



Life
Course
Centre



THE UNIVERSITY OF
SYDNEY

Some Economics of Self-Control

Deborah Cobb-Clark AO FASSA

University of Sydney, IZA, & ARC Centre of Excellence
for Children and Families over the Life Course

HILDA CONFERENCE

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Motivation



Why Self-Control?

We need a behavioural lens to understand disadvantage and inequality:

- The factors behind within- vs. between-country inequality differ.
- Poverty has psychological consequences that lead to decisions which make it difficult to escape poverty.

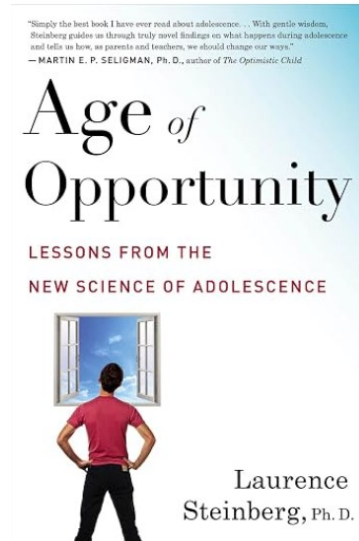
It matters for the choices that people make and the outcomes they achieve:

- *“The capacity for self-regulation is probably the most important single contributor to achievement, mental health, and social success”* (Steinberg 2014 p. 16).
- Self-control is key to human capital development, but also a skill in its own right. Demand for and supply of skills shapes inequality (Autor 2014).

It is a target for policy



Have you ever parented an adolescent ?



It's one of those last days before Easter. Very soon Louisa is going to be thrown out of an art auction for vandalizing a valuable painting. Old Ladies will shriek and the police will come and it really wasn't planned. Not to brag, but Louise did have a perfect plan, **it wasn't the plan's fault that she didn't stick to it.** Because sometimes Louisa is a genius, but sometimes she isn't a genius, **and the problem is that the genius and the non-genius share a brain.** But the plan? Perfect.

My Friends

Fredrick Bachman 2025



Self-Control and Sophistication

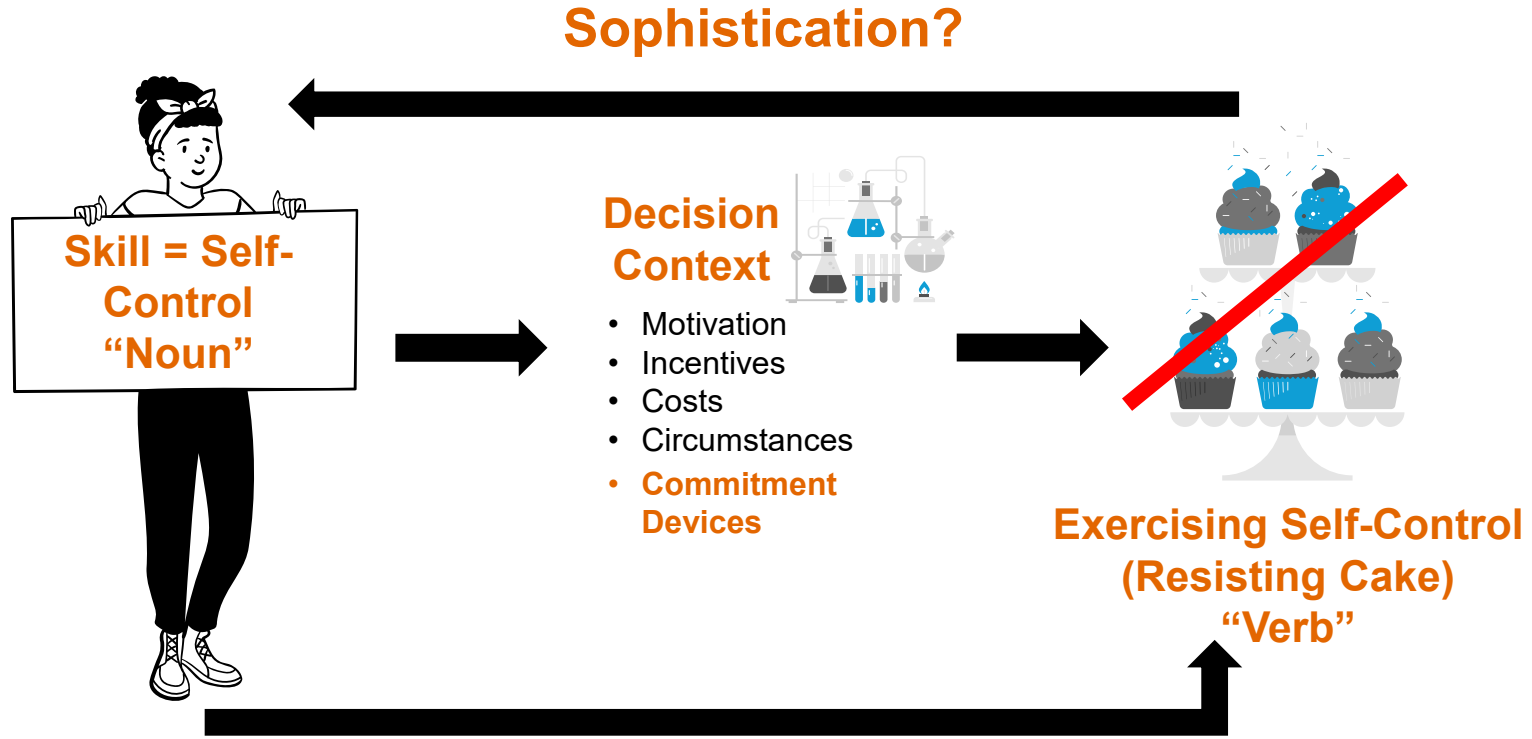
Self-Control is the ability to control or override one's thoughts, emotions, urges, and behaviour (e.g. Tangney et al. 2004).

Sophistication is the ability to predict whether you will deviate from your own ideal behavior in the future.

- How people respond to information and incentives depends on what they understand about their own self-control (Ali 2011).
- Empirical strategy: Classify people as time-consistent, naive, or sophisticated by comparing predicted, ideal and actual future behaviour.



