Perspectives on Active and Inhibitive Self-Regulation Relating to the Deliberate Practice Activities of Sport Experts

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Abstract: On the long road to expertise, individuals must constantly negotiate motivational and effort constraints to deliberate practice (Ericsson et al., 1993). We draw on two different self-regulation theories to explore how athletes engage in more deliberate practice, and remain resilient during such activities. We discuss how a social-cognitive self-regulated learning model (Zimmerman, 2006) can be complemented by a strength model (Baumeister et al., 2007) to better understand experts' deliberate practice processes. Whereas the former model accounts for active pursuit of learning activities towards long-term goals, the latter model affords a unique examination of inhibitive self-control processes that enable experts to remain resilient during difficult practice. Finally, we identify research avenues that may advance the strength model as a novel conceptualization of expert self-regulation in sport.

Keywords: sport expertise, self-regulation, deliberate practice, self-regulated learning, ego strength

To develop expertise in sports, music, and other fields, it is widely accepted that one must practice the constituent skills in a domain for long periods of time. Ericsson, Krampe, and Tesch-Römer (1993) proposed the theory of deliberate practice in which expertise development involves the accumulation of a critical and specific form of practice named deliberate practice (DP). In contrast to other practice activities, only accumulations in those activities rated as highly effortful, highly relevant for improving one's current performance level, and comparatively low in enjoyment, differentiated experts from novices. Although initial work focused on musicians, the DP framework has been researched in many domains and a recent wide-ranging review attests to its applicability to sport (Baker & Young, 2014). Sport research has supported a major tenet of the DP framework, that more-expert athletes accrue greater amounts of DP, or at least greater amounts of select DP activities (Young & Salmela, 2010), than their less-expert peers at successive development points in a career (e.g., Helsen, Starkes, & Hodges, 1998; Starkes, Deakin, Allard, Hodges, & Hayes, 1996). Although DP is not the only causal mechanism to account for expertise (e.g., Güllich & Emrich, 2014), its consistent and significant effect on expertise acquisition across domains has also been documented in sport (MacNamara, Hambrick, & Oswald, 2014).
On the long road to expertise, individuals must constantly negotiate effort and motivational constraints related to training (Ericsson et al., 1993). The most relevant DP activities require much effort and can only be sustained for a limited amount of time each day because they are exhausting. Sport studies confirm that the most relevant DP activities often include high demands for cognitive and/or physical effort as well (e.g., Helsen et al., 1998) and necessitate efforts to recover and regenerate afterwards. Some DP activities are found to be less enjoyable than leisure and other activities such as group practice (Helsen et al., 1998; Ward, Hodges, Starkes, & Williams, 2007), implying that the motivation to engage in such demanding practice activities stems from its instrumental role for improving performance (Ericsson et al., 1993). Finally, Côté, Baker, and Abernethy (2003) noted that DP in sport does not necessarily afford immediate gratification to athletes, meaning that the hard work invested in DP requires persistence to realize delayed performance outcomes.

Baker and Young (2014) concluded that little research in sport has investigated the conditions that allow individuals to circumvent DP constraints and recommended that researchers gain a better understanding of how athletes maintain motivation and effort to persist at DP for extensive periods of time. In essence, they concluded that self-regulation is critical in helping athletes overcome practice constraints toward expertise. In particular, they suggested that self-regulatory processes allow developing athletes to make strategic decisions in order to optimize training and to effectively and efficiently balance the needs to practice and recover.

Self-regulation as it relates to expertise and sport DP remains understudied. To stimulate discussion on this topic, we consider two prominent models of self-regulation that may offer different yet complementary perspectives toward DP in sport. Conceptually, we propose that a more complete understanding of self-regulation and negotiation of DP constraints may result from considering the strength model of self-regulation (Baumeister, Vohs, & Tice, 2007) against the backdrop of the social cognitive model of self-regulated learning (Zimmerman, 2006).

**Zimmerman’s Social Cognitive Model of Self-Regulated Learning**

Zimmerman (2000) defined self-regulation as “self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals” (p.14). Self-regulated learning (SRL) depends on a set of motivational, behavioural, and metacognitive strategies or skills that can be acquired (Zimmerman, 2006) and that are particularly beneficial to learning efforts when external reinforcement (e.g., from a coach) is absent. In order to acquire high-level performance, an individual must self-regulate three interdependent elements: covert cognitive and affective processes, behavioural performance, and aspects of the environment (Zimmerman, 2006). SRL is cyclical in nature; feedback from previous experience is used to inform adjustments to goals and strategies for subsequent efforts to learn, practice, and perform.

