# Rewriting the Schrödinger Equation



*Alexander cutting the Gordian Knot,* Berthelemy

## *by Miles Mathis*

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Since I have overthrown the Lagrangian, it has been clear that the Schrödinger equation must fall, requiring a total rewrite of all of quantum mechanics. Knowing what a big job that would be, and having my nuclear diagrams to work on, I shelved the problem for many months. But now I am back, ready to face the mountain. It was best I did, because, as you will see, my recent work will be what allows me to rewrite the Schrödinger equation.

The Schrödinger equation is based on the Hamiltonian, which is basically just another name for the Lagrangian. Like the Lagrangian it is expressed as

$H = T + V$

Where $T$ is the kinetic energy and $V$ is the potential energy. The Hamiltonian is therefore simply an expression of the total energy of whatever it is applied to. To lead you through the first part of this, I will refer to Linus Pauling's *Introduction to Quantum Mechanics*, Dover edition. We start on page 54. Pauling starts by expressing the kinetic energy in terms of momentum $p$:

$H(p_x, x) = p_x^2/2m + V(x) = W$

He now says

**If we now arbitrarily replace $p$ by the differential operator $(h/2\pi i)(\partial/\partial x)$ and $W$ by $-(h/2\pi i)(\partial/\partial x)$**

**and introduce the function Ψ(x, t) on which these operators can operate, we get the Schrödinger equation.**

That was a magnificent fudge, though poorly hidden. To "arbitrarily" insert the wavefunction in that manner must imply that $W = -p$. Let's see if that can work:

$W = p_x^2/2m + V(x)$

$W = -W^2/2m + V(x) = W^2/2m + V(x)$

$T = W^2/2m = H^2/2m$

As with the Lagrangian, none of that makes any sense. If the total energy is the absolute value of the momentum, why are we including $V$ at all? If the momentum already gives us the total energy, then the potential doesn't really exist. To put it another way, how can kinetic energy require potential to complete the field, but momentum doesn't? What we really have here is $H = |p|$. The rest is just fudge. The equation has been pushed.

Since the Lagrangian/Hamiltonian is in the wrong form, they are trying desperately to push it back to sense. This is done by making the momentum and the total energy equal. That basically short-circuits part of the Lagrangian mess (but not all of it). And, although $V$ has basically been short-circuited out of the equation, they leave it in. Why? So that they have another variable to play with later, when they need another push.

Also curious is that the Schrodinger equation starts from the Hamiltonian, while the Bohr equation I just analyzed in a previous paper starts with the Virial. In other words, we start here with $H = T + V$, but Bohr started with $E = T + V$, where V = -2T. Does V = -2T in the Schrodinger equation? Let's see:

$W = T + V$
$W = T - 2T$
$W = -T$
$W = -p_x^2/2m$
$W = -p$ ?

Nope, that can't work, because we were already told that $W = -p$. $W$ can't equal both $-T$ and $-p$, since that would make m = $p/2$, which would make the velocity of the electron a constant at 2. These guys just have two forms of the Virial/Lagrangian/Hamiltonian they can use as they need, depending on whether they want a 2 or not. But Bohr and Schrodinger were working on the same problem. Why would one start with the Virial and one start with the Hamiltonian? Don't we have some sort of continuity problem here, at the very least? Very strange, but it doesn't really matter. All three forms of the equation are false.

Let me repeat that, for effect. The Hamiltonian, like the Lagrangian, is false. Both come from a false Virial derived with big mathematical cheats centuries ago by Lagrange, and neither apply to the real field. The only way any of them work is by major pushing, and I am showing you once again the sort of pushing that is going on to make the Hamitonian appear to work in Schrödinger's equation.

Pauling seems to understand this: why else would he give the total energy two different variables, $H$ and $W$? I thought that was curious the first time I saw it. Why a triple equation? *So that he doesn't*

*have to make the momentum p equal to the Hamiltonian H.* He makes it equal to *W* instead, you see, which misdirects you. He also doesn't tell you right out that the total energy equals the momentum, since that might cause you to ask the questions I am asking. He simply assigns the same operator and function to both, "arbitrarily". Very tricky, you see. So this derivation is not accidently pushed. Pauling and those who came before him are trying to slip something by you here, *on purpose*.

We see this again with the insertion of the operator, which is just a way of inserting **h/2πi** into the equation by hand. But that constant is another fudge, because it comes from a false assumption of de Broglie, that being that the electron expressed waves in its orbital motion, and that an even number of waves had to fit on the circumference of the orbit. Schrödinger then just imported that assumption and the math that goes with it into the equation. In other words, de Broglie assumed

n$\lambda$ = 2πr

That is false for several reasons. Primarily, the physics is wrong. That isn't where the wavelength comes from, as I just showed in a previous paper. The wavelength we measure or experience is either created by interaction with our machines (such as an interferometer), or it is the radius of the photon scaled up by $8c^2$. In no case it is a wave pattern on a circumference. It isn't created that way locally, from the point of view of the electron, or from our point of view. It isn't happening that way, period. So the operator is also wrong. It is another fudge factor.

Also a **huge** problem is that Pauling is "arbitrarily replacing" momentum *p* with $(h/2\pi i)(\partial\Psi/\partial t)$. But $h/2\pi$ is angular momentum L, not momentum *p*. Big cheat right there! Remember, the variable *p* here was gotten from rewriting LINEAR kinetic energy, like this

$mv^2/2 = p^2/2m$

So $p = mv$
$p \neq h/2\pi$
$p \neq L$

Can you even believe they try to pass this stuff by us, 90 years after the fact? And that most people buy it! These are Nobel Prize winners, using tricks we couldn't get past our teachers in highschool. C'mon! If you are going to fudge me, at least make it creamy and chocolate-y. This is just sour.

Momentum at this level is represented this way:

$p = h/\lambda$

Since Schrödinger himself assigned the wavefunction to the charge density, and charge is photons, shouldn't we replace *p* with h/$\lambda$? We should, since I show below that the wavefunction is a function of charge density or photon spins. And we should since I showed in my rewrite of the Bohr formula that Bohr's variable *p* should also be assigned to the photon. Bohr *himself* assigns it that way at the start of his proof, although he switches it by the end.

The reason we have a switcheroo here is that they don't want the wavelength in the denominator. The wavefunction Ψ is in the numerator, as you see, so the wavelength can't be in the denominator. So instead of making logical and legal mathematical substitutions, we get "arbitrary replacements." In other words, the mathematicians just put whatever they want in the equation wherever they need it, and

hope you don't notice.

In the end, the electron may or may not be creating an orbital wave, but it doesn't matter here because that is not where the wave in our data or in the equation is coming from. The waves in quantum wave mechanics are often coming from the photons, not the electrons. If we apply the Schrödinger equation to solve the emission lines of Hydrogen, the waves belong to the photons. They must be, because it is the photon energy that is quantized in the first instance. This should have been clear from the Bohr formula derivation, where Bohr *explicitly* assigned the change in momentum of the electron to the photon. The electron velocity and energy *are* quantized, and the electron does have wave capabilities; but here the waves belong to the photons. The waves in the equations are field *changes*, and so they must go with the momentum *change*.

Another problem is the *i* hiding in the operator. Pauling puts it in the denominator, although they now commonly put it in the numerator. It doesn't really matter where it is, because it is just another fudge factor—as if the equation wasn't already fudged enough. It is like a little trapdoor into a fairyland, where you can make anything happen that your heart desires. It is like a joker or wildcard hidden in the equation, that the mathematician can play later if he gets in a bind. Although he is unlikely to get in any binds, since the equation is already infinitely malleable even without the wildcard. In my paper on complex numbers, I showed that not only is *i* used as a trapdoor to fairyland, it is also used to hide the charge field. You are in the realm of "imagination" here, so you do not ask the usual questions. You aren't in the charge field, you are in the imaginary field!

