Kognitionspsychologie II: Session 11
Applications

Rui Mata, FS 2026

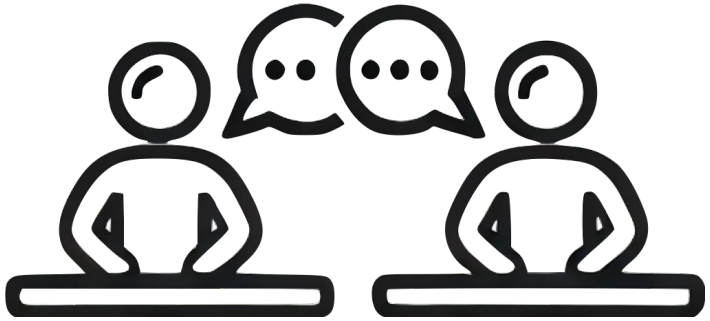
Version: May 12, 2026

Objectives

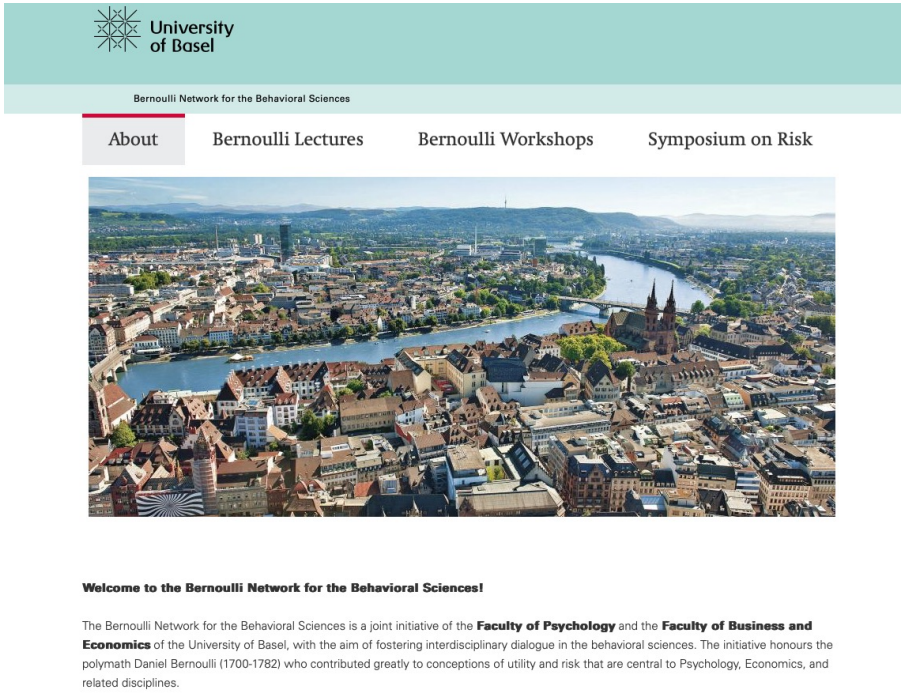
- Discuss self-control problems and possible interventions – use discussion to reflect on practical applications (and limits) of the psychology of motivation
- Information about May 19th Q&A session
- Course evaluation

THHINK OF THE LAST TIME YOU «FAILED» TO EXERT SELF-CONTROL

Who was to blame?



Bernoulli Network for the Behavioral Sciences



https://bernoulli.unibas.ch

2019, 9th Bernoulli Lecture: Prof. Dr. Angela Duckworth, University of Pennsylvania, USA

Strategic self-control

2013, 4th Bernoulli Lecture: Prof. Dr. David Laibson, Harvard University, USA

Can We Control Our Selves? Policy Design for Agents with Self-Control Problems

aps
ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

Beyond Willpower: Strategies for Reducing Failures of Self-Control

Psychological Science in the Public Interest
2018, Vol. 19(3) 102–129

DOI: 10.1177/1529100618821893
www.psychologicalscience.org/PSPI
SAGE

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Abstract
Almost everyone struggles to act in their individual and collective best interests, particularly when doing so requires forgoing a more immediately enjoyable alternative. Other than exhorting decision makers to "do the right thing," what can policymakers do to reduce overeating, undersaving, procrastination, and other self-defeating behaviors that feel good now but generate larger delayed costs? In this review, we synthesize contemporary research on approaches to reducing failures of self-control. We distinguish between self-deployed and other-deployed strategies and, in addition, between situational and cognitive intervention targets. Collectively, the evidence from both psychological science and economics recommends psychologically informed policies for reducing failures of self-control.

