

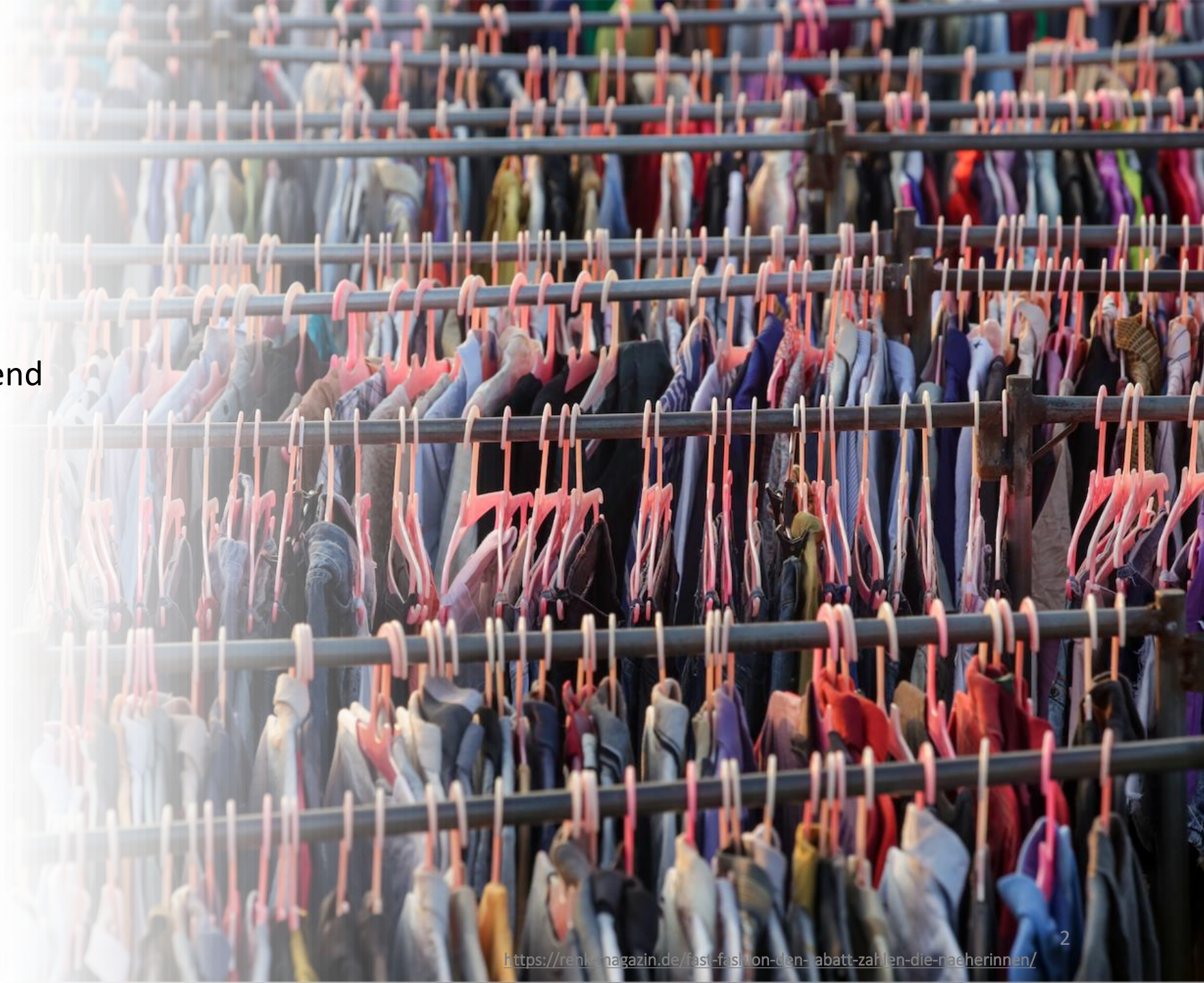
A black and white composite image showing a massive tsunami wave crashing over a coastal town. The wave is towering and turbulent, with white foam at its base. The town below is densely packed with buildings, and the sky is dark and stormy. The overall mood is one of catastrophic scale and impending doom.

# Cognitive Dissonance: Revisiting Festinger's End of the World Study

A presentation by Carlina Becker, Lynn Mitulla and Muriel Valentin

# Fast Fashion

- Modern —> always on trend
- Affordable
- Available everywhere



# The Truth

- Ecologically harmful
- Working conditions are unfair and exploitative
- Ephemeral (kurzlebig) rather than sustainable