Another problem of the Schrödinger equation is that it is initially written as the total energy of a particle. Since the wave function applies to waves, obviously, we have a strange sort of mixed equation. It is not a wave equation or particle equation. Even Feynman admitted that, and he loved the equation. He said,

Where did we get that [equation] from? Nowhere. It is not possible to derive it from anything you know. It came out of the mind of Schrödinger.

We are now told that the Schrödinger equation is "a new concept in itself." As if being a novelty saves it from having to justify itself physically. But as we are seeing, the Schrödinger equation is not a new concept, it is just a badly fudged equation.

Like Feynman, contemporary physicists try to gloss over the mixed form of the Schrödinger equation, though it certainly is a problem. Because they have pushed the quantum equations towards data for decades, they don't want to look too closely at them. No one has ever wanted to do a close analysis of the field math, and that was true as soon as Schrödinger showed that his equation matched the energy levels of the Bohr model. As soon as the data was matched, job one became building walls around the equation. Job two became rewriting it in an even more opaque form—as Born, Jordan and Heisenberg did—to make sure no one unwound them, as I am doing.

Although we are told the Schrödinger equation is a beautiful example of Bohr's complementarity, it isn't. It is a big mess. Even Schrödinger couldn't figure out what his variables applied to. He *never* figured it out, not completely. He said,

I don't like it [QM] and I'm sorry I ever had anything to do with it.

We are told that Born figured it out, applying the wave function to the probability amplitude, but that is

misdirection.   Schrödinger knew it was misdirection and so did Einstein and Planck.   They never accepted that interpretation of the wave function.  As Schrodinger put it:

**In more than forty years physicists have not been able to provide a clear metaphysical model.**

By that he meant a clear explanation, a mechanics, or a physics.  As it exists now, QM is non-physical. And we can now make that 88 years.  Einstein was more poetic in his dismissal:

**The soothing philosophy – or religion? – of Heisenberg-Bohr is so cleverly concocted that for the present it offers the believers a soft resting pillow from which they are not easliy chased away. Let us therefore let them rest.**

But if the wave function doesn't apply to the probability, what does it apply to?

In his fourth paper, Schrödinger theorized that the wavefunction applied to the charge density, which is basically correct.  The charge density determines the energy of each photon, so the charge density is the underlying cause of everything here.  But the actual waves in the equations apply to the photons, not the charge density, so Schrodinger was not exactly right.  The wavefunction is *caused* by the charge density, but it *isn't* the charge density.  The waves are caused by the stacked spins, and all are determined by the radius of the photon.  That is why—as you will soon see—we can write the wavefunction as a simple function of the charge photon radius.

Yes, I will now show that the wavefunction applies to the spins *on the photon*.  That's right, not the electron, but the photon.  This answers a lot of questions, starting with answering this problem highlighted at Wikipedia to this day:

The basis for Schrödinger's equation is the energy of the *particle*, and a separate postulate of quantum mechanics: the wavefunction is a description of the system.

Let me translate that for you into legible English.  That means that Schrödinger starts with classical particle equations.  The Lagrangian and Hamiltonian are not wave equations.  Schrödinger started with the Hamiltonian, as we just saw.  But then he imports into this Hamiltonian his wave function.  He is importing wave mechanics into a particle equation.  That is strange, and had never been done before. But there is more.  It turns out that the wavefunction doesn't apply to the single particle we have in the Hamiltonian part of the equation.  As you see in the quote above, it applies *to the system*.  We know this not only from experiments, where we can see that the wavefunction isn't applying to a single electron, but we can see it from the probabilistic nature of the equations.  Probabilities apply to a field of particles or a system, not to a single particle.

This confusion is what has caused the proposed smearing of the electron.  The form of Schrödinger's equation makes it look like the electron is indeterminate.  But since the wavefunction doesn't even apply to the electron, it isn't the electron that is fuzzy.  What is fuzzy is the photon, and that is because none of the quantum equations—including Schrödinger's equation—treat the charge field as real or give the charge photon any real variables.

