wavelength from $\mathbf{H}^{-1}$ to $2\pi(\mathbf{B})^{-1}$. This is tantamount to a longer wavelength conversion or a magnetic "redshift" of massfree waves in material media, where the longer magnetic wavelength thus obtained translates into a weaker magnetic field, since the latter is a function of the reciprocal of that wavelength.

Of course, we can now appreciate that even though **H** and **B** do have, at last, the same dimensionality, they are not corresponding quantities nor do they deploy the same type of length function; in other words, even "in a vacuum" and for massfree longitudinal spinning waves, **H** could never equate to **B**. The reason is apparent - **H** is a measure of the density of wavelines along the direction of linear displacement in a 'vacuum', whereas $\mathbf{B}^{-1}$ is an angular length or radius, and the angular magnetic wavelength (the perimeter of one cycle of cyclotronic motion) is, in fact, 2π **B**. For massfree waves, where the motion orthogonal to the direction of linear displacement and the motion colinear with that direction are isochronous and identical, the preceding translates into: $\mathbf{H}^{-1}$ is the magnetic wavelength of massfree waves in 'a vacuum', whereas $2\pi/\mathbf{B}$ is the magnetic wavelength of the same waves in a "material medium". Likewise, since "magnetic" fields are measured in gauss and referred to **B**, not to $\mathbf{B}/2\pi$, then 2π **H** is the "true" magnetic "field" of massfree waves in "a vacuum", whereas **B** is simply the magnetic "field" of the same waves in "material media".

22. Our next challenge relates to massbound charge - since here, as in the case of the electron, the field wave or cyclotron wave function of the associated kinetic energy, is quite distinct both from the coupled voltage wave function, and from the resultant rate of forward linear displacement, since -

$$v = \sqrt{W_k W_v}$$

Here, then, $2\pi(\mathbf{B})^{-1}$ can only designate a function of the fixed magnetic field wave W_k of the electron mass-energy, giving the perimeter of one cyclic motion -

$$2\pi(\mathbf{B})^{-1} = W_k/F_{cyclo} = 2\pi\, r$$

whereas $\mathbf{H}^{-1}$ designates the composite magnetic wavelength synthesized from the field (magnetic) and voltage (electric) wavelengths of the kinetic energy swing:

$$\mathbf{H}^{-1} = \frac{Wk^{0.5}\, Wv^{0.5}}{\varepsilon} = \sqrt{\lambda_e \lambda_{y2}}$$