Smart self-control strategies: Beyond effortful inhibition

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What is self-control?

The self's capacity to override or change one's inner responses, as well as to interrupt undesired behavioral tendencies and to refrain from acting on them (Tangney et al., 2004)

The ability to overrule or control immediate urges *in order to attain a long-term goal* (Carver & Scheier, 1981; De Ridder et al., 2012; Vohs & Baumeister, 2004)

Self-control *dilemmas*:
Situations in which competing behavioral tendencies create a conflict that needs to be resolved

Self-control success:

'what made humans human'

as in being able to transcend immediate temptations in service of a long-term goal

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Successes due to *trait* self-control

Academic/work performance
(Duckworth & Seligman, 2005; Mischel et al., 1988)

Satisfying relationships
(Tangney et al., 2004)

Health
(De Ridder et al., 2012)

Wellbeing
(Cheung et al., 2014; Hofmann et al., 2013)

Overall effect size .26

What about *state* self-control?

State self-control: dealing with self-control dilemmas relies on effortful inhibition of undesired behavioral tendencies – same definition, but focus on failure

Ego-depletion paradigm: self-control gets depleted after initial act of self-control (Baumeister et al., 1998)

either because of low self-control resource

or because of temporary flaws in motivation and attention


aps

What Is Ego Depletion? Toward a Mechanistic Revision of the Resource Model of Self-Control

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How can we reconcile these approaches?

Trait self-control: successful regulation of behavior

State self-control: unclear how people would ever successfully resolve self-control dilemmas if resource is easily depleted

Relation between trait SC and state SC unclear:

- High trait self-control bigger resource (Muraven et al., 2007)
- High trait self-control buffers depletion effect (DeWall et al., 2007)
- High trait self-control amplifies depletion effect (Imhoff et al., 2013)
- High trait self-control is more efficient use of resource (Baumeister et al., 2007)
- High trait self-control unrelated to depletion (Stillman et al., 2007)

What is this self-control you speak of?

Discuss recent advances in trait self-control research hinting at smart and effortless – rather than effortful – self-control strategies (Gillebaart & De Ridder, 2015)

And examine their implications for state self-control research

Smart self-control: Beyond effortful inhibition

Admittedly unexpected and apparently paradoxical finding from our meta-analysis:

Effect sizes of self-control larger for automatic habitual behavior than for controlled behavior

Both in case of desired behavior (.36 vs .15) and undesired behavior (-.40 vs -.16)

People with high self-control report stronger adaptive routines (fruit consumption habits) and weaker unadaptive routines (smoking habits)

De Ridder et al., 2012

Suggesting

A sharp contrast with traditional view that people with high self-control are effective in resisting temptations

Rather

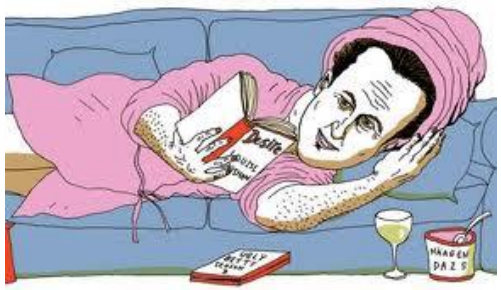
Self-control is a kind of a proactive trait that helps to avoid problematic desires (Ent et al., 2015)

