

# Procrastination

**Procrastination** is the practice of carrying out less urgent tasks in preference to more urgent ones, or doing more pleasurable things in place of less pleasurable ones, and thus putting off impending tasks to a later time, sometimes to the “last minute” before a **deadline**. It is also referred to as the art of being functional without the hassle of structure. People may procrastinate personal issues (raising a stressful issue with a partner), health issues (seeing a doctor or dentist), home care issues (patching a leak in a roof), or academic/work obligations (completing a report).



*In recent years, procrastination has had a strong relation with social media. Office workers and students working on computers may find that checking and re-checking for updates on social media sites interferes with their work.*

The **pleasure principle** may be responsible for procrastination; one may prefer to avoid negative emotions, and to delay stressful tasks. The belief that one works best under pressure provides an additional incentive to the postponement of tasks.<sup>[1]</sup> Some **psychologists** cite such behavior as a **mechanism for coping** with the anxiety associated with starting or completing any task or decision.<sup>[2]</sup> Piers Steel indicated in 2010 that anxiety is just as likely to get people to start working early as late and the focus should be **impulsiveness**. That is, anxiety will cause people to delay only if they are impulsive.<sup>[3]</sup>

Gregory Schraw, Theresa Wadkins, and Lori Olafson in 2007 proposed three criteria for a behavior to be classified as academic procrastination: it must be counter-productive, needless, and delaying.<sup>[4]</sup> Steel reviewed all previous attempts to define procrastination and in 2007 indicated it is “to voluntarily delay an intended course of action despite expecting to be worse off for the delay.”<sup>[5]</sup> Sabini & Silver argued that postponement and irrationality are the two key features of procrastination. Putting a task off is not procrastination, they argue, if there are rational reasons for doing so.

Procrastination may result in **stress**, anxiety, a sense of **guilt** and **crisis**, health problems, and severe loss of personal **productivity**, as well as social disapproval for not meeting responsibilities or commitments. These feelings combined may promote further procrastination. While it is regarded as **normal** for people to procrastinate to some degree, it becomes a problem when it impedes normal functioning. Chronic procrastination may be a sign of an underlying **psychological disorder**. Such procrastinators may have difficulty seeking support due to **social stigma** and the belief that task-aversion is caused by laziness, low **willpower**, or low ambition.<sup>[5]</sup> On the other hand, many regard procrastination as a useful way of identifying what is important to us personally as it is rare to procrastinate when one truly values the task at hand.<sup>[6]</sup>

In recent years, procrastination has had a strong relation with **social media**. The specific action is to keep refreshing one’s browser and check the social media websites such as Facebook, Twitter, Reddit or news websites, regardless of the tiredness, work assignments, deadlines, etc. Indeed, social media isn’t the reason that people procrastinate. Wasting time on social media sites is just an instance of procrastination.

## 1 Overview

### 1.1 Prevalence

In a 1984 study of academic procrastination, 46% of subjects reported that they “always” or “nearly always” procrastinate on writing a paper, whilst approximately 30% procrastinate on studying for exams or on reading for weekly assignments.<sup>[7]</sup> For a range of tasks, a quarter of subjects reliably reported that procrastination was a problem for them. Approximately 60%, however, indicated that they would like to reduce their procrastination.

In a study performed on university students, procrastination was shown to be greater on tasks that were perceived as unpleasant or as impositions than on tasks for which the student believed to lack the required skills.<sup>[8]</sup>

### 1.2 Psychological

The strongest connection to procrastination as of 2010 is **impulsiveness**.<sup>[3]</sup>

An approach that integrates several core theories of motivation as well as meta-analytic research on procrastina-

tion is the **temporal motivation theory**. It summarizes key predictors of procrastination (expectancy, value and impulsiveness) into a mathematical equation.<sup>[5]</sup>

