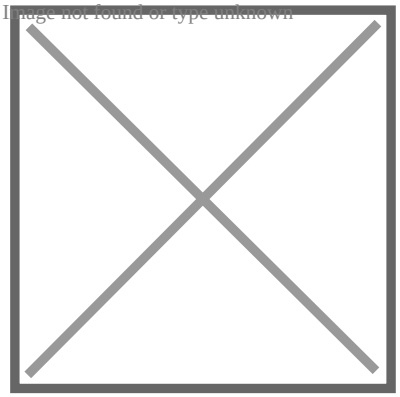

Self-control

Description

Self-control, an aspect of inhibitory control, is the ability to regulate one's emotions, thoughts, and behavior in the face of temptations and impulses. As an executive function, self-control is a cognitive process that is necessary for regulating one's behavior in order to achieve specific goals. W More at Wikipedia

Baumeister, R. F., Vohs, K. D., & Tice, D. M.. (2007). The strength model of self-control. Current Directions in Psychological Science

Plain numerical DOI: 10.1111/j.1467-8721.2007.00534.x
DOI URL
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"Self-control is a central function of the self and an important key to success in life. the exertion of self-control appears to depend on a limited resource. just as a muscle gets tired from exertion, acts of self-control cause short-termimpairments (ego depletion) in subsequent self-control, even on unrelated tasks. research has supported the strength model in the domains of eating, drinking, spending, sexuality, intelligent thought, making choices, and interpersonal behavior. motivational or framing factors can temporarily block the deleterious effects of being in a state of ego depletion. blood glucose is an important component of the energy."
Ajzen, I.. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. Journal of Applied Social Psychology

Plain numerical DOI: 10.1111/j.1559-1816.2002.tb00236.x
DOI URL
directSciHub download

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“Responses of neurons in inferior temporal cortex during memory-guided visual search. j. neurophysiol. 80: 2918-2940, 1998. a typical scene will contain many different objects, few of which are relevant to behavior at any given moment. thus attentional mechanisms are needed to select relevant objects for visual processing and control over behavior. we examined this role of attention in the inferior temporal cortex of macaque monkeys, using a visual search paradigm. while the monkey maintained fixation, a cue stimulus was presented at the center of gaze, followed by a blank delay period. after the delay, an array of two to five choice stimuli was presented extrafoveally, and the monkey was rewarded for detecting a target stimulus matching the cue. the behavioral response was a saccadic eye movement to the target in one version of the task and a lever release in another. the array was composed of one ‘good’ stimulus (effective in driving the cell when presented alone) and one or more ‘poor’ stimuli (ineffective in driving the cell when presented alone). most cells showed higher delay activity after a good stimulus used as the cue than after a poor stimulus. the baseline activity of cells was also higher preceding a good cue, if the animal expected it to occur. this activity may depend on a top-down bias in favor of cells coding the relevant stimulus. when the choice array was presented, most cells showed suppressive interactions between the stimuli as well as strong attention effects. when the choice array was presented in the contralateral visual field, most cells initially responded the same, regardless of which stimulus was the target. however, within 150-200 ms of array onset, responses were determined by the target stimulus. if the target was the good stimulus, the response to the array became equal to the response to the good stimulus presented alone. if the target was a poor stimulus, the response approached the response to that stimulus presented alone. thus the influence of the nontarget stimulus was eliminated. these effects occurred well in advance of the behavioral response. when the array was positioned with stimuli on opposite sides of the vertical meridian, the contralateral stimulus appeared to dominate the response, and this dominant effect could not be overcome by attention. overall, the results support a ‘biased competition’ model of attention, according to which 1) objects in the visual field compete for representation in the cortex, an…”
Muraven, M.. (2010). Building self-control strength: Practicing self-control leads to improved self-control performance. Journal of Experimental Social Psychology

Plain numerical DOI: 10.1016/j.jesp.2009.12.011
DOI URL
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“Self-control performance may be improved by the regular practice of small acts of self-control. ninety-two adults’ self-control capacity was assessed using the stop signal paradigm before they started practicing self-control and again at the end of 2 weeks. participants who practiced self-control by cutting back on sweets or squeezing a handgrip exhibited significant improvement in stop signal performance relative to those who practiced tasks that did not require self-control. participants who did not practice self-control believed that the tasks should improved self-control, engaged in tasks that were effortful and made self-control salient, but did not actually require self-control. supplemental analyses suggested that only practicing self-control built self-control capacity; the improved outcomes cannot be explained by self-fulfilling prophecies, increased self-efficacy or awareness of self-control. the results may have implications for understanding the development of self-control in both children

and adults, as well as clinical implications for treating disorders that involve low self-control. ?? 2009 elsevier inc. all rights reserved."
Muraven, M., Shmueli, D., & Burkley, E.. (2006). Conserving self-control strength. Journal of Personality and Social Psychology