Keywords
self-control, behavior change, behavioral economics, self-regulation

> Men are rather reasoning than reasonable animals for the most part governed by the impulse of passion.
>
> —Alexander Hamilton (1802)

Self-control failures contribute to a range of policy issues, from educational achievement (Duckworth et al., in press) and retirement savings (Benartzi & Thaler, 2013) to the obesity epidemic (VanEpps et al., 2016a) and the promotion of subjective well-being (Wiese et al., 2018). People with greater self-control fare better in terms of health, wealth, and many other dimensions of human flourishing (Moffitt et al., 2011). Scholarly attention to self-control has grown dramatically over the past 2 decades, as shown in Figure 1, which depicts the percentage of articles about self-control in *Psychological Science* from 1995 through 2016. But inquiry on this timely topic stretches back thousands of years (Aristotle, trans. 2009; Freud, 1916/1977; James, 1899; Proverbs 25:28; Smith, 1759/1976; Thaler & Shefrin, 1981).

Why is self-control an object of fascination for philosophers, social scientists, policymakers, and pundits alike? Perhaps because failures of self-control often persist even when people recognize them and resolve to act differently in the future (Norcross & Vangarelli, 1988–1989). From forgoing dessert to exercising regularly to saving for retirement, many people feel as if they are in a perennial battle with themselves. Furthermore, most people predict incorrectly that they will overcome this battle (e.g., Augenblick & Rabin, 2018), even when they recognize that other people's self-control problems persist (Fedyk, 2017; Pronin, Lin, & Ross, 2002). Finally, temptations—rewards that provide short-term gratification but impede people from long-term goals—are ever more abundant, thanks to convenience stores, one-click shopping, social media, 24/7 streaming video, and other new vices (Akst, 2011).

Not all decisions require self-control. Sometimes decisions are difficult because people feel torn between two equally valuable choices (Shenhav & Buckner, 2014). In addition, self-control is irrelevant when people are simply mistaken about the actual costs and benefits of their choices. In the 1940s, for example, smoking cigarettes was not widely perceived as an unhealthy habit; indeed, tobacco companies then touted the health benefits of