My re-assignment of the wavefunction to the photon rather than the electron solves this problem immediately, because the photon field (charge) IS the system that causes the electron to do everything it does.  All motions of the electron are caused by charge photons.

Most readers will not understand what I mean, and I know that. To comprehend my point here, they have to study my rewrite of the Bohr equations. There I show that Bohr conflated the momentum of the electron with the momentum of the photon. He fudged from $p$ to $\Delta p$, $p$ being the momentum of the electron and $\Delta p$ being the momentum of the photon. But Schrödinger didn't catch that huge error, and so it infected his equations and analysis as well.

To show how confused Schrödinger was by the errors of those before him, we can look at his explanation of the wavefunction:

[It is] the means for predicting probability of measurement results. In it is embodied the momentarily attained sum of theoretically based future expectation, somewhat as laid down in a catalog.

Let me tell you what that means. The important part of that is, "theoretically based *future* expectation." He is talking about the Hamiltonian there. Because the Hamiltonian includes both kinetic and potential energies, Schrödinger is trying to explain to himself what the potential energy $V$ is standing for. He is defining potential as future energy, which he calls future expectation. But I cover this problem in detail in my Lagrangian paper. I show that the Lagrangian has been completely misunderstood from the time of its inception, centuries ago. The two terms $V$ and $T$ have been misassigned. Lagrange assigned them to kinetic and potential energies, but that is not right. I show that $V$ just stands for Newton's gravitational equation. It has the same form. The equation in that form can either be the gravitational field, or it can be potential. For Newton they were the same thing in reverse. Therefore, $V$ in the Lagrangian was always just *kinetic* energy the particle had due to gravity. It had nothing to do with potential, and therefore nothing to do with the future.

But since $V$ is basically standing for kinetic energy, $T$ cannot also be kinetic energy. I show that the Lagrangian is actually mimicking my unified field equation, which has two very similar terms—one of which is Newton's gravity equation. The second term in my unified field equation is neither kinetic nor potential energy, but it has a form that looks a lot like kinetic energy. The second term is actually a field correction to Newton's equation, since Newton's equation is incomplete. Here is my UFE, in that stripped down form:

$F = (GmM/r_2) - (2GmM/rct)$
$E = (GmM/r) - (2GmM/ct)$

You see that the first term looks just like $V$ in the Lagrangian or Hamiltonian. We can also rewrite the second term to look more like a kinetic energy, like so

$a = GM/r^2$
$a = v^2/r$
substituting, $2GmM/ct$ becomes $2mv^2r/ct$
$E = (GmM/r) - 2mv^2r/ct$
$E = (GmM/r) - p^2/2m(4r/ct)$

See how that looks like the Hamiltonian? But in my equation, the second term is not kinetic energy. It is a term that corrects Newton's equation. My second term includes a Relativity transform. That is what the r/ct is. It is a Relativity transform. The rest of the term is simply tweaking the charge field that is already in the first term. I have shown that G already includes charge, so that Newton's equation was already a unified field equation. But it wasn't quite complete as a UFE, because it didn't include the fact that charge took up space and caused drag and so on. We know it does now because of the

photoelectric effect and other experiments.

Therefore, neither my unified field equation nor the Hamiltonian includes any "future" energy. Neither one includes gravitational potential. The Hamiltonian is trying to match my UFE, and if it did so it would *already* be both unified and Relativized.

For this reason, the first correction we must make to the Schrödinger equation is replacing the Hamiltonian with my UFE. Instead of starting with this

$$H = V + T = (GmM/r) – p^2/2m$$

We start with this

$$E = (GmM/r) – (2GmM/ct)$$
$$= GmM[(1/r) – (2/ct)]$$

Now, if we want to insert a velocity into that equation to make it match current equations, we can't use $a = v^2/r$, since I have also falsified that equation. The v in that equation is orbital, and we want tangential. So we need this equation, which I derived for just this purpose.