# Animal Products

- Taste good
- Include important nutrition

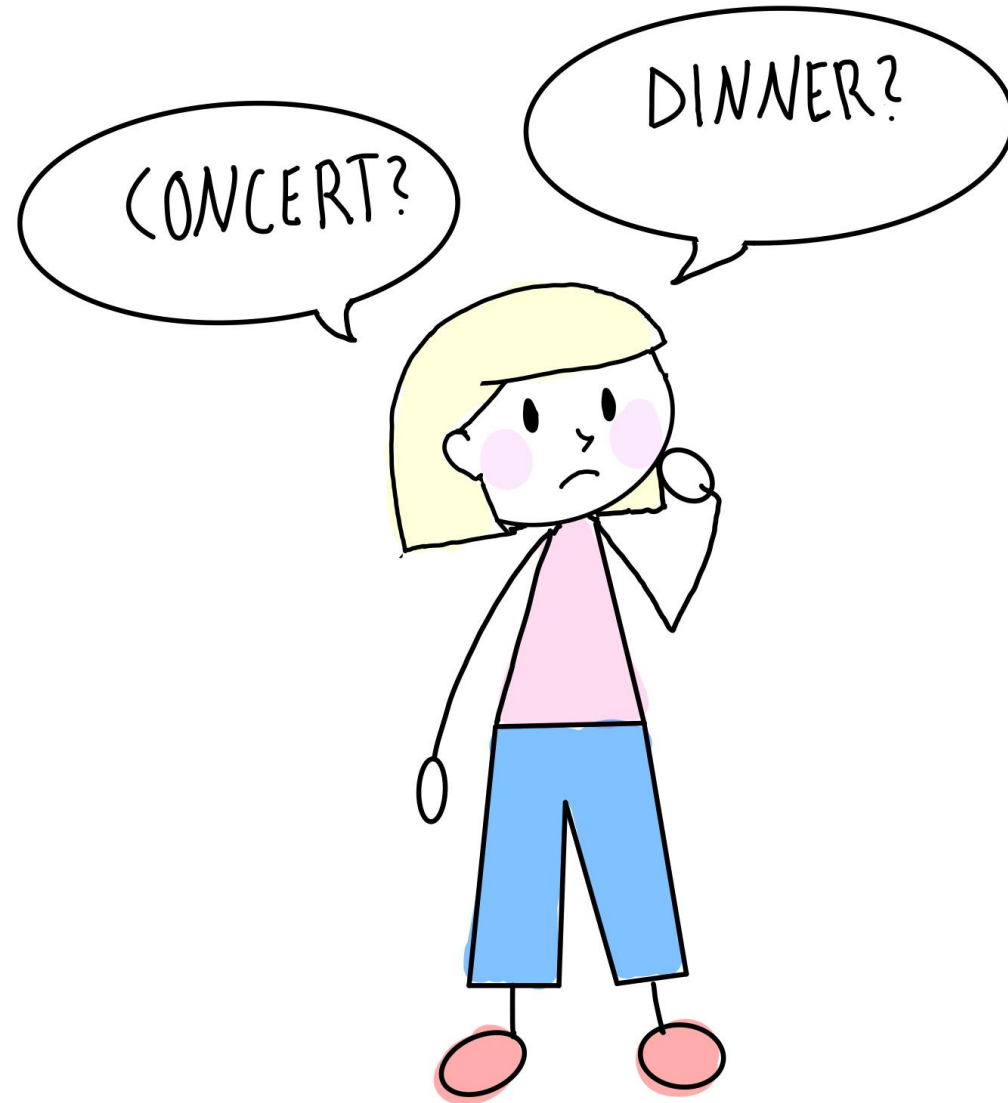


# The Truth

- Animal cruelty: Animals usually raised and treated under awful conditions who suffered a lot because of mass production
- Can have negative impacts on health (Antibiotics used in Mass Factory Farms, Cholesterol...)

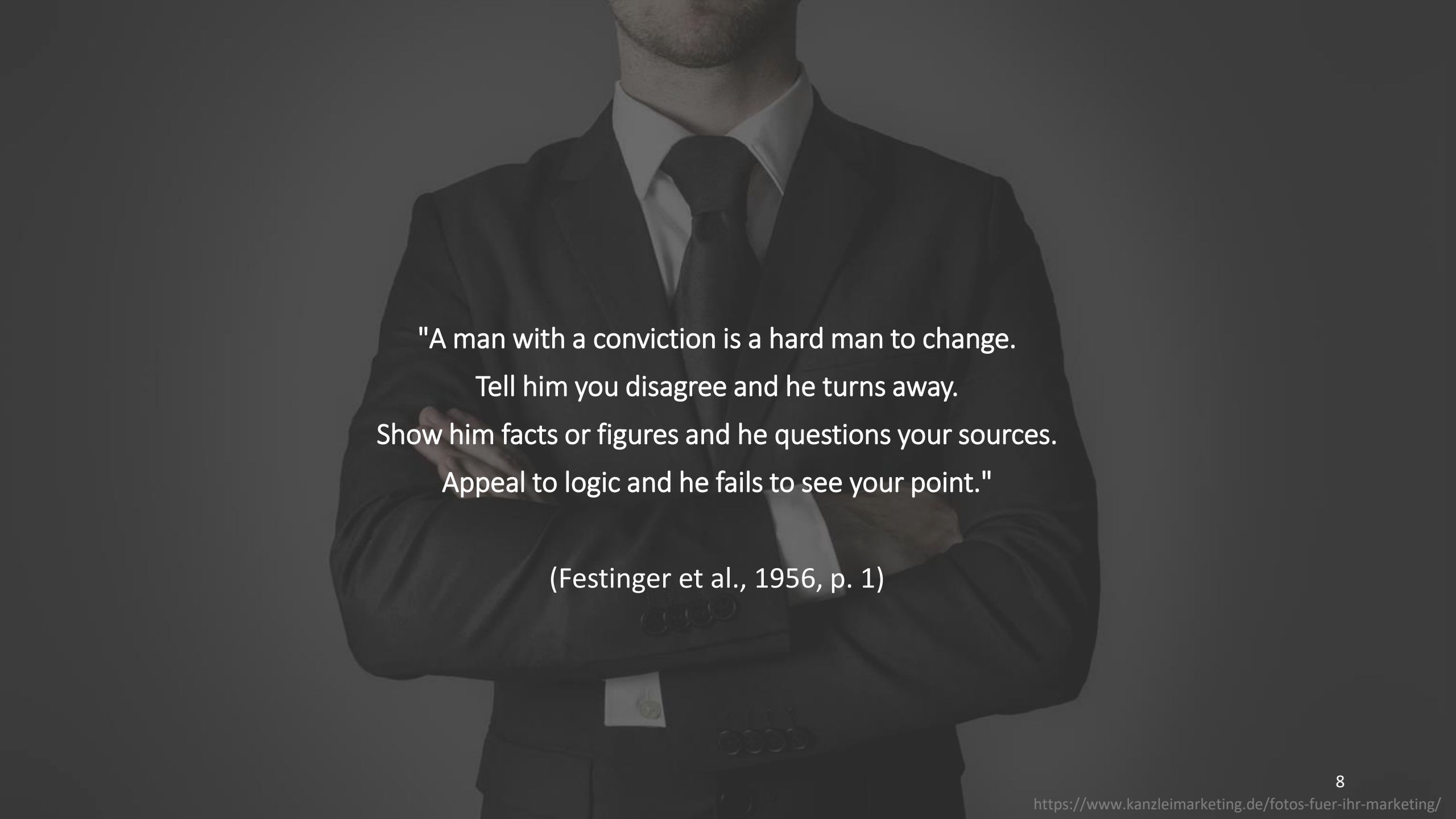


"The concert would have been boring anyway!"