Self-Control According to Deborah



The Agenda: Laying the Foundation



Data: The Brief Self-Control Scale (BSCS)

The BSCS is a 13-item measure of trait self-control that:

- is widely used,
- measures key life outcomes
- has high internal consistency,
- high test-retest reliability; and
- is predictive

The BSCS is included in:

- 2017 and 2020 ($n \approx 1,200$) waves of SOEP-IS
- 2019 and 2023 ($n \approx 11,000$) waves of HILDA
- 2027 wave of HILDA

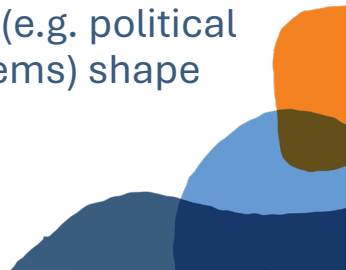


The Brief Self-Control Scale

How well do the following statements describe how you usually are?

- I am good at resisting temptation
- I have a hard time breaking bad habits
- I am lazy
- I say inappropriate things
- I do certain things that are bad for me, if they are fun
- I refuse things that are bad for me
- I wish I had more self-discipline
- People would say I have iron self-discipline
- Pleasure and fun sometimes keep me from getting work done
- I have trouble concentrating
- I can work effectively towards long-term goals
- Sometimes, I cannot stop myself from doing something, even if I know it is wrong
- I often act without thinking through all the alternatives

We can now answer new questions at the **household** and **population** level:

- Does self-control predict the outcomes that we care about;
 - Is parents' self-control related to their children's outcomes?
 - Is self-control stable?
 - Does sophistication matter?
 - Do structural factors (e.g. political regimes, school systems) shape self-control?
- 

What are we finding?

- **Self-control** is stable over time
- **Self-control** predicts a lot of important outcomes
- **Self-control** is correlated across generations
- **Self-control** can be shaped by institutional factors



Why do we care if self-control is stable?

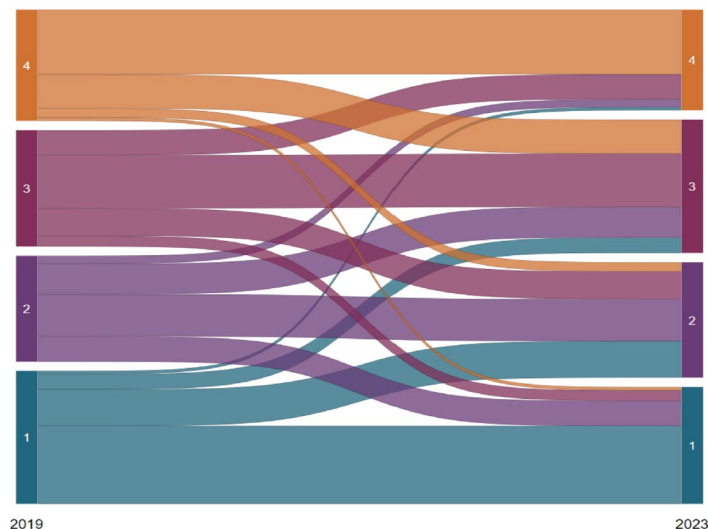
- If disadvantage is linked to self-control, then persistence in self-control may contribute to persistent disadvantage.
- Note ... considering self-control to be a stable personality trait does not imply that it is completely fixed and/or can't be modified.
 - In psychology, “stability” allows for some systematic changes, but excludes others.



The Stability of Self-Control in Australia (Cobb-Clark et al. 2026)

Our study period—2019 to 2023—spans the COVID-19 pandemic. We find:

- Population mean BSCS is stable: 45.26 (2019) vs. 45.35 (2023).
- Rank order is also quite stable.
 - 51% remain in same quartile;
 - 38% move only one quartile;
 - Spearman correlation = 0.65
- Within-person change is small and unrelated to life events or state-level responses to COVID-19.
 - Someone riding out COVID in Melbourne would be predicted to score only 0.06 points lower on the BSCS than someone in the NT.



Stability is similar in SOEP-IS data. Cobb-Clark, Kong, Schildberg-Hörisch (2021b)

The Predictive Power of Self-Control

Choice inevitably involves trade-offs. Self-control matters for people's choices, behaviors, and outcomes.

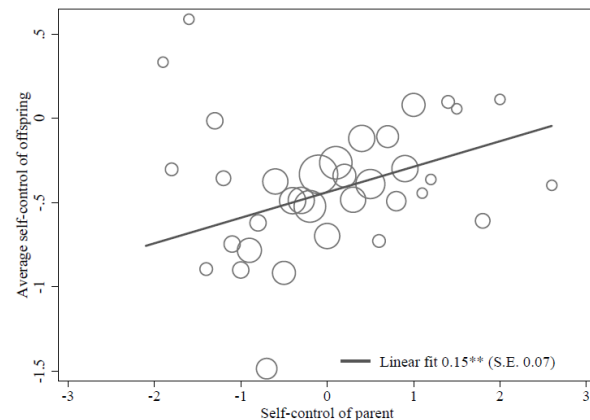
- Self-control predicts good health, educational achievement, wage rates, unemployment, and financial well-being (Cobb-Clark et al. 2022b).
- Self-control predicts early withdrawals from retirement accounts during COVID-19. People in the bottom quintile of the BSCS scale were 60% more likely to withdraw than those in top quintile (Moran & Schneider 2026).
- Gender disparity in the return to self-control contributes to the gender pay gap (Kamal & Backlow 2024).
- Self-control matters over and above the Big Five traits, time and risk preferences (Cobb-Clark et al. 2022b) and locus of control (Botha & Dahmann 2024).



Intergenerational Self-Control: Germany

(SOEP Data) Cobb-Clark et al. (2022b)

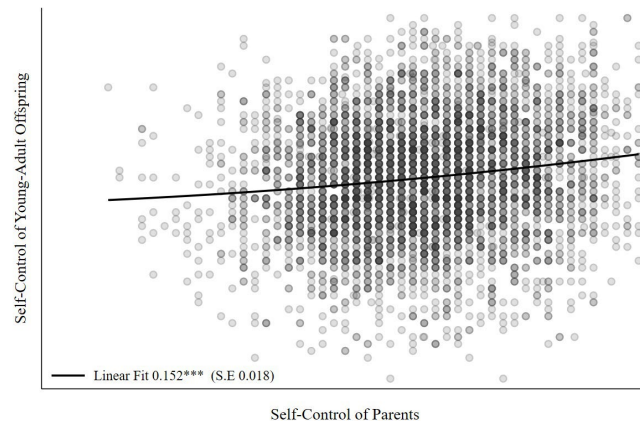
**Self-control is correlated
across generations**



Intergenerational Self-Control: Australia

(HILDA Data) Cobb-Clark & Tayeb (2026)

Intergenerational correlation in self-control is the same in Germany and Australia



HILDA's Intergenerational Data Structure



- **Self-control questions asked in 2019 (all HH members 15+).**
- **Childhood years of interest: ages 0-12**
 - We select youth aged 12+ in 2016
- **N = 1581 (youth-mother-father trios with self-control);**

Is family stress during childhood related to self-control in early adulthood?

