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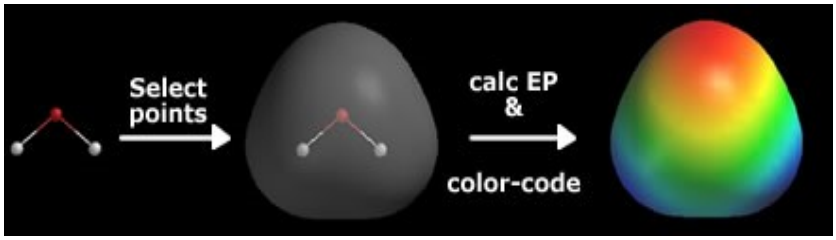
COVALENT *and* IONIC BONDS
are a myth



by Miles Mathis

Just look at that diagram above. I got it from Wikipedia. It is meant to show why the Oxygen **atom** has more negative charge than the Hydrogen **atom.** The problem with that? Atoms are supposed to be charge neutral. This is why we have the same number of protons and electrons, remember? And electrons and protons are supposed to have the same *amount* of charge. So to be consistent, the nucleus should at least be drawn as two red circles, not one. What in god's name is being diagrammed here, anyway? What does Oxygen have three of? I am guessing that is supposed to be a red nucleus and two white valence electrons. But I thought electrons were supposed to be clouds in current theory: how can they be given definite position in a blob? Even if they aren't taken as probabilities, they are still moving very fast. They can't be given a position like that regardless. This is supposed to be a diagram of current theory, but it is a bald contradiction of current theory in several ways. Orbiting electrons could not possibly create bulges like that, and neither could clouds. To do so they would have to stay in the bottom half of this diagram most of the time, and there is no reason why they would do that. No, the reason they are drawn like that in the first blob is to create the second blob. In other words, the diagram is pushed to show what they want to show. Your brain is once again being massaged.

In this paper I will show that both Covalent and Ionic bonding are a myth. Now that I have diagrammed the nucleus, I can show that electron bonding is a myth *in toto*. Atomic bonds are not created by sharing or borrowing electrons, they are created by channeling the charge field through the nucleus. This will destroy both valence bond theory and molecular orbit theory, both of which will be shown to be pushed like this diagram at Wiki.

The original reason electron bonding was invented was to explain the coming together and bonding of atoms. Since the charge field was not considered to be a real field, it wasn't used for this purpose. At the time (early 1900's), charge was not considered to be a real field, and it still isn't in the mainstream to this day. Charge has always been seen only as a naked potential. By naked, I mean it has never been assigned to any real field presence or particle. All the way back to Franklin, charged particles like the proton and electron have been given plus or minus signs to indicate potential, but no real mechanism or field has ever been accepted or even seriously proposed. The current carrier of charge is the messenger photon, but this photon is virtual. It doesn't exist in the field. It has no mass, no radius, and no energy.

It is just a message. Therefore there is no real field. The field has no mass and no energy. It is not really a field. It is only the statement of a field. It is unassigned math.

With no field to explain the bond, early particle physicists had to explain the bond with the electrons. That is all they had. In the early years, they didn't even have the nucleus. And you know what, they *still* don't have the nucleus, since they still haven't diagrammed the nucleus. For mainstream physicists, the nucleus is still just a bag of marbles, with no structure beyond some pushed math. The only thing they have had for the last century is the electron. That is what they knew best, so they assigned the bonding to the electron.

But electron bonding has been illogical and contradictory from the beginning, and most honest people who have studied the problem have seen that pretty quickly. I remember watching an episode of *Felicity*, where they were in chemistry lab. Elena asks, "How can you *share* electrons?" The girls laugh, but it is actually a good question, one that is never really answered, even at the highest levels of physics and chemistry. It was just asserted early on, and because no one could come up with something better, it has been accepted. Over the years a lot of math has been piled on the problem, but it only hides the fundamental questions, it does not answer them. We see the state of the art very quickly when we begin to read about ionic bonds:

The formation of an ionic bond proceeds when the cation, whose ionization energy is low, releases some of its electrons to achieve a stable electron configuration.

But wait, the ionic bond is used to explain the bonding of atoms, not ions. For instance, in the given example of NaCl, it is a Sodium **atom** that loses an electron to become a Sodium cation. But the Sodium atom is already stable. It doesn't need to release *any* of its electrons to achieve a stable configuration, because it is already stable. So what causes it to drop an electron in the presence of Chlorine? We aren't told.

