

## Empirical Residue

1. What is reached by abstraction: subst. forms, conjugates, freq.  
What is always abstracted from: empirical residue, condit materia  
Instance, incidental, non-systematic divergence from ideal freq,  
also continuum (non-numerable infinity)
2. Division: concrete (immediate, remote); imaginary.  
Division: invariant statement, prescind from emp. residue  
relative statement, includes reference to emp. residue  
relative to immediate concrete, remote conc., imaginary.
3. Extension and duration: concrete, continuous  
See distance traversed but not time of traversing; one-to-one  
correspondence between instants of traversing and of watching.  
God: all present; sees distance and time; He is not in time.
4. Magnitude, Unit, Measurement of Extensions and Durations.  
Both magnitudes and units are extensions; or both are durations;  
both concrete and continuous.  
Measurements are numerical ratios. Neither long short fast slow.  
Standardization of units. By system, laws, successive approximat  
No direct comparison of here and distant, now and past.
5. Ar. Th. Def. of Time: number and measure of motion according  
to (spatial) order of prior and posterior. Two o'clock, two hours.  
Therefore, as many times as motions. In Iv Phys lect 17 §3 f.  
Appeal to primum mobile. (Upset by Copernicus)
6. Frame of reference.  
System for specifying any point-instant; for going to any one  
from any other according to rules.  
Personal: here there near far above below right left  
Detached: street map, geography; watch calendar  
  
Division: purely conceptual, imaginary, concrete.  
As many concrete, as distinct origins and orientations.  
Each a different universe of meaning.  
Transformation = Translation.  
Rule: abstract remains invariant.  
Ie. If principle or law varies under transformation, then  
either transformation illegitimate or else expression incorrect.  
Holds for all abstract: not only laws but also ideal frequencies  
Holds only for abstract. (simultaneity not abstract; ergo relat  
Relativity: pursuit of abstract properly formulated.
7. Space and Time.  
1) given, to some individual; 2) abstract geometry; 3)  
totality of concrete, from viewpoint some particular applied frame,  
4) totality from general viewpoint 5) imaginary ordered detached frame  
Abstract geometry settled by physics: how make laws invariant  
coincident with what transformations legitimate; latter determines geo  
Hence pertains to intelligibility of things in space and time,  
not to space and time as such.  
Applied frame, not space in general univocal sense.  
Imaginary frame, not space in real sense.  
Intelligibility of space and time is to provide "together  
and successive" understood in statistical phase.