In 2006 it was suggested that neuroticism has no direct links to procrastination and that any relationship is fully mediated by **conscientiousness**.<sup>[9]</sup> In 1982 it had been suggested that irrationality was an inherent feature of procrastination. “Putting things off even until the last moment isn’t procrastination if there is reason to believe that they will take only that moment”.<sup>[10]</sup> Steel et al. explained in 2001, “actions must be postponed and this postponement must represent poor, inadequate, or inefficient planning”.<sup>[11]</sup>

### 1.3 Physiological

Most research on the **physiological** roots of procrastination has been concerned with the role of the **prefrontal cortex**.<sup>[12]</sup> Consistent with the notion that procrastination is strongly related to impulsiveness, this area of the brain is responsible for executive brain functions such as planning, **impulse control**, and attention, and acts as a filter by decreasing distracting stimuli from other brain regions. Damage or low activation in this area can reduce an individual’s ability to filter out distracting stimuli, ultimately resulting in poorer organization, a loss of attention and increased procrastination. This is similar to the prefrontal lobe’s role in **attention-deficit hyperactivity disorder**, where underactivation is common.<sup>[13]</sup>

### 1.4 Genetics

In a 2014 U.S. study surveying procrastination and impulsivity in **fraternal twin** and **identical twin** pairs, both traits were found to be “moderately heritable.” The two traits were not separable at the genetic level ( $r_{\text{genetic}} = 1.0$ ), meaning no unique genetic influences of either trait alone was found.<sup>[14]</sup> The authors confirmed three constructs developed from the evolutionary hypothesis that procrastination arose as a by-product of impulsivity: “(a) Procrastination is heritable, (b) the two traits share considerable genetic variation, and (c) goal-management ability is an important component of this shared variation.”<sup>[14]</sup>

## 2 Health

For some people, procrastination can be persistent and tremendously disruptive to everyday life. For these individuals, procrastination may be symptomatic of a psychological disorder. Procrastination has been linked to a number of negative associations, such as depression, irrational behaviour, low self-esteem, anxiety, poor study habits,<sup>[15]</sup> and neurological disorders such as **ADHD**. Others have found relationships with **guilt**<sup>[16]</sup> and

stress.<sup>[15]</sup> Therefore, it is important for people whose procrastination has become chronic and is perceived to be debilitating, to seek out a trained **therapist** or **psychiatrist** to see if an underlying mental health issue may be present.

With a distant deadline, procrastinators report significantly less stress and physical illness than do non-procrastinators. However, as the deadline approaches, this relationship is reversed. Procrastinators report more stress, more symptoms of physical illness, and more medical visits,<sup>[15]</sup> to the extent that, overall, procrastinators had suffered more stress and health problems.

## 3 Perfectionism

Main article: [Perfectionism \(psychology\)](#)

Traditionally, procrastination has been associated with perfectionism, a tendency to negatively evaluate outcomes and one’s own performance, intense fear and avoidance of evaluation of one’s abilities by others, heightened social self-consciousness and anxiety, recurrent low mood, and “workaholism.” However, adaptive perfectionists—when perfectionism is **egosyntonic**—were *less* likely to procrastinate than non-perfectionists, while maladaptive perfectionists, who saw their perfectionism as a problem—when perfectionism is **egodystonic**—had high levels of procrastination and anxiety.<sup>[17]</sup> In a meta-analysis of 71 studies in 2007, Steel found that perfectionists typically procrastinate slightly less than others, with “the exception being perfectionists who were also seeking clinical counseling.”<sup>[5]</sup>

## 4 Correlates

As noted above, procrastination is consistently found to be strongly correlated with conscientiousness, and moderately so with neuroticism.

Though the reasons for the relationship are not clear, there also exists a relationship between procrastination and **eveningness**; that is to say that those who procrastinate more are more likely to go to sleep later and wake later. It is known that conscientiousness increases across the lifespan, as does morningness.<sup>[18]</sup> Procrastination too decreases with age.<sup>[5]</sup> However, even controlling for age, there still exists a relationship between procrastination and eveningness, which is yet to be explained.