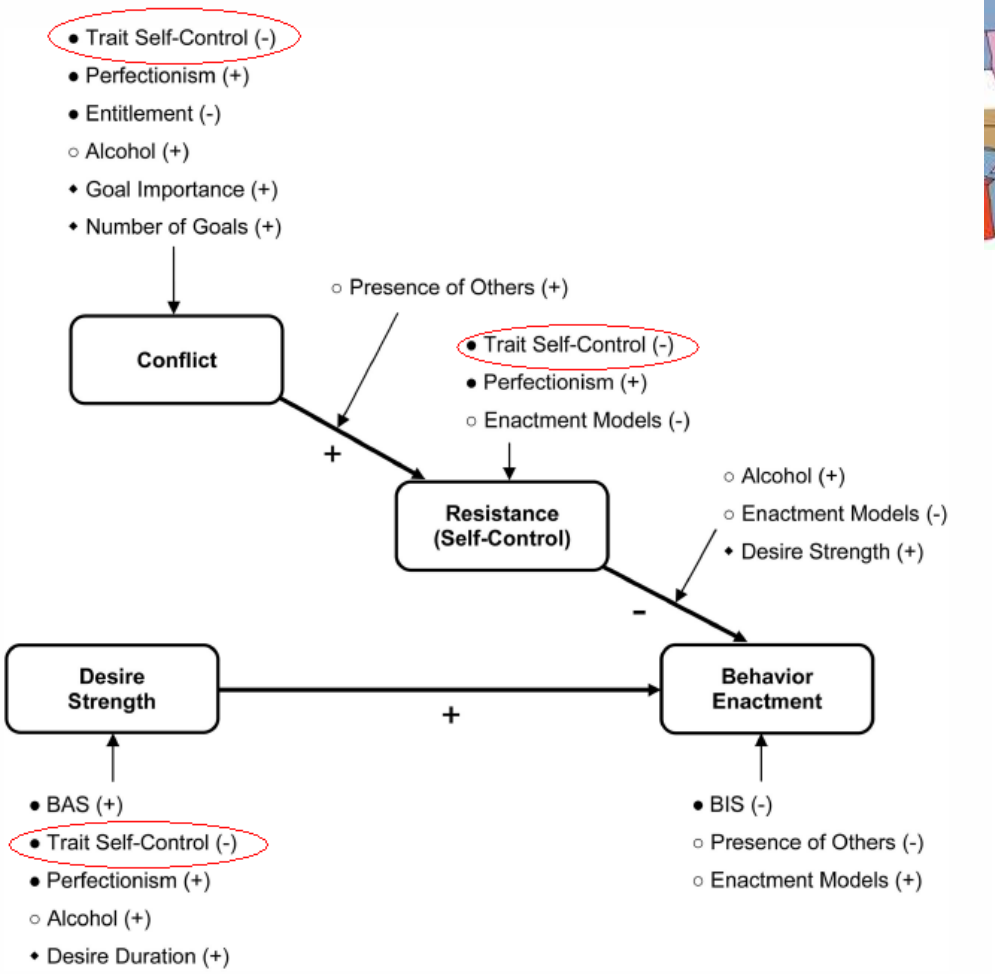
And/or self-control associated with less conflict (temptations/desires)

And/or self-control operates via adaptive habits that do not require reliance on resistance

And/or self-control relates to efficient downregulation of conflict

High T self-control: Less conflict/less desire





Hofmann et al., 2012

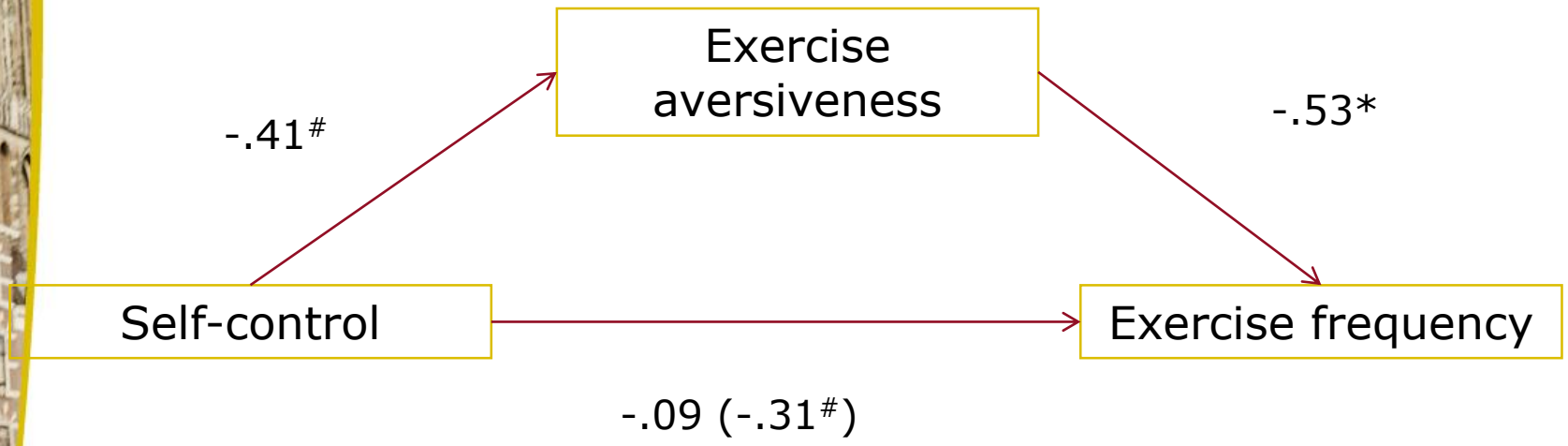
High T self-control: Less conflict/less task aversiveness

