Self-Regulation of Behavior Change

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Mental Contrasting

- Principle
- Mechanism
- Interventions
- Application
Mental Contrasting: Principle
Mental Contrasting

- Desired Future
- Mental Contrasting
- Expectation is activated
- Weakened Goal Pursuit
- Strengthened Goal Pursuit

Present Reality

Mental Contrasting: Mechanisms
How Does Mental Contrasting Affect Behavior Change?

Changes in *Implicit Cognition*

Changes in *Motivation*

Changes in *Responses to Set-Backs*

Mental Contrasting and Successful Goal Pursuit: Evidence

**Academic/vocational**
- Vocational training
- Combining work and family life
- Learning a foreign language
- Studying abroad
- Mathematics
- Creativity tests

**Health**
- Cigarette reduction
- Coping with stress
- Exercise
- Healthy eating

**Interpersonal relations**
- Problem solving
- Social responsibility
- Help seeking
- Help giving
- Reconciliation

Implementation Intentions

If situation X occurs, then I will perform the goal-directed response Y!

If ... the waiter asks me to order a drink, then I will ... ask for a mineral water!

How Do Implementation Intentions Enhance Performance?

Changes in *Activation of Critical Situation*

Changes in *Automaticity of Action Initiation*

Prerequisites for the Effects of Implementation Intentions

- Goal commitment is strong
- If-component specifies critical situation (e.g., challenging obstacle)
- Then-component specifies instrumental mean

Mental contrasting establishes all three prerequisites
Mental Contrasting with Implementation Intentions (MCII)
What is my dearest Wish?

To pass math so I can go to culinary school.
What would be the best Outcome of fulfilling my Wish?

Work in a restaurant, eat good food, become independent
What is my main Obstacle, the Obstacle in me?

I get so angry when my math teacher yells at me.
What can you do to overcome the Obstacle?

Make an if-then Plan!

If... my math teacher yells at me, then I will... breathe deeply 5 times and get back to work.
MCII as Behavior Change Intervention – more than MC and II alone:

Breaking Snacking Habits
Breaking Snacking Habits

MCII as Behavior Change Intervention – more than MC and II alone:

Finding Integrative Solutions
Integrative Negotiation

MCII as Behavior Change Intervention:

Time Management
**Scheduled hours on a 7-day calendar**

\[ \chi^2(2, N = 84) = 5.72, \quad p = .058 \]

**Self-reported time management**

\[ F(1,37) = 9.55, \quad p = .004 \]

Time Management

\[ \chi^2(1, \ N = 58) = 4.70, \ \ p = .03 \]

MCII as Behavior Change Intervention:

Improving Exercise and Diet
Improving Exercise

Intervention in general practice

Information control

Information + MCII

1 week
1 month
2 months
4 months

255 healthy women with a mean age of 41 years.

Diary
MCII Intervention

Today’s Exercise Wish: exercycling in the evening

Best Outcome: feeling balanced

Obstacle: tired when I come home

Plan: Overcome/Prevent/Seize Opportunity

If I come home tired at 7 pm, then I will take my situation (when and where) behavior

ipod and exercycle
Exercise after 4 Months

If chocolate dessert at lunch, then I will take a fruit salad.
Healthy Diet after 2 Years

MCII as Behavior Change Intervention:

Improving Physical Mobility in Chronic Back Pain Patients
Improving Physical Mobility in Chronic Back Pain Patients

Christiansen, Oettingen, Dahme, & Klinger (2010). Pain, 149, 444-452.
MCII as Behavior Change Intervention:
Improving Exercise in Stroke Patients
Sport Activity after 1 Year

- Information treatment as usual
- Standardized information treatment
- Standardized information treatment + MCI

Marquardt, Oettingen, Gollwitzer, & Liepert (2014). Under Review
Weight Loss After 1 Year

- Weight loss in kg

- Information treatment as usual
- Standardized information treatment
- Standardized information treatment + MCII

Marquardt, Oettingen, Gollwitzer, & Liepert (2014). Under Review
MCII as Online Behavior Change Intervention:
Reducing Stress in Health Care Providers
Reducing Stress in Health Care Providers

Reduced stress: Perceived
$\bar{t}(65) = 2.75$, $p = .007$

Reduced stress: Body symptoms
$\bar{t}(65) = 2.25$, $p < .03$

Increased work engagement
$\bar{t}(63) = 2.35$, $p = .02$

MCII as Behavior Change Intervention: Reducing Alcohol Consumption
Reducing Alcohol Consumption