Cobb-Clark & Tayeb (2026)

Is young-adults (15 – 30) related to the mental health and relationship, parenting, and financial stress of their parents while they were growing up?

Key takeaways:

- Some young people ($\approx$ one in four) seem to be particularly sensitive to the circumstances in which they grow up.
 - Fathers matter.
 - Family stress in childhood has consequences for adult self-control that depend on the nature of the stress and which parent experienced it.
- 

The Agenda: Building Bridges



The Conceptual Foundations of Self-Control

(Cobb-Clark 2025b)

Selective attention, self-control & impulse control (executive function) allow our brains to prioritize tasks and filter distractions so that we can meet our goals.



Credit: www.magnific.com

Goal: Establish the link between self-reported (HILDA) and behavioural (lab) measures of self-control.

- Online experiment with representative sample of Australians who make decisions about allocating attentional effort to a task across four weeks.

Takeaway: Self-reported self-control (BSCS) correlate with lab measures that capture the demand for commitment or actual self-control, but not present bias.

Why? These measures all require a degree of sophistication – present bias does not.

The HILDA Bridge



Self-Control & Sophistication in the Context of Online Gambling

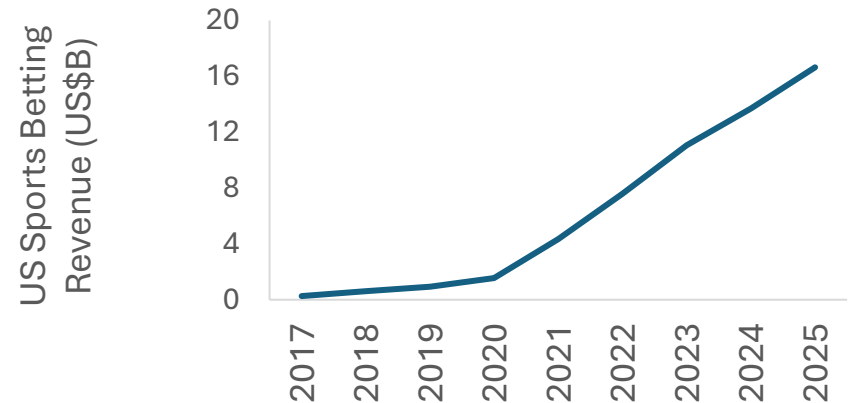
(Cobb-Clark et al. 2025a)

Gambling is a harmless leisure activity for many people; but some experience problem gambling.

- Problem gambling is a broad set of behaviours in which people experience adverse outcomes from their gambling (American Psychological Association 2012; Neal 2005).
 - Globally, $\approx 46.2\%$ of adults engage in gambling annually; 1.4% engage in problem gambling (Tran et al., 2024).

Gambling has increased due to regulatory and technological changes

- AU: Online gambling rate grew from 4.3% (2010) to 33% (2024).
- US: Sports betting increased 63x: $\$261.3\text{M}$ (2017) to $\$16.65\text{B}$ (2023).



Our Study

- Data come from a survey of active online gamblers drawn from the client base of one of Australia's largest online gambling companies.
 - Self-control (BSCS), gambling impact, recall of previous gambling, loss goals, and expectations of meeting loss goals in the future;
- Survey data are matched to gambling transactions and accounts records in the 9 months before and 9 months after the survey.
- People are randomised into receiving feedback about the extent of problem gambling indicated by their responses. **We evaluate the impact of this feedback on the likelihood of meeting the future loss goal.**
- We classify people into self-control types. **We then study: 1) gambling behaviour across self-control types; and 2) the role of previous experiences and memory in the development of sophistication.**



Transactions Data

- March 1, 2023 – Sept. 30, 2024
- Includes:** Type of bet placed, betting market, amount staked, odds, payout, deposits, withdrawals, account balances, safe gambling tools.

[Edit](#) [Add](#) [Racing](#) [Sports](#)

Next To Jump Horses [See all](#)

Next To Jump Greyhounds [See all](#)

Next To Jump Harness [See all](#)

R6 Gavea SKY1 7m	R2 Healesville SKY1 4m 30s	R6 Northfield Pk SKY2 4m 30s
R7 Gavea SKY1 37m	R4 Ascot Park SKY1 14m	R7 Western Fair Raceway 4m 30s
R1 Hawera SKY1 42m	R3 Healesville SKY1 22m	R4 Yonkers Raceway 8m
R8 Gavea SKY1 12:00	R5 Ascot Park SKY1 32m	R5 Yonkers Raceway SKY2 19m
R2 Hawera SKY1 12:10	R1 Murray Bridge Straight SKY1 35m	R8 Western Fair Raceway 19m

FEATURED EVENT
FEATURED RACING

Sandown R3 1200m
 4. Santana (7)
W: 58.0kg J: L Currie
F: 8x22 T: M W & J Haw
 7. Avenue Montaigne
W: 56.0kg J: Jordan Childs
F: 2x43x T: G M Begg
 1. Cavalry Scout (2)
W: 58.0kg J: B Allen
F: 4x5 T: C Maher

[Edit](#) [Add to Bet Slip @ 9.50](#) [Edit](#) [Add to Bet Slip @ 18.00](#)

NBA Matches

Orlando Magic At Cleveland Cavaliers 25 Mar 11:10 Orlando Magic Cleveland Cavaliers 4.55 1.22	Denver Nuggets At Phoenix Suns 25 Mar 14:10 Denver Nuggets Phoenix Suns 1.42 2.98	Atlanta Hawks At Detroit Pistons 26 Mar 10:10 Atlanta Hawks Detroit Pistons 2.27 1.67
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Another HILDA Bridge



No ... our sample of active online gamblers is **not** representative of the Australian population.

Phew!

