk of dissociation might be analogous to talk of various noncognitive organic capacities that are typically not subject to voluntary control. For example, yogis can control many organic functions which most of us can influence only to a very limited degree or only involuntarily – for example, breathing, vasoconstriction and vasodilation. Yet it is still proper to speak about our capacity for pulmonary functioning, vasoconstriction, etc. In fact, those capacities are things that can change after a period of study on a Tibetan mountaintop, and also with (say) disease and old age.

The capability assumption leads smoothly to the non-uniqueness assumption.

Non-uniqueness Assumption

Although dissociation has distinctive features, insofar as it's a capacity, it will be similar in broad outline to most other human capacities. That is, it will share features found generally in human (or just cognitive) capacities. In other words (and failing evidence to the contrary), we should not assume that dissociation is completely unprecedented in the realm of human cognition and performance, however distinctive it may be in certain of its details.

The third assumption is particularly important, and we will see later how it figures in a prominent contemporary debate. We begin by observing that capacities generally are things that people express in different ways and to varying degrees. For example, the capacities for self-deception, intimidation, malice, neatness, self-criticism and generosity can range from extreme to very moderate forms, and they can be expressed in highly idiosyncratic ways. So it seems reasonable to assume the diversification assumption.

Diversification Assumption

Like other capacities, dissociation (a) assumes a variety of (possibly idiosyncratic) forms (e.g., DID, automatic writing, hidden observer phenomena, negative hallucinations), (b) affects a broad range of states (both occurrent and dispositional), including systematized anesthesia and post-hypnotic suggestions, and (c) spreads out along various continua – for example, of pervasiveness, frequency, severity, completeness, reversibility, degree of functional isolation, and importance to the subject. So, for instance, studies of hypnotic and conversion anesthesia reveal that subjects have made themselves anesthetic in areas not corresponding to natural anatomical regions (i.e., the kind that would be caused by real nerve damage). For example, some have experienced anesthesia in a belt or band around the arm, or a glove pattern on the hand, or an anesthetic eyeglass pattern around the eyes in cases of dissociative blindness (see Braude, 2014).

Another important assumption allows us to distinguish dissociation from what we might call cognitive or sensory filtering. Of course, the term "filtering" also has many meanings, and to appreciate the distinction in question we must now use the term more carefully and narrowly than we might ordinarily. In the sense of "filtering" that matters here, the term picks out a total blocking of information from a subject. Examples of this sort of filtering would be blindfolding, audio band-pass filtering, or local chemical anesthesia. Compare those states of affairs to the rather different situations we find in (say) hypnotic anesthesia or negative hallucination, where subjects merely fail to experience consciously what they are nevertheless aware of subconsciously or unconsciously (e.g., Binet, 1892/1896/1977; Hilgard, 1986; Orne, 1971, 1972). So the relevant differences between filtering (as the term is used here) and dissociation is that in filtering, information never reaches the subject (consciously or otherwise), whereas dissociation merely blocks the subject's conscious awareness of information or sensations that had otherwise registered. So, the next important assumption is the ownership assumption.

Ownership Assumption

The things dissociated from a person are always the person's own states – for example, sensory, cognitive, volitional, and physical states. Granted, it's common to say that information or data is dissociated. But I believe that's a careless way of speaking. Strictly speaking, what is dissociated are the subjects' states – for example, sensory perceptions, volitions, knowledge (e.g., the knowledge *that* …, or the knowledge *how* to …), beliefs, memories, dispositions and, sometimes, behavior (as in automatic writing).

The ownership assumption connects with a fifth and very important assumption. At least since the early detailed accounts of multiple personality (e.g., Prince, 1905), researchers have noted that when a state is dissociated, it is not totally obliterated or isolated completely from the subject, although retrieving the state might be quite difficult in both experimental and real-life contexts. That is, dissociated states may be subjectively hidden or psychologically remote, but they are always potentially knowable, recoverable, or capable of re-association. So our final assumption is the accessibility assumption.

Accessibility Assumption

Dissociation is a theoretically (but perhaps not practically) reversible functional isolation of a state from conscious awareness. Before moving on, we should also note that the relation "*x* is dissociated from *y*" is nonsymmetrical, like "*x* loves *y*" (even though *x* loves *y*, *y* may not love *x*). We see this nonsymmetry clearly in cases of one-way amnesia in DID or in hidden observer experiments, where states of a hypnotically-hidden observer may be dissociated from those of the hypnotized subject, even though the subject's states may not be dissociated from those of the hidden observer (see Braude, 1995; Braun, 1988; Cardeña, 1994; Hilgard, 1986).

Dissociation Relative to Other Named Phenomena

Shortly, we will consider how these assumptions play a role in specifying what pathological and nonpathological forms of dissociation have in common. But to reach that point, we must first consider how to distinguish dissociation from at least superficially similar phenomena.

Repression

Repression may be the concept most often confused with that of dissociation. Granted, neither concept is precise, and so we shouldn't expect the distinction between dissociation and repression to be sharp. Nevertheless, there seems to be a distinction worth making. While repression and dissociation both concern psychological barriers that prevent one's states from reaching conscious awareness, the two concepts rest on different presuppositions, and the barriers differ clearly in scope, function and vulnerability. That enables us to distinguish those barriers clearly enough to show that they belong to different (if occasionally overlapping) classes of phenomena.

Consider: Writers often describe repression as a barrier preventing only certain *mental* states from becoming conscious, whereas the dissociative barrier can hide both mental and physical states from conscious awareness. For example, during hypnotically-induced anesthesia one can dissociate bodily sensations and permit radical surgery, but that sort of phenomenon has never been offered as an instance of repression. Moreover, as Hilgard (1986) has noted, writers tend to employ different metaphors when describing the psychological barriers of repression and dissociation. Typically, they characterize repressive barriers as horizontal, whereas dissociated barriers are described as vertical. As a result, repressed material is usually considered to be psychologically deeper than what we can access consciously. By contrast, dissociated states are not necessarily deeper than consciously accessible states. For example, in hypnosis trivial or emotionally neutral states can be dissociated (e.g., the ability to say the letter "r," tactile sensitivity to a band around the arm, or the perception of a chair in one's visual field).

This alleged difference connects with the different roles repression and dissociation ostensibly play in a person's psychological economy. Ordinarily, repression is linked to dynamic psychological forces and active mental defenses that inhibit recall. Granted, some writers likewise describe dissociation as a defense or avoidance mechanism (primarily, one producing amnesia), but that view seems needlessly restrictive. In fact, paradigm cases of dissociation need not involve any impairment of memory, and dissociation may have nothing to do with the urgent needs of psychological survival – that is, it needn't be defensive. For example, systematized anesthesia does not affect memory, and posthypnotic amnesia can concern virtually any kind of state or material, important or unimportant. (For more on shortcomings with particular definitions of "dissociation," see Braude, 1995 and Cardeña, 1994.)

Historically, the concept of repression is bound up with the psychoanalytic concept of a dynamic unconscious, which (according to the standard view) acts as the repository for repressed material. But most important, on that view we gain access to repressed material only by indirect methods, or at least methods more circuitous than those by which we identify dissociated states. Thus, according to the traditional and still standard view of repression, we learn about the unconscious through its by-products (e.g., dreams, or slips of the tongue), and expressions of unconscious material tend to be distorted, either symbolically or by means of more primitive primary-process thinking. So one important difference between repression and dissociation is that repressed mental activities can only be inferred from their behavioral or phenomenological by-products, whereas dissociated states can be accessed relatively directly, as in automatic writing, hypnosis, and interactions with alter identities in cases of DID.

Another way of putting this point would be to say that third- and first-person knowledge of dissociated – but not unconscious – states can be as direct as (respectively) third- and first-person knowledge of non-dissociated states. For example, I can (at least in principle) have direct access to some of my own dissociated states (e.g., beliefs, memories), because they can eventually be retrieved with the help of hypnosis or other interventions. And others can have third-person access to my dissociated states even when I don't. For instance, we have evidence – that is, third-person access to the fact – that in hidden-observer studies, the hypnotized subject feels pain even when that person's non-hidden-observer state does not. And that third-person access is as direct as it would be to ordinary non-dissociated states. In both cases, we learn about the other person's sensations or other internal states through that person's behavior. In both hidden observer studies and ordinary cases, we learn that a person feels pain through their pain behavior (e.g., wincing, limping, saying "ouch").

So we can say that if *x* is repressed for *S* (in this sense of "repressed"), then (a) *S* is not consciously aware of (or has amnesia for) *x*, and (b) third- and first-person knowledge of *x* is indirect as compared (respectively) with third- and first-person knowledge of both conscious and dissociated states (i.e., it must be inferred from its possibly distorted or primitive cognitive, phenomenological, or behavioral by-products).

Of course, the directness of third-person access to another's mental states is a matter of degree, and that access requires both inferences and interpretation no matter whether the other person's states are conscious, dissociated or repressed. For example, you may be directly aware of your anger, but I can be aware of your anger only by virtue of drawing an inference from your behavior and assuming you're not feigning anger.[2] When you dissociate your anger and I elicit a hypnotically-induced report of your angry feelings, my knowledge of your anger again requires me to infer that your verbal or other behavior is a reliable guide to what's happening to you subjectively. In these two cases, I would say that third-person access to your anger is comparably direct, requiring little more than assumptions about behavior-reliability. But when you repress your anger, I don't have at my disposal anything as straightforward as a report from you that you're feeling angry or other relatively transparent outbursts of angry behavior. I might have suggestive word-associations, slips of the tongue, or intriguing constrictions of behavior (e.g., obsessive behavior, sexual frigidity), but usually nothing as blunt as reports of angry feelings, overtly hostile remarks, or punches in the nose.

Not surprisingly, many cases are not this clear-cut. So not surprisingly (and also not alarmingly), this way of characterizing repression allows for an appropriate range of borderline cases. Consider, for example, behavior that reveals hidden feelings but whose interpretation is clear even to the person exhibiting it (e.g., forgetting an appointment you prefer to avoid). In fact, in some cases the only difference between a repressed and a dissociated state may be the conceptual framework in terms of which it is treated clinically. For example, obsessional or compulsive behavior might be approached psychoanalytically, using indirect methods (e.g., free association) to uncover the reasons for the behavior. Or, it might be treated as a dissociative disorder, using hypnosis to reveal hidden memories lying at the root of the problem. So, which diagnosis we choose could easily (and appropriately) depend on whether the clinician treated the patient by means of hypnosis, EMDR, free association, or something else. Therefore, in some cases at least, there may be no preferred or privileged answer to the question, "Is this state dissociated or repressed?" The world may not have a sharp cleavage here, and there is no need for our concepts to do so.