$$v_t = \sqrt{(a^2 + 2ar)}$$

But instead of solving for a, let us solve for r

$$r = (v^2 - a^2)/2a$$

$$E = mar^2 [(1/r) – (2/ct)]$$
$$E = [m(v^2 - a^2)^2/4a] \{[2a/(v^2 - a^2)] – (2/ct)]\}$$
$$E = [m(v^2 – a^2)/2] – [m(v^2 – a^2)^2/2act)]$$

Since a is the gravity of the proton, and since I have shown that the old constant $\varepsilon_0$ is actually standing for the gravity of the proton, we can rewrite the equation as
$$E = [m(v^2 – \varepsilon_0^2)/2] – [m(v^2 – \varepsilon_0^2)^2/2 \varepsilon_0 ct)]$$

But what is the value of t here? Can we get rid of that? Yes, I have shown that is the time it takes light to go r, so r = ct. But since the electron is not travelling as fast as the photon, it will take the electron longer to go the same distance. Therefore we *must* get rid of that t variable. As it stands, the equation only applies to a photon. In that time, the electron won't go r, it will go rv/c. So, substituting rv/c $^2$ for t (and then getting rid of the r again using the equation above) then gives us:

$$\mathbf{E = [m(v^2 – \varepsilon_0^2)/2] – [mc(v^2 – \varepsilon_0^2)/v)]}$$

That is the equation for the energy of the electron as it orbits the axis of the proton. Although it is already more useful than the Schrödinger equation, it doesn't immediately give us what that equation does. Schrödinger didn't know the tangential velocity of the electron in orbit, so he needed an equation that didn't require that variable. Schrödinger got rid of the variable v, you see, by rewriting the equation in terms of other variables. Although my new equation allows us to solve for the velocity of

the electron, I will go ahead and rewrite this quantum equation in a form more like the Schrödinger equation.

To do that, we have to rewrite the equation, finding v in terms of the photon energy. Because the photon energy is quantized, the velocity of the electron must also be quantized, as well as its energy. But, as I have shown before, the electron is *not* inhabiting levels or shells due to this quantization. In the example we are looking at, the electron is simply being pushed from one velocity to another by the photons in the ambient charge field. Whether this entails the electron orbital radius becoming larger or smaller, or simply the orbital speed becoming greater, is not known, was never known, and probably doesn't matter. It doesn't matter here because it turns out the "shells" that determine bonding, the Periodic Table, and so on, are not electron orbital shells <u>but nuclear shells</u>. But we will join the Schrödinger equation to bonding equations later. For now, we have plenty of work to do without that.

I will however repeat that the waves we are finding in the Schrödinger equation belong to the charge photons, not to the electron. The waves do not belong to the electron, as de Broglie and Schrödinger thought.

To see what I mean, we can start with the equation <u>I recently derived</u>, giving us the photon energy straight from its radius.

$$E_\gamma = 2r_\gamma\sqrt{c}$$

The radius is quantized, because in order to gain energy, the photon has to stack on another spin. And to do that, it must double its spin radius. This one equation allows us to plow past decades of misdirection regarding the wavefunction. Not only is the wavefunction completely *defined* now, the source of quantization is also clear. It has nothing to do with Planck's constant, since I have shown that Planck's constant <u>is just a fudge factor</u> like the rest. Planck's constant allowed old physicists to correct early photon equations that were wrong. But we don't need it anymore.

I have also <u>corrected the Bohr equations</u>, replacing

$$E = m_e 4/8\varepsilon_0^2 h^2$$
with $$E = 9m_e c^2\sqrt{\varepsilon_0}$$

Because I used the tangential velocity in my UFE equations above, we can now let the photon transfer its energy straight to the electron at any point on the orbit, without further transforms. As it was before, linear motion of a photon could not be transformed straight to the orbit of the electron, since the motions didn't match. One was curved and the other was straight, you see. But since my electron is given a tangential or straight velocity, we can transfer energy directly.

