

Pessimism, stubbornness and weakness of will

[Received May 10, 2024 – Accepted October 16, 2024]

This paper examines the relations between stubbornness and weakness of will, adopting Holton's definition of weakness of will as an over-readiness to revise one's resolutions. It posits that both stubbornness and weakness of will are responses to pessimism – the negative perception of a task or its outcome. Contrary to naive judgement, stubbornness is not merely the opposite of weakness; rather, it serves as a preventive behaviour stemming from a fear of weakness of will. Weakness of will and stubbornness can be viewed as two facets of the same phenomenon, both influenced by pessimism. The paper explores the implications of this unified account, particularly at the therapeutic level, suggesting that enhancing self and other trust could reduce both weak and stubborn behaviours.

Keywords: weakness of will; stubbornness; pessimism; obsessive-compulsive disorder; self-binding; self and other trust

1. Introduction

The concept of weakness of will has long intrigued philosophers, yet the notion of stubbornness has not received the same level of attention. This study aims to fill this gap by examining the relationship between stubbornness and weakness of will. Understanding this relationship is important, and has crucial therapeutic implications. Stubbornness, as defined here, refers to the adherence to a resolution even when circumstances justify changing one's plans. The central thesis posits that stubborn agents lack trust in their ability to judge whether revising a resolution is justified, driven by a fear of showing weakness of will. This approach challenges the naive view that stubbornness and weakness of will are opposite phenomena. By exploring this relationship, I offer a novel perspective that highlights the psychological and philosophical underpinnings of stubborn behaviour.

The paper begins by overviewing Holton's definition of weakness of will, setting the foundation for the analysis. It then explores how pessimism influences weak-willed behaviour, distinguishing between task-related and outcome-related pessimism, and examines the empirical grounds for this role. Following this, the concept of stubbornness is introduced, contrasting it with strength of will and highlighting its psychological roots. The core argument shows how the stubborn agent's lack of trust in their judgment capabilities leads to persistent adherence to resolutions. Finally, the discussion addresses the implications of these findings and potential therapeutic approaches for addressing both stubbornness and weakness.

2. Holton's definition of weakness of will

As a first step, it is important to clarify what I mean by "weakness of will". The discussion will hinge on a particular interpretation of this phenomenon, one that has been gaining popularity over time.

A weak-willed (or akratic) action is often defined as an action performed freely and intentionally against the agent's best judgement. However, in the relevant literature, weakness of will and akrasia are not always taken to be the same phenomenon, especially since the work of Holton, who has proposed a distinction between akrasia conceived as acting against one's best judgement, and weakness of will conceived as over-readiness to revise one's resolutions (see, most notably, Holton, 1999; Holton, 2003). In Holton's account, resolutions are a subclass of our intentions that are formed precisely in order to protect oneself from the contrary inclinations that one expects to feel when the time comes (Holton, 2003). This allows Holton to distinguish weakness of will from unreasonably changing one's mind, as in capriciousness. The following story illustrates the difference between weakness of will and akrasia in his approach:

Christabel, an unmarried Victorian lady, has decided to embark on an affair which she knows will be disastrous. It will ruin her reputation, and quite probably leave her pregnant. Moreover, she considers it morally wrong. So she thinks it not the best option on either moral or prudential grounds. Nevertheless, she has resolved to go ahead with it. At the last moment, on her way to the assignation, she loses her nerve. (Holton, 1999, p. 255)

In Holton's view, Christabel is not akratic, as she finally does not act against her best judgement (she does not embark on the affair). However, she does not persist in her resolution to go ahead with it ("she loses her nerve"), which leaves her open to the charge of weakness of will.

Holton takes cases like Christabel's to show that akrasia is not necessary for weakness of will. In fact, in his view, akrasia is not sufficient for weakness either: agents can fail to act in accordance with their judgements while failing to act weakly. Consider, for instance, someone who believes that they should give up meat but fails to form the intention to do so.

In this paper, I will be adopting Holton's definition of weakness of will. My analysis of the relations between stubbornness and weakness of will only holds given this specific definition.

