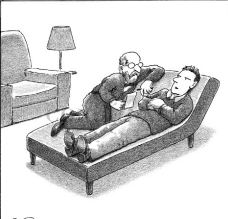



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Processes of emotional change
- a psychotherapy research perspective


ICATA, 17.6.2023
Erkki Heinonen
Professor, University of Oslo
Research Manager, Finnish Institute for Health and Welfare
Specialist in Clinical Psychology, Psychotherapist
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Various pathways of emotional change



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What are emotions?

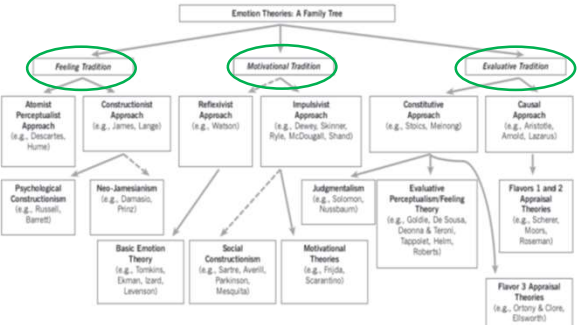


- Definitions and theories vary
- Common “diagnostic features” of an emotion:
 1. Evaluation of some sort
 2. Physiological changes
 3. Changes in bodily/facial/vocal expressions
 4. Subjective experience
 5. Changes in mental processes and behavioral processes from their baseline state
- → Basic emotions observable across cultures and times: e.g., sadness, anger, fear, joy

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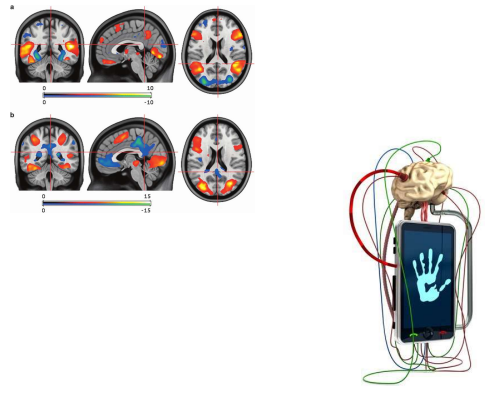
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Traditions of emotion research



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SPECIAL SECTION: ON DEFINING EMOTION

emotion review

The Many Meanings/Aspects of Emotion: Definitions, Functions, Activation, and Regulation

Carroll E. Izard
Department of Psychology, University of Delaware, USA

Emotion Review
Vol. 2, No. 4 (October 2015) 363-370
© 2015 SAGE Publications and
The International Society
for Research on Emotion
DOI: 10.1177/1747391315244653
er.sagepub.com

Table 3. Judges' agreement on the aspects of participating scientists' definitions of "emotion"

Aspects identified by Judge A	Agreement of other judges with Judge A					
	B	C	D	E	F	G
Organized set of responses				√	√	
Physiological component			√			√
Behavioral or expressive component			√			√
Subjective feeling component			√	√		√
Cognitive component						√
Appraisal processes						√
Motivational function or action impulse			√			√
Adaptive or coping function			√			√
May be unconscious				√		
Brain-related						√
Each emotion is different						√

Note: Judges A, B, and C are clinical-science faculty members. Judges D, E, and G are a practicing clinical psychologist, a postdoctoral fellow, and two clinical-science graduate students in the author's laboratory respectively.

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Table 1. Scientists' agreement on the structures of "emotion"

Structures	Mean rating
Neural systems dedicated at least in part to "emotion" processes	8.92
Response systems	8.61
Feelings or feeling state	7.84
Expressive behavior, signaling system	6.56
Antecedent cognitive appraisal	6.54
Cognitive interpretation of a feeling state	4.79

Note: Mean ratings on degree of agreement on a scale from 1 (Not at all) to 10 (Completely).

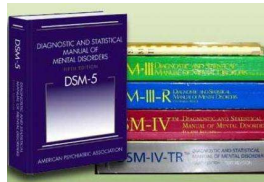

Table 2. Scientists' agreement on the functions of "emotion"

Functions	Mean rating
Recruits response systems	8.87
Motivates cognition and action	8.23
Organizes, orders, coordinates responses	7.78
Monitors or assesses significance of events	7.77
Provides information or meaning	7.35
Relational	6.82
Social	6.38
Controls responses	6.22
Motivates behavior characterized primarily as approach or withdrawal	4.96

Note: Mean ratings of degree of agreement on a scale from 1 (Not at all) to 10 (Completely).

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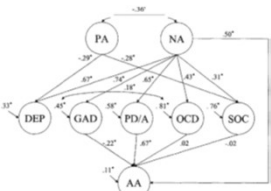
aps
PSYCHOLOGICAL SCIENCE

Special Series

Emotion, Emotion Regulation, and Psychopathology: An Affective Science Perspective

James J. Gross¹ and Hooria Jazaieri²
¹Stanford University, and ²University of California, Berkeley

Clinical Psychological Science
2014, Vol. 2(4), 367–401
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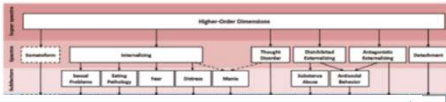
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The p Factor: One General Psychopathology Factor in the Structure of Psychiatric Disorders?