This problem becomes even bigger when we ask the same question for Chlorine. Has Chlorine dropped an electron to become an ion? No, we don't want Chlorine dropping electrons, we want Chlorine adding electrons. So in the beginning, Chlorine is just an atom, and as such is stable. Why should it want to borrow an electron from Sodium? We are told it is because Chlorine has an "electron affinity," but that is just a statement. In fact, Chlorine can't "want" an extra electron, because that would be a stable atom "wanting" to be unstable. That makes no sense.

It is even worse if we ask for an explanation of electron affinity.

The **Electron Affinity** of an atom or molecule is defined as the amount of energy released when an electron is added to a neutral atom or molecule to form a negative ion.

But that is clearly circular. You can't define an affinity by a release of energy. The release of energy is the result. We want a cause.

As a sort of answer, we are told

Ionic bonding will occur only if the overall energy change for the reaction is favourable – when the reaction is exothermic.

The atoms apparently have some desire to release energy. But that isn't an answer, either; it is another

diversion. All that tells us is that there *is* a release of energy during the bond, but that energy could be released in any number of mechanical scenarios. As you will see, it happens in my scenario, which has nothing to do with electrons being shared or borrowed. So it is indication of nothing.

We are told that all elements desire to become noble gases, and that this explains why atoms want to gain or lose electrons. But that is strictly illogical, and we have no evidence for it anyway. It is implied that Chlorine wants another electron to be more like Argon, but if that is true, what it really should want is another proton. Another electron won't make Chlorine into Argon, it will only make Chlorine an ion, which is unstable. Elements don't want to be ions, which is why ions take on electrons to become atoms. It is ions that want to be atoms, not the reverse. If there is any affinity, it is for having the same number of electrons and protons, as we know. Atoms have no affinity for becoming ions.

Once I remind you of the fact, you can see that we have loads of evidence that atoms do *not* want to gain or lose electrons. It is ions that want to be atoms, not atoms that want to be ions. And it is positive ions that attract free electrons, as we know, not negative ions or atoms. Once Sodium becomes a cation, *it* should attract the free electron, not Chlorine. So there is no reason for Sodium to start releasing electrons just to suit theorists. There is no reason for a free electron to move from a cation to a stable atom. But there are lots of reasons for Sodium *not* to release electrons. This whole theory is upside down from the beginning. Therefore, the bond cannot be caused this way.

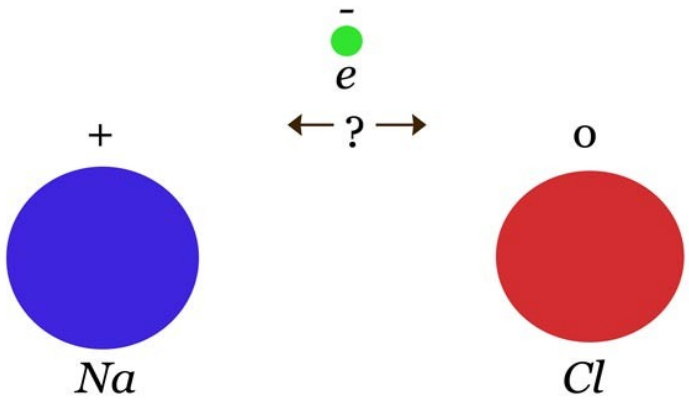
Let me say it again: **free electrons do not move from cations to stable atoms**. That is strictly backwards. 20th century theorists have sold you a contradiction. They give the electron a minus sign and the cation a plus sign and the stable atom no sign, then tell you—as the foundation of a theory—that this free electron moves to the stable atom. If you buy that you will buy anything, and you have.

And again:

The anion, whose electron affinity is positive, then accepts the electrons, again to attain a stable electron configuration. [Wiki]

THE ANION ACCEPTS ELECTRONS. Everybody for a century has bought that. They put it in print and sell it to you. Hey! Slap yourself and remind yourself that anions are given a negative sign. And so are electrons. So the theory of ionic bonding is that electrons move from plus to minus? So much for field potentials. In current theory, electrons can move any way that the theorists want them to. It is all a magic show.

This paper has been up for several months, and I have gotten emails telling me I don't understand electron affinity. The Na and Cl aren't ions until the electron moves over, I am told. And it moves over because Cl has more affinity for it. But that doesn't work because the Cl atom can't have more electron affinity than the Na *ion*. It might possibly have more affinity than the Na atom, and that is the way affinities are assigned. But the Cl *atom* cannot have more affinity for an electron than an Na *ion*. As soon as the electron is "released" by the Na, the Na is an ion. We then have the electron hovering over the Na+ and the Cl atom. Which way will it go? Are you telling me the electron will move from a cation to a neutral atom? It will move away from an open proton? Look at this diagram of the process. I have drawn the moment after the Na has released the electron, but before it is accepted by the Cl.



