



Applied Program Design

Concepts Review & Overview

QUALITY VS QUANTITY RELATIONSHIPS

- ▶ A LOT OF PROGRAM DESIGN IS BALANCING VARIABLES TO ACHIEVE THE DESIRED GOAL.
- ▶ IT CAN HELP TO LOOK AT THINGS IN A QUALITY VS QUANTITY RELATIONSHIP SOMETIMES BUT VARIABLES CAN FIT IN BOTH CATEGORIES AND THERE CAN BE COMPOUNDING EFFECTS.
- ▶ FOR EXAMPLE, YOU COULD CONSIDER NUMBER OF SETS QUANTITY AND PROXIMITY TO FAILURE QUALITY, BUT IF YOU TAKE A SET CLOSER TO FAILURE, YOU DO MORE REPS AT A GIVEN INTENSITY, WHICH ITS ALSO A QUANTITY MEASURE, AS SETS TO FAILURE ARE A HIGHER VOLUME OF REPS.

N1- APPLIED PROGRAM DESIGN

QUANTITY OF QUALITY

- ▶ QUALITY AND QUANTITY ARE INTERCHANGEABLE DEPENDING ON THE LENS WHICH YOU CHOOSE, AND THIS IS JUST A WAY FOR US TO LOOK AT HOW VARIABLES RELATE TO EACH OTHER TO GET US TO OUR GOAL STIMULUS, OR HOW THEY CAN LEAD TO COMPOUNDING FATIGUE.
- ▶ IN GENERAL I TEND TO LOOK AT VARIABLES THAT IMPACT VOLUME INDIFFERENTLY AS QUANTITY MEASURES, AND VARIABLES THAT INFLUENCE HOW VOLUME IS DISTRIBUTED AS QUALITY MEASURES, BUT AGAIN THE SEMANTICS ONLY MATTER FOR WHAT YOU ARE TRYING TO COMMUNICATE.



N1- APPLIED PROGRAM DESIGN

QUANTITY OF QUALITY CONT.

- ▶ LETS COMPARE 3 STRAIGHT SETS VS 2 SETS EACH WITH A DROP.
- ▶ YOU HAVE 3 FRESH SETS VS 2 FRESH SETS + 2 DROPS
- ▶ THE DROPS ARE THE SAME EXERCISE, ROM ETC, BUT THE VOLUME LOAD IS SMALLER FOR A DROP THAN A FRESH SET.
- ▶ BECAUSE A DROP DECREASES THE INTENSITY, YOU ARE ABLE TO TAKE THE MUSCLE TO A GREATER DEGREE OF FATIGUE AT THE SAME RIR.
- ▶ YOU COULD LOOK AT THE SCENARIO WITH THE DROPS AS GOING TO FAILURE 4X VS 3X WITH THE STRAIGHT SETS ONLY, AND SAY THAT THERE ARE MORE "EFFECTIVE REPS" WITH THE DROP SETS.
- ▶ BUT AN EFFECTIVE REP AT A LOWER INTENSITY IS EFFECTIVE FOR FEWER MUSCLE FIBERS THAN AN EFFECTIVE REP AT A HIGHER INTENSITY.



N1- APPLIED PROGRAM DESIGN

QUALITY VS QUANTITY VS WTF

- ▶ IT CAN GET CONFUSING WITH EVEN JUST A FEW VARIABLES DIFFERING, LET ALONE 3,4,5+
- ▶ PART OF THIS MENTORSHIP IS GOING TO COVERING THE NUANCES OF THESE VARIABLES AND HOW THEY RELATE.
- ▶ NOT ONLY WILL THIS HELP YOU CREATE AND PROGRESS INDIVIDUAL PROGRAMS BETTER, BUT IT SHOULD HELP YOU BETTER COMPARE DIFFERENT PROGRAMS TO EACH OTHER SO WHEN CHANGING VARIABLES ACROSS PROGRAMS, YOU ARE GETTING THE STIMULUS CLOSER TO YOUR GOAL AT THE START.



THE LEVER ANALOGY FOR TRAINING VARIABLES

- ▶ THERE IS MORE THAN ONE WAY TO ACHIEVE A GOAL
 - ▶ MORE THAN ONE EXERCISE
 - ▶ MORE THAN ONE TRAINING EFFORT
 - ▶ MORE THAN ONE SPLIT
 - ▶ MORE THAN ONE APPROACH TO VOLUME
 - ▶ MORE THAN ONE METHOD OF PROGRESSION
 - ▶ ETC ETC ETC