We might even want to say that, for ambiguous cases at least, there is but one psychological condition, which is simply identified and treated according to different criteria and methods. And presumably, the indeterminacy of our description is no more unusual or objectionable than it would be in many ordinary cases where we can describe the same state from different perspectives, each of them revealing and valuable in its own way. For example, from one perspective it might be useful to view a person's actions as shy, and from another perspective as cowardly. Similarly, it might be illuminating to see a person's behavior as exemplifying both arrogance and insecurity. Each of those descriptive categories allows us to systematize the person's behavior in a different way, neither of which is inherently preferable to the other, and both of which may give us genuine and distinctive insights into the person's behavioral regularities. Moreover, both can (in different contexts) *explain* the phenomena, because giving causal explanations is akin to giving directions from point A to point B. Which path we prefer will typically be context-dependent, not categorically preferable to the other.[3]

Suppression

The concept of suppression is also a bit difficult to pin down, and certainly the term "suppression" gets used in various ways (often as a synonym for "repression"). To the extent that there is a standard view of the difference between suppression and repression, there seem to be two distinguishing features. First, suppression is always a conscious activity, and second, "amnesia is absent in suppression, present in repression" (Hilgard, 1986, p. 251). So suppression seems to be "a conscious putting-out-of-mind of something we don't want to think about" (Braun, 1988, p. 5). Thus, if we agree to use "suppression" in this fairly narrow technical sense, we can say that when *x* is suppressed for *S*, (a) *S* consciously diverts attention from *x* (i.e., puts *x* "out of mind"), and (b) *S* does not have amnesia for *x*.

Denial

Although Braun regards denial as yet another distinct point on a continuum of awareness, I submit that if we define the relevant terms as I suggest here, a distinct category of denial is gratuitous. I propose instead that we consider using the term "denial" in a descriptive rather than explanatory sense and analyzing it in terms of repression, suppression and dissociation. For example, one handy (if slightly oversimplified) approach would be the following. Let's suppose first that the difference between unconscious and subconscious mental states is that the former can only be accessed relatively indirectly (as explained above), whereas the latter can be accessed relatively directly. Then we can regard repression as unconscious denial, dissociation as subconscious denial, and suppression as conscious denial.

What Dissociation Is

With these considerations in mind, I offer the following provisional analysis of dissociation – in particular, the general expression-form "*x* is dissociated from *y*." We can then see how this analysis bears on current debates about dissociation. So let's say "*x* is dissociated from *y*" if and only if:

(1) *x* is an occurrent or dispositional state, or else a system of states (as in traits, skills, and alter identities) of a subject *S*; and *y* is either a state or system of states of *S*, or else the subject *S*.[4]
(2) *y* may or may not be dissociated from *x* (i.e., dissociation is a nonsymmetrical relation).
(3) *x* and *y* are separated by a phenomenological or epistemological barrier within *S* (e.g., anesthesia or amnesia).
(4) *S* is not consciously aware of erecting the barrier between *x* and *y*.
(5) The barrier between *x* and *y* can be broken down, at least in principle.
(6) Third- and first-person knowledge of *x* may be as direct as (respectively) third- and first-person knowledge of *S*'s non-dissociated states.

Condition (1) takes the capability, ownership, and diversification assumptions into account, and condition (5) acknowledges the accessibility assumption. Since condition (4) requires *S* to erect the dissociative barrier either subconsciously or unconsciously, it provides a way of ruling out cases of suppression. Similarly, condition (6) rules out a large set of cases ordinarily classified as instances of repression. Condition (3) is designed to rule out a large class of cases we would presumably not count as dissociative, but in which the *S*'s states seem to lie behind an epistemological barrier. In particular, this condition rules out many examples of conceptual naveté and inevitable forms of self-ignorance. For example, *S* might desire or dislike something but lack the introspective or conceptual sophistication, or the relevant information, needed to recognize those states.

So condition (3) will rule out cases where infants, small children, or nave or mentally challenged adults lack the conceptual categories to identify their own mental states. The epistemological barrier in these cases is not something they erect. Similarly, many conceptually sophisticated adults may fail to recognize they have certain mental states, either because they are insufficiently introspective or because they lack relevant information. For example, *S* might be unaware she detests the sound of a fortepiano, because she has not yet heard enough examples for that disposition (or regularity in her preferences) to become clear. She might mistakenly think she dislikes only the one or two fortepianos she has heard. That is clearly not a case of dissociation, and condition (3) rules it out as well.

Moreover, my proposed criteria of dissociation countenance a large range of phenomena as instances. Naturally (and predictably), classic forms of pathological dissociation satisfy the criteria, including DID and dissociative fugue. Moreover, other familiar impressive phenomena likewise satisfy the criteria – for example, hypnotic amnesia, anesthesia or analgesia, and automatic writing. Perhaps more interesting, the criteria are apparently satisfied by a range of normal phenomena many want to regard as dissociative. These include, for example, blocking out the sound of ongoing conversation while

reading (but being able to respond when your name is mentioned), and shifting gears and obeying traffic lights while driving but consciously focusing only on your conversation with your passenger. I consider it a virtue of these criteria that they undergird a variety of disparate intuitions about which phenomena are instances of dissociation.

As noted earlier and as I detail further in the next section, most prevailing approaches to analyzing dissociation reflect clinical interests. Accordingly – and appropriately – they focus on dissociative disorders and traumatic dissociation, and they limit their attempts at explication and definition to that domain. For example, Dell (2019) states explicitly that he wants to clarify what a *dissociative disorder* is. Similarly, Nijenhuis (2015) takes *dissociation in trauma* as his target for analysis. These and others are worthy efforts. However, they would fail as attempts to analyze the general concept of dissociation, because (as one would expect) they're either too restrictive or over-inclusive. Nijenhuis (2015) attempts to gets around this issue by categorizing as alterations in consciousness phenomena that others identify as normal, non-clinical dissociative phenemona (e.g., absorption, daydreaming). By contrast, I believe the account of dissociation I provide here is sufficiently general to complement and unify the various analyses or definitions of dissociation scattered throughout the clinical and experimental literature.

What Dissociation Is Not

Many writers on dissociation are less clear than Dell and Nijenhuis about the limitations of their analyses. Among prevailing (and less careful) approaches to dissociation, some (1) characterize dissociation as a defensive response to trauma or stress. But as we've noted, that can't be the whole story, because it rules out the vast majority of hypnotic phenomena and also many widely-accepted examples of (often quite mundane) dissociation in everyday life. Some have said (2) that dissociation is the absence of conscious awareness of impinging stimuli or ongoing behaviors. But if that were the case, then sleep, chemical anesthesia, and subliminal perception would count – incorrectly – as dissociative.

Others take dissociation to be (3) ongoing behaviors or perceptions that are inconsistent with a person's introspective verbal reports. But if that were true, dissociation would encompass far too much – for example, cases of self-deception, cognitive dissonance or confusion, or outright ignorance or stupidity. For instance, it would include a person simply failing to grasp that simultaneously-held beliefs are inconsistent. And incredibly, it would also include Cartesian or Humean skepticism about the external world – that is, the philosophical position implied by someone who, while leaning against a wall, says (in a state of philosophical seriousness) that he can't be certain the wall exists.

Still others say (4) that dissociation is an alteration of consciousness in which one feels disconnected from the self or from the environment. That, indeed, might be a feature of some forms of dissociation – for example depersonalization/derealization. But as a definition of "dissociation," it first of all rules out what many have taken to be a paradigm instance of dissociation – namely, negative hallucination. In classic cases of this phenomenon, the subject doesn't feel disconnected from the self or environment – merely consciously unaware of certain items in the vicinity. Second, it too seems over-inclusive, because it apparently includes as dissociative the experience of paralysis, sleep, and sensory deprivation.

Finally, some say (5) that dissociation is the co-existence of separate mental systems or identities that are ordinarily integrated in the person's consciousness, memory, or identity. But this approach is either empty or also too inclusive. Consider: what does it mean to refer to "separate" mental systems? In the absence of a description of what the separateness amounts to (e.g., of the sort I've provided), that term either has no clear meaning or else it seems merely to be a synonym for "dissociated," in which case the definition would be circular. The likely alternative to this would be to let "separate" stand for something like "distinguishable." But in that case the definition would, after all, be too inclusive, because it would then cover ordinary (retrievable) forgetting and the common (though perhaps only occasional) failure to juggle disparate roles in life (e.g., the person who sometimes has trouble coordinating the different mindsets required for being both a loving parent and mob assassin, or – to keep it personal – philosopher and musician).

Some proposed definitions of "dissociation" commit more than one of the errors already noted. For example, Marlene Steinberg claimed that dissociation is "an adaptive defense in response to high stress or trauma characterized by memory loss and a sense of disconnection from oneself or one's surroundings" (Steinberg & Schnall, 2001, p. 3). As we have seen, this definition errs in several respects. First, dissociation is not just a defensive response, and (as we noted earlier) it doesn't always involve memory loss. Second, this definition excludes most (if not all) hypnotic phenomena.

Inclusivity vs Exclusivity

Earlier, when I surveyed assumptions underlying the concept of dissociation, I described what I called the diversification assumption. According to that assumption, dissociation manifests in many different forms, affects a wide variety of

states, and spreads out along a number of different continua, including pervasiveness, frequency, severity, completeness, reversibility, degree of functional isolation, and importance to the subject. I argued that the diversification assumption is one of several ways in which dissociation resembles many (if not most) other human capacities. For example, courage, sensuality, and wit are human capacities that likewise vary greatly in their range of manifestations and in the degree to which they are expressed along a number of different dimensions. People are not simply more or less courageous, sensual or funny. They manifest these capacities in different ways and in different styles, and to different degrees. Human behavior generally is so complex and varied that it would be incredible if dissociation failed to exhibit a similar range and diversity of expression.