The SRL model has three cyclical phases (Zimmerman, 2006, 2008). The forethought phase includes motivational and task analysis processes that precede and help prepare the individual for learning, practice, and performance. The performance phase includes self-control and self-observation processes that help learners optimize and monitor their attempts to learn. Finally, the self-reflection phase involves self-judgement and self-reaction processes that refer to an individual’s self-evaluations and reactions to performance in a learning setting, which will influence subsequent forethought processes, thus restarting the cycle.
Zimmerman and Martinez-Pons (1986) first examined 14 self-regulatory strategies used students during their classroom and home study efforts to learn and found evidence that high achievers used self-regulation strategies with greater frequency and quality than low achievers. This earliest research, and the majority of research in support of the SRL model since, is from the academic domain. However, research has begun to affirm expert-novice differences with respect to SRL strategy use in the sport practice domain. Cleary and Zimmerman (2001) found expert athletes displayed greater use of self-regulation processes and more effective application of self-regulatory strategies (i.e., more specific goals, more technique-oriented strategies, more strategy attributions, and higher self-efficacy) during specific situational drills in practice compared to non-experts and novices. Similarly, Toering, Elferink-Gemser, Jordet, and Visscher (2009) found that more-elite youth soccer players had a tendency to report greater use of self-monitoring and self-reflection skills pertaining to training than less-elite players. Young and Medic (2008) described how several constituent elements of Zimmerman's cycle of SRL processes are instrumental for long-term sport skill acquisition and portrayed self-regulated sport training as a continual cycle of goal setting and strategic planning, self-monitoring, and self-evaluation. They suggested that the hallmark of expert athletes is responsibility for personally appraising aspects of DP, including actively generating, reflecting upon, and maintaining/adjusting the cognitive scaffolding that motivates one to practice.

**Baumeister’s Strength Model of Self-Regulation**

According to the strength model (Baumeister et al., 2007; Muraven & Baumeister, 2000), self-regulation refers to a person’s capacity to inhibit impulses and override temptations in order to maximize their long-term best interests. In this model, a muscle metaphor is used to understand self-regulatory mechanisms. All acts of self-regulation consume some sort of energy from the same central resource (muscle energy) which is referred to as ego strength or self-control strength. The capacity of this central resource is limited. Just as a muscle gets tired after exertion, each time a person tries to control their thoughts, feelings, or behaviors to inhibit impulses, some of their ego strength is used and they move toward a state called ego depletion where less energy is available for self-control (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Therefore, the strength model predicts that after an initial act of self-regulation (e.g., emotional control) our capacity to self-regulate even in different spheres (e.g., managing attention) will be reduced due to less available energy; the greater the degree of initial depletion from tasks that require inhibitive control, the greater the chance of mis-regulation or under-regulation on subsequent tasks that also require self-discipline or tenacity.

The typical approach to testing the resource-depletion hypothesis is a successive task paradigm (e.g., Baumeister et al., 1998). This involves an initial experimental task manipulation that either demands self-regulation (the depleted condition) or not (control condition), and then measuring how participants perform on a successive task (a second, subsequent task) that requires inhibitive self-regulation or resilience. For example, Muraven, Tice, and Baumeister (1998) had groups of participants watch a sad movie which displayed the extreme effects of environmental disasters on wildlife. The regulatory manipulation consisted in asking the experimental group to suppress their emotional response during the movie, while the control group had to simply watch the movie without regulating their emotional response. Next, the groups were asked to continuously squeeze a handgrip (showing tenacity) for as long as possible. Participants who had to stifle their emotions showed, comparatively, a significant reduction in their physical endurance on the handgrip task. These findings exemplify how regulatory depletion can cause deleterious effects on performance, including physical performance, when individuals perform consecutive and even unrelated acts of inhibitive self-
regulation.