Plain numerical DOI: 10.1037/0022-3514.91.3.524
DOI URL
directSciHub download

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"Individuals may be motivated to limit their use of self-control resources, especially when they have depleted some of that resource. expecting to need self-control strength in the future should heighten the motivation to conserve strength. in 4 experiments, it was found that depleted participants who anticipated exerting self-control in the future performed more poorly in an intervening test of self-control than participants who were not depleted, and more poorly than those who did not expect to exert self-control in the future. conversely, those who conserved strength performed better on tasks that they conserved the strength for as compared with those who did not conserve. the underlying economic or conservation of resource model sheds some light on the operation of self-control strength."
Muraven, M., & Baumeister, R. F.. (2000). Self-Regulation and Depletion of Limited Resources: Does Self-Control Resemble a Muscle?. Psychological Bulletin

Plain numerical DOI: 10.1037/0033-2909.126.2.247
DOI URL
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"The authors review evidence that self-control may consume a limited resource. exerting self-control may consume self-control strength, reducing the amount of strength available for subsequent self-control efforts. coping with stress, regulating negative affect, and resisting temptations require self-control, and after such self-control efforts, subsequent attempts at self-control are more likely to fail. continuous self-control efforts, such as vigilance, also degrade over time. these decrements in self-control are probably not due to negative moods or learned helplessness produced by the initial self-control attempt. these decrements appear to be specific to behaviors that involve self-control; behaviors that do not require self-control neither consume nor require self-control strength. it is concluded that the executive component of the self–in particular, inhibition–relies on a limited, consumable resource."
McCullough, M. E., & Willoughby, B. L. B.. (2009). Religion, self-regulation, and self-control: Associations, explanations, and implications.. Psychological Bulletin

Plain numerical DOI: 10.1037/a0014213
DOI URL
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“Many of the links of religiousness with health, well-being, and social behavior may be due to religion’s influences on self-control or self-regulation. using carver and scheier’s (1998) theory of self-regulation as a framework for organizing the empirical research, the authors review evidence relevant to 6 propositions: (a) that religion can promote self-control; (b) that religion influences how goals are selected, pursued, and organized; (c) that religion facilitates self-monitoring; (d) that religion fosters the development of self-regulatory strength; (e) that religion prescribes and fosters proficiency in a suite of self-regulatory behaviors; and (f) that some of religion’s influences on health, well-being, and social behavior may result from religion’s influences on self-control and self-regulation. the authors conclude with suggestions for future research.”
Denson, T. F., DeWall, C. N., & Finkel, E. J.. (2012). Self-control and aggression. Current Directions in Psychological Science

Plain numerical DOI: 10.1177/0963721411429451
DOI URL
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“Psychological science has largely neglected the role of self-control in studying aggression. fortunately, the past half decade has witnessed a surge of research on this long-neglected topic, including two self-control-informed integrative theories of aggression. robust experimental evidence demonstrates that self-control failures frequently predict aggression and, conversely, that bolstering self-control decreases aggression. research on rumination also suggests that maladaptive anger regulation decreases self-control and, consequently, increases aggression. advances from social-affective and cognitive neuroscience suggest that the neural mechanisms involved in emotion regulation and cognitive control mediate the relationship between deficient self-control and aggression.”
Ariely, D., & Wertenbroch, K.. (2002). Procrastination, deadlines, and performance: Self-control by precommitment. Psychological Science

Plain numerical DOI: 10.1111/1467-9280.00441
DOI URL
directSciHub download

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“Procrastination is all too familiar to most people. people delay writing up their research (so we hear!), repeatedly declare they will start their diets tomorrow, or postpone until next week doing odd jobs around the house. yet people also sometimes attempt to control their procrastination by setting deadlines for themselves. in this article, we pose three questions: (a) are people willing to self-impose meaningful (i.e., costly) deadlines to overcome procrastination? (b) are self-imposed deadlines effective in improving task performance? (c) when self-imposing deadlines, do people set them optimally, for maximum performance enhancement? a set of studies examined these issues experimentally, showing that the answer is ‘yes’ to the first two questions, and ‘no’ to the third. people have self-control problems, they recognize them, and they try to control them by self-imposing costly

deadlines. these deadlines help people control procrastination, hit they are not as effective as some externally imposed deadlines in improving task performance."
Velliste, M., Perel, S., Spalding, M. C., Whitford, A. S., & Schwartz, A. B.. (2008). Cortical control of a prosthetic arm for self-feeding. Nature

Plain numerical DOI: 10.1038/nature06996
DOI URL
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"Monkeys steered food to their mouth through brain control of a prosthetic arm."
Duckworth, A. L.. (2011). The significance of self-control. Proceedings of the National Academy of Sciences