However, an interesting modern development in the study of dissociation has apparently led some to challenge the diversification assumption. Officially, the issue was whether normal, experimental and pathological dissociation are all forms of a single phenomenon (let's call that the *inclusivity* position), or whether pathological and non-pathological dissociation are radically distinct, lacking any significant unifying features (the *exclusivity* position). This rapidly became a very hotly-debated and even polarizing topic in the dissociative disorders field, although interest in the debate declined not long thereafter. That's a good thing; the debate was ill-conceived from the start.

Initially, most clinicians and experimenters seemed to embrace the inclusivity position (although, granted, the issues were never expressed very clearly). But then, on the basis of taxonometric analyses by Waller, Putnam, and Carlson (1996), and several subsequent studies by other investigators, some claimed that pathological and non-pathological dissociation are sharply distinct categories. Accordingly, they argued that dissociation is not a single phenomenon and that it is a mistake to regard normal and pathological dissociation as continuous (see e.g., Putnam, 1997; Waller et al., 1996; Boon & Draijer, 1993; Ogawa et al., 1997; Briere et al., 2005).

However, the underlying reasoning here is flawed. First, even if pathological and non-pathological forms of dissociation differ consistently and dramatically (so that many properties of one are never properties of the other), that could not by itself show that dissociation is not a unitary or single phenomenon embracing both pathological and nonpathological forms. That conclusion would follow only in conjunction with an apparently unjustified assumption about the distribution of dissociative phenomena – namely, that if pathological and non-pathological dissociation were instances of the same class of phenomena, we'd expect to find a fairly even distribution of dissociative phenomena along a dissociative continuum. And because according to some diagnostic surveys dissociative phenomena seem instead to cluster into two distinct groups – not the relatively smooth distribution to which the inclusivity view (or diversification assumption) is allegedly committed – some believed that there was no longer justification for treating dissociation as a concept unifying the varied occurrences that have been considered dissociative.

But in fact there is no reason to insist that the distribution between normal and pathological dissociation has to be smooth. On the contrary, uneven distributions are clearly compatible with treating dissociation as a single concept unifying a quite motley range of manifestations. At least some leading researchers have recognized this (e.g., Nijenhuis, 1999, pp. 175f). For example, pathological lying and ordinary lying may indeed differ dramatically in degree, enough to warrant treating cases of the former (but not the latter) as a special class deserving of clinical attention. But both are still types of lying, and to ignore what they have in common is to miss an important theoretical or conceptual unity. Similar observations can be made about the differences between normal orderliness and pathological or compulsive orderliness, and between ordinary anxiety and panic attacks.

The situation is the same with regard to pathological and nonpathological dissociation. The former seems clearly to be distinguishable from the latter in several respects (as one would expect). But both remain forms of dissociation, as we acknowledge tacitly by using the term "dissociation" in both cases. Interestingly, Waller et al. (1996) seemed not to make the error of concluding on the basis of their data that there is no viable general concept of dissociation uniting the phenomenon's various manifestations. In fact, although they criticize the DES for not capturing certain observed and significant regularities in the data, they conceded that pathological and nonpathological dissociation are nevertheless "related" (p. 301) and are both forms of dissociation. They even stated explicitly that there are "nonpathological or healthy *forms* of dissociation" (p. 302, italics added).

It is less clear whether Briere et al. (2005) avoided the error. Like some others, they claimed to have shown (in their case with the MDI) that the "notion of 'dissociation' as a *general trait* was not supported" (p. 221, emphasis added). Instead, they maintained that "dissociation may represent a variety of phenomenologically distinct and only moderately related symptom clusters whose ultimate commonality is more theoretical than empirical" (ibid). More specifically, they claimed that the "finding of discrete dissociation factors supports a view of dissociation as a multifaceted collection of distinct, but overlapping, dimensions, as opposed to a unitary trait" (p. 228). As noted earlier they also stated explicitly that on the basis of their survey, "the term dissociation may be a misnomer to the extent that it implies a single underlying phenomenon" (p. 230).

But this position is simply confused. First, strictly speaking, dissociation is not a trait. Dissocia*bility*, however, would be. Moreover (and more seriously), the position betrays a failure to appreciate the force and antecedent plausibility of the diversification assumption. Most general concepts (including trait terms) are exemplified in a wide variety of ways ("distinct, but overlapping dimensions"). In that respect, "dissociability" is semantically on a par with "immaturity," "reliability," "honesty," "humility," irascibility," "greediness," "politeness," "stinginess," "laziness," "callousness," "friendliness," and so on. These terms all capture genuine psychological and behavioral regularities (the grasp of which is crucial for successfully navigating through life's perils and obstacles); they are all proper candidates for attempted general definitions; and they can all be expressed (exemplified) in an endless number of different ways and to different degrees.

Of course, what's at issue in this chapter is precisely the theoretical question of whether the variety of dissociative phenomena can be plausibly construed as falling under a general concept. And the definition I provided earlier shows that it can. Now I grant that my multi-part analysis is complex and arguably cumbersome – perhaps something that only a philosopher could love. But an accurate and illuminating *general* account of "dissociation," sufficiently abstract to capture the wide range of phenomena that exemplify the concept, is something that we would demand or attempt in the first place only in a philosophical state of mind. It requires operating at a level of abstraction that would be inappropriate in the clinical literature. As I've noted, clinicians focus instead (as they should) on matters related to treatment, and thus on specific varieties of dissociation (such as traumatic dissociation) and corresponding limited domains of phenomena. (See e.g., Nijenhuis & Van der Hart, 2011; Nijenhuis, 2015, for efforts that also happen to be unusually sophisticated conceptually.)

It's also worth noting that the appearance in diagnostic surveys of sharply distinct classes or taxons of dissociative phenomena may simply be an artifact of the categories and form of questions used in the surveys from which the data were gathered. Questions and their embedded descriptive categories are like conceptual grids. To put the matter picturesquely, depending on the shape and size (e.g., fineness or coarseness) of the grids, objects of only certain sizes and shapes will pass through. That means that items on questionnaires will, from the start, allow only certain kinds of responses and thereby permit only certain kinds of results or types of discriminations. The appearance of dissociative taxons might therefore reveal little more than the inevitably theory-laden biases or coarseness of the distinctions permitted by the questionnaire. For example, from Briere's et al. use of the MDI, we cannot conclude anything more than that dissociative phenomena can be parsed nonarbitrarily in a way that reveals no underlying connectedness. And of course, that's no more revelatory or theoretically interesting than the observation that the things in this room can be divided nonarbitrarily into nomologically anomalous classes each one of which exhibits its own distinctive regularities – for example, when insurance agents, household movers, or interior decorators classify them into heavy things, big things, green things, valuable things, fragile things, and appallingly ugly things. But in that case, if my foregoing conceptual analysis shows that the concept can indeed be made to unify and cover the broad range of phenomena that have been considered dissociative, and if application of the MDI (or another survey instrument) fails to capture that unity and systematicity, there's little reason to think it captures or helps analyze the concept of dissociation.

Moreover, we've already noted one reason to doubt the ability of current diagnostic surveys to illuminate the whole concept of dissociation – namely, their neglect of hypnotic phenomena. Even when the surveys were administered both to clinical and non-clinical populations, their questions were not designed to distinguish, say, those who are good hypnotic subjects from those who are not, much less those who are hypnotizable to varying degrees. So right from the start, they cannot identify one clear group of dissociators or tease out what they have in common. So then they can't be expected to reveal what ordinarily hypnotizable persons have in common with those experiencing clinically interesting forms of dissociation, much less whether there's a smooth transition from the former class of subjects to those suffering from pathological dissociation – or failing that smooth transition, something theoretically relevant that they have in common.

It appears, then, that proponents of the exclusivity position set up a straw man when they stated the inclusivity view. In fact, there are two signs of this. We've already considered the first: namely, assuming unjustifiably that the distribution of dissociative phenomena must be smooth if the inclusivity view is correct. The second apparent instance of straw-man reasoning is this. Contrary to what proponents of the exclusivity view seemed to suggest, to say that normal and pathological dissociative phenomena are continuous is not to say that there is a *single* dissociative continuum along which those forms of dissociation spread (unevenly or evenly). Holmes et al. (2005) seem to make a similar error, in arguing for the division of dissociative phenomena into two qualitatively distinct forms: detachment and compartmentalization. But that's a needlessly simple and antecedently incredible formulation of the inclusivity position, and it's all too easy to overturn. Presumably, one can always select a list of allegedly relevant properties in such a way that the classes of normal and pathological dissociation appear to be profoundly separate. But on different characterizations of dissociation, or using

different lists of relevant properties, the two forms of dissociation might turn out to overlap or distribute quite evenly. In fact, we saw that the criteria of dissociation I listed above countenance both normal and pathological forms of dissociation. So we know already that dissociation can in fact be characterized in a way that embraces the phenomenon in all of its widely recognized forms and which still allows dissociation to be distinguished from repression, etc. Moreover, it's clear that dissociative phenomena satisfying those criteria spread out (smoothly or otherwise) along several continua (e.g., pervasiveness, frequency, severity, degree of functional isolation, and degree of personal importance to the subject).

So it seems to me that the debate over taxons was much ado about nothing, at least so far as it purported to be a debate over the concept of dissociation. However, none of this is to deny the importance – or the clinical necessity – of recognizing and focusing on the manifest disparities between pathological and non-pathological forms of dissociation. (But notice, I refer to both – as one should – as *forms* of dissociation.) For the clinician, the differences are what matter, and perhaps the distinctive aspects of pathological dissociation are the only features that deserve their attention. In that sense, it's pragmatically defensible to regard pathological dissociation as a phenomenon distinct from non-pathological dissociation. Similarly, it's defensible for clinicians to focus on pathological lying as a phenomenon of interest, but not the everyday lies we tell to protect another's feelings, to avoid embarrassment, and to avert countless other mini-conflicts. But it's still confused to think that warrants rejection of the inclusivity view. And as I believe we can now see, to reject that view is to lose sight of the interesting properties that seem to link all forms of dissociation and which justify, for the time being at least, treating dissociation, in all its richness and variety, as a legitimate and single object of psychological and theoretical inquiry.

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Notes

1 Much of what follows draws from, and I believe (or at least hope) improves upon, a more wide-ranging discussion of the concept of dissociation in Braude (1995).

