

Sociology and psychology of simulations

Studies in disability simulations

Job van Achterberg



Tech lead, *tenon.io*



@detonite



Inclusive Design and Accessibility

Partaking in a simulation



<https://www.zorgenziekenhuis.nl/wp-content/uploads/2017/06/Blind-voor-1-dag-660x330.jpg>

Oogfonds





Small rant b/c e-mail.

Empathy exercises (goggles, gloves, etc) as a motivator to build things accessibly is the wrong approach. Build accessible products because it's the right thing to do.

Want to know what it's like to have [disability x]? Talk to people with [disability x].

7:32 AM - 16 Apr 2018

General Concepts in Full Scale Simulation: Getting Started

Michael A. Seropian, MD, FRCPC

Anesthesia & Analgesia, 2003

Simulation:

“an attempt to
mimic reality”

**General Concepts
in Full Scale
Simulation: Getting
Started**

Michael A. Seropian, MD, FRCPC

Anesthesia & Analgesia, 2003

“Reality is truly a matter of perception.

A fundamental assumption of simulation is that learning is enhanced when the environment seems realistic.”

**General Concepts
in Full Scale
Simulation: Getting
Started**

Michael A. Seropian, MD, FRCPC

Anesthesia & Analgesia, 2003

Role-Playing vs. Role-Taking: An Appeal for Clarification

Walter Coutu

American Sociological Review, 1951

A simulation is an attempt to mimic reality in such a way that it is convincing on the sociological (how others perceive you) and psychological (how you perceive yourself) levels.

How to train for this?



Helmet cover



Smoke-filled room



https://www.youtube.com/watch?v=22xwKesD_jk (clipped)

Gas or wood fire



<https://www.dhtc.nl/wp-content/uploads/2017/05/DHTC-Brandweer-480x250.jpg>

Actors



http://www.wleeman.nl/wordpress/wp-content/uploads/2016/04/LeW_5D3_17025.jpg

Why?