Testing the hypothesis that procrastinators have less of a focus on the future due to a greater focus on more immediate concerns, college undergraduates completed several self-report questionnaires, which did indeed find that procrastinators focus less on the future. Researchers had also expected to find that procrastination would be associated with a hedonistic and “devil-may-care” perspective on the present; against their expectations, they

found that procrastination was better predicted by a fatalistic and hopeless attitude towards life.<sup>[19]</sup> This finding fits well with previous research relating procrastination and depression.<sup>[7]</sup>

## 5 Examples

### 5.1 Academic procrastination

A 1992 study showed that “52% of surveyed students indicated having a moderate to high need for help concerning procrastination.”<sup>[20]</sup> It is estimated that 80%–95% of college students engage in procrastination, approximately 75% considering themselves procrastinators.<sup>[5]</sup>

According to an Educational Science Professor, Hatice Odacı, academic procrastination is a significant problem during college years because many college students lack efficient time management skills required to make good use of the internet. Also, Odacı notes that most colleges provide free and fast twenty four hour internet service which their students are not usually accustomed to and as a result these students become engulfed in a world of procrastination.<sup>[21]</sup>

"Student syndrome" refers to the phenomenon where a student will only begin to fully apply themselves to a task immediately before a deadline. This negates the usefulness of any buffers built into individual task duration estimates. Results from a 2002 study indicate that many students are aware of procrastination and accordingly set costly binding deadlines long before the date for which the task is due. Furthermore, these self-imposed binding deadlines are correlated with a better performance than without binding deadlines, though performance is best for evenly-spaced external binding deadlines. Finally, students have difficulties optimally setting self-imposed deadlines, with results suggesting a lack of spacing before the date at which tasks are due.<sup>[22]</sup> In one experiment, participation in online exercises was found to be five times higher in the final week before a deadline than in the summed total of the first three weeks for which the exercises were available. Procrastinators end up being the ones doing most of the work in the final week before a deadline.<sup>[11]</sup>

Other reasons cited on why students procrastinate include fear of failure and success, perfectionist expectations, and legitimate activities that may take precedence over school work (like a job).<sup>[23]</sup>

Procrastination has been associated with the later submission of academic papers, as would have been expected almost by definition.<sup>[15]</sup> Additionally, procrastinators have been found to receive worse grades than non-procrastinators. Tice et al. (1997) report that more than one third of variation in final exam scores could be attributed to procrastination. The negative association between procrastination and academic performance

is recurring and consistent. Howell et al. (2006) found that, though scores on two widely used procrastination scales<sup>[7][24]</sup> were not significantly associated with the grade received for an assignment, self-report measures of procrastination on the assessment itself were negatively associated with grade.<sup>[25]</sup>

Different findings emerge when observed and self-report procrastination are contrasted. Steel et al. constructed their own scales based on Silver and Sabini's "irrational" and "postponement" criteria. They also sought to measure this behaviour objectively.<sup>[11]</sup> During a course, students could complete exam practice computer exercises at their own pace, and during supervised class time, could also complete chapter quizzes. A weighted average of the times at which each quiz was finished formed the measure of observed procrastination, whilst observed irrationality was quantified with the number of practice exercises that were left uncompleted. Researchers found that there was only a moderate correlation between observed and self-report procrastination ( $r = 0.35$ ). There was a very strong inverse relationship between the number of exercises completed and the measure of postponement ( $r = -0.78$ ). Observed procrastination was very strongly negatively correlated with course grade ( $r = -0.87$ ), as was self-report procrastination (though less so,  $r = -0.36$ ). As such, self-report measures of procrastination, on which the majority of the literature is based, may not be the most appropriate measure to use in all cases.

It was also found that procrastination itself may not have contributed significantly to poorer grades. Steel et al. noted that, those students who completed all of the practice exercises “tended to perform well on the final exam no matter how much they delayed.”