2 Some might think instead that we are immediately aware of another person's anger or pain (say), and then only later, upon reflection, wonder whether the anger or pain is feigned. That is certainly a respectable alternative view, and one whose viability can't be adequately addressed here. For now, our concern is with the relative directness or indirectness of first- and third-person knowledge of mental states. To that end I believe it's sufficient to say that we need to focus on what we might call the "logical" as opposed to the "historical" order of ideas. No matter how instinctively and reliably we might accept uncritically various behaviors as indicators of another person's mental states, our third-person knowledge of those states can be analyzed plausibly as involving interpretations and assumptions not required for first-person knowledge of our own states.

3 For example, suppose we want to know what caused my heartburn. That request may be answered *correctly* in many different ways, depending on such things as who is asking, and how much and what sort of knowledge of the situation is presupposed and relevant to the request for an explanation (i.e., how much one *needs* to know). Thus, if we simply want to isolate which of my activities that day was causally relevant to my heartburn, it might be enough to observe that I had eaten Mexican food for dinner. But in response to different requests for explanation or needs to understand, it might be more appropriate and illuminating to trace different causal lines. For example, we might prefer to connect my heartburn to the ingredients present in my dinner, the chemical structure of those ingredients, or the physiological disposition of my body (or of my stomach in particular). Or, it might be more appropriate to connect my heartburn to the psychological factors (say, my relationship with my parents) that contributed to my developing a nervous or weak stomach, or the way in which the chef's preoccupation with his divorce led to an excess of hot spices in my meal, or perhaps even the cultural tradition and geographical factors that culminated in a Mexican propensity for preparing "picante" dishes, etc.

4 The syntactic complexity of this condition reflects the fact that we assert the presence of dissociation under a great variety of conditions. For example, we can say that a subject has dissociated a memory, trait, or alter identity. But we also sometimes say that one memory or skill is dissociated from another.

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3

THE TRAUMATIC DISINTEGRATION DIMENSION

Benedetto Farina and Russell Meares

Despite the high prevalence of dissociation in psychiatric disorders and general agreement regarding its relevance as a marker of clinical severity and poorer treatment response (Lebois et al., 2021; Lyssenko et al., 2018), there is no consensus on its definition and pathogenesis (e.g., Brown, 2006; Nijenhuis & Van der Hart, 2011). Indeed, after more than a century of debate and empirical study, the meaning of dissociation remains controversial, not having achieved a clear, common and scientifically validated definition of its nature (Lynn et al., 2019; Van der Hart & Dorahy, Chapter 1, this volume). We hypothesize that diverse dissociative manifestations are generated by different yet interplaying pathogenic processes: traumatic disintegration and what is more properly called dissociation, that we distinguish in two forms: disinhibited and inhibitory dissociation. This chapter describes these distinctions, which we believe are relevant for treatment and research.

Distinguishing Between Traumatic Disintegration and Dissociation

Dissociation is generally defined as a deficiency of internal and external awareness with a sense of separation and fragmentation of self-experience. This definition includes a wide and diverse group of symptoms (See Linde-Krieger, Yates & Carlson, Chapter 9, this volume). Most contemporary scholars agree it is unlikely that so many different manifestations could be generated by the same pathogenic process (Brown, 2006; Frewen & Lanius, 2014; Meares, 2012; Nijenhuis & Van der Hart, 2011). In fact, psychopathological, clinical and neuroscientific data demonstrate that traumatic dissociative symptoms are not explained by a one-dimensional approach to dissociation. However, there is no agreement among scholars on how to distinguish the various forms of dissociation and the corresponding differing pathogenic processes underlying each of them. We address this problem by reintroducing and renewing the *disintegration* theory originally proposed by Janet and showing how it is consistent with current clinical and neuroscientific research, including the evolutionary psychology of attachment and its role in survival and defense.

Traumatic Disintegration

Traumatic disintegration can be defined as the weakness or lack of integrative capacity that affects high-order mental functions, including executive functions and self-consciousness. Psychological trauma activates different neurobiological pathogenic mechanisms, such as epigenetic editing, stress hormones and inflammation, at different levels. The effects on these types of mechanisms are especially pronounced in response to long-lasting, interpersonal, and repeated trauma occurring during early development, as in the case of traumatic attachment. In these instances, neurobiological pathogenic mechanisms interplay with genetic predisposition to alter the balance between integration and segregation of information and functions (Deco et al., 2015; Gordon et al., 2018; Lord et al., 2017; Park & Friston, 2013). Disintegrative processes lead to very different psychopathological symptoms depending on which mental function they compromise, from altered states of consciousness to sudden emotional and behavioural dysregulations, fragmentation

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of self-experience or metacognitive breakdown. The more a mental function depends on integration and the more it develops in relationship with the environment, especially the interpersonal environment, the more it could be affected by traumatic disintegration. At the top of this failure to develop a co-ordination among the elements of the brain/mind system there is the impaired emergence of self and consciousness (Meares, 2012).

The effect of disintegration leads to both negative symptoms, related to the weakening of an integrative function (i.e., lack of executive functioning, fragmentation of self-experience or failures of metacognitive monitoring), and positive symptoms caused by the dysregulated emergence of mental functions or contents no longer coordinated or inhibited (i.e., traumatic memories, flashbacks or intense affective states) (Farina et al., 2005; Meares, 2012). The weakness of integrative capacity could be viewed as a trait vulnerability acquired during development and affecting personal coherence, self-continuity, and organized states of mind (that Janet called "personal synthesis"). These mental functions are not innate, but rather result from the cognitive and affective coordination with attachment figures (Carlson et al., 2009; Huang et al., 2020; Meares, 2021; Schore, Chapter 11, this volume). Developmental trauma interferes with these functions, leading to fragmentation of self-experience that occurs with shifting of different ego states, chaotic behaviours, a sense of painful incoherence, emptiness, and blank spells (Meares, 2012, Liotti & Farina, 2016; Şar, 2017).

Furthermore, traumatic disintegration in combination with contradictory and threatening experiences with a caregiver leads to disaggregated implicit relational and explicit traumatic memories, fostering dissociation (as described below). Additionally, traumatic disintegration's weakening inhibitory and executive control functioning produces temporary affective and behavioural dysregulation, flashbacks, consciousness alterations and failures in metacognitive monitoring (Liotti & Farina, 2016; Meares, 2012; Meares et al., 2011). This last effect also causes a state dependent disintegrative vulnerability occurring when the person finds themselves in painful, harmful or threatening conditions, which are frequently provoked by the emergence of implicit relational traumatic memories. It has been hypothesized that painful and harmful conditions usually activate the attachment system and its implicit memories (internal working models) (Bowlby, 1969/72).

In the case of attachment trauma, implicit memories convey dramatic self-representations of being in danger and helpless, with the caregiver represented as abusing or abandoning, or simply powerless and scared. In patients with attachment trauma histories this process becomes particularly evident in close interpersonal contexts, especially in those based on care systems, like the therapeutic relationship (Farina et al., 2019; Luyten et al., 2020). The activation of implicit relational traumatic memories and its relative hyperaroused emotional state triggers state dependent disintegration with lowering of 1) self-continuity, 2) metacognition, and 3) inhibition control, that leads to affective and behavioural disturbances which, circularly, deepens the disintegrative effect and self-fragmentation. It is noteworthy that, from a neurophysiological standpoint, all these affective and behavioural psychopathological manifestations are characterized by anatomical and functional connectivity disturbances (Adenzato et al., 2019; Meares et al., 2011; Teicher et al., 2016; Terpou et al., 2019), a point that will be extensively discussed below.

Interestingly, most conceptualizations of dissociation, including those in DSM-5 (APA, 2013) and ICD-10 (WHO, 1992), are based on the concept of "*disruption of normal integration*" of very different mental functions, some of which are directly related to disintegration.

Disintegration Without Dissociation

A main feature of disintegration in the absence of dissociation is captured by C.S. Myers term, the "apparently normal personality" (Myers, 1916, p. 467, 1940). His shellshocked soldiers, having recovered from the acute symptoms of their trauma, were somewhat changed. The change was subtle and not readily observable. It involved loss or impairment of higher order functions involving the capacity to hold two things in mind at the same time, such as inner and outer, past and present (Meares, 2016). Symbolic function was reduced and manifest in a concrete style of conversation (Meares, 2021). Autobiographical memory was diminished. Williams and his colleagues demonstrated the nature of the disturbance. They studied people likely to have suffered cumulative trauma (e.g., suicide attempters; Williams & Broadbent, 1986) and BPD (Jones et al., 1999). Autobiographical memory in these people had become "overgeneralized," resembling semantic memory.

What is disabling, however, lies behind this "front" of normality. It is illustrated by the case of Adele, reported by Meares (2012). On first meeting with this young woman there was no evidence of disorder. Her demeanour was pleasant, and she had a nice smile. After about 15 minutes, the "front" cracked and she began to cry. She spoke of "a barely expressible pain of living, of moving not merely from day to day, but from minute to minute, each step seeming impossible, as if paralysed by an overwhelming sense of emptiness" (p. 2). Underlying it, and without shape or object, was fear. "Some of it involves aloneness. Time by herself is barely to be endured yet in the presence of others she feels

an isolate and unknown" (p. 2). There was a central disturbance of the sense of self. She said: "I don't know who I am… When I look in the mirror I don't see me" (p. 2). Despite all this, she managed to maintain a job. Her work colleagues found it hard to believe there was anything wrong with her. The underlying "psychic pain" (Zanarini et al., 1998) was belied by her behaviour. It may be the most enduring central aspect of disintegration of personality brought about by cumulative trauma (Zanarini et al., 2008). There remains a core of "painful incoherence" (Liotti & Farina, 2016; see Meares, 2012, p. 42–44).

Dissociation of Two Kinds: Disinhibited Dissociation and Inhibitory Dissociation

Dissociation is understood here as a state arising from a matrix of brain-mind systems and units which are not adequately integrated or differentiated and become recomposed in a more or less stably segregated way. Since our main theme concerns disintegration, we do not extend our discussion to the vast array of dissociative experiences beyond the commonest ones. For example, we do not consider those dissociations which are typically the outcome of severe trauma, in which fragments of the trauma are represented as movements, imprints on the skin, flashbacks, and so forth. We focus instead on two main forms of dissociation, both differentiated from disintegration, brought about by two different processes, active and passive. The passive concept we owe to Janet.

We are calling it 'disinhibited dissociation.' A second kind of dissociation distinguished in the chapter, we refer to as 'inhibitory.' It is the most commonly identified form of dissociation, characterized by "zoning out." It is associated with the activation of inhibitory mechanisms (see for example, Lanius et al., 2006).