Table A3: Sample Comparison: Estimation Sample, Excluded Sample, and HILDA Sample

	Estimation Sample (n = 753)	Excluded Sample (n = 1,392)	HILDA Sample (n = 4,396)	p-value Estimation vs. Excluded	p-value Estimation vs. HILDA
<i>Demographics</i>					
Male	0.93 (0.01, n = 753)	0.89 (0.01, n = 1,392)	0.54 (0.01, n = 4,396)	0.034**	0.000***
Married	0.40 (0.02, n = 748)	0.36 (0.02, n = 722)	0.58 (0.01, n = 4,396)	0.144	0.000***
Age	42.82 (0.51, n = 753)	41.61 (0.42, n = 1,392)	52.38 (0.54, n = 4,396)	0.067*	0.000***
<i>Income and Education</i>					
Employed	0.88 (0.01, n = 748)	0.84 (0.01, n = 722)	0.63 (0.01, n = 4,396)	0.027**	0.000***
Household Income	\$122,624 (2,265, n = 647)	\$111,486 (2,357, n = 641)	\$134,408 (3,002, n = 4,396)	0.000***	0.063*
High School	0.83 (0.01, n = 748)	0.84 (0.01, n = 722)	0.75 (0.01, n = 4,396)	0.799	0.000***
University	0.32 (0.02, n = 748)	0.34 (0.02, n = 722)	0.24 (0.01, n = 4,396)	0.359	0.000***
<i>Self-Control</i>					
BSCS Score	44.89 (0.36, n = 753)	44.40 (0.34, n = 731)	45.69 (0.33, n = 4,396)	0.317	0.075*
<i>Problem Gambling Severity</i>					
PGSI Score	4.56 (0.17, n = 753)	4.29 (0.14, n = 1,206)	0.55 (0.04, n = 4,396)	0.218	0.000***

Notes: *p<0.10; **p<0.05; ***p<0.01. Standard errors are reported in parentheses with sample sizes. The Estimation Sample consists of the survey data used for the main analysis. The Excluded Sample consists of observations excluded from the estimation sample. The HILDA Sample consists of weighted summary statistics from gamblers in the HILDA survey. P-values compare means between the Estimation Sample and the relevant comparison sample using two-sample t-tests. BSCS is the Brief Self-Control Survey. PGSI is the Problem Gambling Severity Index. The HILDA sample is restricted to those who indicated participating in gambling in wave 18. All demographic

Feedback Intervention

We measure loss goals:

“Approximately, how much money would you be comfortable losing from bets in the next 30 days?”

We measure predicted loss (i.e., net result):

“Approximately, what do you think your **net result** will be in the next 30 days?”

We also collected all items in the Problem Gambling Severity Index (PGSI)

(Ferris and Wynne, 2001):

How often do the following apply to you in the past 12 months (0: Never; to 3: Always)

- Have you bet more than you could really afford to lose?
- Have you needed to gamble with larger amounts of money to get the same feeling of excitement?
- When you gambled, did you go back another day to try to win back the money you lost?
- Have you borrowed money or sold anything to get money to gamble?
- Have you felt that you might have a problem with gambling?
- Has gambling caused you any health problems, including stress or anxiety?
- Have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?
- Has your gambling caused any financial problems for you or your household?
- Have you felt guilty about the way you gamble or what happens when you gamble?

The Feedback Intervention (cont.)