People with high self-control experience less conflict:
Maybe they don't mind performing "ought to" behaviors

Rather than excelling in effortful inhibition of undesired impulses, people with high self-control may find it *easier* to perform "good" behaviors

Task aversiveness: "If I'm honest, [eating healthy dishes] is something I'd rather not do"; "[exercising] is something I find pleasurable"
Behavioral outcomes:
Healthy eating: frequency of healthy meals
Studying: hours of studying
Exercising: hours of exercising

High T self-control: Less aversive of exercise



Bootstrap indirect effect (z = 1000): CI 95% [-.03;.48]

Kroese & Gillebaart, 2016

High T self-control: Adaptive routines

People with high self-control feel less aversion to goal-directed behaviors: Does self-control promote the automatic performance of these behaviors?

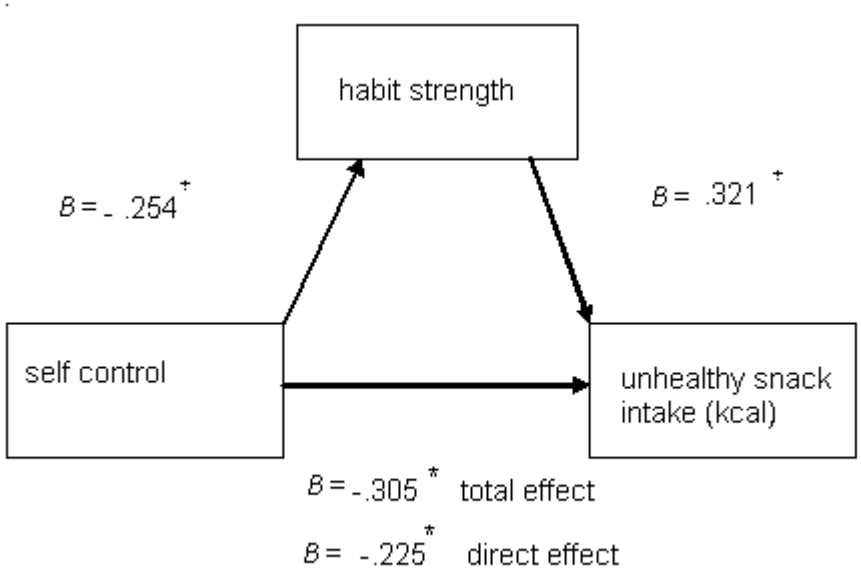
Is the effect of self-control mediated by (the formation of) strong wanted habits and/or weak unwanted habits?

Participants completed
- Self-Control Scale
- Habit Index adapted for (un)healthy snack intake

And kept a food diary assessing (un)healthy snack intake for 7 days

High T self-control operates via adaptive habits

People with high self-control are more successful because they have weaker maladaptive habits and thus have to use self-control less frequently



Adriaanse et al., 2014; cf. Galla & Duckworth, 2015

High T self-control: Smaller response conflicts

High self-control associated with adaptive routines:

Do people with high trait self-control experience smaller response conflicts?