- **Improvement / Measurement**
- **Development**
- **Training**

Training paying off



The Psychology of Attitudes

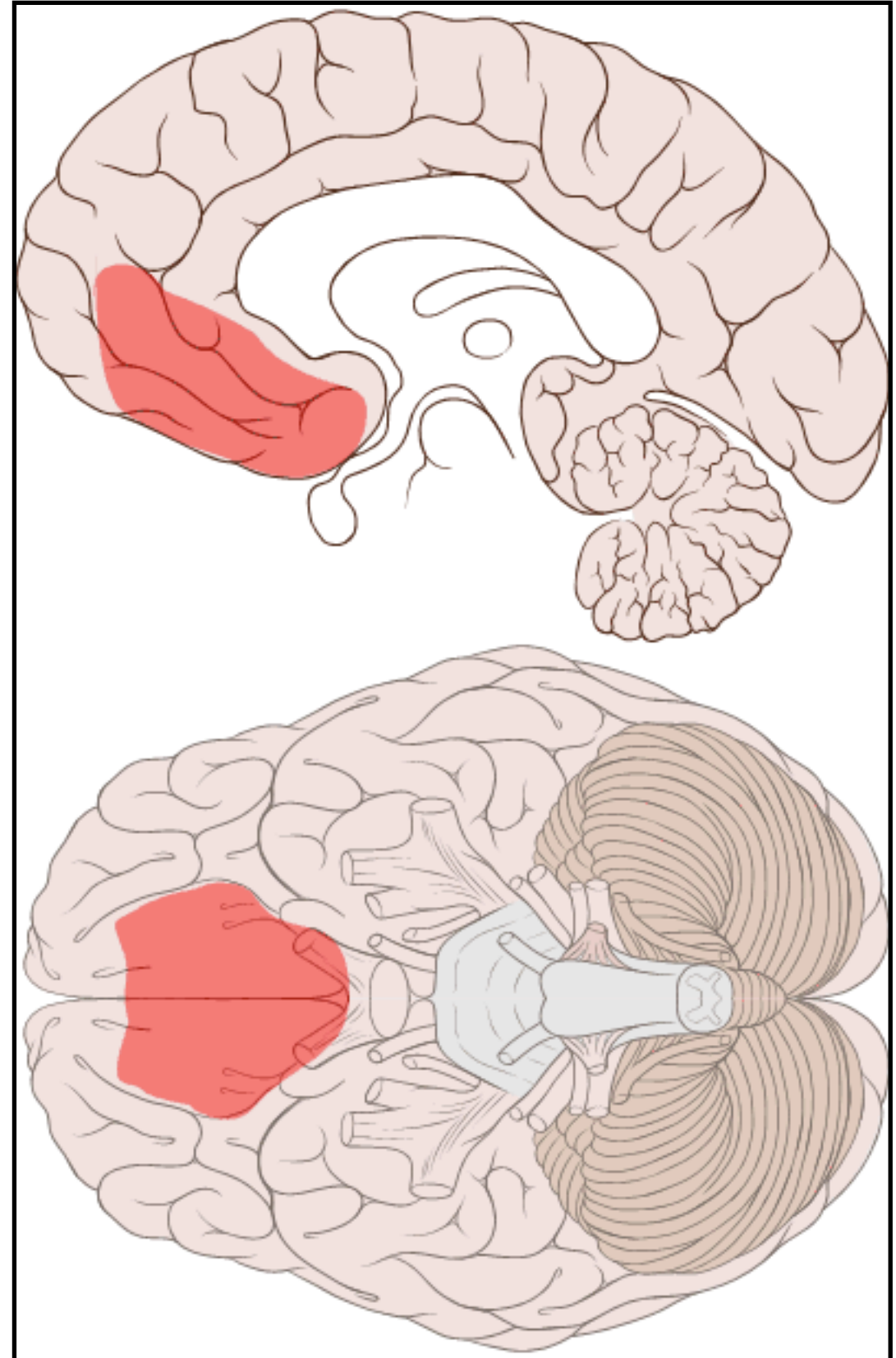
Alice Eagley and Shelly Chaiken

Harcourt Brace Jovanovich College Publishers, 1993

Choice



Ventromedial Prefrontal Cortex



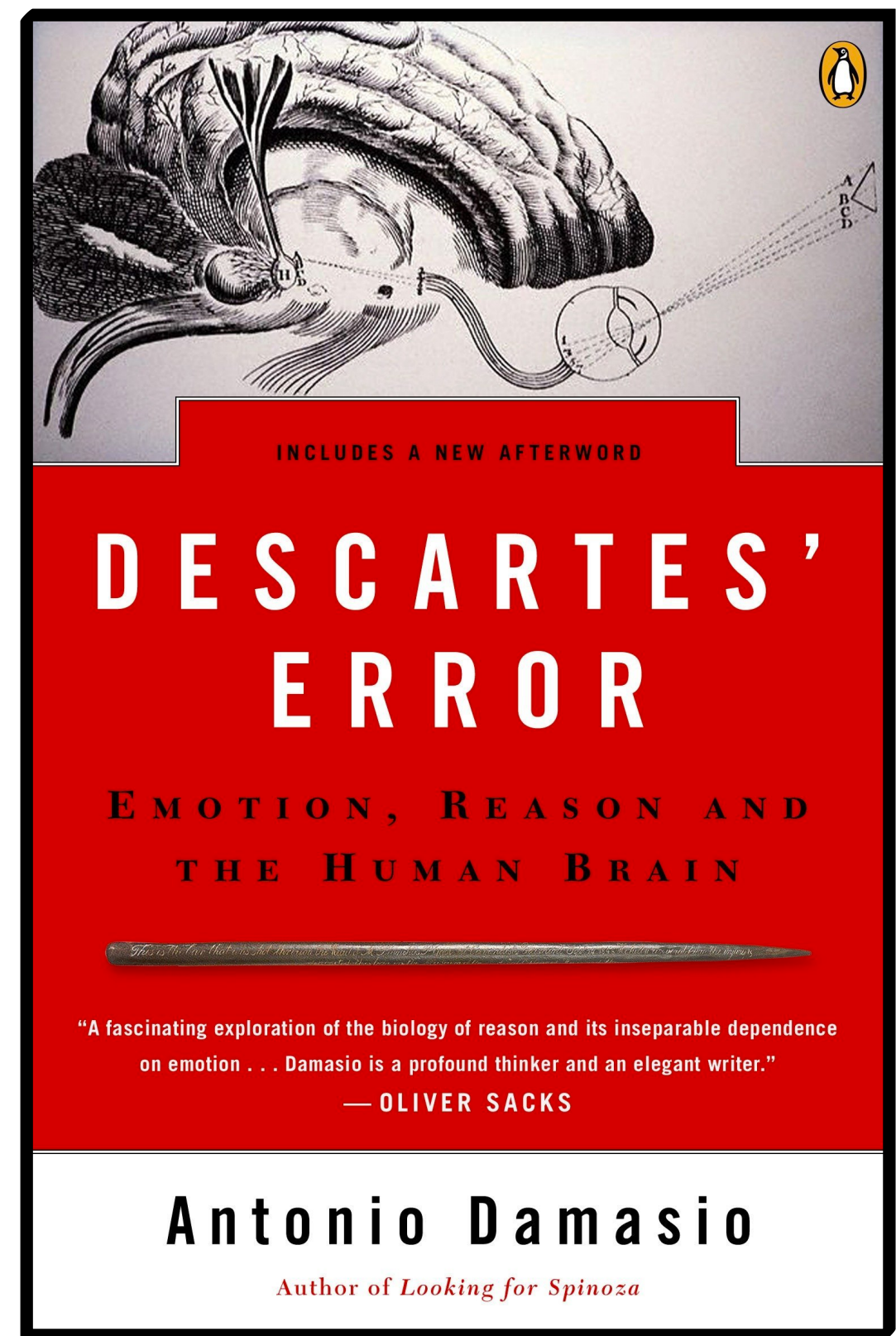
Logically effective?



Descartes' Error

Antonio Damasio

2005



Somatic Marker Hypothesis

2019

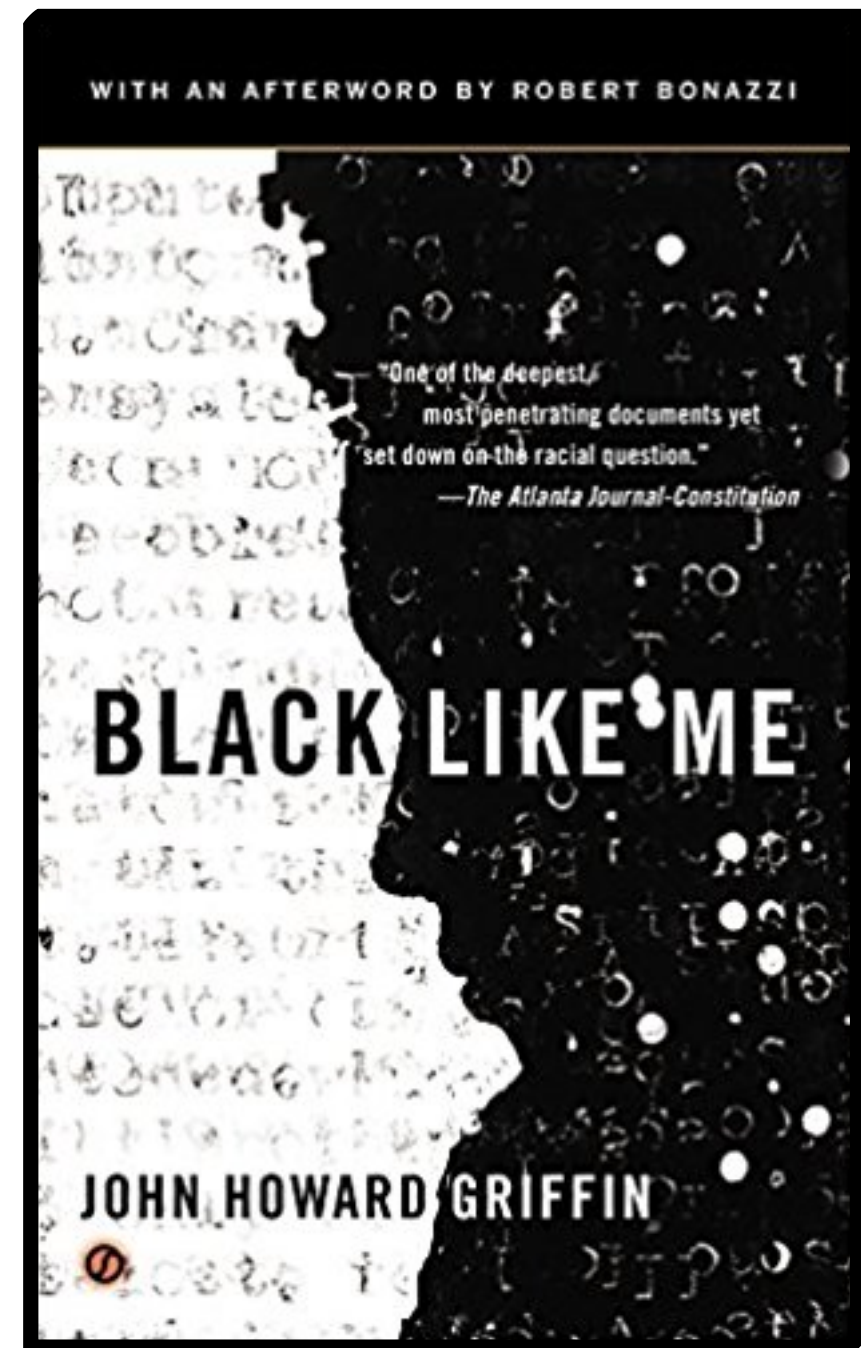
Black Like Me

John Howard Griffin

1969



<https://www.telegraph.co.uk/content/dam/books/johnhowardgriffin2.jpg?imwidth=450>



https://images-na.ssl-images-amazon.com/images/I/51rd5IIEEL_SX308_BO1,204,203,200.jpg

The Influence of Role Playing on Opinion Change

Irving L. Janis & Bert T. King, Yale University

Journal of Abnormal Psychology, 1954

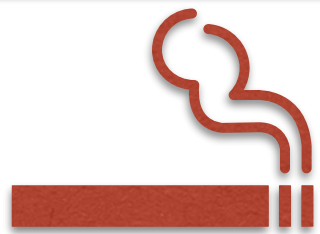


Debate study

Influence of Fantasy Ability on Attitude Change Through Role Playing

Alan C. Elms, Southern Methodist University

Journal of Personality and Social Psychology, 1966



Smoking study

“role playing resulted in greater mean positive attitude change than did simply listening to the role player's arguments.”