3. From pessimism to weakness of will

For my purposes here, it is sufficient to make an assumption for which I will not argue in detail, but that seems reasonable to me: the more the perception of the task the agent has resolved to carry out is a negative one, the more the agent is likely to act weakly. More specifically, my assumption will be that negative perception of the task (henceforth, pessimism) and weak-willed behaviour are positively correlated.

Two types of pessimism are relevant to this discussion. The first type of pessimism is related to the task's inherent characteristics. In what follows, I will refer to this as "pessimism directly related to the task". The assumption here is that the more one believes a task will generate unpleasant emotions (due to the belief that the task will be difficult, boring, anxiety-inducing etc.), the more likely one is to fail to act on the resolution to complete the task.

An example of this can be seen in routine activities such as washing dishes. If one believes they are slow at washing dishes, and thus, washing dishes after dinner will take a long time, they are more likely to fail to act on their resolution to wash dishes immediately after dinner.

The second type of pessimism pertains not to the task itself, but to the benefits one may derive from it. It is a kind of pessimism which is only indirectly related to the task. For example, forgoing a smaller immediate reward (such as skipping dessert today) for a larger future reward can be challenging if one doubts their ability to maintain compliance (thus never receiving the larger reward).

This type of pessimism can also occur when the attainment of the larger reward is dependent on other people or circumstances beyond one's control. For instance, sacrificing a smaller immediate reward (like revising a paper for resubmission instead of watching a TV series tonight) for a larger future reward (having the paper resubmitted and potentially published) can be difficult if one believes that such a sacrifice will be in vain (for example, if one believes that the paper will be rejected regardless).

I would like to emphasize that the use of the term "pessimism" in this context does not imply that the agent's negative perception of the task or outcome is unjustified. This perspective acknowledges that some tasks may be objectively difficult or painful, and some desired outcomes may be objectively unlikely. Moreover, I am not dismissing the existence of individuals who confront challenging tasks, of which they have a fundamentally negative perception. The claim being made here is probabilistic in nature: there is a positive correlation between negative perception and weak behaviour.

4. Empirical models of weakness of will: An open problem

As previously stated, I will not argue extensively for the correlation between pessimism and weakness of will, relying essentially on the plausibility of this correlation. The challenge in providing empirical evidence stems from the absence of a unified empirical model for weakness of will, as defined by Holton. This can be attributed in part to a broader issue: the difficulty philosophers encounter when trying to understand and weave together the various threads of empirical research related to willpower, delay of gratification, ego depletion, self-control, procrastination, delay discounting, and so on. Specifically, it remains unclear how weakness of will, in Holton's sense, is represented in the empirical literature. Despite the plausible connections between Holton's notion of weakness of will and

phenomena such as ego depletion, delay discounting, and procrastination, the exact nature of these relations is yet to be determined¹.

Despite the challenges, it is noteworthy to highlight intriguing discoveries regarding the connection between delay discounting and uncertainty processing. Delay discounting, a well-known phenomenon, refers to how the perceived worth of a reward diminishes as the waiting time for its delivery increases. Heinzelmann (2023), drawing from recent economic and empirical literature (e.g., Dasgupta and Maskin, 2005; Fehr-Duda and Epper, 2012; McGuire and Kable, 2015), posits that uncertainty processing is the primary mechanism behind delay discounting. This claim is supported by empirical studies demonstrating that an individual's response to probability can predict their attitude towards delays (Richards *et al.*, 1999; Reynolds *et al.*, 2003; Epper *et al.*, 2011; Fehr-Duda and Epper, 2012). Moreover, it appears that individuals skillfully adjust to the unpredictability of their surroundings. This is exemplified by the well-known marshmallow task. In the original experiment (Mischel and Ebbesen, 1970) a child is offered a single marshmallow. They are given a choice: they can either eat the marshmallow immediately or wait to receive an additional marshmallow as a reward. Before exiting the room, the experimenter informs the child that they will be absent "for a while" and that "sometimes, I'm gone a long time" (Mischel and Ebbesen, 1970, p. 332). Unbeknownst to the child, the experimenter will return after fifteen minutes. If the child manages to wait for the experimenter's return without eating the marshmallow, they are rewarded with a second one. Interestingly, it has been observed that a child's willingness to wait is influenced by their perceptions of the experimenter's trustworthiness. In scenarios where children are led to believe that the return of the experimenter is uncertain, they are significantly less likely to wait (Kidd, Palmeri and Aslin, 2013).