Do you still think the electron will move to the Cl? Do you really think an atom can have more electron affinity than a cation? How could an atom be more receptive to a free electron than a cation? That goes against the definition of cation, of ion, of atom, and of field potential.

You will say it must work that way because we know that Na and Cl do bond. But that isn't an answer. Yes, they bond, but that can be explained in any number of ways—and hopefully one of them wouldn't contradict the field definitions. In fact, I present an explanation below that doesn't contradict the field definitions. The current explanation is just that of Kossel from 1916, updated with macromedia presentations. It was naïve then and it is equally naïve now. It was a bald contradiction then and it is still a bald contradiction.

This is not to say that elements have no affinity for one another. I will show that they do. But this affinity is has nothing to do with electrons. It has to do with charge. Elements don't want to gain or lose electrons, they want to balance the charge field around them, to gain even more nuclear stability.

I will get back to my criticism of current theory later, but for now the best way to make you see the deficiencies of the present model is to show my new model. I have written six papers in the past week on nuclear structure, and it will help if you have read them. But to gloss the method, I build the noble gases from alpha particles, then build the other elements from the noble gases. This isn't much different than the current model, except that I now can diagram the nucleus, showing how the alphas and protons fit together to channel charge through the nucleus.

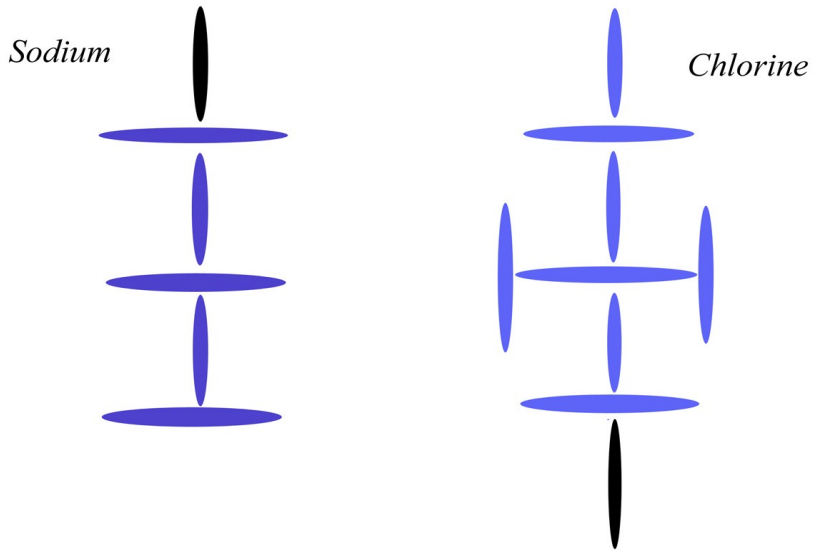
I have shown in many previous papers that charged particles are in fact recycling the charge field, by taking in charge photons at the poles and emitting them (most heavily) at the equators. They do this just like the Earth does it, though on a different scale.

I draw the alphas and protons as disks seen from on-edge. This helps me to diagram without blocking your view of inner parts of the nucleus. In addition, each disk is assumed to have a hole in the middle, like a compact disk [CD]. Although I still assume the protons are roughly spherical, I draw them as disks to indicate the spin and the charge emission. Because they are spinning very fast, the emission is

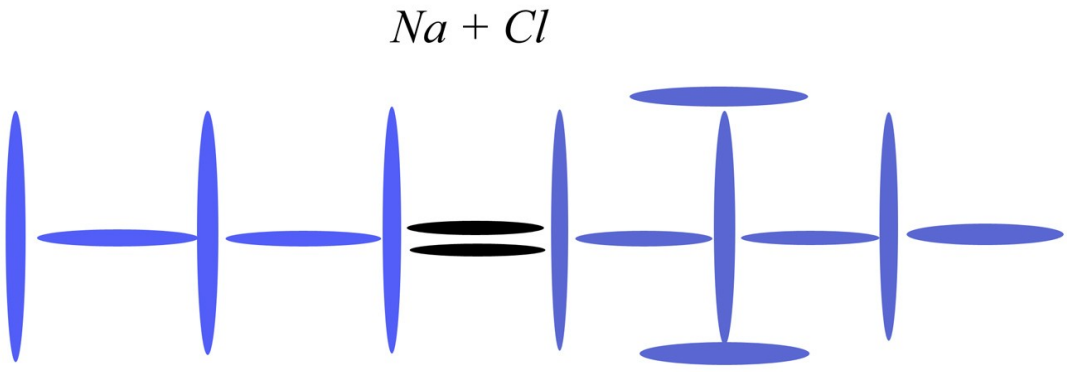
heaviest in the equatorial plane of the sphere. Since I want to indicate the proton as an emitter of charge, this allows me to simplify the diagram into a circle rather than a sphere.