Influence of Fantasy Ability on Attitude Change Through Role Playing

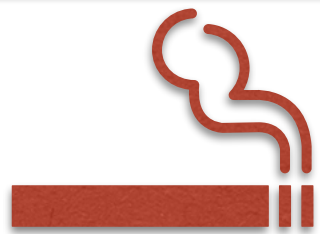
Alan C. Elms, Southern Methodist University

Journal of Personality and Social Psychology, 1966

The Effects of Emotional Role Playing on Desire to Modify Smoking Habits

Leon Mann, University of Melbourne, Australia

Journal of Experimental Social Psychology, 1967

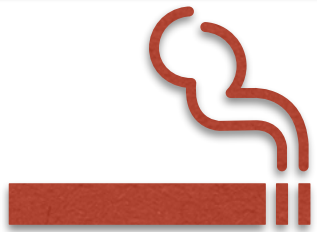


Smoking study #2

A Follow-Up Study on the Long-Term Effects of Emotional Role Playing

Leon Mann (Harvard) and Irving L. Janis (Yale)

Journal of Personality and Social Psychology, 1968



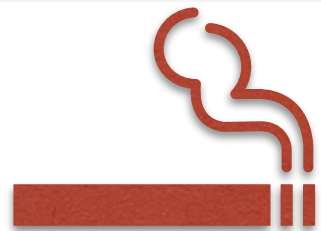
Smoking study #3



Smoking study #1



Debate study



Smoking study #2

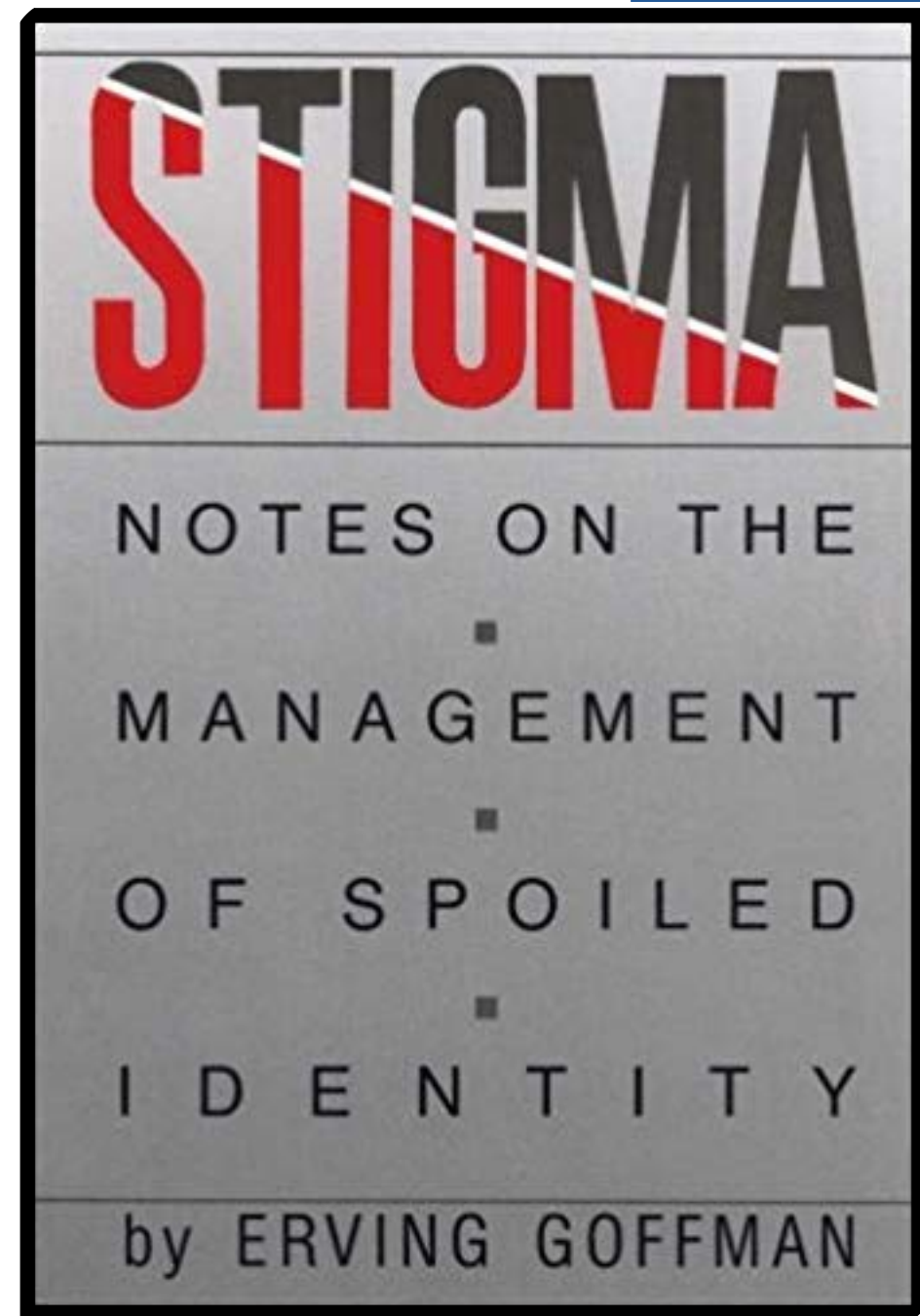


Smoking study #3

Emotional
>
Passive

Stigma: Notes on the Management of Spoiled Identity

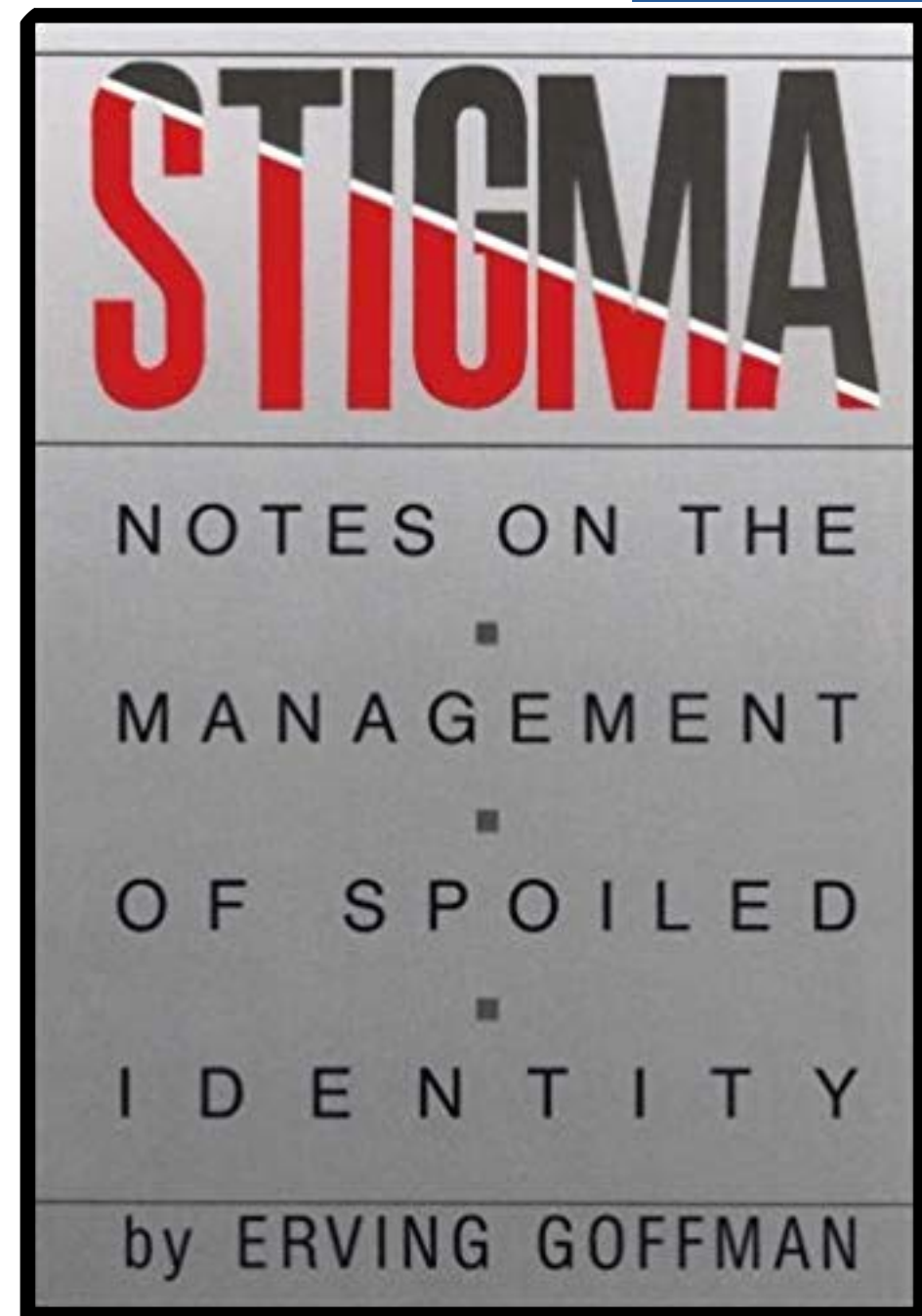
Erving Goffman, 1963



https://images-na.ssl-images-amazon.com/images/I/417K2LICU1L_SX341_BO1,204,203,200_.jpg

