

· demo:

- thermal expansion → heating metal causes it to expand
- explosion to create pressure:
 - temp & pressure increase proportionally
 - 2x temp means 2x pressure
- Model T engine demo:
 - four stroke engine
 - outer pistons move together
 - inner pistons move together

CHAPTER 7

· terms:

- exhaust pipe has "bluer color" (79)
 - ↳ from oxidation
 - means engine is running too hot
- oil filler cap = very hot
- hotter → rubber gets more fluid → rubber gets more wear
- analysis : breaking things down into parts
- romantic : looking at things as a whole
- something is killed when you dive into the details (82)
 - like coming-of-age
 - as you learn more, other things you once thought/knew dies
 - lose some of the beauty when you pay attention to the details, but then you know the bike better
- Phaedrus misses the forest for the trees
 - takes a knife to science
 - went too far → desperately wanted to understand rationality
 - had no friends
 - relies heavily on logic
- how he relates to timber wolf story
 - alone
 - forge his own path - courageous

Phaedrus goes crazy

CHAPTER 8

· terms:

- carbon fouled spark plugs
 - happens when too fuel rich
- tappets
- jets (oversized, standard)
 - on carburetor
 - brass tube w/ opening in it

- bigger opening = get more fuel
- pilot jets : set the idol on the motorcycle
- early carburetors only have two jets - newer have three or four
- chain adjuster link
 - pulls wheel back to tighten the chain
- foot peg
 - metal w/ rubber for feet to rest on
- connecting rod
 - in fly wheel
 - in bottom end
 - biggest part at bottom of engine case
 - explosion gets it going, inertia gets it through all the other cycles
- systems of energy
 - consistent problem, if you don't change something, it will just keep coming up
- taxonomy (99)
 - describes motorcycle + its functions
 - this is Phaedrus taking a knife
- System: inter-related and interconnected parts

CHAPTER 9

- battery
 - two parts of bike - one uses battery, one uses alternator
- engine mis-fire
 - combustion @ the wrong time
 - often caused by spark not igniting the fuel
- backfire
 - caused by too much fuel
- methodical approach to motorcycles & life (logic + scientific method)
 - inductive inferences:
 - observe what is happening, then coming to conclusion
 - deductive logic:
 - prior knowledge → predict an observation
- method of testing hypothesis = flawed
- mechanic = going through the whole scientific method
 - ask questions that sound kind of dumb
- careful observation & good questions = key for diagnosing problems
- scientific method
 - he doesn't believe and narrowing your scope too much on one problem

CHAPTER 10

- Phaedrus quoting Einstein
 - P believes that he is very smart
 - likening himself to Einstein → narcissistic
 - maybe even thinks he is smarter than Einstein

- trying to justify his own spiraling by quoting these other people
- what does this have to do with motorcycles?
 - motorcycle = example/parallel for his philosophy

CHAPTER II

- carburetors
 - have to do with idol
 - relates to air flow
- backfires
 - high altitude, less O_2
 - more fuel than O_2 → causes there to be too much unburned fuel
 - too much fuel → causes backfire
- Hume's approach:
 - experience the world through our senses
- Kant's approach
 - priori knowledge
 - you do have prior knowledge that informs the way you see the world
 - start with experience
- Copernicus:
 - change in prior knowledge w/o change in senses
 - flat earth approach → world is doing the same → senses don't change but understanding does change