Study 1: 1 week
Heavy drinking events per week

- College Students
  - Control Group
  - MCII

Study 2: 4 weeks
Standard drinks per week

- Adult Mturk Users
  - Control Group
  - MCII

MCII as Behavior Change Intervention:
Study Effort and Performance in High School and Middle School Students
MCII Intervention

My study wish: _______________________

Best outcome: ______________________

Obstacle: __________________________

If-then plan: ________________________

Obstacle (where and when)           Action (to overcome obstacle)
Control

My study wish: ____________________

Best outcome: ____________________

Another good outcome: ______________

If-then plan:

If ___________________________, then _________________________

Best outcome (where and when)

Feelings (of best outcome)
Study Effort

Study 1: PSAT workbook completion

- High School Students: Control Group (80), MCII (140), \( \beta = 0.27, p < 0.004 \)
- Middle School Students: Control Group (110), MCII (160)

Study 2: Homework completion

- High School Students: Control Group (5), MCII (6), \( t(55) = 1.73, p = 0.04 \)
- Middle School Students: Control Group (5), MCII (6), \( t(56) = 1.52, p = 0.06 \)
- Disadvantaged Middle School Students: Control Group (70), MCII (80), \( F(1, 71) = 4.37, p = 0.04 \)

Study 3: GPA, School attendance

- GPA: High School Students (86), Middle School Students (84), Disadvantaged Middle School Students (82)
- School attendance: High School Students (78), Middle School Students (76), Disadvantaged Middle School Students (74)

### Mental Contrasting with Implementation Intentions (MCII)

<table>
<thead>
<tr>
<th>Academic/vocational</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Work engagement</td>
<td>• Exercise</td>
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<tr>
<td>• Mastery of everyday life</td>
<td>• Stress Management</td>
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<tr>
<td>• Decision making</td>
<td>• Healthy diet</td>
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<td>• Negotiation performance</td>
<td>• Weight loss</td>
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<td>• Class attendance</td>
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<td>• Course Grades</td>
<td>• Insomnia</td>
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<tr>
<td>• Time Management</td>
<td></td>
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</tbody>
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**Interpersonal relations**

- Fairness
- Reconciliation
- Perspective taking
- Reduced social anxiety
- Sustainable consumption

Traditional Behavior Change Interventions...

- modify incentive value and expectations
- modify framing of status quo
- modify content or structure of goals

MAL is a meta-cognitive self-regulation strategy drawing on imagery that changes cognition and energy outside of awareness.
Mental Contrasting with Implementation Intentions

• Principle
• Mechanisms – Cognition, Motivation, Feedback
• Interventions – MCII
Rethinking Positive Thinking
INSIDE THE NEW SCIENCE OF MOTIVATION

Gabriele Oettingen

Available now:

Gabriele Oettingen
gabriele.oettingen@nyu.edu
New York University
University of Hamburg

www.woopmylife.org

amazon
Barnes & Noble
BAM!
INDIE BOUND

Penguin Random House

CURRENT
list

Sort by content

prepare meeting 2014-11-28

talk to Jennifer 2014-11-28

go to gym 2014-11-28

WOOP every day!
WOOP audio leads you through the WOOP exercise step by step.

WOOP it: 24 hours

Stream other guides
(internet connection required)

WOOP it: 1 month

WOOP it
WOOP helps me to organize my days and to focus on the important tasks.
wish, outcome, obstacle, plan

woop

to and through college
My WOOP Home

- my academic Wishes
- my personal Wishes
- my WOOP List
- my WOOP history
- quick WOOP

Info Tips Reminder Settings

I want to do the WOOP training
MY WOOP

WISH
ask Dr. Frome for a letter of recommendation

OUTCOME
feel relieved

OBSTACLE
I feel shy

PLAN
if I feel shy
Then I will send Dr. Frome an email

update status of your Wish!
Since I started using WOOP my goals have gotten bigger and I feel my accomplishments more.

My emotions have changed a lot. The WOOP use has helped me kind of control them.
...I have gotten a lot of confidence using this method.

I have found that there is always an escape plan from the obstacle that is blocking my way from success.
WOOP to and through college

WOOP app

www.woopmylife.org
Thank you to Motivation Labs: NYU and UHH
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