Stigma: Notes on the Management of Spoiled Identity

“a process by which the reaction of others spoils normal identity”



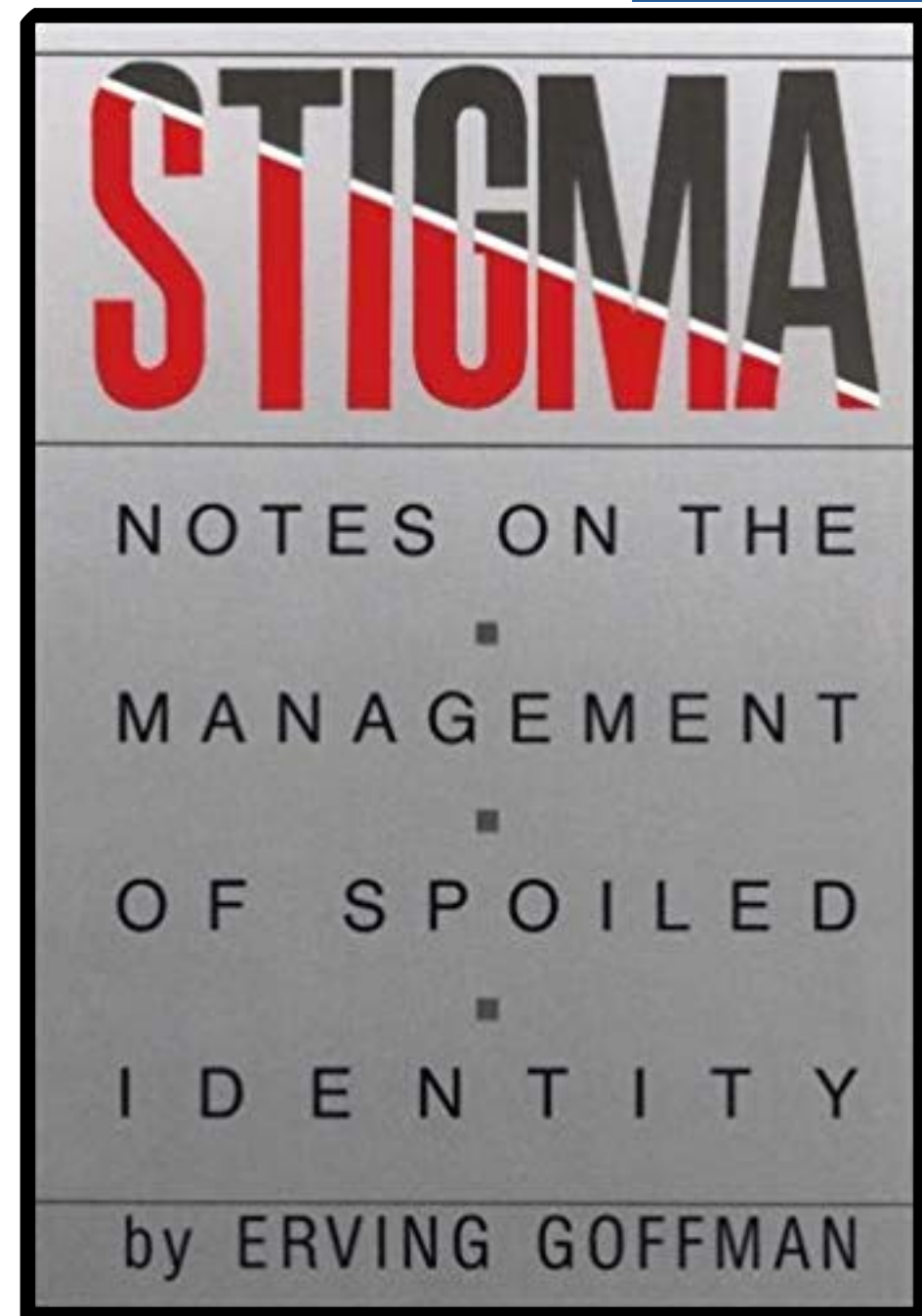
https://images-na.ssl-images-amazon.com/images/I/417K2LICU1L_SX341_BO1,204,203,200_.jpg

Stigma: Notes on the Management of Spoiled Identity

“I also learned that the cripple must be careful not to act differently from what people expect him to do.

Above all they expect the cripple to be crippled; to be disabled and helpless: to be inferior to themselves, and they will become suspicious and insecure if the cripple falls short of these expectations.

It is rather strange, but the cripple has to play the part of the cripple, just as many women have to be what the men expect them to be, just women; and the Negroes often have to act like clowns in front of the "superior" white race, so that the white man shall not be frightened by his black brother.”



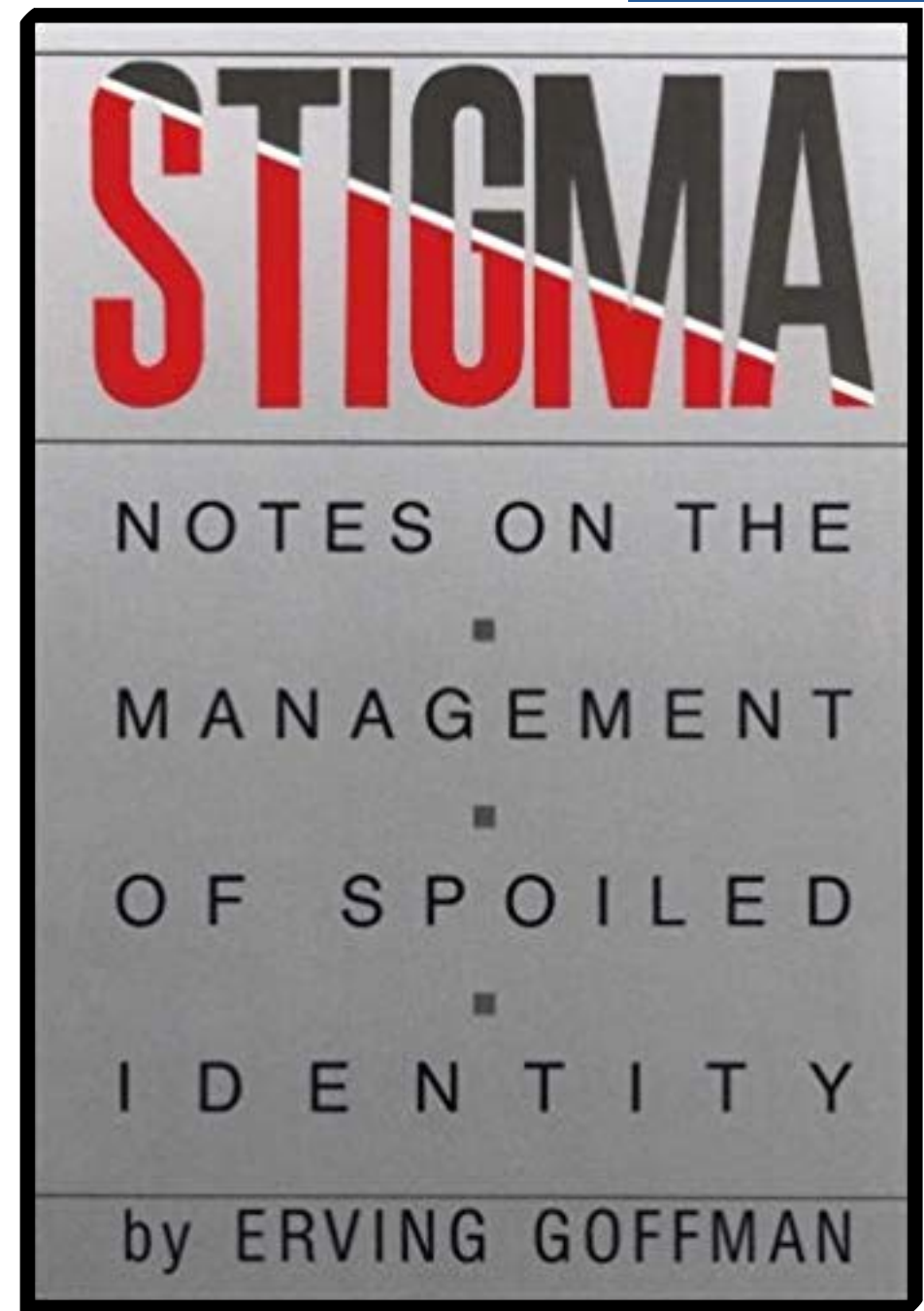
https://images-na.ssl-images-amazon.com/images/I/417K2LICU1L_SX341_BO1,204,203,200_.jpg

Stigma: Notes on the Management of Spoiled Identity

“I once knew a dwarf who was a very pathetic example of this, indeed. She was very small, about four feet tall, and she was extremely well educated.