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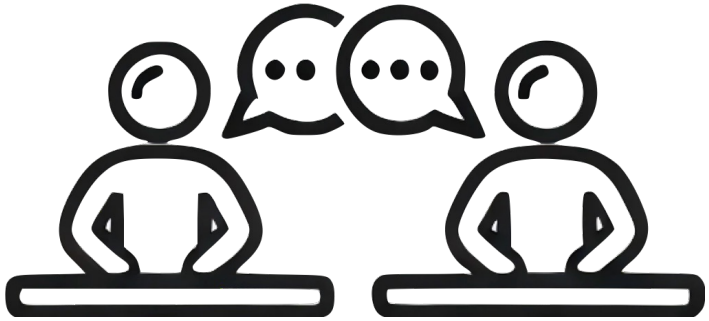
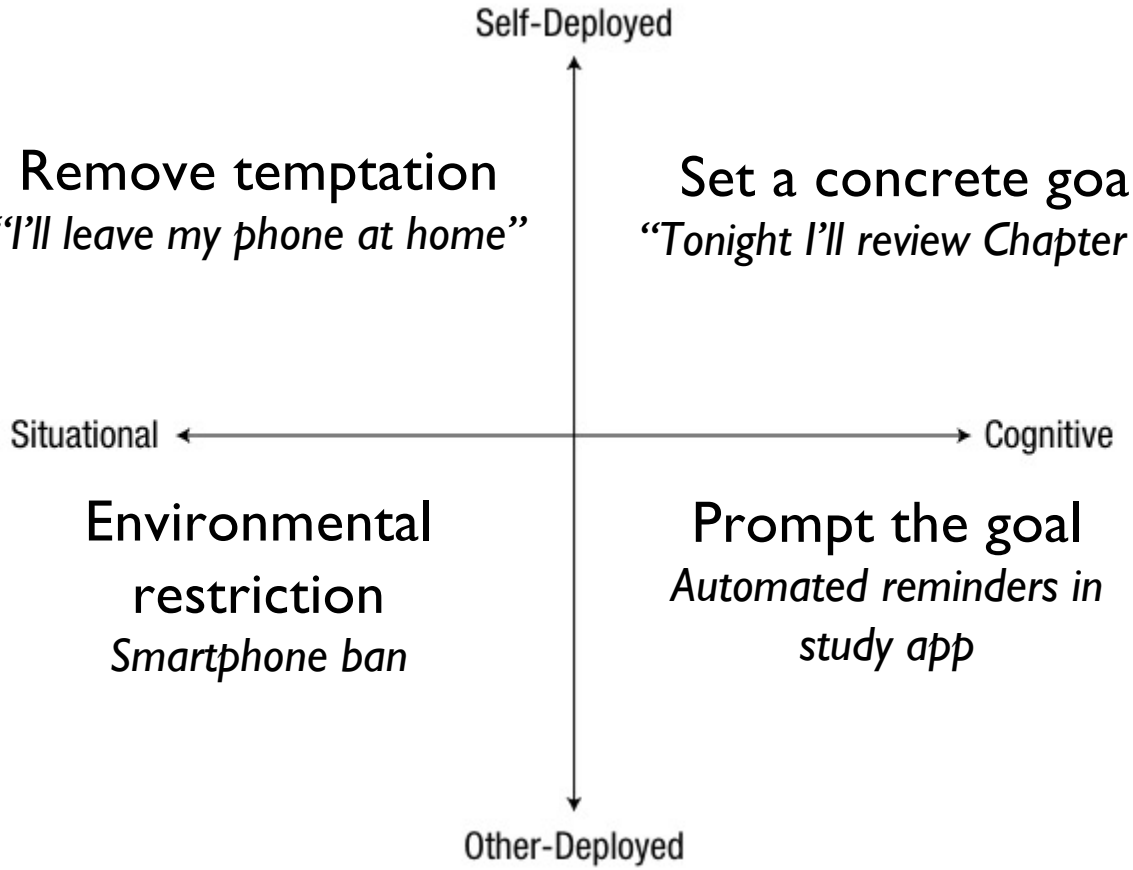
Duckworth, A. L., Milkman, K. L., & Laibson, D. (2018). Beyond willpower: Strategies for reducing failures of self-control. Psychological Science in the Public Interest, 19(3), 102–129. https://doi.org/10.1177/1529100618821893

REFLECT AND SUMMARIZE

What strengths could you identify in Duckworth et al.'s overview?