$$2r_\gamma\sqrt{c} = 9m_e c^2\sqrt{\varepsilon_0}$$
$$4r_\gamma^2 = 81m_e^2 c^3\varepsilon_0$$
$$m_e^2 = 4r_\gamma^2/81c^3\varepsilon_0$$
$$m_e = 2r_\gamma/9\sqrt{(c^3\varepsilon_0)}$$

$$E = [m(v^2 - \varepsilon_0^2)/2] - [mc(v^2 - \varepsilon_0^2)/v)]$$
$$E = m(v^2 - \varepsilon_0^2)[\tfrac{1}{2} - (c/v)]$$

Now that we have our equations lined up, to solve we just need to recognize that when the electron is bumped by the photon, the energy transfer follows the old conservation of momentum laws:

$$m_\gamma c = m_e v$$

The electron gains what the photon loses.

$v = m_\gamma c / m_e$
$$\mathbf{\Delta E \; = (m_\gamma{}^2 c^2 / m_e - m_e \varepsilon_0{}^2)[\; \tfrac{1}{2} - (m_e/m_\gamma)]}$$
$m_\gamma = 2r_\gamma / c\sqrt{c}$
$$\mathbf{\Delta E \; = (4r_\gamma{}^2 / cm_e - m_e \varepsilon_0{}^2)[\; \tfrac{1}{2} - (c\sqrt{c}m_e/2r_\gamma)]}$$
$\Delta E \; = (2r_\gamma{}^2 / cm_e) - (m_e \varepsilon_0{}^2/2) - (2r_\gamma\sqrt{c}) + (c\sqrt{c}m_e{}^2 \varepsilon_0{}^2/2r_\gamma)$
$\Delta E \; = r_\gamma(9\sqrt{}(c\varepsilon_0) - (\varepsilon_0\sqrt{\varepsilon_0}/9c\sqrt{c}) - (2\sqrt{c}) + (2\varepsilon_0\sqrt{\varepsilon_0}/9)$
$\Delta E \; = r_\gamma(.46374 - 5.63\ E\text{-}31 - 34{,}629 + 5.85\ E\text{-}18)$
$\Delta E \; \approx 2r_\gamma\sqrt{c}$

I went to all that trouble to show you that my equation $E_\gamma = 2r_\gamma\sqrt{c}$ is pretty much the whole solution to the problem. It replaces the wavefunction in many problems, because it is the source of the wave causing the quantization. In the initial Bohr problems that Schrödinger was working on, that is the entire source of the waves, and therefore the wavefunction. As we move up the Periodic Table, that is no longer true, and the problem becomes more complex. But in the first instance, we can simplify the Schrödinger equation down to my unified field equation and the energy of the charge photon.

We already know that works from my rewriting of the Balmer equation.

$$\lambda = 8r_\gamma c^2 / [1 - (2/m)\,][1 + (2/m)]$$

We see that Schrödinger's equation is really just a rewrite of the Balmer equation, solving for energy instead of macro-wavelength. Both equations are being quantized by the photon radius, and the charge photon is the "wavefunction" in both. Remember, Balmer and Schrödinger were working on the same basic problem, so it is no surprise they got similar answers.

You will say, "But do your equations get the same answer as Schrödinger?" Yes, they have to because as you see I just used my new equation $E_\gamma = 9m_e c^2\sqrt{\varepsilon_0}$, which—if we account for the value of the Earth's charge field in the experiment—has the value 13.6eV. I derived that straight from a simplification of the Bohr Formula, so I am explicitly matching data just like Bohr and Balmer and Schrödinger did. I am not questioning data, I am just cleaning up the math.

You will ask, "But how on Earth did Schrödinger manage to match data with such a screwed-up equation?" Because, as I just showed, the equation has tons of wiggle room. The fake Hamiltonian is pushed by the fake operator and by the strange imposed equality of momentum and total energy. Then the wavefunction, being totally unassigned, is capable of almost infinite fudging itself. If you follow the current theory past where I have taken it here, you see both a horrible dive into cloaking math and a horrible series of finesses. I won't bother with most of that here, since I have already brought the house down.