In front of people, however, she was very careful not to be anything other than "the dwarf," and she played the part of the fool with the same mocking laughter and the same quick, funny movements that have been the characteristics of fools ever since the royal courts of the Middle Ages.

Only when she was among friends, she could throw away her cap and bells and dare to be the woman she really was: intelligent, sad, and very lonely.”



https://images-na.ssl-images-amazon.com/images/I/417K2LICU1L_SX341_BO1,204,203,200_.jpg

Emotional Role Playing, Attitude Change, and Attraction Towards a Disabled Person

Gerald L. Clore & Katharine McMillan Jeffery
University of Illinois

Journal of Personality and Social Psychology, 1972



Wheelchair study

“I am surprised what effect this had on me. I was alone the entire time, I saw no one that I knew, so perhaps this made me take it all very seriously.

All I know is that my eyes filled up with tears coming back up alone in that elevator”

**Emotional Role Playing,
Attitude Change, and
Attraction Towards a
Disabled Person**

Gerald L. Clore & Katharine
McMillan Jeffery
University of Illinois

Journal of Personality and Social Psychology, 1972

“The looks that I received were very interesting and were consistently the same.

People look out of the corner of their eyes and then a downward glance past my legs. They seem a bit embarrassed”

**Emotional Role Playing,
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Gerald L. Clore & Katharine
McMillan Jeffery
University of Illinois

Journal of Personality and Social Psychology, 1972

“My arms had started to bother me, and it was hard to go in a straight line.

When I got to the ramp at the union, I started to go up and realized I was never going to make it.”

**Emotional Role Playing,
Attitude Change, and
Attraction Towards a
Disabled Person**

Gerald L. Clore & Katharine
McMillan Jeffery
University of Illinois

Journal of Personality and Social Psychology, 1972

Empathy and Attitudes: Can Feeling for a Member of a Stigmatized Group Improve Feelings Towards the Group?

C. Daniel Batson, Marina P. Polycarpou,
Eddie Harmon-Jones, Heidi J. Imhoff, Erin C. Mitchener,
Lori L. Bednar, Tricia R. Klein, & Loft Highberger

University of Kansas



Recording study

*Journal of Personality and
Social Psychology, 1997*

“attitudes towards stigmatized groups are notoriously hard to change”

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Journal of Personality and Social Psychology, 1997

“Only if the stereotype-inconsistent information is widely dispersed throughout the group, and we are made aware of this dispersion, is it likely to change our stereotype”

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Journal of Personality and Social Psychology, 1997

