Is there a place for philosophy in resistance training?

Samuel Leblanc, 2021

Philosophy is known to be something like “the study of the fundamental nature of reality”. I however think it is becoming less true with time. Before the scientific revolution, every question was a philosophical one. “Why is the sky blue?”, which could be said to be a childish — and false — way of representing philosophy, was actually a philosophical question for thousands of years. Since then, scientific studies, in this case physics, told us that it could be explained without the use of a god, or anything other than simple interaction between particles.* Since the scientific revolution, philosophy has been elevated to be what science can’t yet answer.

We divided scientific fields because of our low memory capacity. It is impossible for us to explain psychology with physics, we needed to create levels of abstraction, so that some things could be generalised easier while some things can stay extremely specific. It also enables us, for instance, to acquire scientific knowledge while observing nature (ie. biology) instead of running a program from the *source code* of the universe to the emergence of that particular behavior of that species.

Everything is therefore based on prediction (except mathematics, which was created to be true by default). That’s why using Newtonian physics to describe exercise mechanics is better than quantum physics. Both don't operate at the same distance from the source code, but it doesn’t mean that one is *true* and the other is not. Both are predictions that are accurate depending on what it tries to predict. Physics as the truth, not as a prediction model, might never be found if the current physics emerged from an older set of rules.

** Particles in the atmosphere deviate light particles (photons). Since the deviation by the atmosphere is higher with shorter wavelengths, we see the sky blue (it has the shortest wavelength of the visible lights).*

Back to philosophy

There are multiple fields that can explain things about the human body, all of which make predictions at a different level of abstraction. Currently; physics, chemistry, biology, psychology and philosophy can all give answers to some important questions, but different ones. For example, you can’t even begin to answer “Is suffering fundamental to human existence?” with anything below biology in terms of abstraction. On the other hand, like said earlier, “Why is the sky blue?” is now strictly a question for physics.

Regarding resistance training, pioneers like Joe Weider, who was Arnold Schwarzenegger's mentor, were using philosophy to make recommendations. It was, at the time, the best tool to make predictions. Claims about muscle hypertrophy methods like "it's best to constantly change your workout so that you confuse your muscles" and "have your spotter making you do forced repetitions to go beyond failure" turned out to be wrong or ineffective.[1, 2] With time, philosophy has been elevated to be what science can't yet answer. So, is there still a place for philosophy in resistance training?

Philosophy in resistance training

Currently, biochemistry, biology and psychology are what's used to answer training related questions. Biochemistry is the main one, because it describes what happens in the body at the lowest level of abstraction possible as of right now. Biology explains the principle of muscle and nervous system adapting to a stimulus, leading to muscle hypertrophy or strength increases. Psychology explains the benefits of resistance training for mental health, but also advice on how to stay motivated, for example. Finally, my obvious goal with this website is to share ideas on how to answer resistance training questions with physics, making it computable and creating various opportunities for improvement and technology advancement.

I however do not think that philosophy is rendered useless regarding weight training. Some examples of questions that need to be asked, first from a philosophical perspective and then possibly answered through a lower level of abstraction are "Should you allow yourself to skip a workout?", "Where should training be in your hierarchy of priorities?" and "Is it okay for a personal trainer or coach to oversimplify an explanation to help the client?". Answering, or at least discussing these questions is essential for creating the optimal training plan. We, as humans, might be able to make adequate judgments, depending on the situation, without knowing why. However, questioning our fundamental reasoning is a must because (a) someone who makes a decision without being able to explain why has no reason to think it was a wise one, and (b) an artificial intelligence system doesn't come with innate intuition, hence it is necessary for us to program an appropriate reasoning to make a good virtual trainer.

Citations

1. Fleck, Steven J. "Non-linear periodization for general fitness & athletes." *Journal of human kinetics* vol. 29A (2011): 41-5. doi:10.2478/v10078-011-0057-2
2. Hackett, Daniel A. PhD; Amirthalingam, Theban BHSc (Hons) A Brief Review of Forced Repetitions for the Promotion of Muscular Hypertrophy, Strength and Conditioning Journal: October 2015 - Volume 37 - Issue 5 - p 14-20 doi:10.1519/SSC.0000000000000150