In other words, the empirical evidence seems to suggest that discounting varies with environmental uncertainty on the one hand and individual attitudes towards this uncertainty on the other hand. The connection with the second type of pessimism, which I discussed above, is clear: the greater the perceived uncertainty of the outcome by the individual – whether justified or not – the more likely they are to act weakly.

Finally, despite the debates over the connection between procrastination and weakness of will in Holton's sense, it is worth mentioning that a robust positive correlation has been consistently observed between task aversiveness and measures of procrastination. This correlation holds true across various research methodologies (refer to Steel (2007) for a comprehensive review). "Task aversiveness", as it is termed in empirical studies, essentially aligns with what I have defined above as "pessimism directly related to the task" – a negative outlook on the task based on its inherent features. Moreover, it is a widely held belief among experimental psychologists that procrastination serves as a short-term mood regulation strategy by avoiding the negative emotions associated with an undesirable task (see Sirois (2022) for an extensive review). Regardless of the precise nature of the relations between the concept of weakness of will discussed here and procrastination, this seems to support the correlation I am relying upon between pessimism and weakness of will.

5. Two sides of the same coin

I would now like to delve deeper into the core of this paper by presenting a phenomenon that, *prima facie*, appears to show the opposite tendency with respect to weakness. This phenomenon is sometimes called "stubbornness" (Holton, 1999) or "rigidity" (Elster, 2007). An agent shows stubbornness when they stick to their resolution even though the circumstances would justify revising one's plans. Suppose, e.g., that I resolved to go for a run in the park but there is a storm outside: in this context, revising my resolution seems the rational thing to do. One might question how this differs from strength of will. In the following discussion, in line with Holton's perspective, I will assume that an agent demonstrates strength of will when they successfully persist with their resolutions, unless circumstances warrant a

¹For a discussion on the relations between Holton's concept of weakness of will and procrastination see Stroud (2010) and Ang (2012). One notable distinction between procrastination and weakness of will in Holton's understanding is that it is plausible to view failing to form an intention as procrastination under certain circumstances (Ang, 2012). However, without a resolution being made, there can be no weakness of will in Holton's sense. A famous attempt to associate an empirical model with the concept of weakness of will in Holton's sense, in a way that supports Holton's view, is that by Levy (2010).

revision of their plans (Holton, 1999). Remember that resolutions are initially formed with the intention of overcoming the contrary inclinations that one anticipates experiencing when the time comes, i.e., resolutions are intentions that are contrary-inclination-defeating. Therefore, it seems reasonable to label an agent who sticks to their resolutions as strong-willed. However, if circumstances justify a revision of their plans, but the agent persists, they display stubbornness according to our definition.

An intriguing perspective I invite the reader to explore is that the stubborn agent lacks trust in their ability to judge correctly, on a case-by-case basis, whether resolution revision is justified under the circumstances. After all, judging whether, in a specific context, we should revise our plans involves case-by-case reasoning, which requires, in turn, confidence in one's ability to judge. If confidence is lacking – perhaps because one is too afraid of failing to stick to one's resolution for no good reason – the agent will find reassurance in relying on a rigid rule which minimizes the danger of weak behaviour.

The ensuing view would be that weakness of will is more of a first-order reaction, which consists in avoiding something which we predict will be painful, or maybe pointless etc. Stubbornness would be, instead, more of a second-order reaction, which arises from the awareness that having to deal with an unwelcome task is likely to determine an avoidance reaction. In the run in the park example, e.g., stubbornness may arise from the lack of trust in one's own judgement, which itself arises from a fear of acting weakly. Whereas in weakness of will we only have one type of pessimism, i.e., a negative perception of the task the agent has resolved to carry out (be it of the direct or of the indirect kind), in stubbornness we have both this first-order kind of pessimism, and the second-order pessimism about one's ability to not implement a flight reaction given their negative perception of the task. In other words, in this perspective, stubbornness would arise from the fear of weakness of will.