# Content

- The researcher: Leon Festinger
- The origin of the theory
  - General principles of Festinger's original Theory (1957)
- The end of the world study: When Prophecy Fails (1956)
- Criticism of the experiment
- Replications and Additions
- New developments
  - Revisions and developments of cognitive dissonance theory
  - Example: What is behind the phenomena of dissonance? A study with children and monkeys
- Application of the theory
  - Cognitive Dissonance Theory applied in life
  - Example: The Body project 2013-now

A man in a dark suit, white shirt, and dark tie stands with his arms crossed. The image is dimly lit and serves as a background for the text.

"A man with a conviction is a hard man to change.  
Tell him you disagree and he turns away.  
Show him facts or figures and he questions your sources.  
Appeal to logic and he fails to see your point."

(Festinger et al., 1956, p. 1)



# Leon Festinger

## – American Psychologist

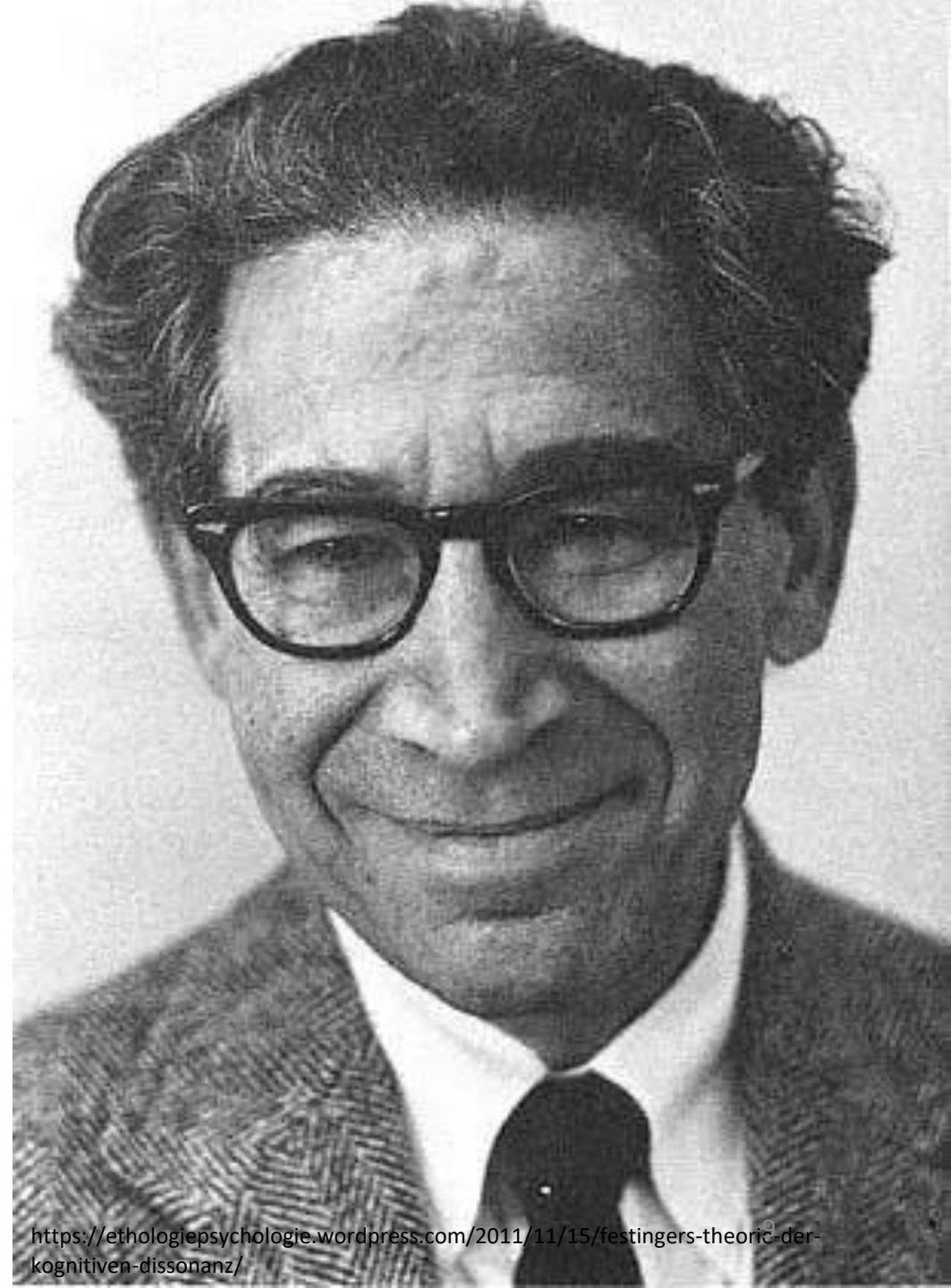
\* May 8, 1919 in New York

† February 11, 1989 in New York

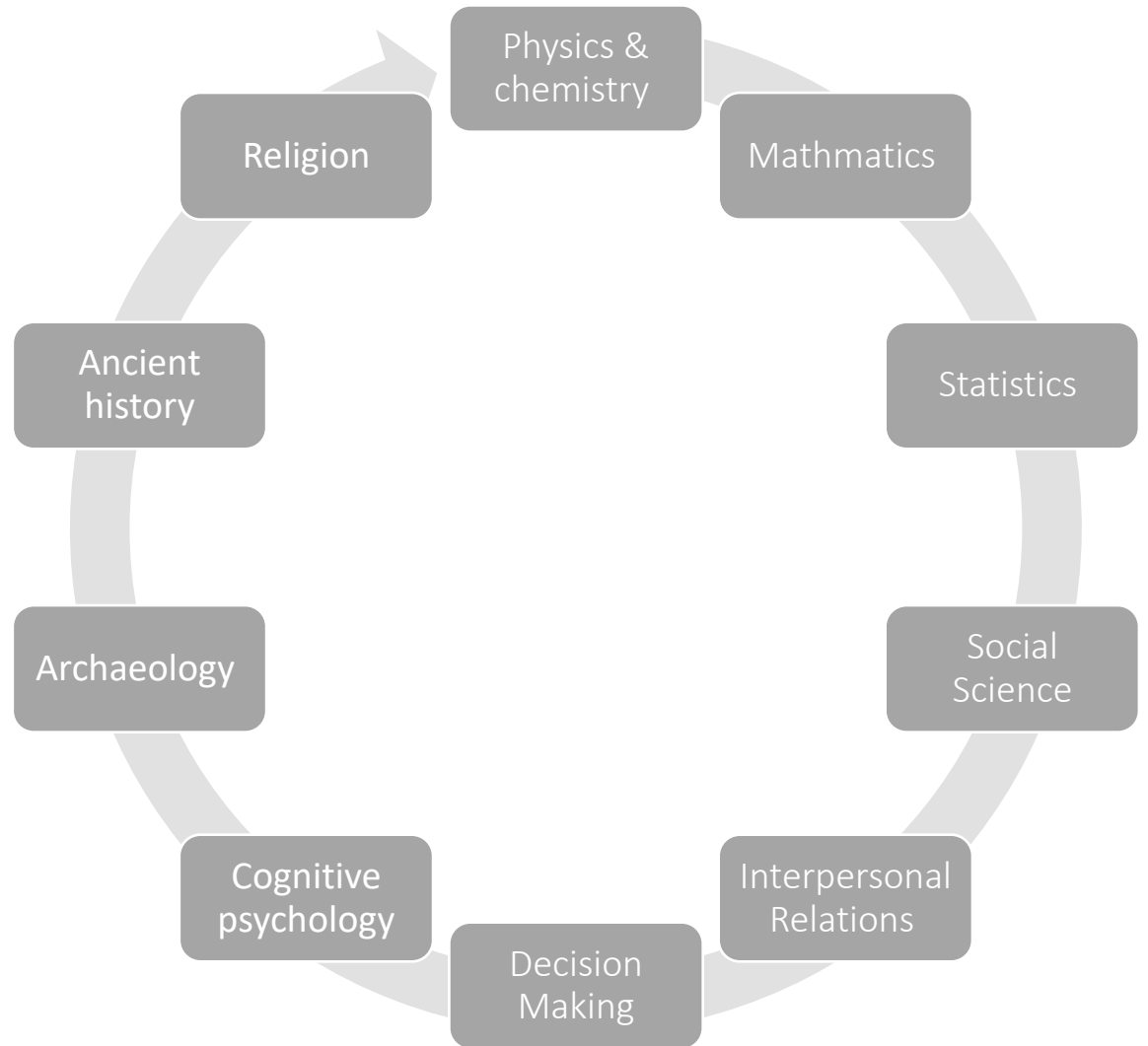
Son of russian-jewish immigrants

- Contributions to the study of group behavior, self-evaluation and attitude change
- Studied his theory with Henry Riecken and Stanley Schachter
  - 'End of the World Study'

Hatfield, E., Carpenter, M., Thornton, P., & Rapson, R. (2014). Leon Festinger. *Psychology*, 27, 439-452.



# Festinger's Interests



# Career

- B.A. in psychology from City College of New York
- Kurt Lewin and other German psychologists drew his interest in psychology
  - inspired by Lewin's level-of-aspiration theory
- Lewin and Festinger became friends
  - worked together at University of Iowa
- Ph.D. in 1942
  
- At Stanford University (1955-68) he developed the theory of cognitive dissonance

## Famous Studies

Cognitive Dissonance

The Proximity Effect

Informal Social  
Communication

# The origin of the theory

## Developing a theory: Influences on Festinger

- Earthquake in India 1934
- Kurt Lewin as mentor of Festinger
- Social Comparison Theory 1954
- Jack Brehm 1956 first investigated dissonance & decision making

Hatfield, E., Carpenter, M., Thornton, P., & Rapson, R. (2014). Leon Festinger. *Psychology*, 27, 439-452.

Cooper, J. (2019). Cognitive Dissonance: Where We've Been and Where We're Going. *International Review of Social Psychology*, 32(1): 7, 1–11. DOI: <https://doi.org/10.5334/irsp.277>

Cognitive Dissonance - The Decision Lab. (n.d.). The Decision Lab. <https://thedecisionlab.com/biases/cognitive-dissonance>

# What did Brehm say about dissonance?

1. Choosing between two alternatives creates dissonance and a consequent pressure to reduce it. The dissonance is reduced by making the chosen alternative more desirable and the unchosen alternative less desirable after the choice than they were before it.

2. The magnitude of the dissonance and the consequent pressure to reduce it are greater the more closely the alternatives approach equal desirability.

3. Exposing a person to new relevant cognitive elements, at least some of which are consonant, facilitates the reduction of dissonance.