Strategies for Reducing Failures of Self-Control



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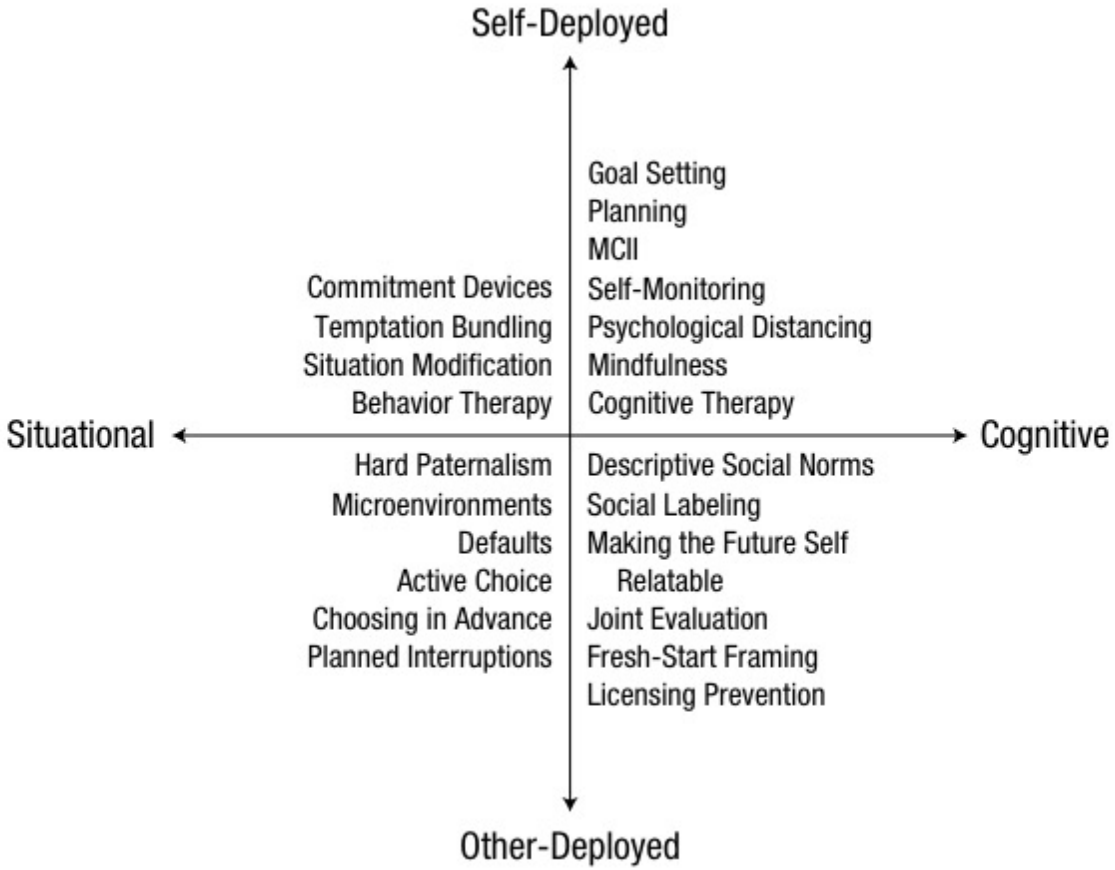

Relation to other work/models in the psychology of emotion and motivation?

Duckworth, A. L., Milkman, K. L., & Laibson, D. (2018). Beyond willpower: Strategies for reducing failures of self-control. Psychological Science in the Public Interest, 19(3), 102–129. https://doi.org/10.1177/1529100618821893

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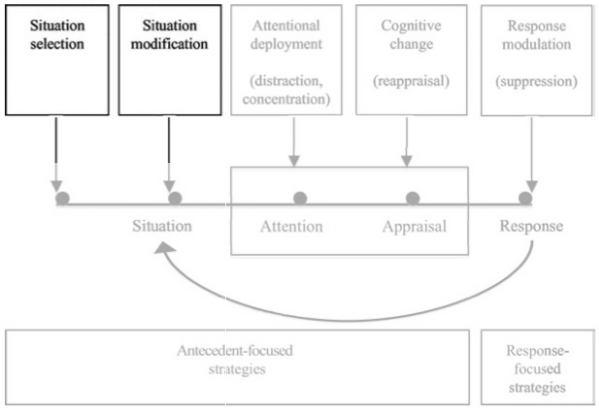

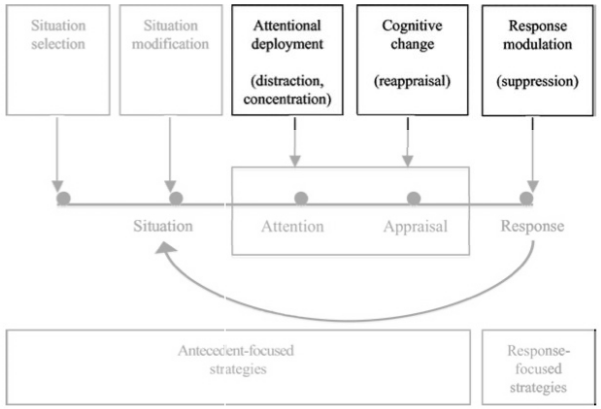

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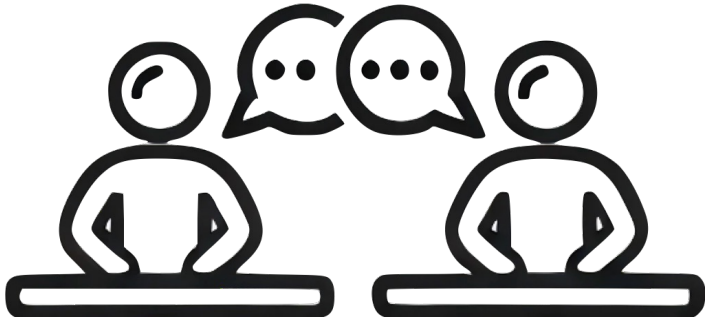
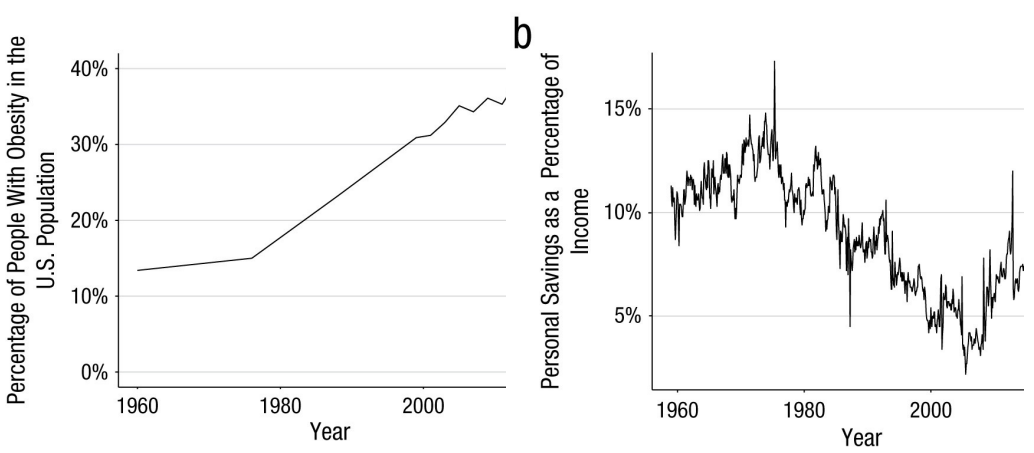
REFLECT AND SUMMARIZE

What limitations can you identify in Duckworth et al.'s overview?



Strategies for Reducing Failures of Self-Control

Lowenstein comments: “My first issue with the article is that it seems to attribute many of the problems plaguing our society to lack of self-control, which in my view **risks blaming the victim** and, more substantively, risks misidentifying the most effective types of policy interventions. This perspective (and its pitfalls) is already evident in the abstract, which asks, “what can policymakers do to reduce overeating, undersaving, procrastination, and other self-defeating behaviors that feel good now but generate larger delayed costs? In this review, we synthesize contemporary research on approaches to reducing failures of self-control” (p. 102). It is important to emphasize that **these problems are not primarily the result of self-control problems** in most adults, even if enhanced self-control could mitigate them.”



Lowenstein argues that If obesity increases or savings decline across a whole society, we should be cautious about explaining this only by saying that individuals lack willpower. Population-level changes suggest that environments have also changed.

Loewenstein, G. (2019). Self-Control and Its Discontents: A Commentary on Duckworth, Milkman, and Laibson. Psychological Science in the Public Interest, 19(3), 95-101. https://doi.org/10.1177/1529100619828401

I-frame and S-frame

"An influential line of thinking in behavioral science, to which the two authors have long subscribed, is that many of society's most pressing problems can be addressed cheaply and effectively at the level of the individual, without modifying the system in which the individual operates. We now believe this was a mistake, along with, we suspect, many colleagues in both the academic and policy communities. Results from such interventions have been disappointingly modest. But more importantly, they have guided many (though by no means all) behavioral scientists to frame policy problems in individual, not systemic, terms: To adopt what we call the "i-frame," rather than the "s-frame." The difference may be more consequential than i-frame advocates have realized, by deflecting attention and support away from s-frame policies. Indeed, highlighting the i-frame is a long-established objective of corporate opponents of concerted systemic action such as regulation and taxation. We illustrate our argument briefly for six policy problems, and in depth with the examples of climate change, obesity, retirement savings, and pollution from plastic waste. We argue that the most important way in which behavioral scientists can contribute to public policy is by employing their skills to develop and implement value-creating system-level change."

Chater, N., & Loewenstein, G. (2023). The i-frame and the s-frame: How focusing on individual-level solutions has led behavioral public policy astray. Behavioral and Brain Sciences, 46, e147. https://doi.org/10.1017/S0140525X22002023

I-frame and S-frame

I-frame	**S-frame**
Individual-level solutions	System-level solutions
Incentives, labels, feedback	Taxes, regulation, infrastructure
"How can we help people choose better?"	"How can we change the choice environment?"