Disinhibited Dissociation

Janet studied patients with what he called a "mental disease." There is no precise modern equivalent. Janet's mental disease was a polysymptomatic personality disorder involving more or less stably segregated brain-mind systems, the identifying features of which were loss of function, most particularly of sensation, memory, and motor power (Janet, 1901). He called these manifestations of the illness "stigmata." The main feature of the disease was a "weakening of the faculty of personal synthesis" (1901, p. 527). This was an effect of traumatic impacts on the personal system, bringing about disintegration. These impacts, producing "vehement emotions," lead to "cerebral exhaustion" (p. 527). As Van der Hart and Dorahy (2009) note, "vehement emotions inherent in traumatic experiences [are] the primary causes of this integrative failure" (p. 7). Janet stated that traumas "produce their disintegrative effects in proportion to their intensity, duration and repetition" (Janet, 1909, p. 1556).

Thirty years after his original formulations, apparently exasperated by the misunderstandings surrounding his work, Janet attempted to provide the clearest account that he could of his main thesis. It concerned "a particular modification of consciousness that I tried to describe in 1889 under the name subconsciousness through disintegration. This dissociation, this migration of certain psychological phenomena into a special group, seemed to me connected with exhaustion brought on by various causes, and in particular by emotion" (Janet, 1924, p. 40). He distinguished then, two processes, one of disintegration (i.e., désagrégation), and a subsequent elaboration of disintegration, dissociation. Dorahy and Van der Hart (2015) have pointed out the English translations of Janet's désagrégation, have assumed that it is merely a synonym of dissociation. This has led to considerable conceptual confusion.

The same authors speak of dissociation as a "division of the personality into dissociative systems of ideas and functions" (Van der Hart & Dorahy, 2009, p. 8). They quote Janet (1946): "these divisions of the personality offer us a good example of dissociations which can be formed in the mind when the laboriously constructed syntheses are destroyed [disintegration]. The personal unity, identity, and initiative are not primitive characteristic of psychological life. They are incomplete results acquired with difficulty after long work and they remain very fragile (…) and the end of the illnesses of the mind is dissociation…" (Van der Hart & Dorahy, 2009, p. 8). In other words, traumatic development interferes with integration of personal unity and identity fostering the division of the personality into dissociative systems that we call dissociation proper (see below for further discussion).

Integration is not a given. It arises out of a developmental process, beginning at birth. Every stage in this process requires an appropriate relational provision, characterized by connectedness. The outcome is a hierarchically organized self system involving successive "layers," all of which contribute to the experience of self. The "layers" become progressively more coordinated. Each one involves a "higher" or more refined system of inhibition, which controls the earlier ones.

Tulving conceived a three-tiered hierarchical structure of memory. The earliest and most fundamental forms are procedural memory and perceptual representations (Tulving & Schacter, 1990). These are unconscious. The next level,

the "semantic", becomes first evident at about 18 months (Tulving, 1983). It concerns facts, known without awareness of their origin. It is partly conscious, or "subconscious" to use Janet's term. The highest level of memory, autobiographical, can be demonstrated after about four years of age (Nelson, 1992), when the first manifestations of "self" appear (Meares & Orlay, 1988).

A number of parallel hierarchies have been proposed. The nineteenth-century neurologist, Hughlings Jackson also envisaged a three-tier system of brain development, based on neurological representation of an environmental event (discussed in more detail below). His conception of representation, re-representation, and re-re-representation has been extensively elaborated by Gerald Edelman (1992). A seven-layered hierarchy made of relation and emotion is a necessary addition (Meares, 2016, p. 70–82). Trauma causes a retreat down a hierarchy of mental function such that the unity of mental life is lost.

Janet's concept of dissociation is somewhat mysterious. He saw it as a phenomenon in which traumatic material separates from the rest of mental life in a figurative "migration" (Janet, 1924, p. 40). How can this occur when, in his view, no inhibitory mechanisms are involved (Janet, 1907)? His implication is that it is due to a difference in structure.

The organization of traumatic material has a form which differs from that of ordinary consciousness. It is lower on a hierarchy of mental life (that can range from lower-order reflexive *behaviors*, to higher-order integrate capacity underpinning a sense of self existing currently and overtime). Traumatic material is both "restricted" and less coordinated. It becomes foreign. Janet saw such alien matter as indissoluble in the flow of ordinary consciousness. This idea underlies his approach to the treatment of traumatic matter by "mental liquidation" (which faciliated an abreaction that promoted integration with higher mental levels; Janet, 1925, p. 589). Since the traumatic material, organized as a "fixed idea", is somewhat down in a hierarchy of mental life, it depends upon a memory system which is more limited than normal consciousness. It is partial, or "subconscious", to use Janet's term. It offers no defence and, typically, has no "purpose". It is simply an occurrence. It is a very common clinical presentation.

Janetian dissociation is often subtle in its manifestation, and triggered by minor events, such as a perceived slights or devaluations. Here is an example. A middle-aged couple take turns at night in cooking and setting the table. One night the wife is cooking and the husband is setting the table. She says "why don't we use the new tablecloth?", "Ok", he says and changes the cloth. The next night he cooks while she sets the table. He says "why don't we use the other knives?" She erupts, "Do you think I am so stupid that I can't even set a table". Mystified by her vehemence, the husband responds angrily. Soon they are fighting (Meares, 2000, p. 53).

She had a past of relational trauma. She had lived in a family milieu in which she would expect belittling and criticism, leading to the brain-mind system that became "weak or enfeebled by a succession of slight forgotten shocks" (Janet, 1924, p. 275). Memories of these "shocks" are aggregated into an unconscious traumatic memory system, Janet's "fixed idea". It is triggered by events which resemble these memories, however slightly. This woman interpreted her husband's suggestion as criticism. She did not realise that she was in the grip of the past. She was unaware of the origin of her vehemence. In this sense, she was dissociated.

Inhibitory Dissociation

The second kind of dissociation is, unlike the first, defensive and dependent upon inhibitory activity. It is most saliently manifest in symptoms of coarse, or global, loss of function (e.g., paresis, amnesia). However, it also operates at a finer level. Janet described a form of dissociation which always arises from a pre-existing state of disintegration. We believe that this is also the case for the second kind of dissociation, which we are calling *inhibitory dissociation*. Disintegration may be an enduring background condition in these subjects who have suffered cumulative trauma. In such people, a dis-coordination between brain systems which usually work together can be demonstrated (Meares, 2012; Meares et al., 2005). The stress inducing the symptom may be relatively mild.

In other cases of inhibitory dissociation, no such *enduring* disintegrative background can be demonstrated. We assume that in these circumstances a considerable "shock" is needed to precipitate the protective inhibitory "shield". A very simple example is as follows. A trainee nurse is ordered to set out a dead body for the first time. She is apprehensive as she approaches the body. When she bends over the face, she feels a click in her spine. Her arms go weak. She cannot continue her task. A neurologist finds no abnormality to explain her paresis. Afterwards, she was able to speak of her experience, during which time she recovered the strength in her arms. She remembered the "shock" when she looked into the face. It reminded her of her mother, with whom she did not get on well. "The shock" was presumably disintegrative and was immediately followed by coarse inhibitory activation (dissociation), causing a temporary loss of power in her arms.

This young woman had no biography suggesting that she harboured a traumatic disintegration dimension which might give rise to dissociation. People having sudden severe "shocks", such as a wartime event, may have a brief episode

of inhibitory dissociation with no evidence, as indicated electrophysiologically, of underlying disintegration (Meares & Horvath, 1972).

Although Janetian (disinhibitory) dissociation and inhibitory dissociation can be distinguished: the kind of dissociation proposed by Janet is a reflection of failure of higher order inhibition, whereas the second kind of dissociation depends upon an activation of coarser and more global inhibition. This latter dissociation is defensive and protective; the former has no psychological purpose or function. They are sometimes active together. For example, the protective function of inhibitory dissociation may be recruited in order to shield from consciousness the traumatic material at the core of disinhibited dissociation.

The differentiation between disintegration and dissociation is much less clear during the attachment period, before about age 4 when the first evidence of self is manifest in autobiographical memory (Nelson, 1992), and the child has the capacity to hold simultaneously in mind two different realities. Adverse childhoods characterized by repeated, severe and long-lasting disintegrative processes in combination with extremely traumatic or contradictory experiences with caregivers can lead to inhibitory dissociation (Farina et al., 2019; Liotti, 1992). However, in the period before 4, when the self is less fully formed (Meares & Orlay, 1988; Wimmer & Perner, 1983) and integration may be rudimentary and inhibitory function undeveloped, the distinction between disintegration and inhibitory dissociation becomes blurred. Each shifting conscious state can be called both dissociated and disintegrated.

The Hierarchy of Hughlings Jackson

Janet's description of disintegration and dissociation needs elaboration. Further clarity depends upon a hierarchical conception of human consciousness. This approach became highly developed in Janet's later work (Barral & Meares, 2019). However, the hierarchy had already been envisioned by the great English neurologist John Hughlings Jackson (1835–1911). His work contributes to an understanding of what Janet meant by dissociation (Farina et al., 2005; Meares, 1999).

Jackson proposed a view of the making and breaking of what he called *self* which shows a remarkable resonance with Janetian ideas, at least in terms of the breaking. He conceived the brain-mind as a hierarchical organization which, reflecting the history of evolution, integrates increasingly complex inter-coordinated levels as it rises. Every superior level modulates and is co-ordinated with the lower ones. At the highest levels, the mind represents itself, integrating the activity of its lower components (Meares, 1999). This re-representation in the dynamic play at the highest levels of mind has been rediscovered by Nobel prize winner Gerald Edelman (1992) in his conceptions of different levels of consciousness based on organization-structuring and complexity, that he calls primary and higher-order consciousness.

Jackson saw the evolution of self as a cooperation between two opposing themes of organization. The first involves an increasing coordination between the basic elements of neural function. The second theme is *inhibitory*, concerning a force which disconnects these developing unities. It fosters discrimination between them. At each "level" of evolutionary progress, a new degree of inhibitory competence is gained, allowing a finer disconnection and discrimination between the unities. For example, prefrontal cortex executive functions develop for inhibition of impulses or intense affective states related to threatening situations in favour of a more refined defence response. The new level of inhibitory activity has a controlling effect over earlier levels. It is evident that Jackson had somehow anticipated the present neuroscientific knowledge on integration-segregation balance of mental functioning described below (Deco et al., 2015).