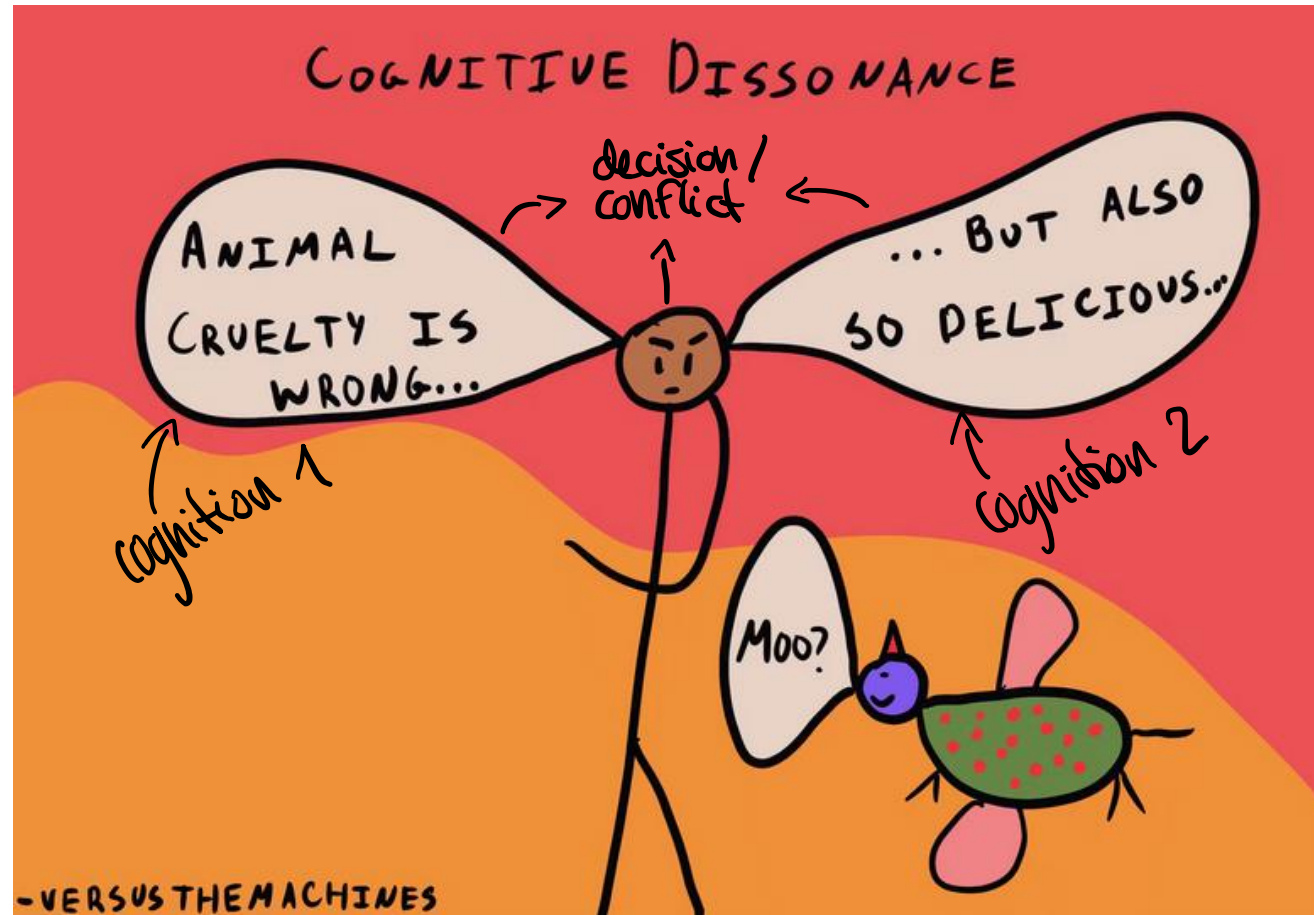
## REFERENCES

1. ADAMS, D. K. Conflict and integration. *J. Pers.*, 1954, **22**, 548-556.
2. FESTINGER, L. The relation between cognition and action. Paper read at Symposium on Cognition, Boulder, Colo., May, 1955.
3. LEWIN, K. *Field theory in social science*. New York: Harper, 1951.
4. MARTIN, A. H. An experimental study of the factors and types of voluntary choice. *Arch. Psychol.*, 1922, **22**, No. 51.

# What exactly is dissonance?

- inconsistency between cognitions (beliefs, attitudes, behavior)
- they do not fit together / conflict/ contradict each other

*Or as Brehm Said: choosing between two alternatives*



<https://thedecisionlab.com/biases/cognitive-dissonance>

# General principles of Festinger's Theory (1957)

Innovative Theory: consistency is not a preference but a drive  
+ Theory focuses on magnitudes and not just symmetry of cognitions

## Basic hypotheses:

1. Psychologically uncomfortable dissonance motivates to achieve consonance
2. In the presence of dissonance a person will avoid situations or information that is increasing dissonance



Cooper, J. (2019). Cognitive Dissonance: Where We've Been and Where We're Going. *International Review of Social Psychology*, 32(1): 7, 1–11.  
DOI: <https://doi.org/10.5334/irsp.277>

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford University Press.

# General principles of Festinger's Theory (1957)

Methods to reduce dissonance

**What do you think?**  
**Max vs. Min**





# The End of the World Study or "When Prophecy Fails"

- 'the Seekers'
  - Founder and leader: Mrs Martin (pseudonym: Mrs Keech)
    - Claims to have been receiving messages from beings on a distant planet called Clarion through automatic writing
  - Belief: "'Major parts of the world would be destroyed by a flood before dawn on December 21st 1954.'"



<https://sproutsschools.com/cognitive-dissonance-our-battle-with-conflicting-beliefs/>

## What do you think?

Please take the next 5 minutes to brainstorm potential factors that could have been considered in selecting a group for this experiment!



1. A belief must be held with deep conviction and it must have some relevance to action, that is, to what the believer does or how he behaves.

2. The person holding the belief must have committed himself to it; that is, for the sake of his belief, he must have taken some important action that is difficult to undo. In general, the more important such actions are, and the more difficult they are to undo, the greater is the individual's commitment to the belief.