Avshalom Caspi^{1,2,3,4}, Sidra J. Goldman-Meiser¹, Madeline H. Idan Shalev¹, Richie Poulton¹, and Terrie E. Moffitt^{1,2,3,4}

The Hierarchical Taxonomy of Psychopathology (HiTOP): A Dimensional Alternative to Traditional Nosologies



DEBATE Open Access

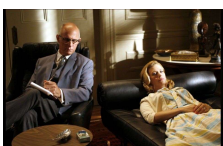
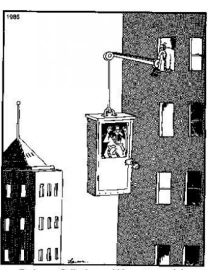
Toward the future of psychiatric diagnosis: the seven pillars of RDoC

Bruce N. Cuthbert^{1,2} and Thomas R. Insel^{2,3}

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Working with emotions therapeutically

Professor Gallagher and his controversial technique of simultaneously contrasting the fear of heights, snakes and the dark.

- Activating Event
- Belief
- Consequences

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→ Differences in effectiveness?

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OPEN ACCESS Freely available online

PLOS MEDICINE

Comparative Efficacy of Seven Psychotherapeutic Interventions for Patients with Depression: A Network Meta-Analysis

Jürgen Barth^{1,2*}, Thomas Mu
Peter Jüni^{1,2}, Pim Cuijpers³



ivien Trelle^{1,2}, Hansjörg Znoj⁴,

Systematic
Review

apies for anxiety disorders
Zilcha-Mano⁵, Jacques P. Barber^{6,7*}

JAMA Psychiatry | Original Investig
Efficacy of Psychot... for Personality Disorder
A Systematic Review and Meta-analysis

Ioana A. Cristea, PhD, Claudio Gentili, MD, PhD, Carmen D. Coste, PhD, Daniela Palomba, MD, Corrado Barbui, MD, Pim Cuijpers, PhD

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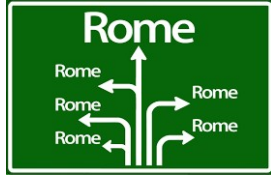
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→ Common vs. specific factors?

Annual Review of Clinical Psychology
The Role of Common Factors in Psychotherapy Outcomes


Pim Cuijpers, Mirjam Reijnders, and Marcus J.H. Huibers



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Emotional change processes in- and outside of therapy



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1. Increased awareness and symbolization of emotions

- Much of processing occurs outside of awareness (e.g., Kahneman, 2011), including that of emotions (Winkielman & Berridge, 2004)
- Labeling emotions
 - Regulates amygdala reactions (Lieberman *et al.*, 2007)
 - Potentiates positive effects of exposure (Kircanski *et al.*, 2012)
- Expressive writing:
 - Numerous psychological and somatic benefits (Pennebaker *et al.*, 1990, 1995)
- Extremes:
 - Hyper- vs. hypoawareness (panic vs. eating disorders) (Gross *et al.*, 2015)
 - «Psychobabble» (Rosen, 1977)

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In psychotherapy

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2. Relationships

- Safe attachment relationships:
 - Response to threat (Coan *et al.* 2006)

Research Article
Lending a Hand
Social Regulation of the Neural Response to Threat
James A. Coan¹, Hillary S. Sharkey², and Richard J. Davidson¹
¹University of Virginia and ²R.M. Axel Laboratory for Functional Brain Imaging and Behavior and Department of Psychology, University of Wisconsin-Madison

Attachment figures activate a safety signal-related neural region and reduce pain experience – Reaction to pain (Eisenberger *et al.*, 2011)

Noomi I. Eisenberger¹, Sarah L. Masten¹, Tristen K. Inagaki¹, Shelley E. Taylor¹, David Skowron¹, Matthew D. Lieberman², and Bruce D. Naloff¹

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In psychotherapy

- «Corrective emotional experience»
(Alexander & French, 1946)

Contents lists available at ScienceDirect
Psychiatry Research
Journal homepage: www.elsevier.com/locate/psychres

Patients' pre-treatment interpersonal problems therapeutic alliance in long-term psychodynamic
Pekka Ollila^a, Paul Knekt^{a,b}, Erkki Heino^{a,b}, Olavi Lindfors^a

^a National Institute for Health and Welfare, Helsinki, Finland
^b University Hospital, Helsinki, Finland

a. Changes in WAIAP means by IIP score tertile and time during the 3-year follow-up (n=100)

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3. Deliberate self-regulative skills

- i) Classic cognitive techniques:
 - Evaluation of negative cognitive thought (pattern)s
 - Distraction
- ii) Third wave therapies:
 - Developing a more accepting and compassionate stance towards thoughts and feelings
- iii) Behavioral techniques:
 - Body relaxation (e.g., progressive muscle relaxation)
 - Exercise
 - Physiological techniques (e.g., ice cold water)

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4. Changing emotions with emotions

- Facilitating and deepening emotional experience
 - Reaching core maladaptive emotions
 - Contact with needs
 - Reaching adaptive emotions

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Face-in-session events (n = 17)
Good in-session events (n = 17)

Degree of Transformation Scale (DTS)

Time (30 second unit intervals)

Durations of observed "collapses" are shortening (when compared to bootstrapped distribution, $p < .05$).

Pascual-Leone, 2009

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Chemical pathways?

Journal of Humanistic Psychology
2017, Vol. 47(4), 384–388

SCIENTIFIC REPORTS
nature research

Patient Experiences of Psilocybin-Assisted Psychotherapy: An Interpretive Phenomenological Analysis

OPEN Emotions and brain function are altered up to one month after a dose of psilocybin

ARTICLES
https://doi.org/10.1038/s41598-017-08896-3

MDMA-assisted therapy for severe PTSD: a randomized, double-blind, placebo-controlled phase 3 study

Jennifer M. Mitchell^{1,2,3,4}, Michael Bogenschutz², Alia Lilienstein¹, Charlotte Harrison¹, Sarah Kleiman¹, Kelly Parker-Guilbert¹, Marcia O'Riordan^{1,5,6}, Wael Gassan¹, Casey Palileo¹, Ingmar Gorman^{1,7}, Christopher Nicholas^{1,8}, Michael Mitrofe^{1,9,10}, Shannon Carlisle^{1,11}, Bruce Poulter^{1,12}, Ann Mitrofe^{1,13}, Sylvestre Quevedo^{1,14}, Gregory Walls^{1,15}, Sukhpreet S. Klaier^{1,16}, Bessel van der Kolk^{1,17}, Koren Tazfarly^{1,18}, Revital Amiaz^{1,19}, Roy Worsley^{1,20}, Scott Shannon^{1,21}, Joshua D. Woolfay^{1,22}, Cole Marti^{1,23}, Yegoniy Gelfand^{1,24}, Emma Hapak^{1,25}, Simon Amari^{1,26}, Yair Wallach^{1,27}, Randall Brown^{1,28}, Scott Hamilton^{1,29}, Julie B. Wang^{1,30}, Allison Coker^{1,31}, Rebecca Matthews^{1,32}, Alberdina de Boer^{1,33}, Berra Yazan-Kiosinski^{1,34}, Amy Emerson^{1,35} and Rick Doblin^{1,36}

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Various pathways of emotional change

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«More research needs to be done»

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Psychotherapy Research, 2019
https://doi.org/10.1080/10503307.2019.1630778


Check for updates

EMPIRICAL PAPER

The role of pre-treatment interpersonal problems for in-session emotional processing and long-term outcome in emotion-focused psychotherapy

ERKKI HEINONEN^{1,2,3} & ALBERTA E. POS²

¹National Institute for Health and Welfare, Helsinki, Finland; ²Department of Psychology, York University, Toronto, ON, Canada & ³Department of Psychology and Logopedics, University of Helsinki, Finland

(Received 2 July 2018; revised 11 May 2019; accepted 18 May 2019)

Are different emotional processes helpful for different clients?

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Clinical Psychology Review
Elsevier
journal homepage: www.elsevier.com/locate/cpr

Review
Mechanisms of change in psychotherapy for depression: An empirical update and evaluation of research aimed at identifying psychological mediators
Lotte H.J.M. Lemmens, PhD^{1,*}, Viola N.L.S. Müller, MSc², Arnold Arntz, Prof PhD³, Marcus J.H. Hubbers, Prof PhD^{4,5}

European Child & Adolescent Psychiatry
https://doi.org/10.1007/s10803-022-02196-9

REVIEW

Mediators of outcome in adolescent psychotherapy and their implications for theories and mechanisms of change: a systematic review
Svenja Tauber¹, Yianna Ioannou², Andrea Saliba³, Calla M. D. Sales⁴, Jana Volkert^{1,6}, Karolina⁷, Sonia Comajo-Castillo⁸, Oana Di Giacomini⁹, Filipa Mocha Vieira¹⁰, Catarina Probsto Mota¹¹, Işık¹², Filipa Mocha Vieira¹³, Catarina Probsto Mota¹⁴, Işık¹⁵, Jan Inar Heinberg^{16,17}, Tjasa Stoplarsnik Perlih¹⁸, Janki Elberg¹⁹, Erkki Heinonen²⁰

Journal of Consulting and Clinical Psychology
https://doi.org/10.1037/0022-006X.2022.00001

Emotional Changes and Outcomes in Psychotherapy: A Systematic Review and Meta-Analysis
Nils M. Sanderland, Ole A. Solbakken, Dag E. Eikelsen, Magnus Nordmo, and Jon T. Monsen
Department of Psychology, University of Oslo

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Challenges

- Emotional change processes still understudied
 - Measuring emotions labor-intensive
- Research designs often not optimally designed for rigorously establishing effective processes (i.e., mediators)
- Statistical techniques still in development

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Thank you!

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