Chater, N., & Loewenstein, G. (2023). The i-frame and the s-frame: How focusing on individual-level solutions has led behavioral public policy astray. Behavioral and Brain Sciences, 46, e147. https://doi.org/10.1017/S0140525X22002023

I-frame and S-frame

Table 1. Potential i-frame and s-frame interventions to address public policy problems

Policy issue	Potential i-frame interventions	Potential s-frame interventions
Climate change	Social feedback on energy use (Schultz et al., 2007)	Carbon pricing (Best, Burke, & Jotzo, 2020)
	Smart meters (Department for Business, Energy & Industrial Strategy, 2013)	Decarbonization of the power sector (Jägemann, Fürsch, Hagspiel, & Nagl, 2013)
	Carbon footprint calculators (West, Owen, Axelsson, & West, 2016)	Green building codes (e.g., Leadership in Energy and Environmental Design (LEED) certification) (U.S. Environmental Protection Agency, 2022)
Obesity	Calorie labels (Jue et al., 2012; Swartz, 2011)	Sugar tax (Allcott, Lockwood, & Taubinsky, 2019b)
	Portion size changes (Downs & Loewenstein, 2011; Schwartz, Riis, Elbel, & Ariely, 2012)	Subsidies for healthy food (Afshin et al., 2017)
	Weight loss incentives (Volpp et al., 2008)	
	Individual incentives to exercise (Charness & Gneezy, 2009)	
Retirement savings	Advisors declare conflicts (Cain et al., 2005)	Employer-provided pensions (e.g., Australian Age Pension) (Agnew, 2013)
	Defaulting into pensions (Madrian & Shea, 2001)	
	Save more tomorrow (Benartzi, 2012)	Social security expansion (Social Security Administration, 2022)
Health care	Medication reminders (Volpp et al., 2017)	Government negotiation of prescription drug prices (Ginsburg & Lieberman, 2021)
	Choice architecture for insurance exchanges (Johnson et al., 2013)	Single-payer health insurance (Woolhandler & Himmelstein, 2019)
Waste	Keep America Beautiful campaign (Mann, 2021)	"Polluter pay" policies (Corkery, 2020)
	Painted footsteps leading pedestrians to trash bins (Keep Britain Tidy, 2015)	Plastic bag bans (National Conference of State Legislatures, 2021)

Chater, N., & Loewenstein, G. (2023). The i-frame and the s-frame: How focusing on individual-level solutions has led behavioral public policy astray. Behavioral and Brain Sciences, 46, e147. https://doi.org/10.1017/S0140525X22002023

From self-control to behavior change

The Behavior Change Wheel was developed in health psychology and adopts the COM-B framework. Example: If a student does not study, “lack of motivation” may be too simple. Before designing an intervention, ask:

Capability
Can they study effectively (e.g., do they know how to use retrieval practice)?

Opportunity
Do they have the chance to study (e.g., do they have time, a quiet place, and access to materials)?

Motivation
Do they want to study and feel able to start (e.g., is the goal valuable, urgent, and manageable)?