3. The belief must be sufficiently specific and sufficiently concerned with the real world so that events may unequivocally refute the belief.

4. Such undeniable disconfirmatory evidence must occur and must be recognized by the individual holding the belief.

The first two of these conditions specify the circumstances that will make the belief resistant to change. The third and fourth conditions together, on the other hand, point to factors that would exert powerful pressure on a believer to discard his belief. It is, of course, possible that an individual, even though deeply convinced of a belief, may discard it in the face of unequivocal disconfirmation. We must, therefore, state a fifth condition specifying the circumstances under which the belief will be discarded and those under which it will be maintained with new fervor.

5. The individual believer must have social support. It is unlikely that one isolated believer could withstand the kind of disconfirming evidence we have specified. If, however, the believer is a member of a group of convinced persons who can support one another, we would expect the belief to be maintained and the believers to attempt to proselyte or to persuade nonmembers that the belief is correct.

Conditions that will make the belief resistant to change

✓ Conviction

✓ Commitment

- ✓ When a belief is subject to **specific falsifiability**, believers are exposed to the possibility of their belief being disproven.
- ✓ **undeniable contradictory evidence** puts pressure on believers to abandon their belief.
- ✓ Individuals may not be able to withstand the pressure to abandon their beliefs in the face of conflicting facts, but groups might be able **to support each other** in upholding their beliefs.

# Hypothesis

## Idea:

The disconfirmation the seeker's would experience on the morning of the 21nd would cause a condition of cognitive dissonance

## Hypothesis:

In order to resolve this unpleasant tension state the seeker's are going to become proselytizers.

*„If more and more people can be persuaded that the system of beliefs is correct, then clearly it must, after all, be correct" (Festinger et al., 1956, page 28).*

Festinger, L., Riecken, H. W., & Schachter, S. (1956). *When prophecy fails*. University of Minnesota Press. <https://doi.org/10.1037/10030-000>

# Protokoll of the events on December 21st

- „12:05 A.M. December 21. No visitor. Someone in the group notices that another clock in the room shows only 11:55. The group agrees that it is not yet midnight.
- 12:10 A.M. The second clock strikes midnight. Still no visitor. The group sits in stunned silence. The cataclysm itself is no more than hours away ... Midnight has passed and nothing has happened. There is no talking, no sound ... People sit stock still, their faces seemingly frozen and expressionless.
- 4:00 A.M. The group has been searching for an explanation. None seems satisfactory. They comfort one another searching for a reason. Some, including Mrs Keech herself, begin to cry.
- 4:45 A.M. Salvation! Mrs Keech is summoned to receive another message by automatic writing. When she returns she reads the message's momentous words to the group:
  - "For this day it is established that there is but one God of Earth and He is in thy midst and by his word have ye been saved. Not since the beginning of time has there been such a force for Good and light as now floods this room (...) (Festinger et al., 1956, page 169)."

(Smith & Haslam, 2017, page 46, based on Festinger et al., 1956: 163–9).

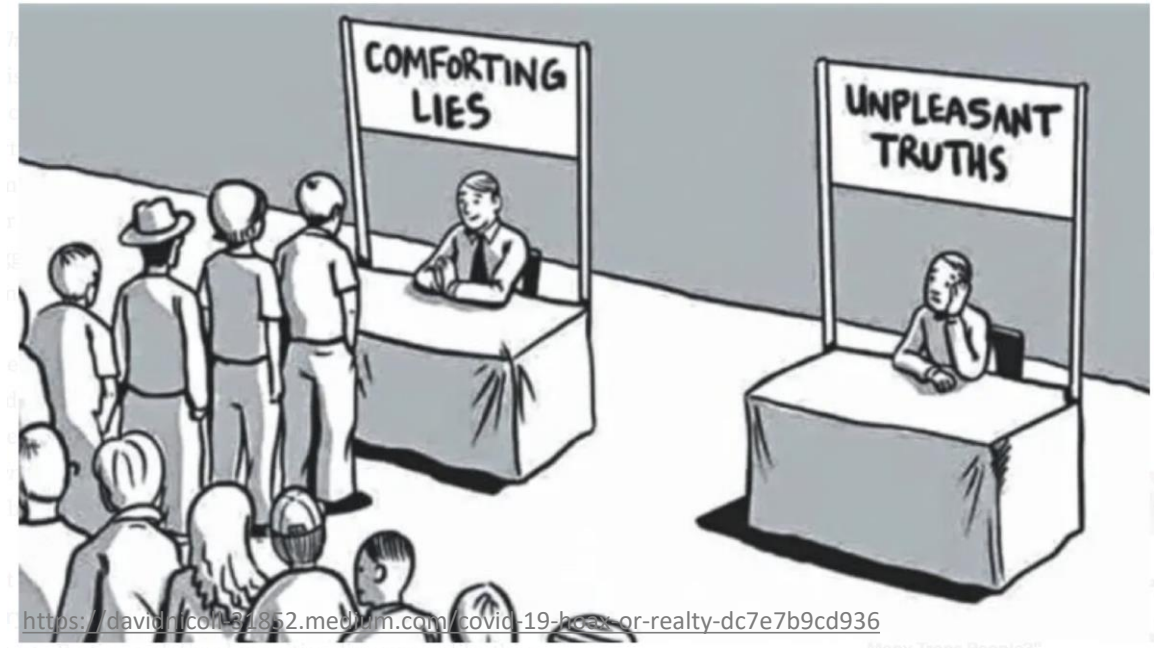
# Resolving the dissonance

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## Interpretation of the last messages

"The cataclysm had been called off. The little group, sitting all night long, had spread so much light that God had saved the world from destruction" (Festinger et al., 1956, p. 169).

"this "Christmas Message" together with the fact that it had been received at **4:45 A.M.** was to be released immediately to the newspapers" (Mrs Martin cited by Festinger et al., 1956, p. 169).



