A PHYSICAL LINKAGE BETWEEN SYNODICS AND INCORPORATIONS

by Jeremy Batterson, May 11, 2004

It seemed to be that there were two basic periods that arose from incorporating any two periods A and B, with A 📹 B, namely, the “synodic” period, wherein two bodies of periods A and B return to being in opposition to each other, $1/(1/A - 1/B)$, and the =93incorporated” period, wherein the sum of angular rotations of the two bodies performed one complete rotation, $1/(1/A + 1/B)$; yet, the question naturally came as to whether these two were connected in some way that unified them both into one.

As noted in earlier memos, what is called the “harmonic” period of A and B, is actually twice their incorporated period, so that the incorporated period is the semi-period of the harmonic period. If twice one incorporation had some significance, what about thrice and more times?

First we asked, “if A is unity, how many times must be B for its harmonic with A to equal its synodic period with A? [2/(1/A + 1/B) = 1/(1/A – =/B).]

Since A is taken as one, 2/(1 + 1/B) = 1/(1 - =/B), or

1 + 1/B = 2 – 2/B, so B = 3. So, if B is 3 times A, then its harmonic and its synodic with A are equal.

But, were we to ask, “during X whole incorporated rotations, how large must be period B, in order that during this number of incorporations, the synodic and incorporation come back together*, so that Synodic[A,B] ≡ Incorporation[A,B],” we find that, for any number X, the value of period B must be

$A(X + 1)/(X - 1)$, which also means that we get a series of fractions whose numerators can always be represented as the denominator plus 2; So, 3/1, 4/2, 5/3, 6/4, etc.

If we have unique ratios where the synodics are congruent to the incorporations, this also gives us unique, un-arbitrary frequencies, which may have some significance.   This is a kind of language to be developed much more fully.

FN* i.e. they are congruent.

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