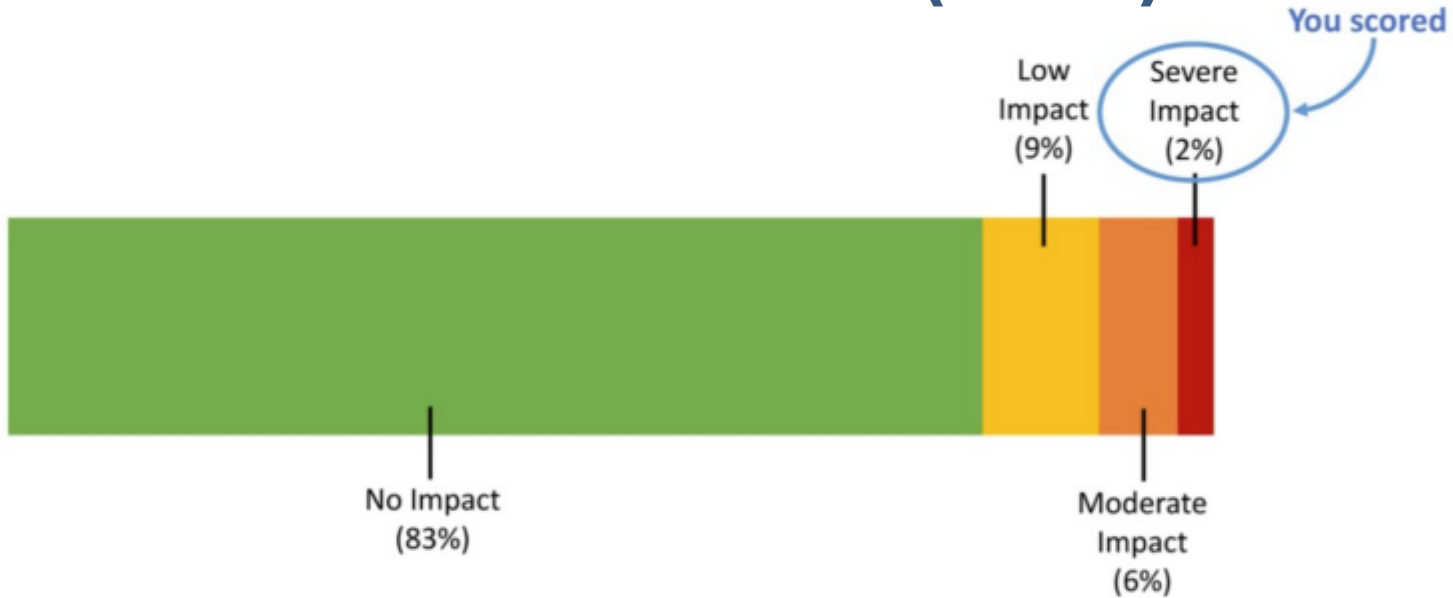


Figure 1: Feedback for Respondents with Severe PGSI Score

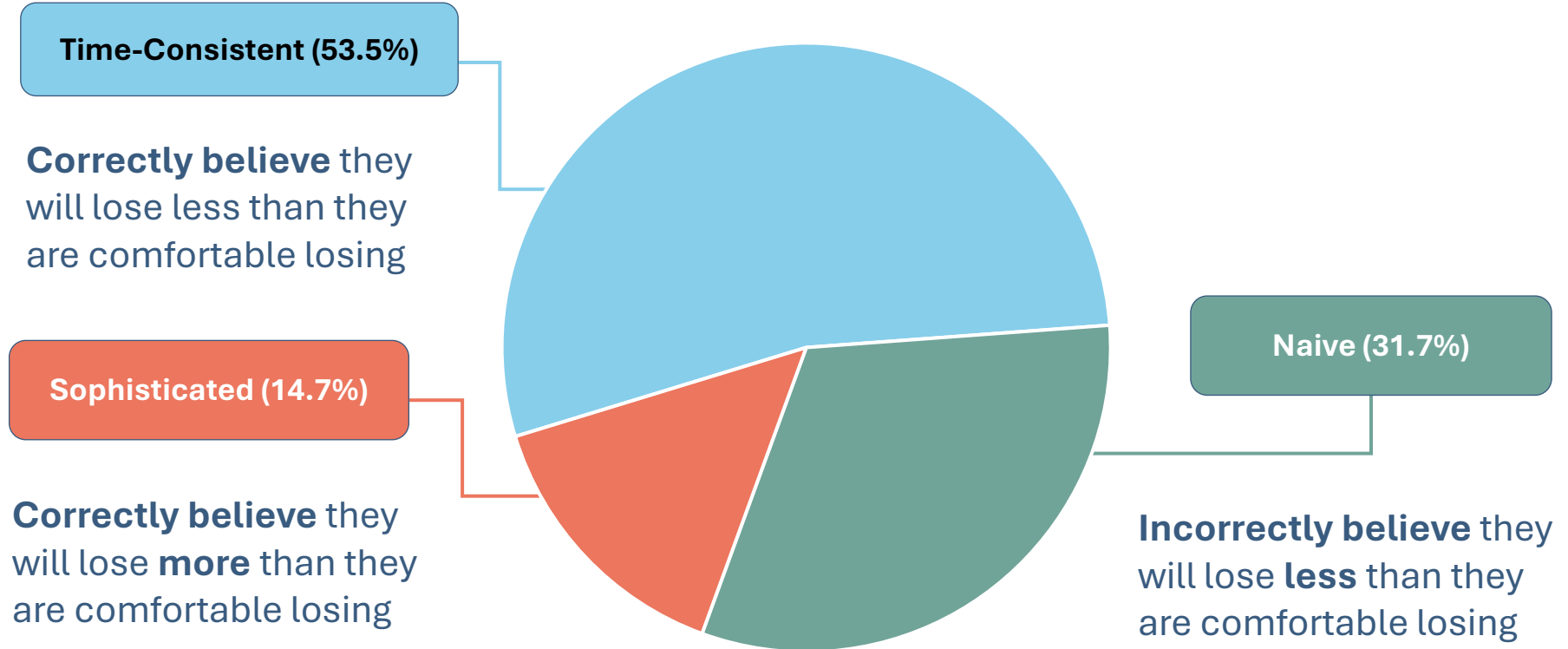
Does feedback raise the chances of meeting the loss goal?

- **No**, providing respondents with feedback about their PGSI score is ineffective on average.
- **But, in the short run**, providing PGSI scores increases the chances that those at high risk of problem gambling, with low self-control, or poor recall of past gambling will meet their future loss goal.

Commitment devices and activity statements must be made available to gamblers. We should extend this to include more personalised feedback based on people's loss goals and gambling experiences.



We can also identify self-control types:



Self-Control Types Matter

- Self-control (BSCS), gambling risk (PGSI), and gambling harm (GHM) all differ by self-control type; but other characteristics (including education and income) do not.
- Those with a self-control problem place more bets, stake more, money, and lose more than those who are time-consistent.
- The gambling outcomes of those who are sophisticated are not statistically different to those who are naive.



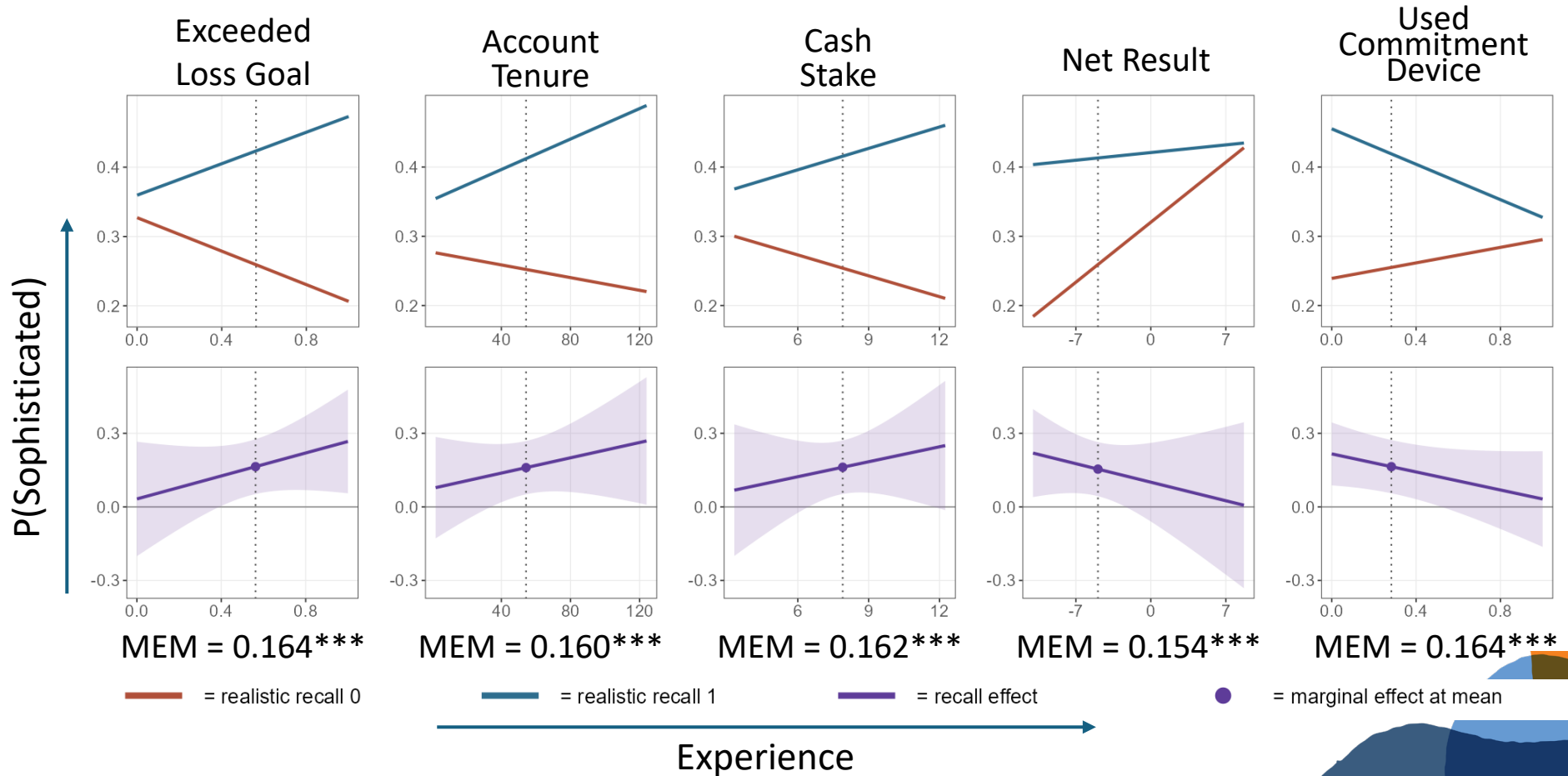
Experience and Recall

Does more gambling experience increase the chances that you are sophisticated about your self-control problem?