Cognitive Processes in the Revision of Stereotypic Beliefs

Reneé Weber and Jennifer Crocker

Northwestern University

Journal of Personality and Social Psychology, 1983

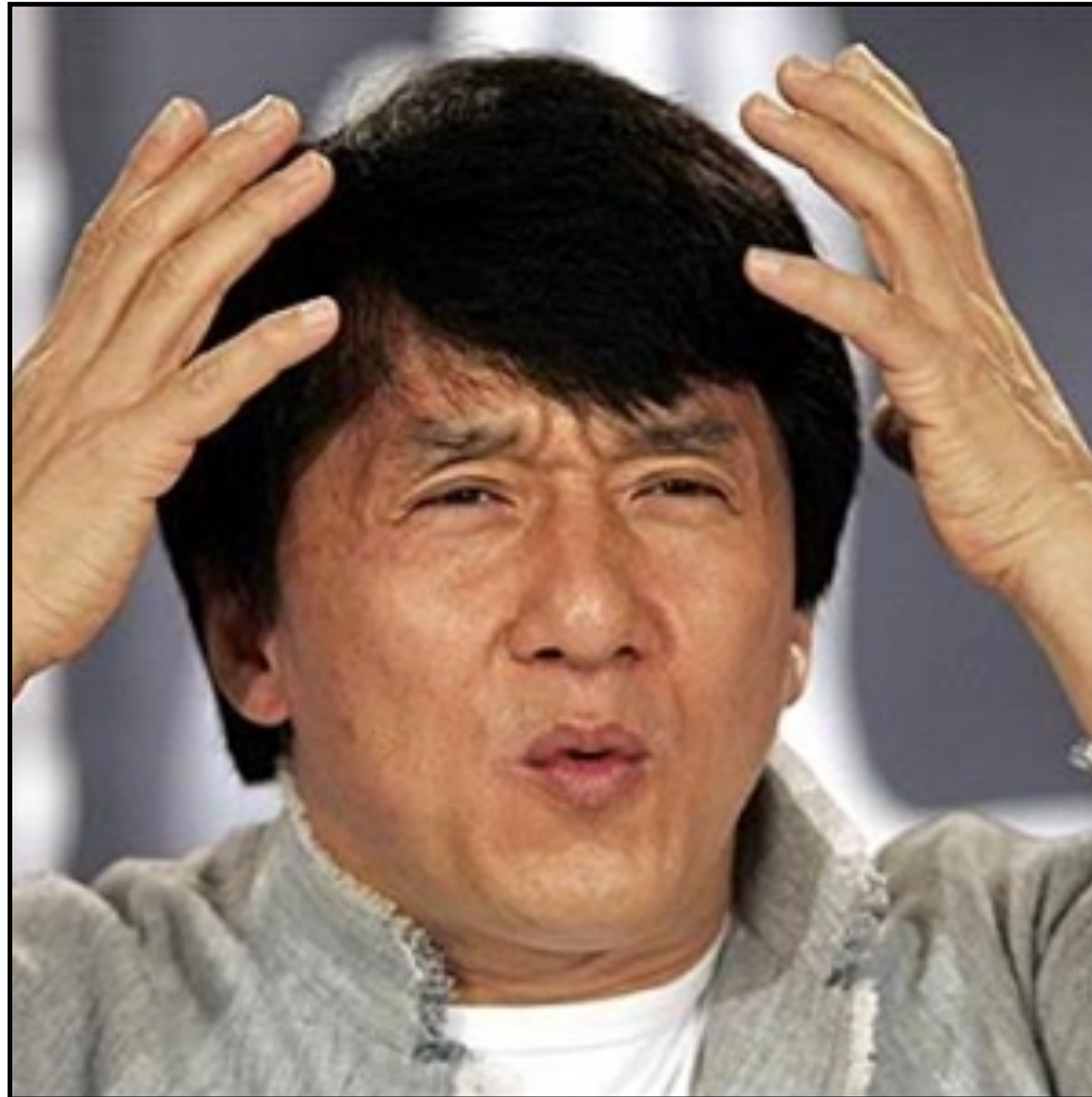
Bookkeeping model



Library Indicator Book

Cognitive Processes in the Revision of
Stereotypic Beliefs

Conversion model



**Cognitive Processes in the Revision of
Stereotypic Beliefs**

Subtyping model

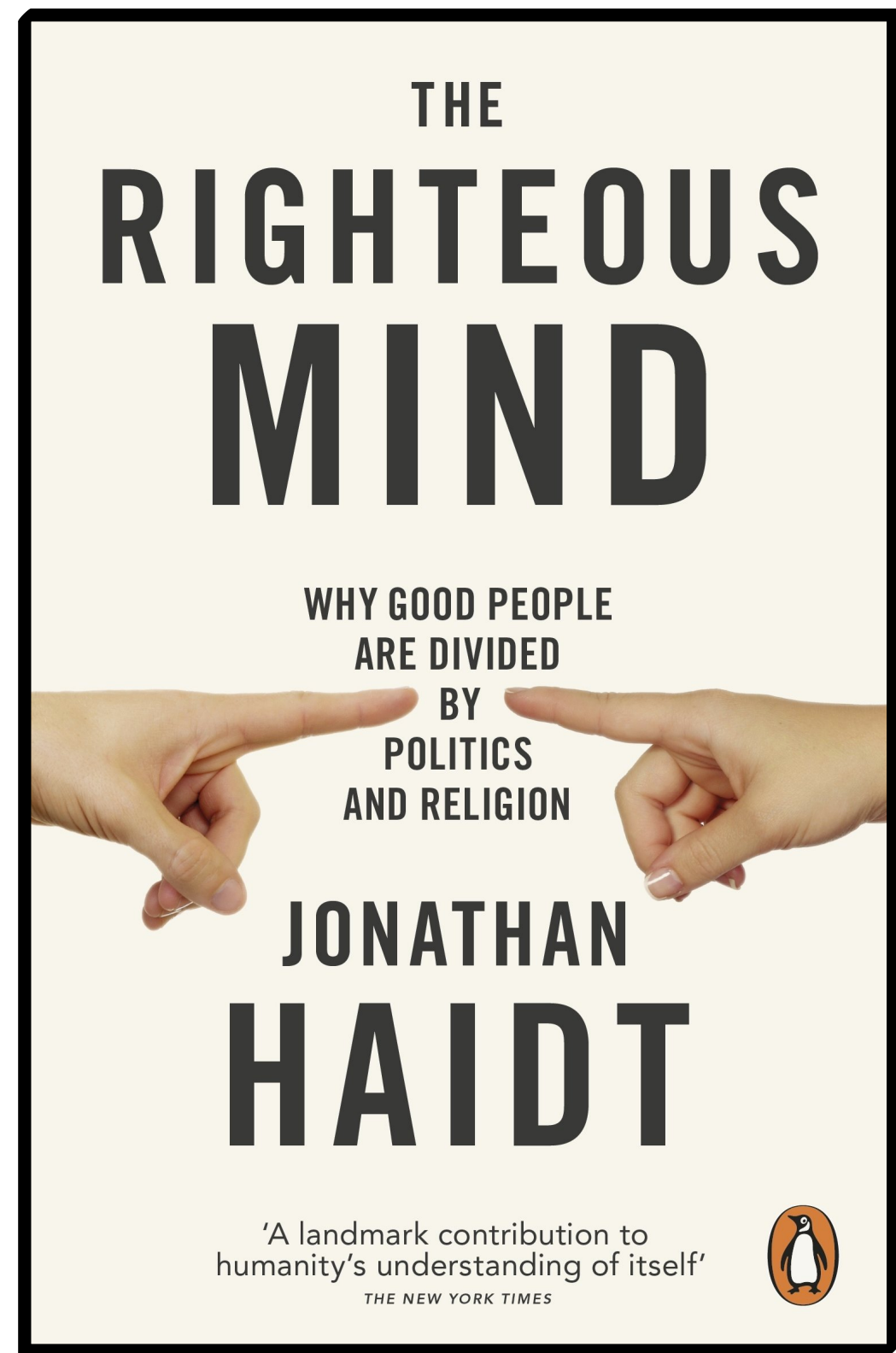


**Cognitive Processes in the Revision of
Stereotypic Beliefs**

The Righteous Mind

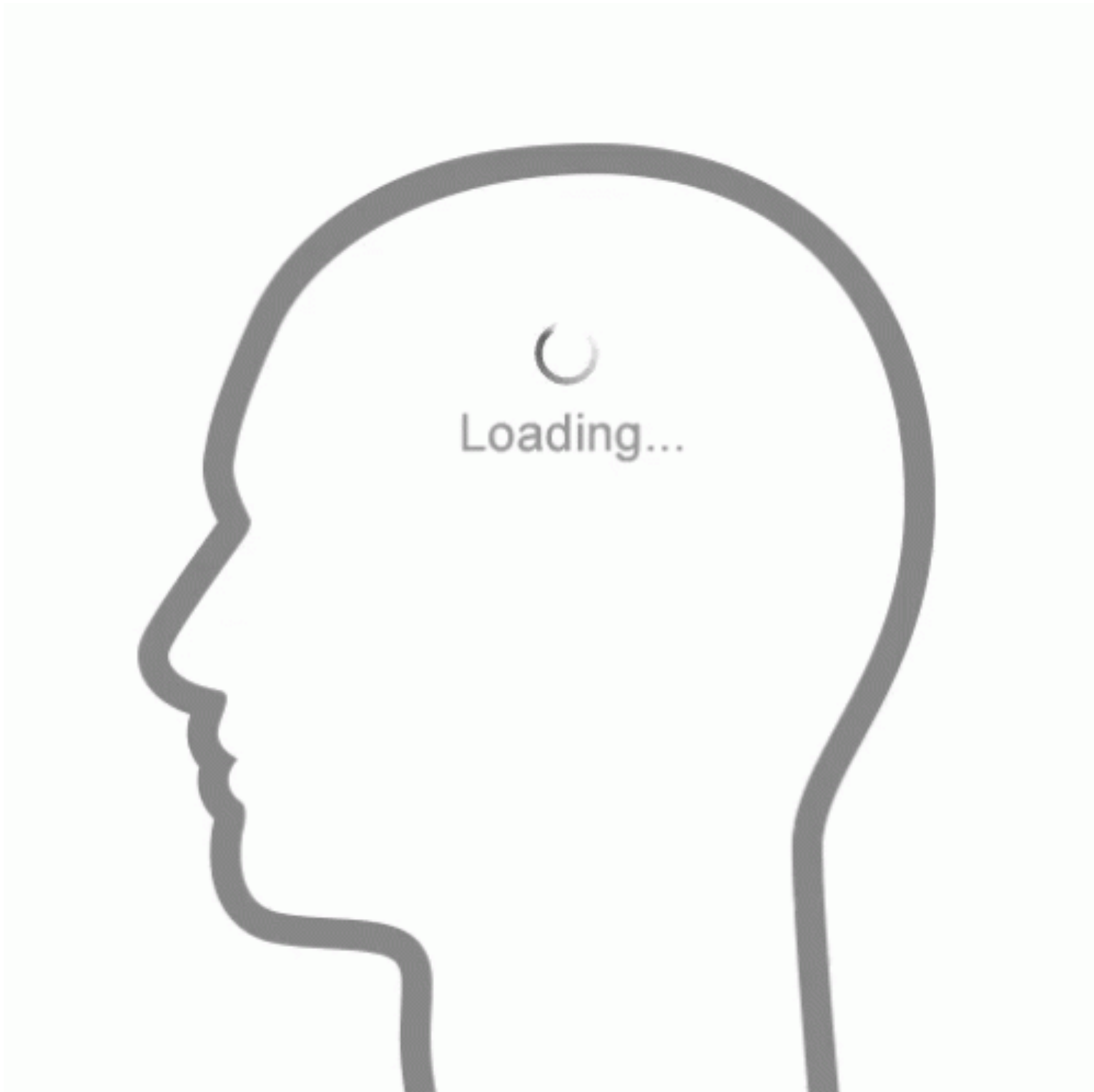
Jonathan Haidt

2013



The Rider and the Elephant

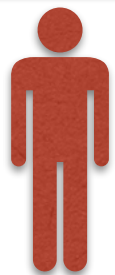
2019



Does Perspective taking Increase or Decrease Stereotyping? The Role of Need for Cognitive Closure