There can be a retreat down the evolutionary trajectory which Jackson called "dissolution". There are two main consequences: a relative failure of connection between brain elements and a loss of higher-order inhibitory function with low-level mental functions emerging uncontrolled and separated. An example is a momentary failure of executive functions with the emergence of exaggerated emotionality and dysregulated behavioural reactions to threat. There is a progressive failure of voluntary control over the movements of mental life, which becomes more automatic, less complex and more fragmented. Earlier developed functions are dis-coordinated and exaggerated (Meares, 1999).

Sherrington and the Discovery of Inhibition as a Coordinative Factor

Hughlings Jackson was working during the first phases of neurological science, before fundamental concepts like the synapse were named. It was Charles Sherrington who, in 1897, introduced the term 'synapse' for the special membrane between neurons via which impulses are conducted from one neuron to the next. Sherrington built on the skeletal foundation of Hughlings Jackson's theory. Over the next decade Sherrington (1906) showed that the great function of the nervous system is the integration of all bodily phenomena, to enable an appropriate motor output. The integration includes not only the conscious functions of volitional movement but also those that are unconscious, autonomic, and

proprioceptive. Sherrington was the first to use the term proprioception and described much of the system that generates it, ruled by the cerebellum.

Sherrington's whole system was based on his discovery of inhibition and its essential role in the integration dynamics of brain function as described in the coming sections. He showed that a particular kind of neuron, which he called "internuncial," now called *interneuron*, had an inhibitory function. Modern neuroscience shows that inhibitory interneurons are crucial for integration and segregation balance because they "*serve to coordinate networks*" (Kepecs & Fishell, 2014, p. 6) by gating information flow within a given circuit, providing feed-forward inhibition and other computational functions in order to regulate and coordinate higher-order brain functions. Indeed, their density and functioning are considered to be an indicator of cortical maturity (Umemori et al., 2018). The neocortex has the largest number of interneuron types, but they are also numerous in the hippocampus and other limbic structures such as the amygdala. Indeed, it has been demonstrated that inhibitory interneurons play a crucial role for fear learning, emotional control, memory functions, executive functions, consciousness and many other high level coordinating mental functions impaired by psychological trauma (Ferguson & Gao, 2018).

Sherrington highlighted the significance of inhibitory systems in his Nobel speech in 1932. He made its starting point Jackson's release phenomenon, which manifests a failure of inhibition. Jackson had called the nervous system "a sensorimotor mechanism, a co-ordinating system from top to bottom" (Jackson, 1958, II, p.41). Sherrington's lecture, entitled "*Inhibition as a co-ordinative factor*", gave an indication of how the co-ordination may come about.

"Normal Integration" and the Dynamic Network Organization of the Brain

To best understand the pathogenic power of traumatic disintegration anticipated by Janet, we first need to clarify the concept of normal integration within the hierarchical network architecture of the brain as predicted by Janet, Hughlings Jackson and Sherrington.

"The healthy human brain segregates and integrates information" (Deco et al., 2015, p. 430). Modern neuroscience experiments have demonstrated that the brain is a highly integrated and dynamic system which connects functionally segregated systems (Biswal et al., 2010; Fukushima & Sporns, 2020; Lord et al., 2017; Park & Friston, 2013). The brain also operates to segregate information into distinct modules that execute specialized local computations, functions, and mental contents (Deco et al., 2015). The optimal functioning of the human brain is an interplay between segregation and integration, which is essential for balancing effective local processing and global communication of neural information between specific areas, in turn supporting high-level mental functions (Deco et al., 2015; Fukushima & Sporns, 2020; Lord et al., 2017).

Segregation and integration operate through the dynamic activity of a complex organization of neural networks involving several brain areas, rather than through single anatomical structures (Gordon et al., 2018; Park & Friston, 2013). The structural connectivity architecture of the brain (axons, white matter tracts) includes both short and local connections organized in modules and large-scale connections. The large-scale connections integrate different segregated modules in a heterarchical manner, supporting local and global integration that operates a flexible top-down control over low level cognitive, sensory, and motor networks (Deco et al., 2015; Gordon et al., 2018; Lord et al., 2017; Park & Friston, 2013). This connectivity architecture of neural communities and interconnected hubs allows many possible patterns of functional segregation and integration of neural information organized in functional networks that change their dynamic configuration according to different tasks and mental states in response to momentary demands from the environment (Fukushima & Sporns, 2020; Gordon et al., 2018; Park & Friston, 2013).

Large scale functional networks support global and efficient processing of information, integrating different local segregated modules: "*brain function or cognition can be described as global integration of local integrators*" (Park & Friston, 2013, p. 580). In this regard integration and segregation are not specific mental functions, but emergent intrinsic properties of optimal mental functioning. As Janet stated more than a century ago: "*mental health is characterized by a high capacity for integration*" (Janet, 1889, p. 460). Recent scientific literature leads to the consideration of major psychiatric disorders as alterations of the balance of integration and segregation (Bassett et al., 2018; Lord et al., 2017).

As anticipated by Sherrington, to achieve an optimal interplay between integration and segregation the brain must regulate the level of excitatory and inhibitory neuronal activity (Lord et al., 2017). The balance between excitatory and inhibitory neurotransmission, particularly in the prefrontal cortex, amygdala, hippocampus and other limbic structures, is essential for executive functioning, working and declarative memory, emotion processing and regulation, social and fear response, behavioural control, high-level cognitive functioning and metacognition (Ferguson & Gao, 2018). A key role for the regulation of excitatory and inhibitory equilibrium is played by the inhibitory interneurons. They have a

prominent part in the integration and segregation processes through inhibition of neighboring excitatory pyramidal neurons that warrants fine-tune network regulation (Ferguson & Gao, 2018).

Overall, there is increasing evidence that among the effects of child maltreatment and developmental trauma is a disruption of the balance between integration and segregation (Lanius et al., 2020; Teicher et al., 2016). We thus hypothesize that most of the psychopathological phenomena described as dissociative are manifestations of normal integration and segregation, through inhibition failures.

Disintegration and Failed Inhibition

The hypothesis advanced here is that disintegration is the outcome of enduring failure of higher-order inhibitory mechanisms. This proposal, first put forward in 1980 (Horvath & Meares, 1979), was based on findings from a study of 11 patients who had identifying features very much like Janet's cases of désagrégation. They had a polysymptomatic history, including episodes of loss of function (e.g., paralysis, anaesthesia, aphonia, blindness, amnesia, or coma) for which no organic cause could be found. These symptoms of dissociation proper were in remission. Episodes of tremor, ataxia, dystonia and other movements sometimes representative of fragments of a traumatic experience, were not included in the criteria for fear of misdiagnosing an organic condition. The characteristic features of this group of patients seemed to epitomize the nature of traumatic disintegration dimension (TDD). We are, then, suggesting that TDD is largely synonymous with Janet's enduring background condition of désagrégation. These patients were compared with 10 patients with anxiety in terms of electrophysiological indices of arousal and inhibition described by Lader (1975). Arousal was shown by the rate of spontaneous fluctuation of skin resistance. Inhibition was reflected by the habituation rate to meaningless sound. It is understood as a measure of the capacity to screen out redundant stimuli, a capacity obviously dependent upon inhibitory competence.

The outstanding finding was total failure of habituation in the désagrégation-like group (i.e., inhibition failure) (Horvath & Meares, 1980). Habituation failure is usually the outcome of high arousal. The consequences of inhibitory failure are numerous. They include dysregulation of arousal through lost inhibitory control. The loss of relationship between inhibitory control and arousal indicates, at least in this study, a disconnection between parasympathetic and sympathetic systems. This observation is supported by work from Porges and his colleagues (Austin et al., 2007). They studied BPD patients from the perspective of his polyvagal theory (Porges, 2009). This model proposes that the parasympathic, and inhibitory, vagus nerve, evolves in two stages. The early part of the nerve is unmyelinated; the later evolved section is myelinated and has a greater series of functions than the primitive section. These functions include linking the rhythms of the heart to those of breathing, producing respiratory sinus arrhymia (RSA). Under stress, the borderline patients showed diminishing RSA while the controls showed increasing RSA (Austin et al., 2007). Porges and his colleagues saw the change in BPD patients as an example of Jackson's "dissolution", a stress induced reversal of the evolutionary trajectory, with the late evolved and higher-order functions being lost first.

Using the Adult Attachment Interview (AAI), Farina and colleagues (2015) observed that the retrieval of childhood attachment experiences in individuals with a DD was associated with a change in heart rate variability (HRV) patterns that could reflect arousal and emotion dysregulation of the disintegrative psychopathological process. The results for DD patients were similar to those replicated in other trauma-related clinical samples, such as Posttraumatic Stress Disorder (PTSD; Park et al., 2019) and, as we have just noted, in BPD (Austin et al., 2007; Luyten et al., 2020), and are consistent with those from developmental psychopathology. Indeed, Oosterman and colleagues (2010) found that children with a background of neglect and those with disordered attachment showed more sympathetic reactivity and less vagal regulation.

Appropriate levels of arousal sharpen sensory awareness and vigilance, promote motivated behaviours, regulate emotions, and improve cognitive and executive functions. Dysregulated high arousal states, on the contrary, are associated with an impairment in prefrontal dependent top-down regulation of motivated behaviours, emotion dysregulation, and altered impulse control that are core symptoms of childhood and later traumas (Jung et al., 2019; Young et al., 2017). Thus, dysregulated levels of arousal have a negative impact on higher-order integrative and inhibition functions worsening emotional and behavioural control (Jung et al., 2019).

Traumatic Attachment and Disintegration

Integration of the personality is most profoundly disturbed by insults occurring during the early developmental period. Yet, these events might not appear to be insults to an observer. They are, to repeat Janet's words "a succession of slight forgotten shocks" (Janet, 1924, p. 275). The most characteristic shocks are those the child experiences when the mother's

response are out of kilter with his/her own. If the rhythm of the mother–infant interplay is repeatedly upset it provides the background to the formation of disorganized attachment (DA).