Plain numerical DOI: 10.1073/pnas.1019725108
DOI URL
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"Self-control is among the most widely studied constructs in the social sciences. for instance, more than 3% of peer-reviewed psychology articles in the past year were referenced by the key word 'self-control' or closely related terms. the report by moffitt et al. (1) in pnas substantially advances this growing literature by demonstrating robust predictive associations between childhood self-control and a wide range of consequential life outcomes in a large, nationally representative sample of new zealanders."
Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., … Caspi, A.. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. Proceedings of the National Academy of Sciences

Plain numerical DOI: 10.1073/pnas.1010076108
DOI URL
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"Policy-makers are considering large-scale programs aimed at self-control to improve citizens' health and wealth and reduce crime. experimental and economic studies suggest such programs could reap benefits. yet, is self-control important for the health, wealth, and public safety of the population? following a cohort of 1,000 children from birth to the age of 32 y, we show that childhood self-control predicts physical health, substance dependence, personal finances, and criminal offending outcomes, following a gradient of self-control. effects of children's self-control could be disentangled from their intelligence and social class as well as from mistakes they made as adolescents. in another cohort of 500 sibling-pairs, the sibling with lower self-control had poorer outcomes, despite shared family background. interventions addressing self-control might reduce a panoply of societal costs, save

taxpayers money, and promote prosperity."
Duckworth, A. L., Gendler, T. S., & Gross, J. J.. (2016). Situational Strategies for Self-Control. Perspectives on Psychological Science

Plain numerical DOI: 10.1177/1745691615623247
DOI URL
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"Exercising self-control is often difficult, whether declining a drink in order to drive home safely, passing on the chocolate cake to stay on a diet, or ignoring text messages to finish reading an important paper. but enacting self-control is not always difficult, particularly when it takes the form of proactively choosing or changing situations in ways that weaken undesirable impulses or potentiate desirable ones. examples of situational self-control include the partygoer who chooses a seat far from where drinks are being poured, the dieter who asks the waiter not to bring around the dessert cart, and the student who goes to the library without a cell phone. using the process model of self-control, we argue that the full range of self-control strategies can be organized by considering the timeline of the developing tempting impulse. because impulses tend to grow stronger over time, situational self-control strategies–which can nip a tempting impulse in the bud–may be especially effective in preventing undesirable action. ironically, we may underappreciate situational self-control for the same reason it is so effective–namely, that by manipulating our circumstances to advantage, we are often able to minimize the in-the-moment experience of intrapsychic struggle typically associated with exercising self-control."
Muraven, M., Tice, D. M., & Baumeister, R. F.. (1998). Self-Control as Limited Resource: Regulatory Depletion Patterns. Journal of Personality and Social Psychology

Plain numerical DOI: 10.1037/0022-3514.74.3.774
DOI URL
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"If self-regulation conforms to an energy or strength model, then self-control should be impaired by prior exertion. in study 1, trying to regulate one's emotional response to an upsetting movie was followed by a decrease in physical stamina. in study 2, suppressing forbidden thoughts led to a subsequent tendency to give up quickly on unsolvable anagrams. in study 3, suppressing thoughts impaired subsequent efforts to control the expression of amusement and enjoyment. in study 4, autobiographical accounts of successful versus failed emotional control linked prior regulatory demands and fatigue to self-regulatory failure. a strength model of self-regulation fits the data better than activation, priming, skill, or constant capacity models of self-regulation."
Barker, J. R.. (1993). Tightening the Iron Cage: Concertive Control in Self-Managing Teams. Administrative Science Quarterly

Plain numerical DOI: 10.2307/2393374

DOI URL
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“In this paper, i provide an ethnographic account of how annorganization’s control system evolved in response to a managerial changenfrom hierarchical, bureaucratic control to concertive control in thenform of self-managing teams. the study investigates how thenorganization’s members developed a system of value-based normative rulesnthat controlled their actions more powerfully and completely than thenformer system. i describe the organization and its members and provide andetailed account of the dynamics that emerged as concertive controlnbecame manifest through the members’ interactions. this account depictsnhow concertive control evolved from the value consensus of the company’snteam workers to a system of normative rules that became increasinglynrationalized. contrary to some proponents of such systems, concertivencontrol did not free these workers from weber’s iron cage of rationalncontrol. instead, the concertive system, as it became manifest in thisncase, appeared to draw the iron cage tighter and to constrain thenorganization’s members more powerfully.”
Gailliot, M. T., Baumeister, R. F., Dewall, C. N., Maner, J. K., Plant, E. A., Tice, D. M., … Schmeichel, B. J.. (2007). Self-control relies on glucose as a limited energy source: Willpower is more than a metaphor. Journal of Personality and Social Psychology