- **Not in general, no.**
- Importantly, repeatedly failing to meet your loss goal in the past does **NOT** increase the chances you can accurately predict doing so again in the future.
- But ... gambling experience does lead to more sophistication **IF people realistically recall their previous gambling losses.**



Sophistication by Experience and Memory



Final Takeaways



Credit: Vanessa V., pexels.com

- Increasing gamblers' awareness of their gambling risk helps vulnerable groups meet their loss goals – at least in the short run.
- This opens the door for new policy responses. Gambling providers should for people's gambling goals.
- Our work adds to the effort to understand how people become aware of their self-control limitations.
- Sophistication is **not**:
 - i. Predicted by individual characteristics;
 - ii. Equivalent to the use of commitment devices;
 - iii. The result of experience – exceeding loss goals in the past doesn't lead people to predict they will do it again in the future;
- Sophistication appears to be linked to **memory** and the **ability to realistically recall** past losses.

For the Policy Enthusiast



Why should policy enthusiasts care about self-control?

- Self-control (and related skills) may be malleable (see Piquero et al. 2016)
- Awareness of self-control limitations matters – Can we improve outcomes by improving awareness?
- Structural factors also matter ... incentives to self-regulate depend on things beyond the control of people & their families (Cobb-Clark et al. 2022a).
 - 30+ years after reunification, former East Germans have higher self-control than former West Germans. (Equivalent to being 15 years older).

All of these suggest that a broad range of policy initiatives might be useful in reducing inequality and enhancing economic opportunity.



What do Governments actually do?

Decide whether – and if so when and how – to intervene in the market;

- Economic arguments for market intervention: externalities, public goods, defence, redistribution, competition policy, macro-economic policy.
- Self-control problems mean revealed preferences no longer equate to normative preferences, giving rise to “**internality**” arguments for intervention.
 - **Internality:** People do not fully internalise all the costs (or benefits) they impose on their (future) selves.

Determine the choice architecture:

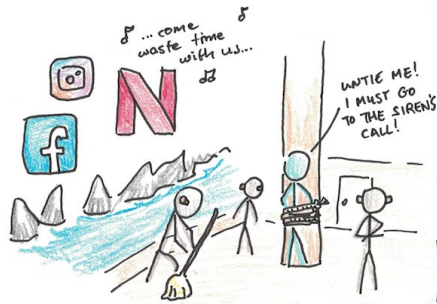
- Take a policy stance (paternalism, nudge, free market);
 - Set default rules (op-in vs. opt-out);
 - Determine how much complexity and red tape (“sludge”)
- 

Wait!

Won't the market provide solutions for people's self-control problems?

Possibly:

The market does find it profitable to provide a range of commitment devices.



Credit: Scott H. Young

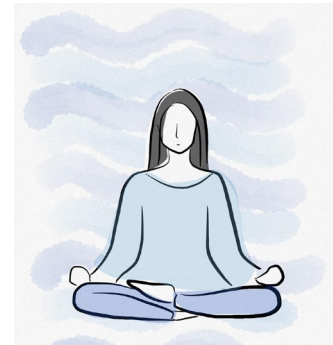
But:

It's profitable to exploit the lack of self-control (e.g. placement of candy bars in stores, ads for gambling).



And:

Not everyone is aware of their self-control limits. Firms target naive consumers (Ru & Schoar 2016).



So, back to gambling ...

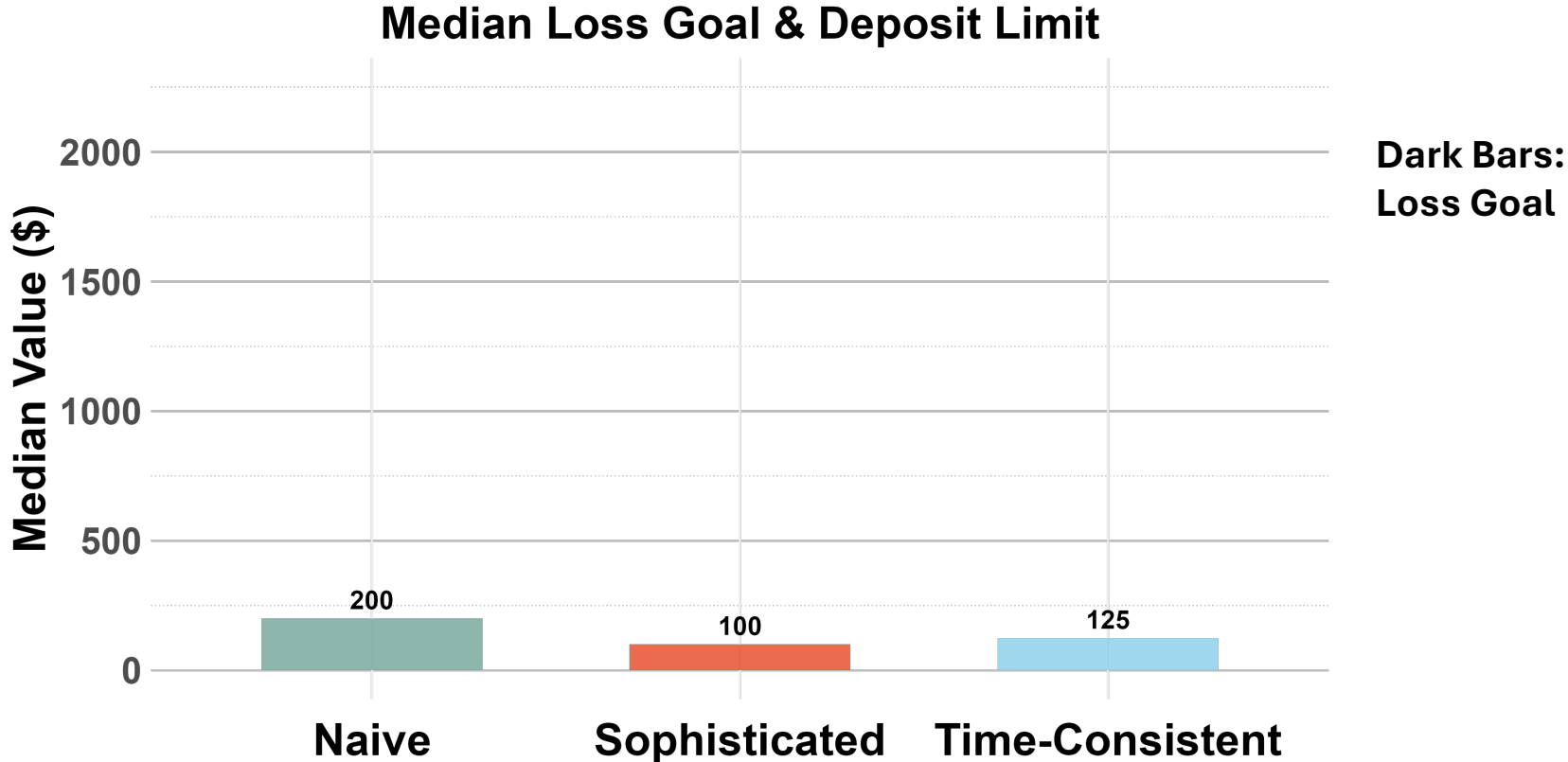
We can probably all agree that ... it is unlikely the market will deliver solutions for problematic gambling.