A large body of empirical studies demonstrate that attachment relationships during the first year of life become disorganized as a consequence of the caregiver being 1) overtly aggressive or 2) responding to the child in a vulnerable, frightened, neglectful but not actively maltreating way (Granqvist et al., 2017; Liotti, 2017). Thus, parents are perceived by the child as a source of nurturance, while simultaneously being a source of threat (Granqvist et al., 2017; see Schimmenti, Chapter 10, this volume). Although DA does not necessarily indicate active maltreatment, situations where the parent is at the same time the source of and the solution to the child's fear are capable of disorganizing the child's mental processes. Thus, DA represents a type of traumatic experience insofar as it constitutes an inescapable threatening experience in the face of which the child is powerless. In addition, as Guérin-Marion and colleagues (2020) reminded us, the caregiver is an external regulator of the infant's stress response, both at a neurovegetative level and coping strategy level. Cognitive, affective and neurovegetative misattunement from a hyperaroused and dysregulated caregiver can impair the formation of stable self-regulation responses and harmonious physiological and socioemotional development in a child, constituting a "*hidden trauma*."

In accordance with Liotti and many others, we consider DA as traumatic in nature, especially if severe, prolonged, and reinforced in the course of child development and adolescence by other traumatic experiences (Liotti, 2017). Because of its traumatic nature, DA fosters the impairment of high-order integrative mental functions and neurovegetative regulation, leading to disorganized mental processes evidenced by both developmental psychopathology and neuroscientific studies (Farina et al., 2014).

Liotti furthermore hypothesized that the threatening and paradoxical intersubjective experience of DA may constitute a predisposition to dissociation (Liotti, 1992). This hypothesis was later supported by longitudinal controlled studies (Dutra et al., 2009; Ogawa et al., 1997) and neuroscientific experiments (Farina et al., 2014). In more recent work, Liotti refined his hypothesis, arguing that the relationship between DA and dissociation may be due also to the simultaneous and conflicting activation of the motivational systems governing attachment and survival defenses in the infant (Liotti, 2017). According to Liotti, children exposed to a caregiver perceived simultaneously as a source of safety and threat face an unsolvable conflict between two inborn and powerful dispositions: the tendency to seek help and soothing, regulated by the attachment system, and the evolutionary archaic defence system located in the brain stem that is responsible for animal defensive responses. The contradictory behaviour of the caregiver cannot be assimilated in the same memory system of the child and, in addition to the disintegrative effect, leads to a fragmented and segregated self-representation that compromises the serial organization of autobiographical memory and self-consciousness, and therefore to inhibitory dissociation (i.e, dissociation proper; Farina et al., 2019; Liotti, 2009).

The Neurobiological Effect of Traumatic Stress on Mental Integration

An increasing and convergent body of empirical data demonstrates that at a neurobiological level early life stress, along with developmental and later trauma, hamper mental integrative capacity, disturbing both local and large-scale structural networks and their functional connectivity (Lord et al., 2017; Teicher et al., 2016; Massullo et al., 2022). Researchers have proposed multiple potential neurobiological mechanisms by which maltreatment and trauma increase risk for impaired brain connectivity: from epigenetic processes and gene expression to neuroendocrine and immune responses.

For instance, it has been proposed and partially demonstrated that the environmental deprivation of neglect (the most frequent form of child maltreatment) hijacks the developmental process of synaptic pruning, resulting in accelerated and extreme synapse elimination (McLaughlin et al., 2020). Although synaptic changes are a primary mechanism of experience-dependent plasticity, other mechanisms take part in the alteration of brain connectivity and poor white matter integrity related to adverse childhood experiences such as reduced myelination and axon-sprouting through myelin gene expression changes (Lutz et al., 2017).

Another growing body of studies suggests that the neurophysiological substrate of integrative capacity is impaired by the defensive neurobiological response to neglect and abuse during development, and that this impairment is mediated by catecholamines, corticosteroids and inflammatory responses (Weems et al., 2019). Numerous studies have reported an association between childhood trauma and increased levels of pro-inflammatory markers: C-reactive protein, cytokines such as interleukin-6, and tumor necrosis factor-α (Baumeister et al., 2016). A systematic review and meta-analysis reports that interleukin 1β, interleukin 6, and interferon γ levels are higher in patients with PTSD than in healthy controls; the authors suggest that inflammatory markers could explain neurophysiological impairments in PTSD

(Passos et al., 2015). Recent neuroimaging findings have demonstrated that increased trauma-related inflammation can alter functional connectivity of the major brain regions associated with higher-order mental functions, and that altered functional connectivity and inflammation correlate with the severity of clinical symptoms (Kim et al., 2020). Clinical studies report an association between childhood abuse, lifetime exposure to trauma, level of inflammation, dissociative symptoms, and other trauma-related disintegrative psychopathology, such as emotional dysregulation (Powers et al., 2019).

Furthermore, several experimental findings converge to suggest that both developmental trauma, and stress at different stages, including adult traumatic events, have a pathogenic effect on functioning of inhibitory interneurons through corticosteroids, oxidative stress and inflammatory cytokines. These pathogenic inhibitory effects, in turn, hamper integration and segregation processes and could lead to alterations of emotional control, memory, metacognition and other typical symptoms of trauma-related disorders (Holland et al., 2014; Regev-Tsur et al., 2020). Recent evidence shows that memory alterations in trauma-related disorders, such as traumatic intrusive memories, could be provoked by a failed inhibition in hippocampal-cortical networks activated by stress reactions (Guo et al., 2018; Regev-Tsur et al., 2020).

The exact contribution of different neurobiological processes involved in the "disintegrative effect" remains unclear. Nevertheless, there is evidence that a child's neurobiological response to maltreatment and trauma has a direct negative effect on connectivity and inhibition and, therefore, on the balance between integration and segregation.

Neurophysiology of Disintegration Psychopathology

The majority of psychopathological, clinical and neuroscientific studies indicate that the most affected mental functions of child maltreatment and trauma are those underpinned by high-level integrative functions and their large-scale brain networks. These include arousal modulation, emotional processing and regulation, executive functions, social cognition, self-identity, autobiographical memory and other self-referential processes (Krause-Utz et al., 2017; Lanius et al., 2020; Teicher et al., 2016).

Experimental data lead also to the view that the disintegrative effect could be manifest either as trait disintegration vulnerability (TDV) or a state dependent propensity to disintegration (SDD). TDV should be understood as the background psychopathological vulnerability caused by the trauma-related weakness of integrative and inhibitory brain structures. It refers to a trait vulnerability which is a more or less permanent and stable feature of the personality. It should be distinguished from the SDD which refers to the propensity for momentary and transient failures of integrative or inhibitory functioning. The two are not mutually exclusive but rather tightly related. Indeed, SDD usually is the result of a TDV that becomes evident only in response to specific triggers.

Many neuroimaging studies show resting state alterations of structural and functional connectivity suggesting a TDV affecting different mental functions. In other studies, instead, the aberrant functional connectivity emerges only after a task or a trauma trigger. For example, Farina et al. (2014) evaluated cortical connectivity modifications in subjects with DA and dissociative disorders compared to healthy controls, before and after retrieval of personal attachment-related autobiographical memories through the AAI. While before the interview the two groups did not differ, afterwards functional connectivity decreased in the DA dissociative patients compared to controls. Thus, it is possible to argue that a TDV becomes manifest with a SDD, evidenced by disorganized state of mind associated with the AAI, only in the case of a specific trigger such as a traumatic memory or a specific interpersonal situation interpreted as potentially threatening, that heavily impacts high-level mental functioning.

Regarding SDD, we hypothesize it is a consequence of TDV and worsens because of the typical arousal dysregulation of developmental trauma, with threat overvaluation circularly activated by the re-surfacing of implicit relational traumatic memories. In most cases it is difficult to disentangle disintegrative disturbances because they are closely interwoven by a circular causality where hyperarousal has a worsening effect on cognitive functions that usually regulate affective and arousal states. However, we offer a brief and synthetic overview of the most common disintegration alterations in trauma-related disorders.

Failures of the Inhibition Control System and Executive Functions

Executive functions reflect deliberate, self-directed processes that regulate psychological functioning to best adapt to natural and social environments (such as suppression of behaviour from immediate, short-term goals in order to maximize the long-term outcomes or support social behaviours for cooperative and competitive strategies). The core of executive functioning is based essentially on affective and behavioural inhibition and flexibility for decision making (Del Giudice, 2018) that is underpinned by neuronal connectivity and compromised by childhood maltreatment and trauma. There

is, indeed, a wide consensus among clinicians and researchers that emotional and behavioural dysregulations are core aspects of childhood maltreatment and trauma-related disorders (Jaffee, 2017; Mayes, 2006). Both emotional and behavioural regulation are based on a sum of functions that includes initial emotional detection, orienting toward emotional cues (emotional reactivity), emotional processing (i.e., appraising facial expression) and executive control of emotional and behavioural responses either as modulatory/inhibition and/or cognitive re-interpretation of evocative stimuli to reduce negative affect. All emotional regulation functions are widely demonstrated to be compromised by either structural and functional connectivity impairments related to early and later adverse experiences.

Additionally, all trauma-related disorders are characterized by emotional and impulse alterations related to connectivity dysfunctions (Bertsch et al., 2018; Terpou et al., 2019). In particular, neuroimaging studies repeatedly and consistently find disturbed modulatory control of cortical over subcortical regions related to reduced connectivity between prefrontal cortex (PFC), hippocampus and amygdala and within the Central Executive Network in all stages of affective processing and control (Lei et al., 2019; Wang et al., 2020). The widely demonstrated disturbed modulatory control of cortical over subcortical regions is not the only disintegrative driver for the exaggerated emotionality and dysregulated behavioural reactions of trauma-related patients. As already mentioned apropos of the segregation process of DA IWMs, disintegrated traumatic implicit relational memories triggered by a social or interpersonal cue (e.g., a gesture, or tone of voice or facial expression suggesting devaluation or threat) can unconsciously trigger the pathological disintegration described above, causing or worsening affective dysregulation (Huang et al., 2020; Luyten et al., 2020; Meares, 2012). In this regard several researchers argue that the hippocampus, due to its inhibitory coordination operated by interneurons (as predicted by Sherrington), is implicated in sophisticated threat stimulus discrimination and safety processing influencing reactivity of fear-inhibition with its interactions with the PFC. Failures of this coordinating network reduce hippocampal responses to ambiguous threats and can promote threat overgeneralization that, circularly, increases affective hyperactivation and hyperarousal (Lange et al., 2019).