Procrastination is considerably more widespread in students than in the general population, with over 70 percent of students reporting procrastination for assignments at some point.<sup>[26]</sup> A recent panel study from Germany among several thousand university students found that increasing academic procrastination increases the frequency of seven different forms of academic misconduct, i.e., using fraudulent excuses, plagiarism, copying from someone else in exams, using forbidden means in exams, carrying forbidden means into exams, copying parts of homework from others, fabrication or falsification of data and the variety of academic misconduct.<sup>[27]</sup> This study argues that academic misconduct can be seen as a means to cope with the negative consequences of academic procrastination such as performance impairment.

### 5.2 Procrastibaking

During an episode of *The Great British Bake Off* one contestant described her willingness to defer important activities in favour of baking almost anything. This technique was described as 'procrastibaking'. Within a few days other similar definitions were seen in the media -

procrastichatting, procrastiblogging and similar.<sup>[28]</sup>

## 6 Reactions

### 6.1 Justification

Individual coping responses to procrastination are often emotional or avoidant oriented rather than task or problem-solving oriented. Emotion oriented coping is designed to reduce stress (and **cognitive dissonance**) associated with putting off intended and important personal goals, an option that provides immediate pleasure and is consequently very attractive to impulsive procrastinators.<sup>[29][30]</sup> There are several identified emotion oriented strategies, similar to Freudian **defense mechanisms**, **coping styles** and **self-handicapping**. These procrastinators include using the following:

- **Avoidance:** We avoid the locale or situation where the task takes place (e.g., a graduate student avoiding driving into the university).
- **Distraction:** We engage or immerse ourselves in other behaviours or actions to prevent awareness of the task (e.g., intensive videogame playing or Internet surfing)
- **Trivialization:** We reframe the intended but procrastinated task as being not that important (e.g., “I’m putting off going to the dentist, but you know what? Teeth will do fine by themselves, even without dental appointments.”)
- **Downward counterfactuals:** We compare our situation with those even worse (e.g., “Yes, I procrastinated and got a B– in the course, but I didn’t fail like one other student did.”) Upward counterfactual is considering what would have happened if we didn’t procrastinate.
- **Humour:** Making a joke of one’s procrastination, that the slapstick or slipshod quality of one’s aspirational goal striving is funny.
- **External attributions:** That the cause of procrastination is due to external forces beyond our control (e.g., “I’m procrastinating because the assignment isn’t fair.”)
- **Reframing:** Pretending that getting an early start on a project is harmful to one’s performance and leaving the work to the last moment will produce better results (e.g., “I’m most creative at 4:00 AM without sleep.”)
- **Denial:** Pretending that procrastinatory behaviour is not actually procrastinating, but a task which is more important than the avoided one (e.g., I am making important contributions to **Wikipedia!**).
- **Laziness:** Procrastinating simply because one is too lazy to do their desired task.
- **Valorisation:** Pointing out in satisfaction what we achieved in the meantime while we should have been doing something else.

Task or problem-solving oriented coping is rarer for the procrastinator because it is more effective in reducing procrastination. If pursued, it is less likely the procrastinator would remain a procrastinator. It requires actively changing one’s behaviour or situation to prevent a reoccurrence of procrastination.

## 7 See also

- African time
- Akrasia
- Attention economy
- Avoidant personality disorder
- Kick the can down the road
- Passive-aggressive behavior
- Postponement of affect
- Resistance (creativity)
- Self control
  - Attention management
  - Decision making
- Temporal motivation theory
- Time management
  - Getting Things Done
  - Pomodoro Technique
- Time perception
- Work aversion
- Workaholism

## 8 Notes

- [1] Pychyl, T. (20 February 2012). “Due Tomorrow. Do Tomorrow”. *Psychology Today*. Retrieved 20 February 2012.
- [2] Fiore, Neil A (2006). *The Now Habit: A Strategic Program for Overcoming Procrastination and Enjoying Guilt- Free Play*. New York: Penguin Group. p. 5. ISBN 978-1-58542-552-5.