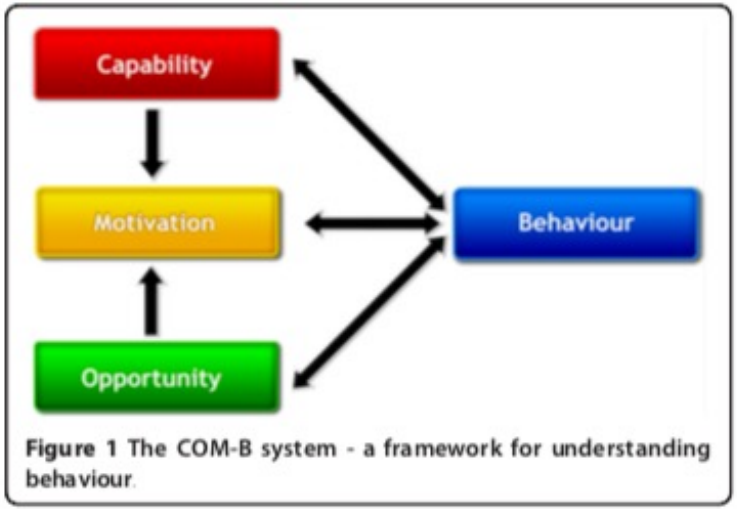
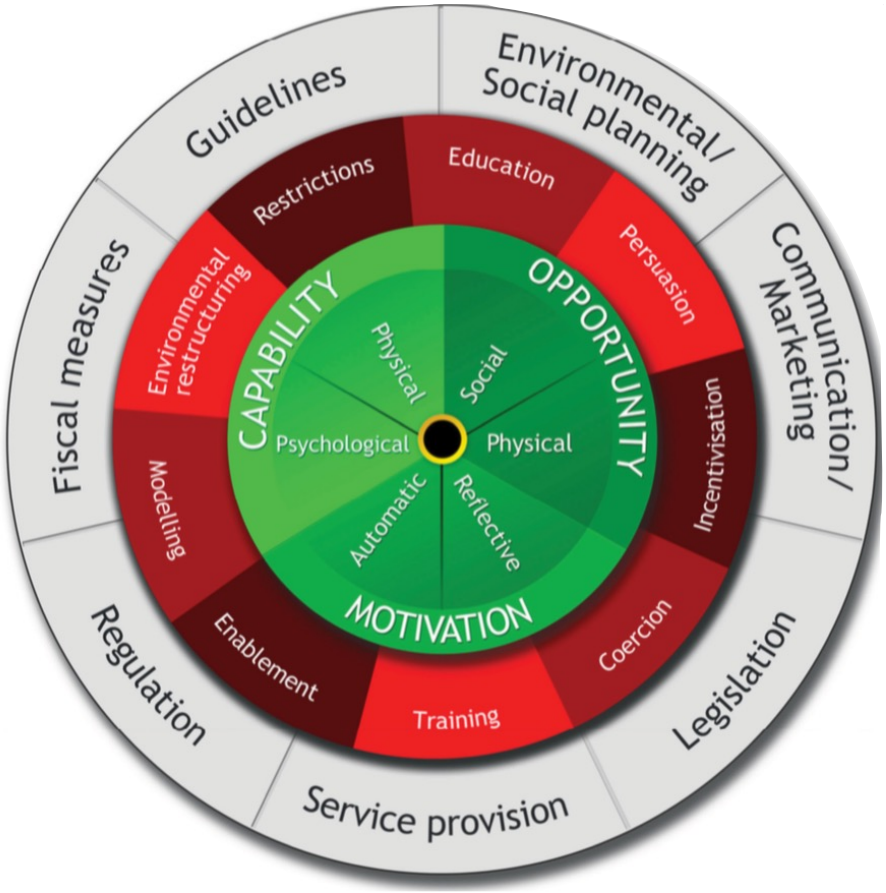


Figure 1 The COM-B system - a framework for understanding behaviour.

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science, 6*(1), 42.

From self-control to behavior change



How to read the wheel…

Why is the behaviour not happening?
Inner layer (green): Capability · Opportunity · Motivation

What type of intervention could help?
Middle layer (red): Education · Persuasion · Incentivization · Coercion · Training · Enablement · Modeling · Environmental restructuring · Restrictions

What policy tools could support it?
Outer layer (grey): Guidelines · Environmental planning · Communication · Legislation · Service provision · Regulation · Fiscal measures

The Behavioral Change Wheel links psychological mechanisms to practical interventions and policies, and aims to improve assessments of relative efficacy.

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. ***Implementation Science, 6***(1), 42.

Summary

- Strengths: Duckworth et al. contribute a categorization of self-control change strategies for many important behavior change problems in applied domains (health, finance, addiction, well-being), a dimensional approach (self vs other deployed; situational – cognitive) is helpful;
- Limitations: 1) emphasis on individual behavior relative to systemic factors, 2) lack of a larger taxonomy of behavior change interventions, and systematic and comprehensive (e.g., meta-analytic) assessment of efficacy – such efforts are, however, taking place in psychology at large and there is increased attention to pluralistic taxonomies and their impact (e.g., behavior change wheel).

Q&A Session

- Please submit questions for Q&A over ADAM (I won't be able to consider questions submitted after May 17th)