Stimuli: 4 pictures of unhealthy foods / 7 pictures of healthy foods





Experienced conflict: how conflicted/mixed do you feel

'Objective' conflict: separate ratings of positive and negative evaluations

High self-control predicts smaller response conflicts about (un)healthy foods ($\beta \approx -.20$)

Gillebaart, Schneider & De Ridder, 2015

High T self-control: Faster resolution of conflict

Self-reports focus on the *outcome* of the response conflict

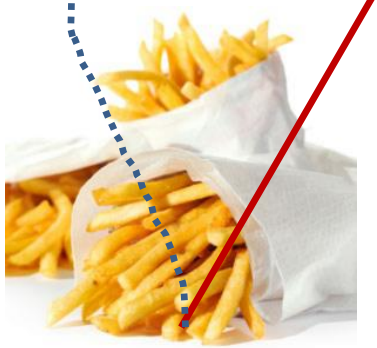
Differences between high and low trait self-control may also lie in the process between emergence and resolution (or reporting) of response conflict

- Categorization task: categorize pictures of (un)healthy food items as *positive* or *negative* by dragging the computer mouse from the bottom of the screen to one of the upper corners to categorize the food item

- DV: the computer mouse trajectories followed by the participant while solving the response conflict

POSITIVE

NEGATIVE

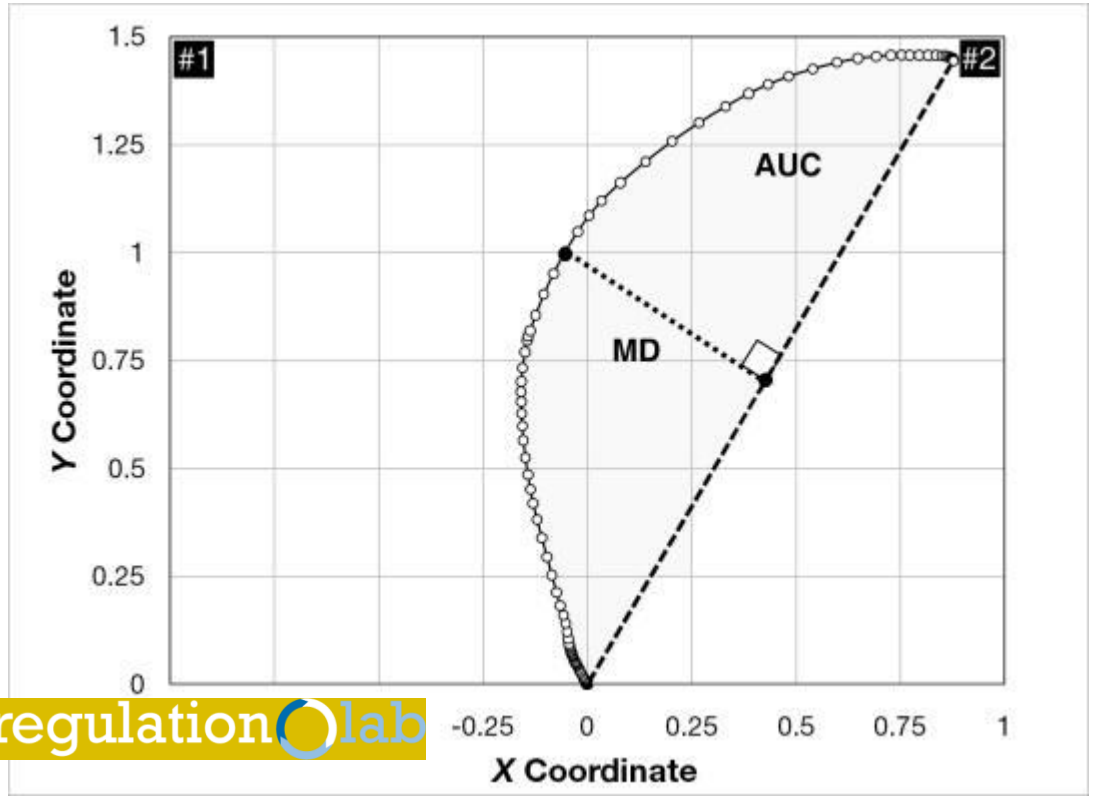


- Area under the curve (AUC)
- Maximum deviation (MD)

