On Integrating the Components of Self-Control

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Self-Control
Integrative Model of Self-Control
(Kotabe & Hofmann, 2015, PPS)
Building on Earlier Insights

- Elaborated intrusion theory of desire (Kavanagh et al., 2005) & incentive salience model of wanting (Berridge & Robinson, 1998)
- Cybernetic approaches (Carver & Scheier, 1981; Baumeister & Heatherton, 1996)
- Work on conflict monitoring/conflict detection (Botvinick et al., 2004; Inzlicht & Legault, 2014; Myrseth & Fishbach, 2009)
- Executive functioning and resource depletion research (Kane & Engle, 2002; Baumeister et al., 1998; Inzlicht & Schmeichel, 2012)
- Four-component framework of self-control (Hofmann et al., 2012)
- Principles of effort allocation (Brehm & Self, 1989; Gendolla & Richter, 2010)
- Lewinian (1951) field theory principles; cognitive energetics theory (Kruglanski et al., 2012)
- Work on choice architecture (Thaler & Sunstein, 2009) and proactive self-control (Fujita, 2011; Hofmann & Kotabe, 2012)
- [...]
(1) Desire Strength
- “Wanting” (Berridge et al., 2009)
- Desire emerging from (automatic) subcortical reward processing, amplified through attention and cognitive elaboration (Kavanagh et al., 2005)

(2) SC Goal Strength
- \( f(\text{goal commitment}, \text{goal activation}) \)
(1) Desire Strength
- “Wanting” (Berridge et al., 2009)
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(2) SC Goal Strength
- $= f(\text{goal commitment}, \text{goal activation})$

(3) Conflict Experience
- $C = \text{Desire Strength} \times \text{SC Goal Strength} \times \text{Degree of Incompatibility}$

Integrative Model of Self-Control (Kotabe & Hofmann, 2015, PPS)

Pre-Behavior

- Control Capacity
- Control Motivation
- Control Effort
- Desire vs. Control Effort
- D-G Conflict

Behavior

- Prevailing Force is Control Effort
- Self-Control Success
- Enactment Constraints
- Prevailing Force is Desire
- Self-Control Failure
Early Automatic Inhibition

Pre-Behavior

Control Capacity
Control Motivation
Control Effort
Desire vs. Control Effort
Desire
Self-Control Goal

Behavior

Activation
Desire
Early Inhibition

Prevailing Force is Control Effort
Self-Control Success
Enactment Constraints
Self-Control Failure

Crowding Out (Temporary Short-Sightedness)

Pre-Behavior

Control Capacity
Control Motivation
Control Effort
Desire vs. Control Effort
Desire
Self-Control Goal

Behavior

Activation
Desire
Crowding out

Prevailing Force is Control Effort
Self-Control Success
Enactment Constraints
Self-Control Failure

Prevailing Force is Desire
“Crowding out”
(4) Self-Control Motivation
- Motivation to control a given desire; willingness to invest SC effort at a given point in time (not identical with SC goal strength)
- Link to self-efficacy (Bandura, 1977)
- Role of lay theories / beliefs (Job, Dweck, & Walton, 2010)
- Problem of motivated reasoning / self-licensing (e.g., De Witt Huberts, Eves, & De Ridder, 2014)
- Problem of balancing (Inzlicht et al., 2014)
(5) Self-Control Capacity
- Link to executive functions (Hofmann, Schmeichel, & Baddeley, 2012)
- Trait and state-level (i.e., temporary) effects

(6) Self-Control Effort
- **Potential Effort** ($E_P$): Control Motivation $\times$ Control Capacity
- **Actual Effort** allocated to match demands (e.g., desire strength) (e.g., Kruglanski et al., 2012; CET; Gendolla & Richter, 2010) in accordance with principles of effort conservation. People disengage when (perceived) demands $> E_P$
Actual Effort Allocation and Disengagement
(Brehm & Self, 1989; Gendolla & Richter, 2010)

Kotabe & Hofmann, in E. Hirt (in press) Self-Regulation and Ego Control

(7) Enactment Constraints
- Choice architecture/Nudging: Typically a paternalistic (i.e., imposed) measure but can also be self-imposed
(7) Enactment Constraints

- Desire enactment constraints
  - Situation and stimulus control to forfeit problematic choice options
  - Social interventions (e.g., relationship partner)
  - Help from technology, e.g., smart geospatial sensing (e.g., “you’re too close to a casino”)

- SC enactment constraints
  - Implementation intentions to overcome enactment obstacles (Gollwitzer, 1999; Oettingen & Gollwitzer, 2010)
Nudging Success
(Fishbach & Hofmann, 2016, *Motivation Science*)

High challenge goal domains (80.2% of goals:
Health/fitness, academic/work, financial, activism/volunteering, emotion management, maintenance)

![Graph showing goal progress](image)

Control Condition
Anticipation of Enactment Constraints
Anticipation + Resolution of Enactment Constraints

Treatment Condition

Wrapping Up

- Self-control is not a unitary phenomenon or single essence, but rather an interplay of several components
- Accordingly, there are many routes to self-control failure and multiple soft spots for intervention

<table>
<thead>
<tr>
<th>Cause of SC Failure</th>
<th>Intervention Example</th>
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<tbody>
<tr>
<td>Overpowering Desire</td>
<td>Craving reduction techniques</td>
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<tr>
<td>Weak Commitment to SC goal</td>
<td>Risk Education</td>
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<tr>
<td>Low Conflict Awareness</td>
<td>Stop Drinking</td>
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<tr>
<td>Low Control Motivation</td>
<td>Increase Stakes</td>
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<tr>
<td>Low Control Capacity</td>
<td>Train Executive Functions</td>
</tr>
<tr>
<td>High SC Enactment Constraints/ Low Desire Enactment Constraints</td>
<td>Lower SC Enactment Constraints/ Increase Desire Enactment Constraints</td>
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Connecting the Dots

- Need to better understand interplay among components, such as
  - Desire strength ↔ goal strength dynamics: when do we see activation vs. inhibition?
  - Principles of effort allocation
  - Exact interplay of internal factors and environmental constraints

Applications

- Develop a more complete map of the (many) predictors of core model components
- Pinpoint how certain moderators of self-control success operate
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• Develop a more complete map of the (many) predictors of core model components
• Pinpoint how certain moderators of self-control success operate
• Classify/identify proactive self-control strategies (Fujita, 2011; Hofmann & Kotabe, 2012)

Thank you very much for your attention!

Collaborators on the research presented:
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