Although only briefly, Elster (2007) seems to propose an account of stubbornness along these lines: “Rigidity, like superego, is a perverse effect of the effort to control or overcome weakness of will” (Elster, 2007, pp. 46-47; my translation). Specifically, he considers the example of someone who fears that an exception to the rule of brushing their teeth every night before going to bed constitutes “the beginning of the end” and finds themselves walking two kilometers through a snowstorm to buy a toothbrush (Elster, 2007, pp. 71-72)².

I believe this is a plausible account of stubborn behaviour. One might argue that stubbornness should be seen as a first-order phenomenon, where individuals simply fail to adjust their plans based on new circumstances and instead rigidly adhere to a predetermined course of action. However, I contend that my account offers greater explanatory power. Unlike the first-order account, my perspective helps us make sense of stubborn behaviour. While it is true that we observe a rigid adherence to a predetermined course of action, stopping at this observation leaves the behaviour somewhat opaque. My proposal, on the other hand, elucidates a phenomenon that is particularly puzzling because maintaining a resolution is inherently costly. This costliness is precisely why the agent made the resolution in the first place (see the definition of a resolution by Holton): to ensure they would follow through with a challenging,

²It could be claimed that perhaps I am overestimating the role of negative perception, i.e., of what I have called “pessimism”, in weakness of will. It can be argued that the weak agent might not have a negative perception of the task they resolved to carry out, simply a less positive perception than other competing tasks, i.e., they perceive alternative tasks more positively than what they have resolved to do, and this is enough to provoke weakness of will. In this respect, I would like to stress once again that assuming, as I am doing here, the existence of a correlation between pessimism and weakness of will only entails that when we act weakly a negative perception is likely to be there; likely is not certain.

However, I want to specify that by negative perception I do not mean to denote a perception which is necessarily such in absolute terms. It can indeed be the case that a task is perceived negatively only since it is compared to other tasks which are viewed in a more favourable light. That is, the assumption I have made about the correlation between pessimism and weakness is compatible with the negative perception of a specific task being generated comparatively, i.e., with such a perception being merely the result of comparison with other tasks or activities that we perceive more positively. In this respect, consider, for instance, the studies about so-called hedonic adaptation (e.g., Gilbert *et al.*, 1998; Frederick and Loewenstein, 1999; Loewenstein and Schkade, 1999; Gilbert, Gill and Wilson, 2002; Loewenstein and Ubel, 2008). Hedonic adaptation is the tendency of humans to return to a baseline level of happiness despite life's changes. For example, lottery winners and people who have become paraplegics tend to return to their original levels of happiness after a certain period. It is an adaptation-level phenomenon, which describes how humans become insensitive to new stimuli, and quickly readjust to an emotional baseline. What is interesting for my purposes here is that this entails that in a globally happy context a certain task can be experienced very negatively for purely contextual reasons (as the same task would perhaps be experienced positively in a globally negative context). My point here is that what I have said so far is compatible with this state of affairs.

unwelcome behaviour. Although I cannot definitively prove that my view is correct, I believe it should be favoured over the first-order account due to its superior explanatory power.

In this account, weakness and stubbornness are two different (actually, opposite) responses to the agent's prediction of a painful experience: whereas weakness lies on the avoidance side of the spectrum – it is a flight response –, stubbornness is a fight response. Whereas the weak agent reacts to their pessimistic prediction by avoiding the task altogether, the stubborn agent reacts by constraining their behaviour in an excessively rigid way.

An interesting connection worth noting here is the similar fight response observed in individuals who attain resolution fulfilment through excessively restrictive self-binding mechanisms, such as highly detailed and inflexible schedules, often seen in Obsessive-Compulsive Disorder (OCD). This mechanism can be viewed as similar to stubbornness: when confronted with a task perceived as unpleasant, the individual imposes a very rigid schedule to counteract the fear of an avoidance reaction. Although a detailed exploration of this is beyond the scope of this paper, it suggests potential for further investigation into the relations between weakness of will and certain manifestations of OCD.

In this respect, it is worth mentioning that the account I am proposing about stubbornness as a second-order mechanism is also compatible with some traditional hypotheses about obsessive-compulsive behaviour and its relation to superstition or magical protection (see, e.g., Einstein and Menzies, 2004). Indeed, my account aligns with such a hypothesis: there is a superstitious component in believing that performing a certain action will protect us from being weak in the future (e.g., running in a storm based on the belief that otherwise, I will never run again).

The same applies to the idea, especially present in psychoanalytic literature, that some manifestations of OCD are related to an unconscious desire for atonement (see, e.g., McWilliams, 2011, p. 288): after all, stubbornness involves imposing unnecessary, irrational effort on oneself, which, if done frequently, can be seen as compatible with an unconscious sense of guilt that needs to be expiated.

In other words, this paper's purpose is to suggest that unlike what we may intuitively believe, there is a way of providing a unified account of weakness of will and stubbornness, which allows us to see them as two sides of the same coin. This conclusion ensues from the two following premises: on the one hand, it seems plausible that a fundamental psychological component of weakness of will is pessimism, in the sense that I have specified. On the other hand, there is a plausible account of stubbornness according to which it is not simply the opposite of weakness, as one might *prima facie* suppose, but rather a behaviour aimed precisely at preventing weakness. According to this unified view both weakness and stubbornness stem from pessimism, although of two different kinds: recall the distinction I have made between first-order and second-order pessimism, i.e., between an avoidant behaviour and a complying behaviour, where the latter is only motivated by the fear of avoidance.

6. Benefits of a unified account

I have shown that, contrary to what one might *prima facie* expect, a unified account for weakness of will and stubbornness is possible and even plausible. The relevance of such an account may not be immediately apparent. However, it offers several benefits. The focus of this section is to briefly explore the potential therapeutic implications of this unified account, which could be particularly insightful.

Firstly, on the therapeutic level, my approach has significant implications for the assessment of self-binding strategies in preventing weakness of will. Self-binding strategies are those strategies that raise the disutility of weak actions (e.g., telling all your friends that you are on a diet so as to incur their negative judgement if you were to order dessert next time at the restaurant).

Self-binding strategies have well-known limitations. They often appear either too inflexible or too lax. Unlike Ulysses in the famous sirens episode from the *Odyssey*, we generally believe that it is not advisable to eliminate all possible escape routes beforehand. After making a resolution, new information could emerge that makes us realize that the behaviour we resolved to adopt is unnecessary or even harmful; i.e., that complying with the resolution would make us stubborn. Yet, creating exceptions often renders the binding ineffective.

Viewing pessimism as increasing the probability of weakness adds to these limitations, as an overemphasis on self-binding can create a climate of distrust towards one's future self which is not helpful in overcoming weakness of will. If I am binding myself, it is because I do not trust myself with the ability to just do the task "on my own". This means that I am perceiving the task as especially painful

or difficult, and I have a pessimistic outlook on it. Given our assumption that pessimism heightens the probability of weak behaviour, this is problematic.

However, this does not imply that we should abandon self-binding strategies. Rather, agents should learn to navigate between an excessive self-confidence which disregards their own limitations and takes no precautions against temptation, and a lack of self-confidence which prevents them from taking action. A middle ground between pessimism and excessive optimism is ideal.

A suggestion would be to shift the focus from binding to nudging: if pessimism makes weak action more likely, then perhaps we should consider structuring our environment to make it less conducive to weakness as an act of self-kindness rather than binding.

To put things differently: the hypothesis I have proposed is that a pessimistic prediction underlies both flight (that is, weak) and fight (that is, stubborn) reactions. If we have a pessimistic prediction regarding the task (and/or outcome), there will be a risk of being at one extreme or the other of the spectrum (either avoidance or extreme measures to ensure compliance). However, if we are in an intermediate situation where neither pessimistic nor excessively optimistic predictions are present, we reach that level of serenity towards the task that gives us the right confidence to face it with some tranquility, as opposed to avoiding it or confronting it aggressively³.

