Temporal Effects in Depleting Vs. Replenishing Self-Control

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Past research has viewed self-control as an exhaustible resource. The current research shows that initial self-regulation may deplete or augment self-control resources depending on its temporal pattern. When self-regulation becomes harder over time it leads to depletion, whereas when self-regulation becomes easier over time it leads to greater self-control subsequently.

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EXTENDED ABSTRACT

While ego-depletion (whereby requiring consumers to self-regulate subsequently lowers their self-control) is well established in prior literature, relatively little is known about how self-control resource can be replenished (Baumeister, Schmeichel & Vohs 2007). Current article fills this void by examining when exerting self-control may augment, rather than deplete, the self-regulation resources. The focus is different from recent research that has started to examine the moderating factors of depletion, such as the level of autonomy (Nix et al., 1999), self-affirmation (Schmeichel & Vohs, 2009), choice domain (Dewitte et al., 2009), and rest or glucose (Gaillot & Baumeister, 2007). The focus of the current research is on how exerting self-control itself increase self-regulatory resources.

It is proposed that a self-regulation task that gets easier over time (improving experience) can replenish self-control resources and increase self-control in subsequent tasks. The replenishing effect occurs because when people perceive themselves as getting better on an effortful self-regulation task it increases their perceived self-efficacy (Bandura, 1982). Self-efficacy is at the core of human motivation and increasing it can counter the depleting effects of initial self-regulation, consequently increasing self-control in subsequent behavior. Multiple studies support the proposed framework.

Study 1 used a choice between a cookie and aplain yogurt as a measure of self-control (Khan & Dhar, 2007) and anagrams as a potentially depleting task before the choice. Participants were divided into four conditions where they solved three hard anagrams (condition-1); solved three hard anagrams and then solved four moderate anagrams (condition-2); solved no anagrams before the choice (control condition); took a short break after four hard anagrams (condition-4). Results: choice of yogurt was significantly lower when participants solved three hard anagrams compared to the control (26% vs. 54%); p<.05) suggesting that anagram-solving was indeed depleting. Share of yogurt increased to 84% when participants solved easy anagrams after the hard ones showing that although people solved more anagrams, they were replenished rather than depleted. Finally, a break eliminated the depleting effect of solving hard anagrams but did not increase the share of yogurt significantly above the control (59% vs. 54%; p=.71). The findings show that an improving experience of self-control can be replenishing and the effect is greater than allowing people to rest.

Study 2 replicates the effect, provides evidence for self-efficacy based process and rules out mood and general self-esteem as alternative processes. Participants listened to the sound of a drill by pressing a button as the volume either increased (worsening experience) or decreased (improving experience) over time. Next, they completed self-efficacy, mood, and self-esteem measures. Finally, as a measure of self-control, participants crossed e’s in a text. Results: Compared to a (no-sound) control condition persistence on the e-crossing task was significantly lower in worsening experience condition (M=483.5 vs. M=660 seconds, p<.01) but was significantly higher in improving experience condition (M=620 vs. M=498 seconds p<.01). The effect was mediated by self-efficacy. Neither mood nor general self-esteem explained the effect.

As further evidence of self-efficacy based process, study 3 shows that when the improving experience of initial self-regulation cannot be attributed to “self” its replenishing effect attenuates. Participants completed anagrams in improving or worsening order of difficulty. Some participants in each condition were provided an external attribution for their experience (assignment by the computer). All participants then completed an impossible puzzle. Results: In absence of external attribution, an improving experience on the anagram task resulted in greater persistence on the puzzle (M=498 seconds) compared to the worsening experience condition (M=292 seconds; p<.01). However, the order of anagrams had no significant effect when an external attribution was provided for the experience (M=313improving experience vs. M=334worsening experience seconds).

Study 4 replicated the results. Participants ran on a treadmill and difficulty of the run was manipulated by increasing or decreasing the incline by 1%. Some participants were told that their experience was due to the shifting incline (external attribution) while others were told that the experience was due to their own abilities (self attribution). A no-attribution, control condition was also included. After the run, participants chose between a cookie and yogurt as an unexpected compensation. Results: In absence of any attribution, an improving experience at the run resulted in greater choice of yogurt (55%) than a worsening experience (29%; p=.08). Similarly, an improving experience resulted in greater share of yogurt than a worsening experience in self-attribution conditions (62% vs. 30%; p<.05). However, the difference in the improving (35%) versus the worsening experience (30%) was not significant when an external attribution was provided (p=.78).

As another theory-test study 5 differentiates an improving sequence without self-control from an improving experience of exerting self-control. As an initial task participants either listened to two unpleasant sound-clips or one unpleasant and one pleasant sound-clip either in an improving or a worsening order. A no-sound control condition was also included. Persistence on an impossible puzzle served as a DV. Results: When both sounds were aversive, a worsening order reduced persistence on the puzzle compared to the control (M=386 vs. M=463 seconds) whereas an improving order increased persistence (M=569 seconds; p<.01). When one sound was aversive and one pleasant, a worsening order reduced persistence on the puzzle relative to the control (M=353 seconds, p<.01) but an improving order did not increase persistence beyond the control (M=431 seconds). Thus, an improving experience of listening to the sounds increased persistence more when both the sounds were aversive and required self-regulation rather than when only one sound was aversive (569 vs. 431 seconds, p<.01).

The findings contribute to self-control and depletion literatures and further the understanding of how consumers manage a balancing act between regulating themselves versus not exercising self-control. The studies suggest the importance of appreciating temporal patterns of self-regulation and examining how self-control is exercised and not just whether it is exerted or not. The results also have implications for the ordering of self-control targets that consumers set for themselves (e.g., weight-loss goals) or of tasks that are set for others (e.g., academic performance and sales targets).

REFERENCES:


