

Periodization, planning and prediction: A new perspective?

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Abstract

The planning and organisation of athletic training has been much discussed and debated within the coaching and sports science literature. Various influential periodization theorists have devised, promoted, and justified particular training planning models based upon personal interpretation of the scientific evidence and their individual beliefs and experiences. Superficially these proposed planning models appear to differ substantially. However, at a deeper level, it can be demonstrated that such models are rooted in a common heritage and underpinned by a common set of historically-pervasive beliefs and assumptions. A concern with these formative assumptions is that-although no longer scientifically justifiable-their shaping influence on contemporary training planning concepts remains deeply embedded. In recent years substantial evidence has emerged demonstrating that training responses vary extensively dependent upon multiple underlying factors. Such findings challenge the appropriateness of applying generic methodologies, founded in overly-simplistic rule-based decision-making, to the planning problems posed by inherently complex biological systems.

The purpose of this brief review is not to suggest a whole-scale rejection of periodization theories but to promote a refined awareness of their various strengths and weaknesses. Eminent periodization theorists - and the variously proposed periodization models - have contributed substantially to the evolution of training-planning practice. However, there is an urgent need for periodization concepts to be updated to align with contemporary elite practice and modern scientific conceptual understanding. In conclusion, it is recommended that increased emphasis be placed upon the design and implementation of sensitive and responsive training-systems facilitating the evolution of customized context-specific training planning solutions.

Keywords: periodization, decision-making, complex biological systems, responsive training systems, planning solutions.