A second important point on the therapeutic level concerns self and other trust. A significant consequence of my unified account would be that enhancing an individual's level of trust in themselves (in their own abilities, e.g., of handling difficult tasks) and others is fundamental both to treat the tendency to weakness of will and to treat stubbornness. Greater confidence in oneself and others should have the effect of greater optimism (towards one's own abilities and life in general) which should, in turn, reduce both weak and stubborn behaviours. This is because it should decrease both the pessimism "directly related to the task", and the pessimism "indirectly related to the task", as well as second-order pessimism about one's ability to not act weakly.

Naturally, such a unified account would give rise to several questions. For instance, one might wonder why some individuals tend to "choose" the fight mode more frequently while others opt for flight. This question also applies to the same individual who may choose to fight or flee on different occasions. In other words, why does second-order pessimism add to first-order pessimism in some cases? This is a complex question that, within this framework, relates to the origins of pathologies such as OCD.

7. Conclusion

This paper asserts that, unlike what one would naively expect, we can provide a unified account of weakness of will and stubbornness, viewing them as two facets of the same phenomenon. Pessimism, as defined in this context, is seen as a fundamental psychological component of weakness of will. This is based on the plausible assumption that there is a positive correlation between pessimism and weakness of will in Holton's sense.

Concerning stubbornness, contrary to initial beliefs, we are not bound to see it as the opposite of weakness. It can be interpreted, instead, as a behaviour aimed precisely at preventing weakness. This interpretation provides a plausible explanation for stubborn behaviour.

According to this unified perspective, both weakness and stubbornness stem from pessimism, although of two different kinds: while the pessimism involved in weakness concerns the task and/or its outcome, the pessimism involved in stubbornness has to do with the agent's lack of trust in their ability to not implement a flight reaction vis-à-vis an unwelcome task. A compelling argument for this integrated view lies in its potential implications, particularly at the therapeutic level, which are intriguing and warrant further exploration⁴.

³This may be reminiscent of the doctrine of the "golden mean" in Aristotelian virtue ethics (see, in particular, 1106a26-b28 and 1106a36-b7; for a contemporary account see, e.g., Nussbaum, 1988). A "golden mean" is required to navigate a middle path between stubbornness and weakness of will. However, this is not the place to delve deeper into this topic, since this would lead too far afield.

⁴I would like to thank Matteo Cresti, Franco Quesito, Jan Sprenger, two anonymous referees of this journal, and audiences in Alessandria, Vienna and online for their helpful comments. I acknowledge financial support by the Italian Ministry of University and Research (MUR) through the National Recovery and Resilience Plan (NRRP) funded by the European Union

References

- Ang N. (2012). Procrastination as Rational Weakness of Will. *Journal of Value Inquiry*, 46: 403-416, doi: 10.1007/s10790-013-9357-1.
- Bartlett R. C. and Collins S.D., eds. (2011). *Aristotle's Nicomachean Ethics*. Chicago: University of Chicago Press.
- Dasgupta P. and Maskin E. (2005). Uncertainty and Hyperbolic Discounting. *American Economic Review*, 95: 1290-1299, doi:10.1257/0002828054825637.
- Einstein D. A. and Menzies R. G. (2004). The Presence of Magical Thinking in Obsessive Compulsive Disorder. *Behaviour Research and Therapy*, 42: 539-549, doi:10.1016/s0005-7967(03)00160-8.
- Elster J. (2007) *Agir contre soi: la faiblesse de volonté*. Paris: Odile Jacob.
- Epper T., Fehr-Duda H., and Bruhin A. (2011). Viewing the Future through a Warped Lens: Why Uncertainty Generates Hyperbolic Discounting. *Journal of Risk and Uncertainty*, 43: 169-203, doi: 10.1007/s11166-011-9129-x.
- Fehr-Duda H. and Epper T. (2012). Probability and Risk: Foundations and Economic Implications of Probability-Dependent Risk Preferences. *Annu. Rev. Econ.*, 4: 567-593, doi: 10.1146/annurev-economics-080511-110950.
- Frederick S. and Loewenstein G. (1999). Hedonic Adaptation. In: Kahneman D. and Diener E., eds. *Well-Being. The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation: 302-329.
- Gilbert D. T., Pinel E. C., Wilson T. D., Blumberg S. J., and Wheatley T. P. (1998). Immune Neglect: a Source of Durability Bias in Affective Forecasting. *Journal of Personality and Social Psychology*, 75: 617-638, doi: 10.1037//0022-3514.75.3.617.
- Gilbert D. T., Gill M. J., and Wilson T. D. (2002). The Future Is now: Temporal Correction in Affective Forecasting. *Organizational Behavior and Human Decision Processes*, 88: 430-444, doi: 10.1006/obhd.2001.2982.
- Heinzelmann N. (2023). *Weakness of Will and Delay Discounting*. Oxford: Oxford University Press.
- Holton R. Intention and Weakness of Will. (1999). *Journal of Philosophy*, 96: 241-262, doi: 10.2307/2564667.
- Holton R. How is Strength of Will Possible? (2003). In Tappolet C. and Stroud S., eds. *Weakness of Will and Practical Irrationality*. Oxford: Oxford University Press: 39-67.
- Kidd C., Palmeri H., and Aslin R. N. (2013). Rational Snacking: Young Children's Decision-Making on the Marshmallow Task Is Moderated by Beliefs about Environmental Reliability. *Cognition*, 126: 109-114, doi: 10.1016/j.cognition.2012.08.004.
- Levy N. (2010). Resisting "Weakness of the Will". *Philosophy and Phenomenological Research*, 82: 134-155, doi: 10.1111/j.1933-1592.2010.00424.x.
- Loewenstein G. and Schkade D. (1999). Wouldn't it Be Nice? Predicting Future Feelings. In: Kahneman D. and Diener E., eds. *Well-Being. The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation: 85-105.
- Loewenstein G. and Ubel P. A. (2008). Hedonic Adaptation and the Role of Decision and Experience Utility in Public Policy. *Journal of Public Economics*, 92: 1795-1810, doi: 10.1016/j.jpubeco.2007.12.011.
- McGuire J. T. and Kable J. W. (2015). Medial Prefrontal Cortical Activity Reflects Dynamic Re-evaluation during Voluntary Persistence. *Nature Neuroscience*, 18: 760-766, doi: 10.1038/nn.3994.
- McWilliams N. (2011). *Psychoanalytic Diagnosis. Understanding Personality Structure in the Clinical Process*. New York: Guilford Press.
- Mischel W. and Ebbesen E. B. (1970). Attention in Delay of Gratification. *Journal of Personality and Social Psychology*, 16: 329-337, doi: 10.1037/h0029815.
- Nussbaum M. C. (1988). Non-relative Virtues: An Aristotelian Approach. *Midwest Studies in Philosophy*, 13: 32-53, doi: 10.1111/j.1475-4975.1988.tb00111.x.
- Reynolds B., Karraker K., Horn K., and Richards J. B. (2003). Delay and Probability Discounting as Related to Different Stages of Adolescent Smoking and Non-Smoking. *Behavioural Processes*, 64: 333-344, doi: 10.1016/s0376-6357(03)00168-2.
- Richards J. B., Zhang L., Mitchell S. H., and De Wit H. (1999). Delay or Probability Discounting in a Model of Impulsive Behavior: Effect of Alcohol. *Journal of the Experimental Analysis of Behavior*, 71: 121-143, doi: 10.1901/jeab.1999.71-121.

- Sirois F. M. (2022). *Procrastination: What it Is, why it's a Problem, and what you Can Do about it*. Washington, D.C.: American Psychological Association.
- Steel P. (2007). The Nature of Procrastination: a Meta-analytic and Theoretical Review of Quintessential Self-Regulatory Failure. *Psychological Bulletin*, 133: 65-94, doi: 10.1037/0033-2909.133.1.65.
- Stroud S. Is Procrastination Weakness of Will? (2010). In Andreou C. and White M. D., eds. *The Thief of Time. Philosophical Essays on Procrastination*, 51-67. Oxford: Oxford University Press.