The detrimental effects of initial ego depletion on subsequent attempts of self-control have been consistently demonstrated in several studies (Baumeister et al., 2007), showing medium-to-large effect sizes across different domains of self-control such as emotion regulation, thought control, and attention management (Hagger, Wood, Stiff, & Chatzisarantasis, 2010). Given the relative generality and consistency of these effects, it is plausible that athletes' self-regulatory mechanisms should follow suit, especially under demanding self-control conditions. In light of recent work that has challenged the replicability of aspects of the strength model (Xu et al., 2014), the sport expertise domain offers an opportunity to replicate the depletion effect in a novel sample using strong methods and with full disclosure of positive and negative results.

Dorris, Power, and Kenefick (2012) investigated the effects of ego depletion on athletes' practice routines. They compared hockey and rugby athletes' performance on sit-ups after a simple cognitive task (i.e., counting back from 1000 in 5's) with their own performance after a demanding cognitive task (i.e., counting back from 1000 in 7's while keeping a bubble centered on a miniature spirit level). When athletes were depleted by the demanding cognitive task, they completed significantly fewer sit-ups compared to when the sit-ups task followed the non-depleting task. Other studies have shown that ego depletion can negatively affect accuracy and consistency on performance of a skill-based sports task (i.e., dart-throwing; McEwan, Martin Ginis, & Bray, 2013) and ego depletion can negatively influence exercise effort, planning, and decision-making (Martin Ginis & Bray, 2010). These results show that (a) the strength model may be applied to understand motor performance, and (b) ego depletion may negatively affect athletes' physical practice routines as well as their decision-making governing their practice. In light of this work, it would be interesting to examine whether an initial demanding regulatory task would have a subsequent bearing on athletes' performance in DP, when the secondary task requires tenacity at effortful, uncomfortable or unenjoyable, exhausting conditions of training, or when the performance gains from persisting are not immediately apparent. This said, research has yet to apply the strength model to the context of DP.

Strength model research has prompted the generation of additional recovery and conservation hypotheses (Hagger et al., 2010). The conservation hypothesis is pertinent to the purpose of the current paper. It specifies that an initial regulatory task may only partially deplete resources because people tend to conserve energy for future self-control demands (Baumeister & Vohs, 2007). When people expect to use self-control strength in the future, they tend to be less willing to exhaust their energy on an immediate regulatory task (Muraven & Baumeister, 2000). Muraven, Shmueli, and Burkley (2006) found that depleted participants who anticipated exerting self-control in the future performed more poorly in an immediate self-control task compared to those who did not anticipate future self-control demands. Researchers concluded that anticipating future demands of self-control increases the motivation to conserve energy for future self-control needs. This economy of effort serves to maximize the use of ego strength, and is regarded as an adaptive strategy (Baumeister et al., 2007). It would be interesting to examine whether athletes adopt such conservation strategies on initial depleting regulatory tasks when they anticipate having to regulate themselves in later important tasks in the same protracted DP session. Research, however, has yet to examine the conservation hypothesis in the context of DP.

**Considering the Strength and the Self-Regulated Learning Models in Parallel**

Although the models clearly have different foundations, this section explores the
complementary merits of the two perspectives. Through a sport expert development lens, we suggest that a consideration of both may help us better understand (a) how athletes self-regulate in both macroscopic and microscopoc practice settings, and (b) how athletes fare at both active as well as inhibitive self-regulatory processes related to DP.

A distinction has been made between micro and macro-analytic perspectives on self-regulation (e.g., Zimmerman, 2008). Macro perspectives attempt to explain self-control and metacognitive processes enacted over long periods of time, across various settings and contexts. Thus, the macro-level perspective can be employed to understand broad self-regulation efforts aimed at achieving long-term goals such as adopting cyclical self-regulation strategies to energize and enact personal strategies to motivate, plan, direct, and manage one’s training activities over months of a sport season (Young & Medic, 2008). Conversely, micro-analytic processes fixate on a short period of time and rather defined tasks in a specific context, often on laboratory tasks. The SRL model has been supported in micro-analytic training settings (Cleary & Zimmerman, 2001) and recent work has begun to shows its applicability macro-analytically (Toering, Jordet, & Ripegutu, 2013; Young, Medic, & Starkes, 2009) in training settings. Zimmerman (2008) argued that macro and micro-analytic approaches are complementary and help enrich our understanding of self-control in learning contexts. The strength model may help enrich what we know about self-regulation in the micro-analytic setting. The strength model exclusively uses micro-analytic methods to understand short-term, rather task-specific, notions of self-regulatory conservation and depletion (e.g., Muraven et al., 2006).