Plain numerical DOI: 10.1037/0022-3514.92.2.325
DOI URL
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“The present work suggests that self-control relies on glucose as a limited energy source. laboratory tests of self-control (i.e., the stroop task, thought suppression, emotion regulation, attention control) and of social behaviors (i.e., helping behavior, coping with thoughts of death, stifling prejudice during an interracial interaction) showed that (a) acts of self-control reduced blood glucose levels, (b) low levels of blood glucose after an initial self-control task predicted poor performance on a subsequent self-control task, and (c) initial acts of self-control impaired performance on subsequent self-control tasks, but consuming a glucose drink eliminated these impairments. self-control requires a certain amount of glucose to operate unimpaired. a single act of self-control causes glucose to drop below optimal levels, thereby impairing subsequent attempts at self-control.”
Duckworth, A. L., & Steinberg, L.. (2015). Unpacking self-control. Child Development Perspectives

Plain numerical DOI: 10.1111/cdep.12107
DOI URL
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“Self-controlled behavior refers to actions aligned with valued, longer-term goals in the face of conflicting impulses to seek immediate gratification. in this article, we argue that the psychological

processes that contribute to self-controlled behavior can be grouped into two functionally distinct categories: volitional processes facilitate self-controlled behavior and include executive functions as well as learned metacognitive strategies like planning, attention deployment, and psychological distancing. in contrast, impulsigenic processes undermine self-controlled behavior and include reward sensitivity, sensation seeking, and domain-specific cravings. a disproportionate amount of research has addressed the former at the expense of understanding individual and developmental differences in the latter. this imbalance is now being rectified. distinguishing between self-controlled behavior and its antecedent psychological processes helps illuminate normative developmental changes in self-control and points to directions for measurement and intervention."
Casey, B. J., & Caudle, K.. (2013). The Teenage Brain: Self Control. Current Directions in Psychological Science

Plain numerical DOI: 10.1177/0963721413480170
DOI URL
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"Adolescence refers to the transition from childhood to adulthood that begins with the onset of puberty and ends with successful independence from the parent. a paradox for human adolescence is why, during a time when the individual is probably faster, stronger, of higher reasoning capacity, and more resistant to disease, there is such an increase in mortality relative to childhood. this is due not to disease but, rather, to preventable forms of death (accidental fatalities, suicide, and homicide) associated with adolescents putting themselves in harm's way, in part because of diminished self-control–the ability to suppress inappropriate emotions, desires, and actions. this article highlights how self-control varies as a function of age, context, and the individual and delineates its neurobiological basis."
Friese, M., Messner, C., & Schaffner, Y.. (2012). Mindfulness meditation counteracts self-control depletion. Consciousness and Cognition

Plain numerical DOI: 10.1016/j.concog.2012.01.008
DOI URL
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"Mindfulness meditation describes a set of different mental techniques to train attention and awareness. trait mindfulness and extended mindfulness interventions can benefit self-control. the present study investigated the short-term consequences of mindfulness meditation under conditions of limited self-control resources. specifically, we hypothesized that a brief period of mindfulness meditation would counteract the deleterious effect that the exertion of self-control has on subsequent self-control performance. participants who had been depleted of self-control resources by an emotion suppression task showed decrements in self-control performance as compared to participants who had not suppressed emotions. however, participants who had meditated after emotion suppression performed equally well on the subsequent self-control task as participants who had not exerted self-control previously. this finding suggests that a brief period of mindfulness meditation may serve as a

quick and efficient strategy to foster self-control under conditions of low resources. © 2012 elsevier inc.” de Ridder, D. T. D., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., & Baumeister, R. F.. (2012). Taking stock of self-control: A meta-analysis of how trait self-control relates to a wide range of behaviors. Personality and Social Psychology Review

Plain numerical DOI: 10.1177/1088868311418749
DOI URL
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“Given assertions of the theoretical, empirical, and practical importance of self-control, this meta-analytic study sought to review evidence concerning the relationship between dispositional self-control and behavior. the authors provide a brief overview over prominent theories of self-control, identifying implicit assumptions surrounding the effects of self-control that warrant empirical testing. they report the results of a meta-analysis of 102 studies (total n = 32,648) investigating the behavioral effects of self-control using the self-control scale, the barratt impulsiveness scale, and the low self-control scale. a small to medium positive effect of self-control on behavior was found for the three scales. only the self-control scale allowed for a fine-grained analysis of conceptual moderators of the self-control behavior relation. specifically, self-control (measured by the self-control scale) related similarly to the performance of desired behaviors and the inhibition of undesired behaviors, but its effects varied dramatically across life domains (e.g., achievement, adjustment). in addition, the associations between self-control and behavior were significantly stronger for automatic (as compared to controlled) behavior and for imagined (as compared to actual) behavior.”

Category

1. Cognitive science
2. General psychology

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