- [3] Steel, Piers (2010). *The Procrastination Equation: How to Stop Putting Things Off and Start Getting Stuff Done*. New York: HarperCollins. ISBN 978-0-06-170361-4.
- [4] Schraw, Gregory; Wadkins, Theresa; Olafson, Lori (2007). "Doing the things we do: A grounded theory of academic procrastination". *Journal of Educational Psychology* **99**: 12. doi:10.1037/0022-0663.99.1.12.
- [5] Steel, Piers (2007). "The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure" (PDF). *Psychological Bulletin* **133** (1): 65–94. doi:10.1037/0033-2909.133.1.65. PMID 17201571.
- [6] Pavlina, Steve. "How to Fall in Love with Procrastination". Retrieved 18 April 2013.
- [7] Solomon, L. J.; Rothblum, E. D. (1984). "Academic Procrastination: Frequency and Cognitive-Behavioural Correlates" (PDF).
- [8] Norman A. Milgram, Barry Sroloff, Michael Rosenbaum (June 1988). "The procrastination of everyday life". *Journal of Research in Personality* **22** (2). pp. 197–212. doi:10.1016/0092-6566(88)90015-3.
- [9] Lee, Dong-gwi; Kelly, Kevin R.; Edwards, Jodie K. (2006). "A closer look at the relationships among trait procrastination, neuroticism, and conscientiousness". *Personality and Individual Differences* **40**: 27. doi:10.1016/j.paid.2005.05.010.
- [10] Sabini, J. & Silver, M. (1982) Moralities of everyday life, p.128
- [11] Steel, P., Brothen, T., Wambach, C., (2001) Procrastination and personality, performance and mood
- [12] Evans, James R. (8 August 2007). *Handbook of Neurofeedback: Dynamics and Clinical Applications*. Psychology Press. p. 293. ISBN 978-0-7890-3360-4. Retrieved 8 October 2010.
- [13] Strub, RL (1989). "Frontal lobe syndrome in a patient with bilateral globus pallidus lesions". *Archives of neurology* **46** (9): 1024–7. doi:10.1001/archneur.1989.00520450096027. PMID 2775008.
- [14] Gustavson, Daniel E.; Miyake A; Hewitt JK; Friedman NP (4 April 2014). "Genetic Relations Among Procrastination, Impulsivity, and Goal-Management Ability Implications for the Evolutionary Origin of Procrastination". *Psychol Sci.* e publication (6): 1178–1188. doi:10.1177/0956797614526260. PMID 24705635.
- [15] Tice, D. M., & Baumeister, R. F. (1997) Longitudinal Study of Procrastination, Performance, Stress, and Health: The Costs and Benefits of Dawdling
- [16] Pychyl, T. A.; Lee, J. M.; Thibodeau, R.; Blunt, A. (2000). "Five days of emotion: An experience sampling study of undergraduate student procrastination (special issue)". *Journal of Social Behavior and Personality* **15**: 239–254.
- [17] McGarvey. Jason A. (1996). "The Almost Perfect Definition".
- [18] Duffy, J. F., Czeisler, C. A., (2002) Age-related change in the relationship between circadian period, circadian phase, and diurnal preference in humans.
- [19] Jackson, T., Fritch, A., Nagasaka, T., Pope, L., (2003)
- [20] Gallagher, Robert P.; Golin, Anne; Kelleher, Kathleen (1992). "The Personal, Career, and Learning Skills Needs of College Students". *Journal of College Student Development* **33** (4): 301–10.
- [21] Odaci, Hatice (August 1, 2011). "Academic Self-Efficacy and Academic Procrastination as Predictors of Problematic Internet Use in University Students".
- [22] Ariely, Dan; Wertenbroch, Klaus (2002). "Procrastination, Deadlines, and Performance: Self-Control by Precommitment" (PDF). *Psychological Science* **13** (3): 219–224. doi:10.1111/1467-9280.00441. PMID 12009041.
- [23] "Procrastination — The Writing Center at UNC-Chapel Hill". Writingcenter.unc.edu. Retrieved 2012-03-10.
- [24] Tuckman, B. W., (1991) The Development and Concurrent Validity of the Procrastination Scale
- [25] Howell, A. J., Watson, D. C., Powell, R. A., Buro, K. (2006) Academic procrastination: The pattern and correlates of behavioural postponement
- [26] "Getting Around to Procrastination". Retrieved 10 October 2014.
- [27] Patrzek, J., Sattler, S., van Veen, F., Grunschel, C., Fries, S. (2014). Investigating the effect of academic procrastination on the frequency and variety of academic misconduct: a panel study. *Studies in Higher Education*. doi:10.1080/03075079.2013.854765
- [28] "The Great British Bake Off". *The Great British Bake Off*. BBC.
- [29] Gendler, Tamar Szabó (2007). "Self-Deception As Pretense". *Philosophical Perspectives* **21**: 231. doi:10.1111/j.1520-8583.2007.00127.x.
- [30] Gosling, J. (1990). *Weakness of the will*. New York: Routledge.