Size of response conflict

- Response time
- Time of MD

Process of response conflict



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No effect of trait self-control on *size* of response conflict (*area under the curve* and *maximum deviation)*

Significant effect of trait self-control on *process* of conflict resolution:

- High trait self-control leads to faster resolution of conflict: faster categorization of the food item (response time)
- High trait self-control associated with maximum amount of conflict at an earlier point in time, which may be why they resolved the conflict faster

Thus high trait self-control associated with early identification of response conflict and subsequently resolving it – resulting in smaller experienced response conflict and probably allowing to deal more efficiently with conflict

Gillebaart et al., 2015

Implications for state self-control research

Together, novel trait self-control research suggests smart and effortless dealing with self-control dilemmas

Are these new directions in trait self-control research incompatible with state self-control highlighting depletion after effortful inhibition of undesired impulses?

May be related to different research questions: explanation of self-control succes vs self-control failure

But both approaches suggest different mechanisms: effortful inhibition of impulses vs effortless resolution of conflict

Does Dual Task paradigm allow for assessment of dealing with self-control conflict?

No conflict involved: both initial task and secondary task are trivial; no long-term goal at stake

Paradigm does not allow people to rely on their adaptive routines for dealing with lab tasks

Paradigm may even interfere with smart and automatic dealing with conflict (cf. Imhoff et al., 2013)

Shift between tasks may produce poor performance (Dewitte et al., 2009)

Thus DT paradigm not suitable to detect potentially smarter and faster conflict resolutions, as suggested by trait self-control studies

What's next?

We may decide that trait self-control and state self-control relate to distinct phenomena that are interesting in their own right but do not relate to each other

Or we may attempt to incorporate notions from smart and effortless trait self-control into state control paradigms

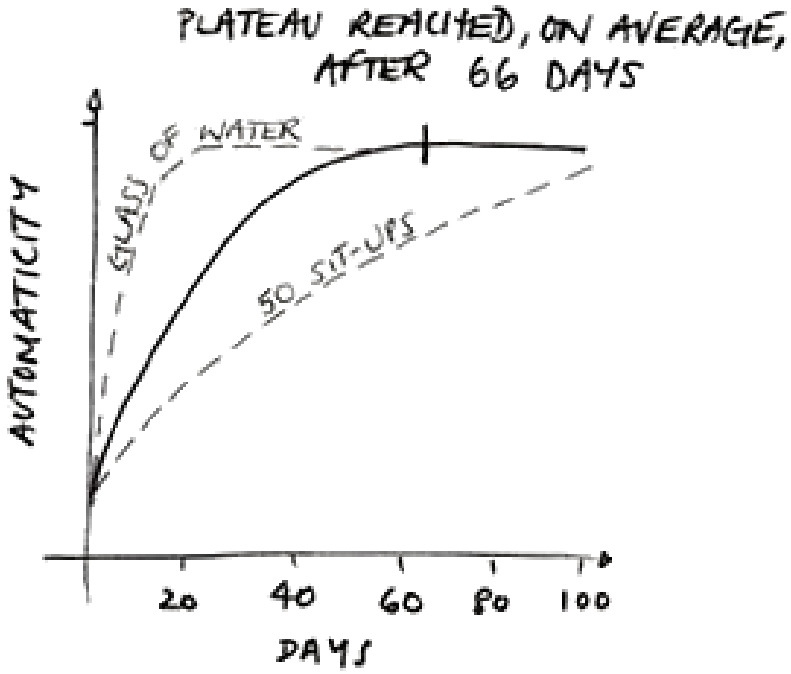
Do mouse tracking results hold if we manipulate state self-control and is this effect moderated by trait self-control?

How does low/high state self-control affect recognition and resolution of self-control dilemma?

Does poor recognition and resolution of self-control dilemma result in low self-control or vice versa?

Self-control improvement over time outside the lab

Does self-control improve because people become stronger or because routinization requires less effort?



Van der Weiden, Gillebaart, Benjamins & De Ridder, 2016


Wie niet sterk is
moet slim zijn

www.selfregulationlab.nl

Many thanks to my collaborators

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