Altered Pattern Separation and Threat Overgeneralization

Lecei and Van Winkel (2020) recently proposed a key role for altered pattern separation in psychopathological vulnerability following childhood adversity. Pattern separation is a cognitive process operated by the hippocampus and coordinated with the amygdala and ventromedial prefrontal Cortex (vmPFC) to differentiate similar memories, and reduce recall errors and interpretation interferences in affective stimuli. Pattern separation is supposed to discriminate a threatening cue from a safe one based on previous experiences. The numerous animal and human experiments reviewed by Lecei and Van Winkel led them to hypothesize that chronic stress alterations associated with childhood adversity reduces hippocampal subfields' inhibitory activity and also their connectivity with the amygdala and vmPFC, preventing the pattern separation modulatory effects from extinguishing fear in the absence of threat. They propose that these failures of pattern separation play a key role in socially ambiguous situations, causing the social threat hypervigilance and overinterpretation typical in maltreated children.

Relational and Social Functioning: Disintegration of Social Cognition and Metacognition

Traumatic impairment of integration could also affect empathic abilities, prosocial inclination, group affiliation, cooperative abilities, mentalization and perceived trustworthiness (Teicher et al., 2016). Like emotional and behavioural control, these interpersonal abilities and social cognitions are based on a complex network of sophisticated mental functions underpinned by integration of higher-order cognitive processes and, therefore, of large-scale network connectivity. Recent fMRI studies revealed that individual differences in trait empathy and empathic concern are mediated by patterns of connectivity between self-other resonance and top-down control functional brain networks (Christov-Moore et al., 2020). Similarly, a number of studies demonstrate the key role of functional connectivity integration for social cognition. Most of them implicate the Default Mode Network (DMN). The DMN reflects the neural activity of different brain areas and is proposed to be involved in self-consciousness, self-processing and introspection functions, including emotional awareness, processing, and mentalizing in social interactions (Mars et al., 2012).
Mentalizing and other social cognition abilities are affected by child maltreatment, attachment trauma and later traumatic experiences. Huang and colleagues recently pointed out:

> Attachment and mentalizing may interact in a complex causal way, in which early experiences of maltreatment lead to disruptions of the attachment system, which in turn causes mentalizing failure when the attachment system is activated. This vulnerable mentalizing triggers cascades of arousal, which then undermine mentalizing even

> further … that mentalizing difficulties increase the risk of development of dissociative experiences after exposure to childhood trauma.
>
> *Huang et al., 2020, pp. 55–56*

In other words, since mentalizing and other social cognitive functions require high-level cognitive operations, and, consequently, high levels of integrative capacity, they are easily impaired by hyperarousal and emotional dysregulation.

Traumatic Disintegration of Self-Related Processes

One of the most important and characteristic effects of child maltreatment, attachment trauma and later traumatic events is impairment of tightly intertwined self-referential mental processes (SRP), such as autobiographical memory, sense of agency and self-consciousness, with its properties of self-coherence, self-continuity, and self-embodiment (Lanius et al., 2020; Luyten et al., 2020; Meares, 2012; Terpou et al., 2020). To some extent, every psychopathological consequence of trauma involves a disturbance of self-consciousness felt as fragmentation of self-experience. Disintegrative fragmentation of self-experience usually leads to "*painful incoherence*" and chaotic behaviours (Liotti & Farina, 2016; Şar, 2017, Meares, 2021).

Even dysregulated affective reactions or somatization are experienced as somewhat estranging and alienating in trauma-related disorder patients (Meares, 2000). As previously mentioned, the alterations of DMN connectivity are extensively considered one of the most representative neurophysiological signatures of every form of self-referential disturbances; a large body of evidence suggests that exposure to both chronic early stress and all forms of trauma alters DMN connectivity (Lanius et al., 2020; Teicher et al., 2016). For the purpose of this chapter it is important to note that most of the effects of developmental and complex trauma impact the DMN, altering its connectivity and creating disintegration of self-referential processes, from self-consciousness to body awareness and control, both in resting and in task-dependent states (Adenzato et al., 2019; Lanius et al., 2020).

Lateralization of Disintegration and the Impairment of Right Hemisphere Language

Meares and colleagues (2005) investigated the brain's coordination of two main neural networks for processing of a strange, or "odd", stimulus in BPD patients by Event-Related Potential (ERP). They found that unlike controls in which the two networks were coordinated, producing a single ERP waveform, BPD patients showed a double peaked waveform, revealing that the two networks were no longer synchronized. In a further experiment, Meares, Schore and Melkonian (2011) demonstrated, as previously claimed by Schore (see Chapter 11, this volume), that the impaired coordination and inhibitory failures of BPD patients are mainly confined to the right hemisphere, which is more vulnerable to relational trauma. Meares (2021) recently argued that the lateralization of disintegration in the right hemisphere accounts for the language deficiencies of those suffering relational trauma, which manifest in a form of language, or more particularly, conversation, which is largely asymbolic.

Trait and State Disintegration and their Circular Causality

As described above, a disintegrative effect could be manifested both as trait vulnerability and a state dependent propensity to disintegration. Indeed, some scholars argue that the detrimental effects of childhood maltreatment and/or trauma may act through the altered development of the DMN and other brain networks, resulting in a trait-dependent vulnerability factor (Lanius et al., 2020). As we have previously observed, it is also repeatedly demonstrated that stressful or painful stimuli and trauma-related memory tasks dynamically worsen this vulnerability in both non-clinical and clinical samples, impairing emotional, metacognitive and self-referential functions (Adenzato et al., 2019; Lanius et al., 2020). For emotive control and cognitive functions, as well as for social cognition and self-referential processes, it is possible to argue that in individuals with early adverse relational experiences the functional connectivity abnormalities worsen and become clinically symptomatic only when the system is overloaded by affectively relevant and hyperarousing stimuli in a dimensional manner.

Finally, in the study of early relational trauma and disintegration processes we should consider the continuing interplay between alterations of biological structures (e.g., functional connectivity), the development of mental functions (e.g., emotional control, continuity of self-experience or mentalization), the interpersonal environment (e.g., attachment figures) and pathogenic beliefs that take shape within the traumatic environment in an attempt to adapt to it. In this sense

the traumatic disintegration could have a compounding negative impact on development: it hinders high-level mental functioning, leading to the abovementioned difficulties (e.g., executive functions, social cognition, self-consciousness), while it worsens, through a circular causation, the effects of the pathogenic beliefs and the relationship with the interpersonal and social environment, hampering "healthy personality functioning that should be characterized by openness to experience, flexibility, adaptability… flexibility of cognitive-affective schemas… the capacity to constantly re-evaluate the sense of self and relatedness in the course of development" (Luyten et al., 2020, p. 90). The overall effect of these complex interactions is also the impairment of cooperative predisposition and trust (both epistemic and affiliative) that contribute to make these patients so resistant to psychotherapy (Liotti & Farina, 2016).

Regrettably, many neuroscientific studies are limited by a lack of distinction between disintegration and inhibitory dissociation (Krause-Utz et al., 2017). Furthermore, they do not distinguish between two forms of dissociation, one described by Janet, involving a drifting apart by one part of mental life from the rest (disinhibited dissociation), and another form dependent on inhibitory activation (dissociation proper).

The Traumatic Disintegrative Dimension and Diagnostic Categories

Clinical observations and empirical data suggest that disintegration and dissociation processes are not confined to specific diagnostic categories such as dissociative identity disorder, PTSD, complex PTSD or BPD, but rather can be displayed by patients across almost all psychiatric disorders as a psychopathological dimension. We thus propose the existence of a traumatic disintegrative dimension manifesting to varying degrees in the psychopathological profile of all patients with histories of developmental trauma.

Child maltreatment and attachment trauma are considered the most potent predictors of poor mental health across the life span and characterize patients with more severe symptomatology and poorer responses to standard treatment approaches across diagnoses (Lippard & Nemeroff, 2020; McCrory et al., 2017). Consistently, traumatic disintegrative symptoms are linked to symptom severity and predictors of poor responses in psychotherapeutic treatments across diagnosis (Farina et al., 2019; Lyssenko et al., 2018). Arousal, behavioural and affective dysregulation, self-related process disturbances, state of consciousness alterations, mentalization problems, memory and identity disruptions, together with their consequences in terms of alterations in systems of meaning and relational difficulties have been hypothesized, and partially demonstrated, to worsen prognosis and lead to specific therapeutic difficulties regardless of diagnostic category. These findings indicate and implicate disintegration as a key variable in the assessment and treatment of psychopathology, especially in cases where developmental, attachment or omission (e.g., neglect) traumas are present.

Conclusions

This chapter has discussed the concept of the traumatic disintegration dimension, a term that identifies a specific group of phenomena making up a main axis of the structure of traumatic consciousness. The psychopathological, clinical and neuroscientific evidence reviewed in this chapter leads to the distinction between different trauma-related pathogenic processes: traumatic disintegration and dissociation.

Disintegration should be understood as the failure of higher-order inhibitory functions. Higher-order functions, as Vygotsky taught us, do not develop by themselves alone. They need a facilitating environment. That environment is one in which the responses of the caregiver, or caregivers, are, in general, harmonious with the child's essential reality. The mother needs to set up periods of continuing interplay, a quasi-rhythmic in-out engagement, manifest in direction of gaze of both partners. The out, or off, mode depends upon finely adjusted inhibitory mechanisms, which the child is able to draw upon, thus fostering their eventual firm emergence of self and regulatory processes. The opposite of this condition, resulting from disorganized and traumatic attachment, is thus the model for traumatic disintegration. Higher-order mechanisms cannot properly evolve. Consciousness cannot be coordinated in the way Sherrington had proposed. Neuroscientific research seems also to support the neo-Jacksonian prediction that the traumatic disintegrative process will have a basic structure of impaired coordination between brain systems that usually work together, allied with a relative failure of inhibitory control. This general disintegrative process, affecting high-order mental functions, explains in part the vast heterogeneity of psychopathological traumatic outcome.

Dissociation is conceived as segregated multiplicity of mental contents and functions, such as autobiographical memories, self-other representations or identities, and states of consciousness. Trait disintegrative vulnerability is, thus, the precondition to develop both types of dissociation, regarded as the pathological "functional re-organization of the mind into enduring parallel-distinct structures which operate side by side without being fully integrated with each other" (Şar, 2017).