<https://davidnicol81852.medium.com/covid-19-hoax-or-reality-dc7e7b9cd936>

apt. Festinger defined cognitive dissonance like this:

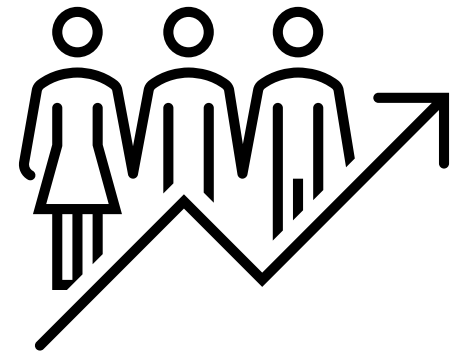
"Many Trans People?"

# Resolving the dissonance

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→ Change of behavior:

- From avoiding the media to actively seeking public attention
- From "those who are ready will be sent" mentality to face to face proselytizing
- From a veil of secrecy (password and secret sign) to exposing the secrets of the group to the world



# Criticism of the research methods

1. Group was not isolated
2. Attention of the media

-> Additionally the hypothesis was criticized as 'one-dimensional'

Festinger, L., Riecken, H. W., & Schachter, S. (1956). *When prophecy fails*. University of Minnesota Press. <https://doi.org/10.1037/10030-000>

Bermejo-Rubio, F. (2017). The Process of Jesus' Deification and Cognitive Dissonance Theory. *Numen*, 64(2–3), 119–152. <https://doi.org/10.1163/15685276-12341457>

Dawson, L. L. (1999). When Prophecy Fails and Faith Persists: A Theoretical Overview. *Nova Religio*, 3(1), 60–82. <https://doi.org/10.1525/nr.1999.3.1.60>

-> Summary: the methods are being criticized but the theory still persists



# Discussion

What do you think? Is this criticism justified?



# Replications...

GROUP STUDIED:	STUDIED BY:	SURVIVAL OF FAILURE OF PROPHECY
Seekers	Festinger et al. (1956)	Yes, for a time
Church of the True Word	Hardyck and Braden (1962)	Yes, quite well
<i>Ichigen no Miya</i>	Takaaki (1979)	Yes, barely
Baha'is under the Provision of the Covenant	Balch et al. (1983) and Balch et al. (1997)	Yes, but with difficulties
Millerites	Melton (1985)	Yes, for a time
Universal Link	Melton (1985)	Yes, for a time
Jehovah's Witnesses	Zygmunt (1970) Wilson (1978) Singelenberg (1988)	Yes, quite well
Rouxists	van Fossen (1988)	Yes, quite well
<i>Mission de l'Esprit Saint</i>	Palmer and Finn (1992)	No
Institute of Applied Metaphysics	Palmer and Finn (1992)	Yes, quite well
Lubavitch Hasidim	Shaffir (1993, 1994, 1995) Dein (1997)	Yes, quite well
Unarians	Tumminia (1998)	Yes, fairly well
Chen Tao	Wright (1998)	Yes, but weakened

Dawson, L. L. (1999). When Prophecy Fails and Faith Persists: A Theoretical Overview. *Nova Religio*, 3(1), 60–82. <https://doi.org/10.1525/nr.1999.3.1.60>

... and  
Additions

Adaptational Strategies	Influencing Conditions
(1) proselytization	(1) level of in-group social support
(2) rationalization -spiritualization -test of faith -human error -blaming others	(2) decisive leadership
(3) reaffirmation	(3) scope and sophistication of ideology
	(4) vagueness of the prophecy
	(5) presence of ritual framing
	(6) organizational factors

# Revisions and new developments

## What motivates people to reduce dissonance?

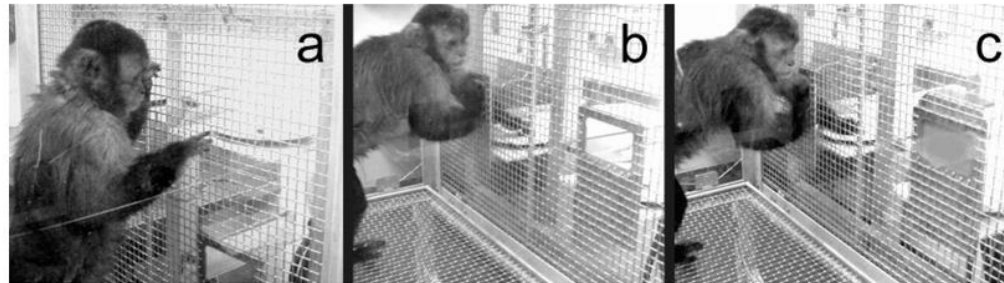
- **Self-consistency interpretation:** dissonance between self-concept and behavior
- **“The new look” version:** people feel personally responsible for consequences
- **Self-Affirmation:** behaving in a way threatening to own moral sense/ sense of self-worth
- **Action-based model:** making execution of current action more effective by increasing value of chosen action

Harmon-Jones, E., & Mills, J. (2019). An introduction to cognitive dissonance theory and an overview of current perspectives on the theory. In E. Harmon-Jones (Ed.), *Cognitive dissonance: Reexamining a pivotal theory in psychology* (pp. 3–24). American Psychological Association. <https://doi.org/10.1037/0000135-001>

# Example on studies revisiting CDT

## Do people change their attitudes based on past experiences?

- Experiment with children (4-year-olds) and monkeys: preferences for stickers /m&ms
  - Findings: Decrease in preference for the alternative which was already declined before
  - Possibility: **Urge to reduce dissonance is a core-knowledge mechanism**



Egan, L. C., Santos, L. R., & Bloom, P. (2007). The origins of cognitive dissonance: Evidence from children and monkeys. *Psychological Science*, 18, 978–983.  
<http://dx.doi.org/10.1111/j.1467-9280.2007.02012.x>

# Cognitive Dissonance Theory applied

How can knowledge of cognitive dissonance be used?