N1- APPLIED PROGRAM DESIGN

LEVERS FOR A PROGRAM

- ▶ SPLIT
- ▶ FREQUENCY
- ▶ VOLUME
- ▶ VOLUME DISTRIBUTION
- ▶ PROGRAM ARCHITECTURE
- ▶ DURATION
- ▶ PROGRESSION MODEL



N1- APPLIED PROGRAM DESIGN

LEVERS FOR A WORKOUT

- ▶ WORKOUT ARCHITECTURE
 - ▶ VOLUME (# OF SETS)
 - ▶ EXERCISE ORDER
 - ▶ PAIRINGS
 - ▶ REST INTERVALS
- ▶ SET ARCHITECTURE
 - ▶ EXERCISE SELECTION
 - ▶ SPECIFICITY
 - ▶ RESISTANCE CHALLENGE
 - ▶ RANGE OF MOTION
 - ▶ EXERCISE TECHNIQUE / EXECUTION
 - ▶ RANGE OF MOTION*
 - ▶ TEMPO
 - ▶ INTENSITY / LOADING / REP RANGE
 - ▶ EFFORT RPE/RIR





What is an architecture?



Relevance of Training Architecture

Architecture Categories

- | | | |
|----------------------------------|---------------------------------|--|
| 1. Full Body Systemic | 9. Tri-Sets | 17. Hepburn Method |
| 2. Half Body. Systemic | 10. Giant Sets (Same body part) | 18. Contrast Training |
| 3. Third Body Systemic | 11. Ascending Load | 19. Tension AMPK Hybrids |
| 4. Systemic Supersets | 12. Descending rep | 20. Volume/Frequency Hybrids |
| 5. Systemic + Local AMPK Hybrids | 13. German Volume Training | 21. Full De-load |
| 6. Incomplete Rest Methods | 14. Cluster Sets | 22. Neuro/tension Focused Metabolic Deload |
| 7. Drop Sets | 15. Wave Loading | 23. Local Metabolic focused Neruo Deload |
| 8. Supersets (same body part) | 16. Eccentric Overload Methods | 24. Metabolic Focused Volume De-load |

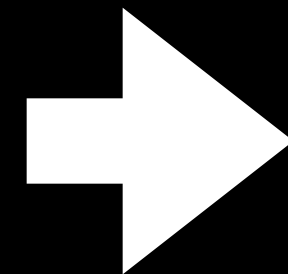
Archetypes

- You may progress from one archetype to another within the same program.
- Changing Architecture likely qualifies as a new program, not a progression*
 - There are exceptions (full body to half body), Ascending load to descending rep
- Archetypes serve both as a tool to accomplish the physiological goal, but also a way to add more mental variety, progressions & regressions, for the same stimulus.
- You want to choose the archetype that fits all the individual's criteria and accomplishes the stimulus in the most efficient way possible for that individual



Archetypes

Full Body Systemic



1. Compound Only
2. Compound Dominant
3. High Variation
4. Big Small
5. Front Loading
6. Back Loading
7. Timed Sets
8. Full body Giant Sets

An architecture will have several archetypes.

There may be a certain degree of crossover between archetypes



Micro, Meso, Meta, Macro CYCLES

Micro, Meso, Macro (and metacycle)

- ▶ A macrocycles is made of mesocycles
- ▶ A mesocycles is made of microcycles
- ▶ A metacycle is similar in length to a mesocycle, but has some drastically different microcycles in it, and these are typically repeated for several progressive rotations

Microcycles

- ▶ A microcycles is your rotation of training days. Typically a week, but not always.
- ▶ When people refer to a split, it usually refers to how your days are organized in 1 microcycles.
- ▶ A microcycles ends when you return to the same training day and repeat it.

Mesocycles

- ▶ A mesocycles is a number of microcycles done in a row. Typically what is referred to as ‘A Program’
- ▶ This can incorporate progressions from micro to micro, but these changes are minor so that progressive overload can easily be applied from micro to micro.

Macrocycles

- ▶ The macrocycle is usually based around the primary goal for the client. It's made of many meso or metacycles that may have slightly different objectives, but the cumulative objective of those should achieve the goal of the macrocycle.
- ▶ If someone wants to lose 20lbs of fat, or put on 10 lbs of muscle. This will happen over a macrocycle.

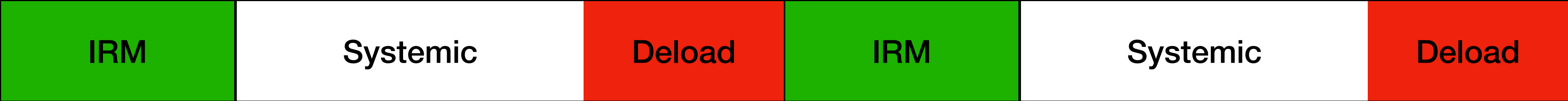
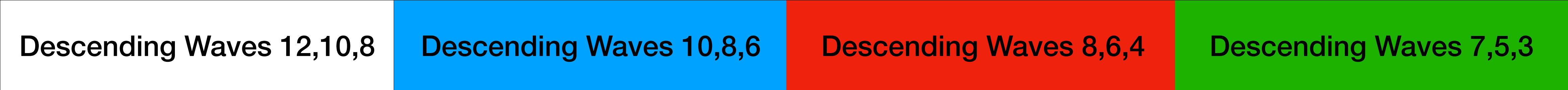
Metacycles

- ▶ A metacycle is rotation of microcycles that have more significant changes, usually completely different stimulus done in a rotational manner, as opposed to doing longer mesocycles of different stimuli.
- ▶ These are likely only going to be implemented in more experienced individuals because the program management and ability to transfer skills and strength is greater.