But if you scan the page at Wikipedia, you get a quick taste of current theory. If we want to take the quantum equations past Hydrogen, we meet new complexities in the wavefunction. To include these,

we are told:

Another postulate of quantum mechanics is that all observables are represented by operators which act on the wavefunction, and the eigenvalues of the operator are the values the observable takes.

In other words, Schrödinger wrote the phase of a plane wave as a complex phase factor. In this way he was able to mathematically introduce the required complexity beyond Hydrogen without defining or assigning any of the constituent waves. They still aren't physically assigned. To hide this, we are assured that there is no mechanics underneath the wavefunction. None of these spins or waves is real, we are told. They are "intrinsic" spins, we are told. When that dodge fails, they tell you that quantum mechanics is inherently non-physical. Feynman, following his teachers, implied that Nature has no real form at the quantum level, and that Nature herself only does math there, rather than bothering to exist in the normal ways. You have to laugh.

But what this means is that the complex phase factor can take any value the data spits out. Since is has no mechanics, it has no footing, and can be pushed any old way. As we go up the Periodic Table, the phase factor becomes more complex, and the physicists just add whatever they need to match numbers.

I will show that all this is just the pathetic attempt to hide behind the math. It turns out that every spin and wave can be physically and mechanically assigned, and this includes spins above the number of spatial dimensions we appear to have. The motions have complexities the old boys never unravelled, mainly because they never *tried* to unravel them. They just accepted what Bohr told them: that none of this could be visualized or made sense of, so accept the equations you are taught.

To be specific, studying my nuclear diagrams shows that although electrons are not spinning in x, y, and z to cause these complex waves, and although the orbit is not causing a standing wave either, we do have ways to easily assign many spins. Let me be clear what I mean by that. I do *not* mean that the electron cannot have spins, just like the photon. It can and does. *In some problems* we will be measuring them. I am only saying that isn't what is happening here. None of the degrees of freedom in the Schrödinger equation are caused by the electron moving as wave.

So where do they come from? We start with the spin of the charge photons, as we saw above. That is where the first degree of freedom enters the equation. But as we move up to larger nuclei, we find more. Although the electron is not orbiting the nucleus, we have to look at what proton or alpha the electron is pairing up with in the nucleus. The electrons that undergo reactions with the charge field are normally in the outermost shell of the nucleus, and since the nucleus is spinning, the electron will have the angular momentum of that level. That is the next degree of freedom. Depending on what element we are talking about, that outer level can be one of any number of levels in the nucleus, as I have shown. Each level has it its own angular momentum. And the complexity is even greater than that, because angular momentum isn't determined simply by level. It also is determined by how many nucleons exist at that level. The spin rate of the level will change depending on the mass at that level. That is how we will put a mechanics under the wavefunction for larger nuclei.

You see, once we give the electron a large circular motion like that, it influences all the smaller circular motions below, and we have another method of spin stacking. We aren't stacking spins on the electron, we are stacking orbit on top of orbit. In other words, we don't need to go into the electron's own stacked spins to figure this one out (although it does have them). All we need is the electron's *outer* spin, which we can define as a simple axial spin (although it isn't one). Then we stack on that the orbit of the electron around the pole of the proton. Then we stack on that the orbit of the entire nuclear level

about the nuclear center.  So we have all those "spins" to work with, as well as the spins on the photon. Since spin stacking or orbit stacking always creates the appearance of waves in the data, we have all the degrees of freedom we need.  AND, we have them mechanically assigned to real motions in the field.

Even if I turn out to be wrong about some of the specific assignments of these motions, I hope I have at least shown you that it is possible to assign them.  If I don't get it exactly right, someone else will.  The quantum world is not a mysterious world of math only, with no reality.  It is just a smaller version of our mechanical universe, where real things happen for real reasons.

I will have much more to say about quantum equations in future papers, but this gets us started in untying the Gordian knot of 20th century quantum math.  Some will accuse me of an Alexandrian solution, but I think most can see that my solution is much more elegant than that.  Yes, my answer to current math is to cut it up with a sharp sword and leave it lying on the ground.  But, unlike Alexander, I have replaced the knot with a subtle line of my own.