→ actively creating dissonance **to increase motivation** and change in behavior

Examples...



## For better learning in Chemistry Class (Widarti et al., 2021)

Widarti, H. R., Permanasari, A., Mulyani, S., & Rokhim, D. A. (2021). Multiple Representation-Based Learning through Cognitive Dissonance Strategy to Reduce Student's Misconceptions in Volumetric Analysis. *TEM Journal*, 10(3), 1263. <https://doi.org/10.1111/jasp.12639>  
<https://doi.org/10.18421/TEM103-33>



## For better strategies to manage resistiveness in care of people with dementia (Mortensen et al., 2022)

Mortensen, A. H., Stojiljkovic, M., & Lillekroken, D. (2022). Strategies to manage cognitive dissonance when experiencing resistiveness to care in people living with dementia: A qualitative study. *Journal of advanced nursing*, 78(2), 486-497. <https://doi.org/10.1111/jan.15030>





## Helping to increase exercise in the elderly (Cooper & Feldman, 2020)

Cooper, J., & Feldman, L. A. (2020). Helping the “couch potato”: A cognitive dissonance approach to increasing exercise in the elderly. *Journal of Applied Social Psychology, 50*(1), 33-40. <https://doi.org/10.1111/jasp.12639>



# CDT applied to mental health

## How can knowledge of a theory help for mental health?

Mechanisms behind successful psychotherapy:

- personal responsibility in effortful therapy could help alleviate symptoms
  - choice between therapy options leads to better outcomes
- Using dissonance as motivation can help with smoking cessation, exercise, substance abuse, depression...



<https://de.depositphotos.com/536022248/stock-illustration-woman-talking-with-psychologist-psychology.html>

Cooper, J. (2019). Cognitive Dissonance: Where We've Been and Where We're Going. *International Review of Social Psychology*, 32(1): 7, 1–11.  
DOI: <https://doi.org/10.5334/irsp.277>

# Example: The Body Project

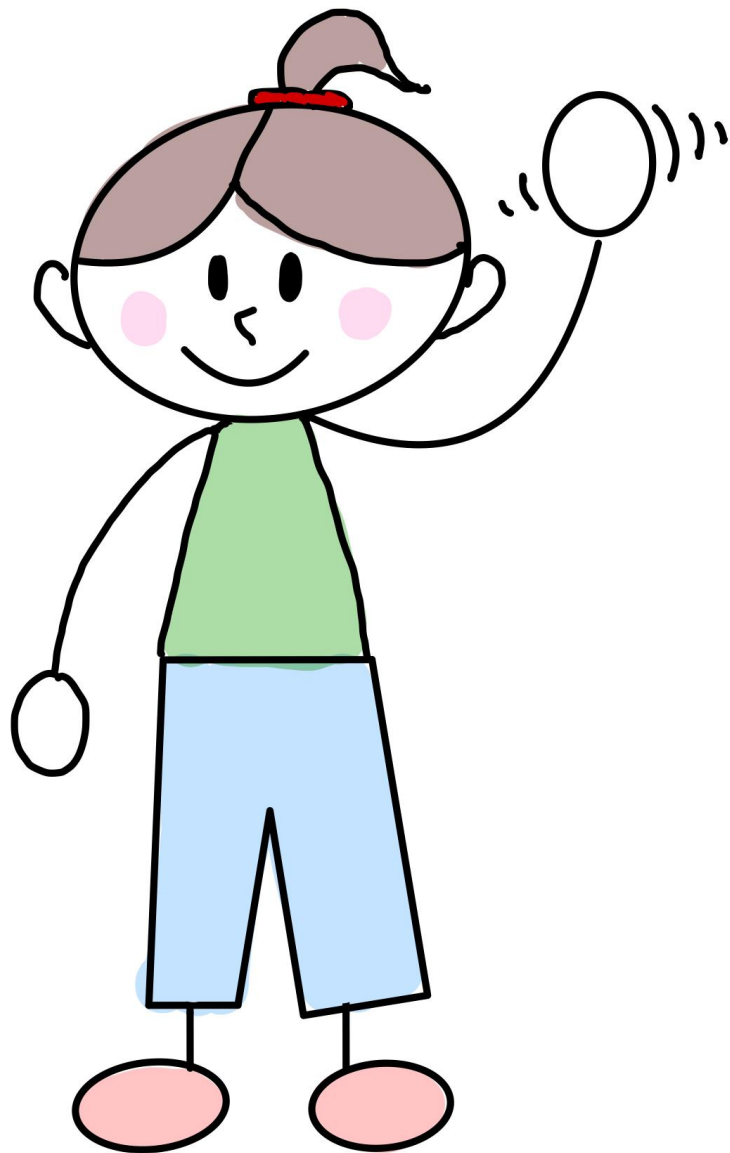
- Eating disorder prevention for female students
  - Goal: create dissonance towards a thin beauty ideal
  - The stronger the dissonance → the stronger the prevention
  - Reduced activity measured in the brain
  - Works best with same-age, same-sex instructor
- produces effects that last longer than any other prevention

Stice, E., Butryn, M. L., Rohde, P., Shaw, H., & Marti, C. N. (2013). An effectiveness trial of a new enhanced dissonance eating disorder prevention program among female college students. *Behaviour research and therapy*, 51(12), 862-871. <https://doi.org/10.1016/j.brat.2013.10.003>

Stice, E., Rohde, P., Shaw, H., & Gau, J. M. (2020). Clinician-led, peer-led, and internet-delivered dissonance-based eating disorder prevention programs: Effectiveness of these delivery modalities through 4-year follow-up. *Journal of Consulting and Clinical Psychology*, 88(5), 481–494. <https://doi.org/10.1037/ccp0000493>



<https://www.advenium.com/blog-post/signs-someone-you-love-may-be-struggling-with-an-eating-disorder/>



Any questions?

*The End*