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Metacycle Examples





Volume Frequency Relationship for Splits

Which Lens to Look at Volume & Frequency

- ▶ Systemic

- ▶ Total Volume and Session Frequency

- ▶ Local

- ▶ Per Muscle/Group volume and frequency

- ▶ ** A lot of people only use this lens and to a limited degree

Which Lens to Look at Volume & Frequency

- ▶ If you have a smashing higher volume leg session today, it could impact your training regardless of muscle group for several days because of the systemic fatigue
- ▶ But you could have a high volume arm workout today and have no interference with training legs tomorrow.

Which Lens to Look at Volume & Frequency

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- ▶ But even if you had a low volume arm day today, you probably wouldn't have the best arm session if you tried it again in 24 hours.

Volume & Frequency Relationships

- ▶ The more total volume and fatigue per session, the lower the frequency per session.
- ▶ The more volume and fatigue for a muscle, the lower the frequency per muscle.

Volume & Frequency Relationships

- ▶ Ideally we want at least 48 hours before repeating the same muscle group, even at lower volumes
- ▶ We can train every 24 hours with moderate volumes and rotating body parts, but some systemic fatigue will compound, meaning we can only train so many days consecutively.

FB vs UL vs PPL vs BRO

- ▶ A lot of people make the mistake of assuming there is a “BEST” split....
- ▶ The reality is that the optimal split is going to depend on what constraints you have, and how much training stimulus you are trying to get out of those constraints.

Generic claims made based on research

- ▶ Higher frequency is better.
 - ▶ But based on what? And to what end?
 - ▶ Do you think splitting up 3 sets across 3 days is the same as splitting up 9 or 12?
 - ▶ Do you think when it's only 1 or 2 exercises that is different than when it is 3 or 4?

Frequency VS Exercise Order

- ▶ Lets say you have 3 training days and we want to compare FB, UL and PPL.
 - ▶ If your FB has a similar order of muscle groups, that means some muscle groups are getting trained fresh 3x per week, and other are getting trained with more pre-fatigue 3x per week.
 - ▶ If you are doing PPL, every large body part is getting trained fresh 1x per week
 - ▶ UL would be somewhere in between.

Frequency VS Exercise Order

- ▶ Could you have different orders of the FB routine so you rotate what body parts are trained first?
 - ▶ Yes
- ▶ Does that make tracking progression harder?
 - ▶ Also Yes

Frequency VS Exercise Order

- ▶ In a PPL split, isn't a lot of the volume also being done when there is more pre fatigue that is specific to that muscle group?
 - ▶ Yes
- ▶ Is this also a way manage training loads?
 - ▶ Yes
- ▶ Does it decrease the number of warm up sets needed in a session?
 - ▶ Yes

Split vs Exercise

- ▶ FB is going to require the most relative time doing warm ups, and offer the least options for exercise variation.
- ▶ PPL and Bro splits will require the least amount of warm up time because of the carry over across the session, and offer a moderate to high amount of options for exercise variation.
- ▶ UL is going to be in between with overlap depending on total sets per muscle group and sets per exercise.

Split vs Volume

- ▶ FB maxes out at 3-3.5x per week training
 - ▶ With 3x per week per body part
- ▶ UL could go up to 6x per week
 - ▶ Also with up to 3x per week per bodypart
- ▶ PPL and Bro splits also 6x per week.
 - ▶ With 2x per week per body part, or 3x with specialization splits.

Split vs Volume

- ▶ **Scaling issues with volume**
 - ▶ **The more total sets you do, the more pre fatigue there is for the later muscle groups, and the more fatigue that will carry over to the following session.**

Split vs Volume

- ▶ FB splits might be great when training at relative low volumes, but when you are trying to train every 48 hours, you can only do so much volume per muscle group before you negatively impact the next session.
- ▶ With a PPL or bro split, you are not worried about fatigue being carried over for the same body parts because you have well beyond the time needed to recover locally.
- ▶ UL again is going to be somewhere in between.

Split vs Volume

- ▶ For all cases systemic fatigue has to be considered
 - ▶ With a FB split, systemic fatigue will be more symmetrical across sessions.
 - ▶ For PPL, you can place your rest days to accommodate the sessions with more systemic fatigue. For example Push, off, pull, off, legs, off, off.
 - ▶ Or for UL: upper, lower, off, upper, lower, off, off

There is a lot of ways to split it