Greater Consideration of Active and Inhibitive Self-Regulation

More research is needed to better understand self-regulation when it propels athletes to action and to deliberately practice; some of the emerging SRL research has begun to address this line of inquiry with athletes. Importantly, we suggest that novel research is required to understand self-regulation during periods when developing athletes are already acting but are tempted to become unmotivated and to compromise the quality of their actions by succumbing to DP conditions (or conditions that approximate DP). Specifically, more work needs to assess how athletes self-regulate when there are threats to their resolve (i.e., when conditions invite a wane in goal-directed behaviour). The standard approach for examining the strength model, because of its primary emphasis on inhibitive self-control and restricting impulsive behaviour (McCrae & Löckenhoff, 2010), affords a very unique micro-analytic perspective for examining the resistance of temptations around DP. Unlike the SRL model, which emphasizes active control and personal agency, where expertise is predicated on individuals’ ability to plan, strive, and evaluate the outcomes of their actions, the strength model could offer a complementary micro-analytic understanding of self-regulation in a learning context. The role of inhibitive self-control is not captured at great length in the SRL model, which is much more cognitively generative in nature.

The strength model offers an opportunity to examine how individuals persist at a self-control task under depleted conditions. For example, researchers have been interested in documenting whether depleted individuals showed a reduced ability to resist fatigue in a physical stamina task (Muraven et al., 1998) or reduced ability to override the urge to quit a frustrating puzzle-solving task (Baumeister et al., 1998). Situational tasks that challenge people to resist fatigue or override impulses to quit frustrating activities mimic what athletes confront in the DP context where they need to exert effective self-control to resist numerous temptations in order to persist in DP. For athletes, persistence under depleted conditions would require individuals to resist an appealing/easy response, such
as quitting, losing focus, or “letting up” during DP.

To understand self-regulatory expertise through a DP lens, both inhibitory and active views of self-regulation are necessary. Due to the fact that expertise development takes prolonged years of sustained DP through adolescence into adulthood, we posit that sport expertise development involves primarily active efforts towards the pursuit of long-term goals (e.g., progressing to the highest competitive levels) and secondarily overriding situational impulses in the short-term relating to demanding practice sessions and resisting the urge to seek immediate gratification. Our knowledge of self-regulated training efforts in sport could be enriched by considering both models in parallel. For example, failure in active self-control related to unsuccessful planning and initiation of effortful activity could prevent an athlete from deliberately engaging in the kind of activities that matters most to performance improvement. Failure in inhibitive self-control could harm an athlete’s ability to give maximal efforts and to persist in demanding workouts, meaning they may get less out of their practice. These situations necessarily entail both forms of self-regulation.

**Merging Ego Strength with the Sport Expertise Approach**

Notions of ego strength, conservation, and depletion may be particularly helpful for understanding how experts and novices are different with respect to inhibitive control, providing a novel perspective to explain an expert advantage for resilience before, during, and after DP.

**Relating Ego Strength, Depletion, and Conservation to DP**

Experimental designs associated with the strength model offer an opportunity to affirm expert-novice differences in a novel empirical area. *We suggest that sport experts will display greater ego strength, less ego depletion, and more optimal conservation, compared to less-expert groups.* Following the manipulation of initial depleting conditions, the strength model paradigm can be employed to assess experts and novices on successive tasks that demand resiliency and tenacity around the scheduling, execution, task selection, and pacing of DP. In terms of scheduling, consider the situation where elite adolescent athletes need to have sufficient ego strength to resist the frequent temptation to engage in alternative activities that are more attractive than DP, such as socializing or leisure (Starkes et al., 1996), activities that would need to be forfeited to honor the practice schedule. In a depleted condition, we propose that expert athletes have greater ego-strength than less-expert peers to discipline themselves to go to practice. In terms of execution, consider the situation where elite adolescent athletes may have to resist the impulse of prematurely quitting during an exhausting/uncomfortable/mundane bout of training. Once depletion has been elicited by earlier practice conditions involving cognitively and/or physically-draining tasks, we would expect expert athletes to “stick-with-it” and complete the remaining parts of the DP bout. In terms of task selection, research shows that expert athletes are more disciplined to work on DP tasks that are designed to improve their weaknesses, whereas less-expert athletes are more inclined to use their time instead on already-mastered (and immediately gratifying) drills (Deakin & Cobley, 2003). Following the elicitation of depleting conditions, when given a choice, we hypothesize that expert athletes would more likely choose to engage in practice activities most relevant for addressing weakness and improvement (Coughlan, Williams, McRobert, & Ford, 2014). With respect to pacing, consider the situation where athletes may be required to effectively conserve ego strength resources across the course of a long practice session to ensure completion of later portions of the same workout. One might expect expert athletes to pace their energy expenditure more efficiently, especially if the initial instructions in the experimental paradigm advised participants that the later tasks would be highly relevant for performance improvement. Novices, on the
other hand, may more fully spend their ego strength early on and become depleted more quickly thus being unable to benefit from the full (and most important sections of the) training session.