Shan Sun, Bin Zuo, Yang Wu & Fangfang Wen

School of Psychology, Center for Social Psychology
Research, Central China Normal University



Perspective study

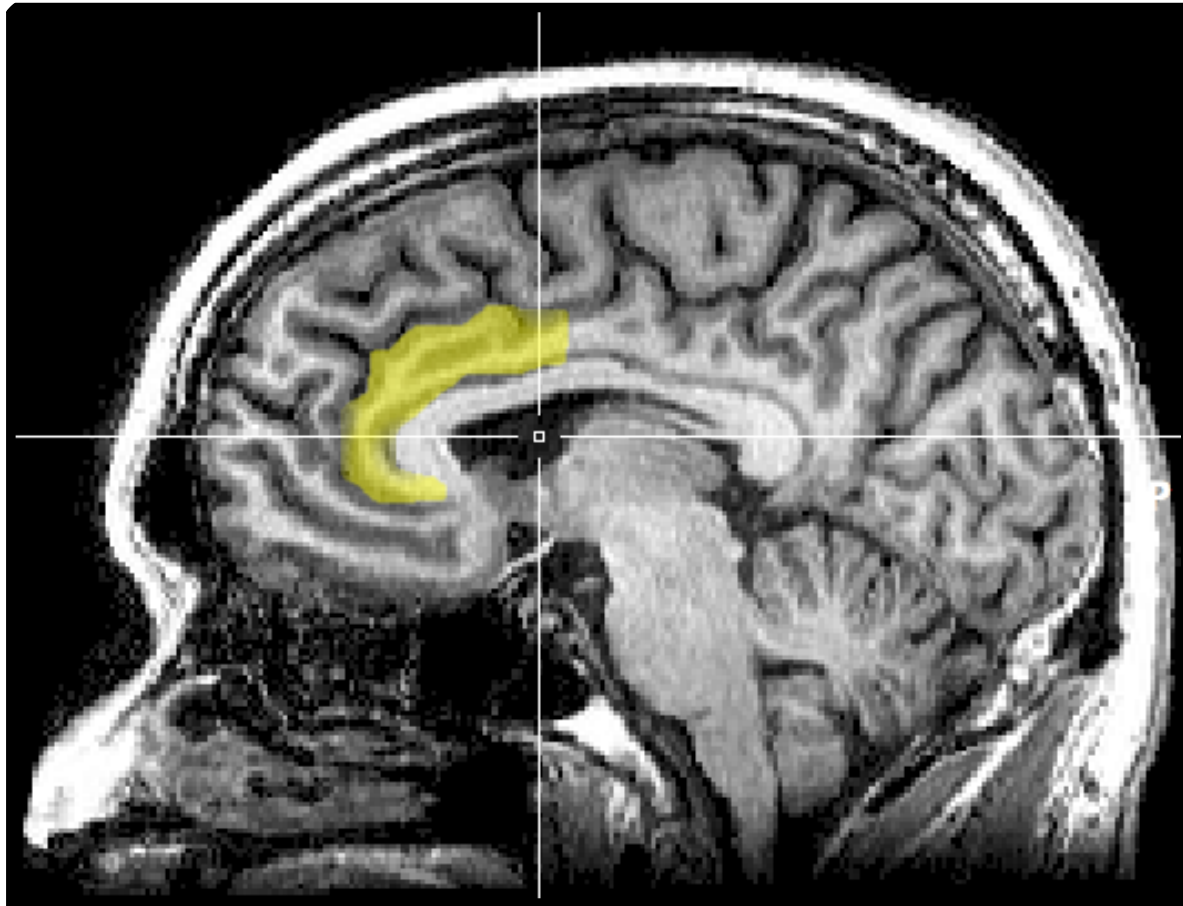
*Personality and
Individual Differences,
2016*

Smarter Than We Think: When Our Brains Detect That We Are Biased

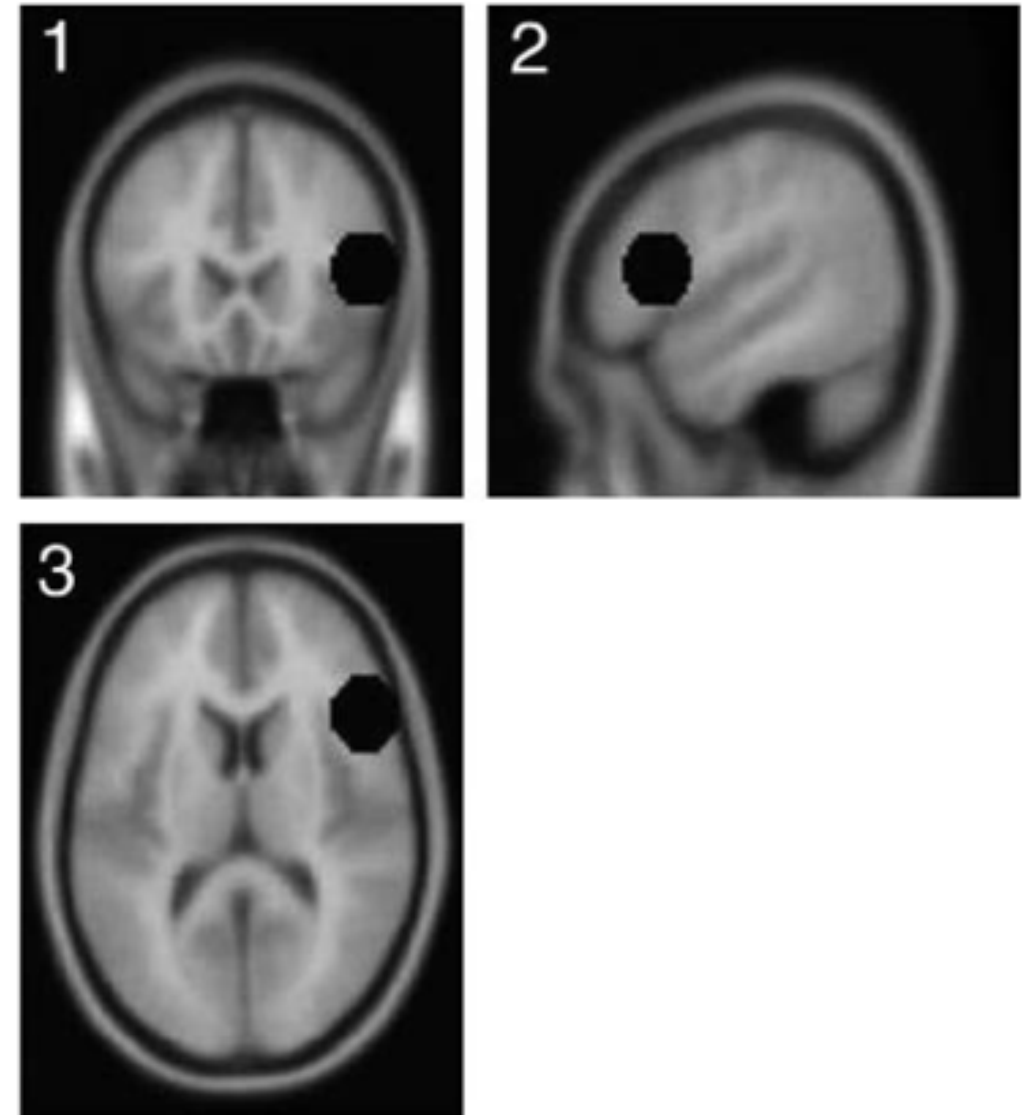
Wim De Neys, Oshin Vartanian and Vinod Goel

University of Leuven and York University

Psychological Science, 2008



Anterior Cingulate Cortex

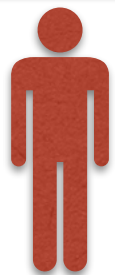


Right Lateral
Prefrontal Cortex

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Perspective study

*Personality and
Individual
Differences, 2016*

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Recording study

*Journal of Personality and
Social Psychology, 1997*

“Like the results reported by Clore and Jeffrey, our finding that an empathy-inducing listening perspective improved attitudes toward convicted murderers 1 to 2 weeks later suggests that **the empathy-attitude effect is not as short-lived as we had feared.** Apparently, it can outlive the empathic emotion itself.”