## 9 References

- Johnson, Juliet McEwen, *The 9 Reasons People Procrastinate with Social Media*

## 10 Further reading

### Procrastination

- Steel, Piers (2010). *The Procrastination Equation: How to Stop Putting Things Off and Start Getting Stuff Done*. New York: HarperCollins.
- Jane B. Burka; Lenora M. Yuen (2008). *Procrastination: Why You Do It, What to Do About It Now*. Da Capo Lifelong Books. p. 336. ISBN 978-0738211701.
- We're Sorry This Is Late ... We Really Meant To Post It Sooner: Research Into Procrastination Shows Surprising Findings; Gregory Harris; ScienceDaily.com; Jan. 10, 2007 (their source)
- Why We Procrastinate And How To Stop; ScienceDaily.com; Jan. 12, 2009
- Perry, John (2012). *The Art of Procrastination: A Guide to Effective Dawdling, Lollygagging and Postponing*. New York: Workman.

### **Impulse control**

- Look Before You Leap: New Study Examines Self-Control; ScienceDaily.com; June 2, 2008

### **Motivation**

- Integrating Theories of Motivation, *Academy of Management Review* 2006, Vol. 31, No. 4, 889–913

## **11 External links**

- CalPoly — Procrastination — Analysis of dilatory behavior and possible cures
- Illustrated articles from waitbutwhy.com explaining why procrastinators procrastinate and how to beat it

## 12 Text and image sources, contributors, and licenses

### 12.1 Text

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Murray, NerdGirl1988, Biogeographist, JamesMoose, Wuerzele, Encyclopaydia, MurphyWaterman, SamX, CatJaHuf, ArmbrustBot, JacobiJonesJr, Babitaarora, Mohamadzidani, Ammaines, Prokaryotes, WireConey, Hfuchino, Winerfresh, Edisto3287, Raegan Gill, Smokypeanut88, Njol, Dr James Herman, Camoredneck, IanMScott, Knowledgasifo99, Orchidales, Vralinitis, Monkbot, DaleksAndDemonsAndWalkersOhhMy, Lemonswirl, Fench, Poepkop, Venomxus, Platypus Prime, 03Chris1991, Nuclearwhale182, JesseR12, Peboandnoggle, Hoi33polloi33, Sage jenkins, Bigcock14, 01christain10, Gabric~enwiki, Zaphod Beeblebrox1221, Universallyknown, Wwilkewitz, AshInternet, Jerodlycett, Miohealgclifford, Joshbnu, Mr knowital is a kutta, CloudyCow, You better look out below!, Yousufatik13 and Anonymous: 1173

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