**Integrating Trait and State Perspectives of Self-Regulation**

The DP framework is predominantly nurturist or environmental, however, there is a need to understand how individual difference variables (e.g., self-control dispositions) interact with other primary causative mechanisms (e.g., training) (Baker & Horton, 2004; Davids & Baker, 2007). One of the advantages of considering the strength model is that it may encourage more research on dispositional self-control and the establishment of expert-novice dispositional differences. The strength model considers both trait and state perspectives on self-regulation. Although some literature contends that state self-regulation can be improved through psychological interventions and situational influences (Baumeister et al., 2007), much of the literature holds that state self-regulation is limited, meaning that the capacity of ego strength and the rate by which the central reservoir is depleted are heavily determined by dispositional aspects (Baumeister, Gailliot, DeWall, & Oaten, 2006).

Individuals high in trait self-control are more protected against the detrimental effects of the depleting task and, in particular, have longer task persistence on the secondary task (Dvorak & Simons, 2009). Gröpel, Baumeister, and Beckmann (2014) further showed how people differ in their dispositional tendency to conserve self-control resources over time—those with the dispositional tendency to allocate resources more evenly over time were able to sustain effort longer on the second regulatory task. These findings have been established by pre-screening participants for dispositional measures of impulse control that have established criterion validity, such as Tangney, Baumeister, and Boone’s (2004) Self-Control Scale (survey), and then observing the statistical interaction such a measure has in explaining adaptive outcomes on the successive task. While dispositions related to ego strength have not been examined in relation to sport expertise and practice, it is appealing to speculate that experts might also score higher on dispositional measures with criterion validity, and that this score should moderate their performance advantage in the strength model paradigm.

**Challenges and Future Research Directions**

Our suggestion to consider the two models as complementary is not without some challenges. For example, it appears that the models offer differing views on the optimal level of athletes' engagement during learning activities, which may need to be reconciled with respect to notions of DP. The SRL model affords athletes an active cognitive and metacognitive role in enriching their own activities, and it is expected that expert learners do this more than non-experts (Zimmerman, 2006); expert athletes are expected to make more decisions related to their learning and to deliberate, monitor, and judge their strategies, instead of passively relying on guidance from others (e.g., coach) (Young & Medic, 2008). From the SRL perspective, one might interpret that athletes are expected to nearly always be “on”, consciously processing and engaging in cognitive machinations to improve their craft. From a strength model perspective, however, learners appear to be better off avoiding spending valuable ego strength resources on less relevant tasks, instead saving their ego strength for tasks that matter most (Baumeister et al., 1998). Thus, the strength model appears to suppose that athletes may more judiciously conserve energies across a series of anticipated practice activities.

One possible way to reconcile these views may be experimentally considering autonomy,
task relevance, and sport task type as important moderators of athletes' self-regulatory habits. For example, the effects of ego depletion on task persistence are moderated by the extent to which individuals have chosen the task to which they allocate their ego resources, with autonomous individuals demonstrating greater persistence (Moller, Deci, & Ryan, 2006) or performance (Englert & Bertrams, 2014) than those in an externally-controlled decision condition. Additionally, we propose that experts might conserve more optimally on protracted series of practice activities, but that this conservation approach will only be evident when athletes know the prescribed series of activities ahead of time, and when anticipated practice tasks of lower relevance (less pertinent for performance improvement) precede later regulatory tasks that may be viewed as highly relevant for performance improvement. How experts and less-expert athletes allocate limited ego strength resources to practice activities of varying importance might be an avenue of future research that would offer insight into the specific conditions with which experts modulate self-regulation of DP efforts. Finally, conservation might be beneficial to athletes in endurance sports which require sustained effort exertion (e.g., marathon) while the tendency to quickly consume resources would appear to benefit athletes in power sports which demand brief and intense performances and where athletes are supposed to “give it all at once” (e.g., sprinting; see Gröpel et al., 2014).

Establishing Valid Inhibitive Self-Control Tasks for Practicing Athletes

One challenge relates to whether findings from the strength model, which are usually obtained in laboratory tasks, can be considered valid representations of self-regulated sport training in elite athletes. To address this, researchers might look to Ericsson and Smith’s (1991) guidelines for the process of choosing empirical tasks that validly identify and capture the constituent elements of expertise in a domain. In sport, for example, these guidelines have been used by many expertise researchers to select and validate a repertoire of skills that discriminate between experts and novices with respect to perceptual processing, decision-making, and executive functioning during sport-specific tasks (Ericsson, 1996). After first identifying critical skills, researchers have developed a host of controlled, laboratory-based experimental tasks that effectively mimicked sport-specific demands. Finding similar tasks that underlie superior performance in self-regulated sport training should be a priority. Using the ego strength experimental paradigm, future research should seek to validate tasks that provide for profiles of adaptive (and maladaptive) conservation and depletion related to DP.

With respect to empirical tasks, it will be imperative to choose initial depleting tasks that are “taxing”, but more importantly, to design successive tasks with conditions that are physically/cognitively fatiguing, tedious, or frustrating, such that they challenge participants to self-regulate and consume the central strength resource. Other key conditions on the successive tasks should include the high relevance of the tasks to one’s improved athletic performance and the absence of immediately gratifying conditions; pre-task protocol could be critical in confirming participants’ task perceptions for these criteria. Aspects of performance, persistence, tenacity, and optimal task choice (e.g., when a highly relevant choice is embedded among lesser alternatives) should be assessed on these successive tasks. In sum, if future research is able to demonstrate that expert groups repeatedly perform better on identifiable self-control tasks than less-expert groups in a controlled empirical setting, results would enable investigators to discuss the DP self-regulatory mechanisms that mediate the expert advantage in sport.

Trainability of Self-Control

Finally, we have yet to discuss the training hypothesis, which is the most equivocal tenet of the strength model (Hagger et al., 2010). It specifies that, like strengthening a muscle, people can improve ego strength capacity or resistance to depletion through regular
practice of self-control over time (Baumeister et al., 2006). Research has shown that regular practice of self-control helps diminish the ego depletion effects on unrelated self-control tasks (e.g., Oaten & Cheng, 2006). Although there is some preliminary support for the training hypothesis, it remains unclear which mechanism (i.e., greater capacity of ego strength or having self-control skills that minimize depletion) is responsible for the effects (Hagger et al., 2010). The DP and sport expertise lens may hold unique prospects for research pertaining to this postulate. The hallmark of the expertise paradigm is establishing differences between experts and less-experts early in a developmental trajectory and then demonstrating how these differences widen at successive developmental points (e.g., Ford, Ward, Hodges, & Williams, 2009; Helsen et al., 1998). In future, cross-sectional studies that seek to discriminate expert and less-expert athletes at different ages (e.g., 8-16 years of age) may offer the chance to observe whether group differences on identifiable ego strength measures are stable or increasing over the years. If data showing an increasing expert advantage on ego strength measures over time can be concurrently associated with data showing an ever-increasing advantage in sport-specific DP over the same period, this may indicate support for the trainability of self-control.

**Conclusion**

We have attempted to demonstrate how the strength model of self-regulation may complement a SRL view of sport expertise development. The dual consideration of the strength and the SRL models may afford the field an enhanced understanding of processes that allow athletes to suppress temptations to withdraw or compromise their DP. The strength model may particularly offer a unique opportunity to (a) test experts and novices for differences in impulse inhibition and resiliency of self-control in specific situations relating to DP, (b) integrate notions of ego depletion and conservation to our understanding of how athletes manage constraints to DP, and (c) examine whether an expert advantage for inhibitive self-control in challenging DP situations may in part represent a dispositional self-control advantage.

**Notes**

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