- **What about regulation?**

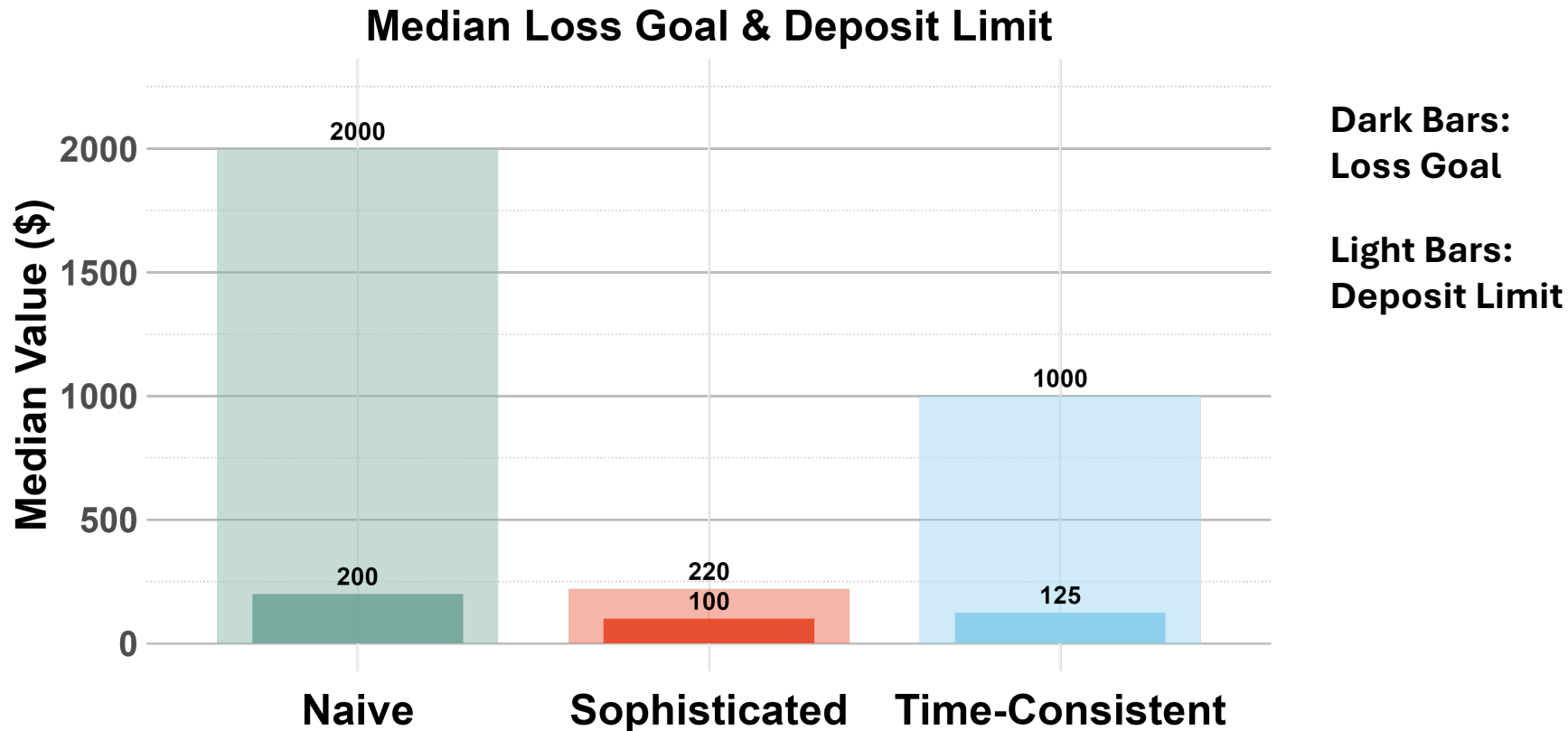
Regulators require commitment devices to be available. BUT less than one third (29%) of gamblers use them. Of those that do, deposit limits are by far the most common.



Self-Control and Commitment Devices



Self-Control and Commitment Devices



The Next Big Agenda



Self-Awareness and Sophistication

How do people become sophisticated about their self-control limitations?

- Classic Model: Sophistication is an exogenous, stable behavioural type (O'Donoghue and Rabin, 1999).
- Richer models: Sophistication develops as you learn about your self-control ability by recalling the previous times you gave in to temptation (Ali, 2011).

"The problem is that the genius and the non-genius share a brain."

Learning is hampered by:

- A lack of self-awareness (Heidhues et al, 2023);
 - Motivated reasoning and self-deception (Zimmermann, 2020); and
 - Selective memory and attention (e.g. Fudenberg et al., 2024).
- 

The Takeaway



HILDA is a world-class resource for studying self-control.

- There is value in studying self-control in the adult population and within families.
- We can benchmark results from targeted subpopulations to a representative sample of Australians.
- Allows us to extend lab results into the real world.

There is a lot of interesting work still to do ...