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Journal of Personality and Social Psychology, 1997

“Our emotion-based approach to attitude change **did not seem vulnerable to the subcategorization effects** that often plague cognitive approaches, such as learning stereotype-inconsistent information about an individual group member.”

**Empathy and Attitudes:
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University of Kansas

Journal of Personality and Social Psychology, 1997



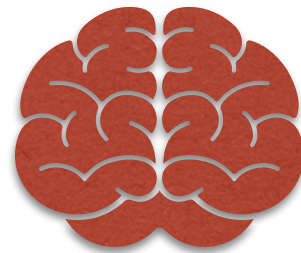
Wheelchair study



Perspective study



Recording study



MRI study

The Coping Framework and Attitude Change: A Guide to Constructive Role Playing

Beatrice A. Wright

Rehabilitation Psychology, 1978

“My concern is that role-playing can enhance, not only understanding of some problems, but also pervasive pity and devaluation.”

**The Coping
Framework and
Attitude Change: A
Guide to Constructive
Role Playing**

Beatrice A. Wright

Rehabilitation Psychology, 1978

“Actually, feelings of inferiority, lack of confidence, and helplessness hardly need roleplaying, for these are common stereotypes of people with disabilities held by the outsider.”

**The Coping
Framework and
Attitude Change: A
Guide to Constructive
Role Playing**

Beatrice A. Wright

Rehabilitation Psychology, 1978

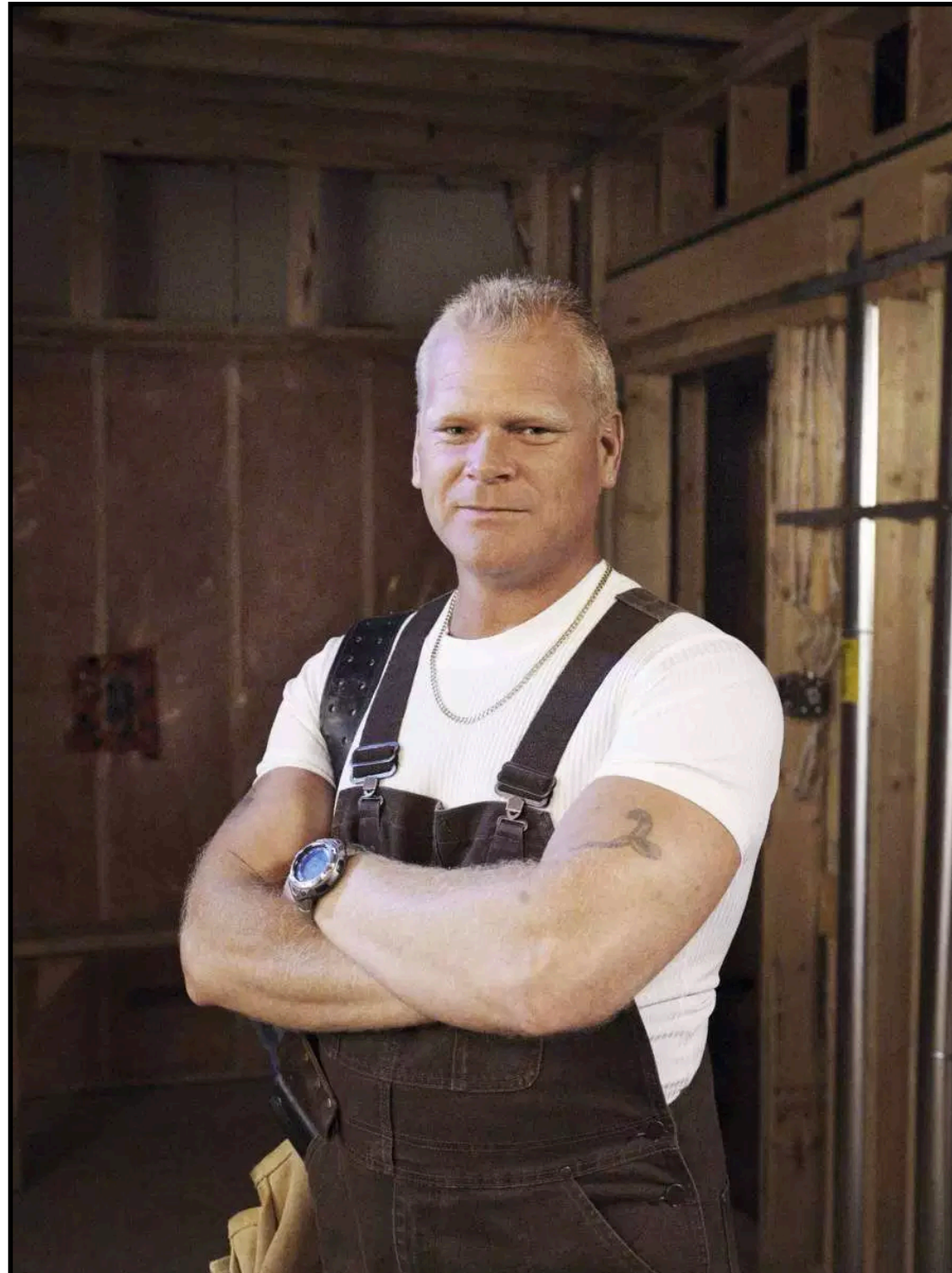
Constructively Guided Role-Playing

**The Coping
Framework and
Attitude Change: A
Guide to Constructive
Role Playing**

Beatrice A. Wright

Rehabilitation Psychology, 1978

Do it right the first time?



- Assertive role-playing
- Role-reversal

**The Coping
Framework and
Attitude Change: A
Guide to Constructive
Role Playing**

Beatrice A. Wright

Rehabilitation Psychology, 1978

Stumbling in Their Shoes: Disability Simulations Reduce Judged Capabilities of Disabled People

Arielle M. Silverman, Jason D. Gwinn & Leaf van Boven

Social Psychological and Personality Science, 2014



Simulation study

Disability Simulations: Logical, Methodological and Ethical Issues

Gary Kiger, Department of Sociology, Utah State University

Disability, Handicap & Society, 1992

“What we want to change are not people's attitudes, but their behaviors. **Will a disability simulation change how participants interact with persons with disabilities in the future?** This is the central question and it is a difficult problem to address in research directed toward measuring a simulation's effectiveness.”

**Disability
Simulations: Logical,
Methodological and
Ethical Issues**

Gary Kiger

Disability, Handicap & Society, 1992

“Additionally, going on a ‘blind walk’ for an hour does not give a participant the ‘feel’ for experiences of discrimination, rejection, or pity that might be directed toward someone who is visually impaired.”

**Disability
Simulations: Logical,
Methodological and
Ethical Issues**

Gary Kiger

Disability, Handicap & Society, 1992

Crip for a Day: The Unintended Negative Consequences of Disability Simulations

Michelle R. Nario-Redmond, Dobromir Gospodinov,
and Angela Cobb

Hiram College

Rehabilitation Psychology, 2017



Simulation study #2

“Simulating disabilities promotes distress and fails to improve attitudes toward disabled people, **undermining efforts to improve integration even while participants report more empathetic concern** and ‘understanding of what the disability experience is like.’”

**Crip for a Day: The
Unintended Negative
Consequences
of Disability
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Michelle R. Nario-Redmond, Dobromir Gospodinov,
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Rehabilitation Psychology, 2017

Conclusion

On the effectiveness of disability simulations

Thank you.