Research Team:



Sarah Dahmann
University of
Melbourne



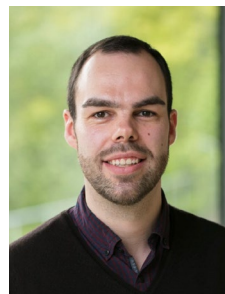
Sally Gainsbury
University of
Sydney



Juliana Silva
Goncalves
University of Sydney



Rob Heirene
University of Sydney



Daniel Kamhöfer
University of
Kaiserslautern-Landau



Nancy Kong
University of
Technology Sydney



Anthony Lepinteur
University of Luxembourg



Giorgia Menta
Luxembourg Institute
of Social and
Economic Research



Nick Mizen
University of Michigan



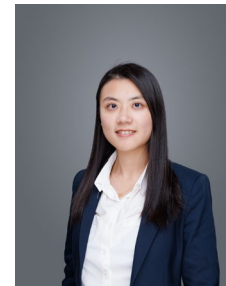
Hannah Schildberg-
Hörisch
University of Duesseldorf



Haniene Tayeb
University of New
South Wales



Agnieszka Tymula
University of Sydney



Xueting Wang
RMIT University

Thank you!



References

- American Psychological Association. (2012). What you need to know about willpower: The psychological science of self-control. American Psychological Association.
- Ali, S. N. (2011). Learning self-control. *The Quarterly Journal of Economics*, 126(2), 857–893.
- Autor, D. H. (2014). Skills, education, and the rise of earnings inequality among the “other 99 percent.” *Science*, 344(6186), 843–851.
- Bénabou, R., & Tirole, J. (2002). Willpower and personal rules. Working paper.
- Bénabou, R., & Tirole, J. (2004). Willpower and personal rules. *Journal of Political Economy*, 112(4), 848–886.
- Bernheim, B. D., Ray, D., & Yeltekin, Ş. (2015). Poverty and self-control. *Econometrica*, 83(5), 1877–1911.
- Bordalo, P., Gennaioli, N., & Shleifer, A. (2016). Competition for attention. *The Review of Economic Studies*, 83(2), 481–513.
- Botha, F & Dahmann, S (2024) Locus of control, self-control and health outcomes. *SSM - Population Health* 25 (2024) 101566
- Chancel, L., & Piketty, T. (2021). Global income inequality, 1820–2020: The persistence and mutation of extreme inequality. *Journal of the European Economic Association*, 19(6), 3025–3062.
- Cobb-Clark, D. A., Dahmann, S. C., Kamhöfer, D. A., & Schildberg-Hörisch, H. (2021a). Sophistication about self-control. IZA Discussion Paper No. 14609.
- Cobb-Clark, D. A., Kong, N., & Schildberg-Hörisch, H. (2021b). The stability of self-control in a population-representative study. IZA Discussion Paper No. 14976.
- Cobb-Clark, D. A., Dahmann, S. C., Kamhöfer, D. A., & Schildberg-Hörisch, H. (2022a). The determinants of population self-control. IZA Discussion Paper No. 15175.

References

- Cobb-Clark, D. A., Dahmann, S. C., Kamhöfer, D. A., & Schildberg-Hörisch, H. (2022b). The predictive power of self-control for life outcomes. *Journal of Economic Behavior & Organization*, 197, 725–744.
- Cobb-Clark, D. A., Gainsbury, S., Heirene, R., Mizen, N., & Tymula, A. (2025a). Self-control, sophistication, and problem gambling.
- Cobb-Clark, D. A., Lepinteur, A., & Menta, G. (2026a). The stability of self-control in unstable times. *Journal of Economic Behavior and Organization*, 248.
- Cobb-Clark, D. A., Silva Goncalves, J., Tymula, A., & Wang, X. (2025b). The conceptual foundations of self-control and the link to impulsivity and attention.
- Cobb-Clark, D. A., & Tayeb, H. (2026b). Family stress and the intergenerational correlation in self-control. *European Economic Review*.
- Duckworth, A. L. (2011). The significance of self-control. *Proceedings of the National Academy of Sciences*, 108(7), 2639–2640.
- Duckworth, A. L., & Seligman, M. E. P. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science*, 16(12), 939–944.
- Fudenberg, D., Lanzani, G., & Strack, P. (2024). Selective-memory equilibrium. *Journal of Political Economy*, 132(12), 3978–4020.
- Golsteyn, B. H. H., & Schildberg-Hörisch, H. (2017). Challenges in research on preferences and personality traits: Measurement, stability, and inference. *Journal of Economic Psychology*, 60, 1–6.
- Haushofer, J., & Fehr, E. (2014). On the psychology of poverty. *Science*, 344(6186), 862–867.
- Heidhues, P., Kőszegi, B., & Strack, P. (2023). Misinterpreting yourself. Cowles Foundation Discussion Paper No. 2378.

References

- Hoyle, R. H., & Davisson, E. K. (2016). Varieties of self-control and their personality correlates. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of Self-Regulation: Research, Theory, and Applications* (3rd ed., pp. 396–413). Guilford Press.
- Kamal, M & Blacklow, P (2024) Self-control, risk aversion, and the gender wage gap. *Applied Economics*, 56(53): 6778–6802.
- Kaur, S., Kremer, M., & Mullainathan, S. (2015). Self-control at work. *Journal of Political Economy*, 123(6), 1227–1277.
- Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., Houts, R. M., Poulton, R., Roberts, B. W., Ross, S., Sears, M. R., Thomson, W. M., & Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences*, 108(7), 2693–2698.
- Moran, P, Schneider, P (2026) Self-control and early withdrawals from retirement accounts. Institute for Fiscal Studies Working Paper 26/40.
- Piquero, A. R., Jennings, W. G., Farrington, D. P., Diamond, B., & Gonzalez, J. M. R. (2016). A meta-analysis update on the effectiveness of early self-control improvement programs to improve self-control and reduce delinquency. *Journal of Experimental Criminology*, 12(2), 249–264.
- Ru, H., & Schoar, A. (2016). Do credit card companies screen for behavioral biases? NBER Working Paper No. 22360.
- Steinberg, L. (2014). *Age of Opportunity: Lessons from the New Science of Adolescence*. Houghton Mifflin Harcourt.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72(2), 271–324.
- Vohs, K. D., & Baumeister, R. F. (2004). Understanding self-regulation: An introduction. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of Self-Regulation: Research, Theory, and Applications* (pp. 1–9). Guilford Press.
- Zimmermann, F. (2020). The dynamics of motivated beliefs. *American Economic Review*, 110(2), 337–363.
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