The hole in the disk indicates one field potential and the equator indicates the opposite potential, since photons go in one and out the other. When we build the nucleus, we place edge to hole, to indicate positive to negative. This creates a channel through which charge can move. Because charge moves in defined and limited channels, it does not tend to dissolve the nucleus. In this way, charge is constantly expelled from the nucleus, explaining in a simple way why charge does not push protons apart. This is what has allowed me to dispense with the strong force entirely.

This is the diagram of NaCl:



The blues disks are alphas. The black disks are protons. All disks are spinning, and all disks have holes in the middle. The blue disks have holes that can accept alphas, which means they can accept two protons. This is why we can simply bring the two protons together to create NaCl.



That link in the middle could now also be diagrammed as one blue disk, instead of two black disks.

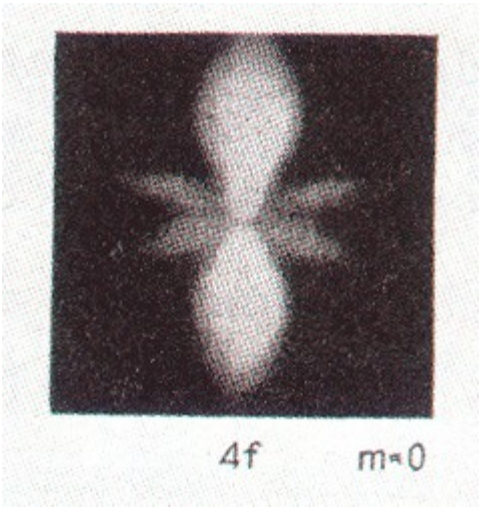
This means that hole is full, which creates a strong bond. Why is there a bond? Because the charge field is now moving through that bond, and therefore through both atoms.

This particular configuration is strong for another reason, one we have studied in previous papers. Because the chain has an alpha in the hole on one end but not the other, we have a large potential difference across the molecule. The alpha is like a fan, pulling charge into the hole. Because we have a fan at one end and not the other, the charge "knows" which way to go through the chain. The charge is moving through this molecule very efficiently, which is why salt is a very good conductor. This also acts as the mechanical explanation for the polar nature of salt, which is strongly + on one end and strongly – on the other. It is the charge field that is causing the potential here, not the electrons. You have charge going in one end and out the other, so we can map potential exactly like wind. Charge IS a photon wind.

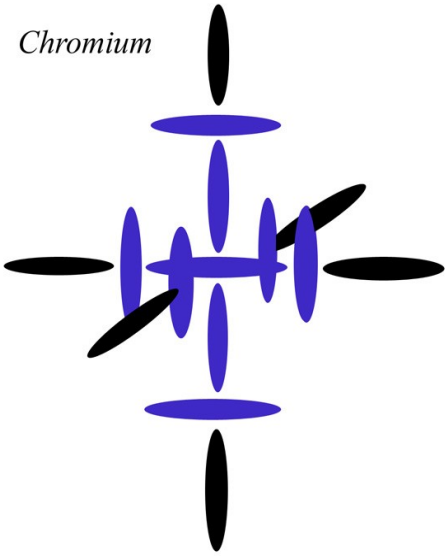
Now, every proton in my diagram has an electron with it, and the alphas have two. So if we track only the electrons, it looks like single "valence" electrons are pairing up in the link. But since I have just explained the bond without mentioning electrons once, we can see that it is not electrons that create the bond. They are just along for the ride. What causes the affinity of these two atoms has nothing to do with electrons. It has to do with the unfilled holes in those outer alphas. That hole is caused by spin and by the channeling of the charge field, not by electrons.

If we treat the holes as charge minima, and the charge field as a wind, the holes have very real suction. They will attract charge maxima like those single protons sticking out. You see, everything in my diagram and theory is mechanical. Nothing is heuristic or mathematical. I am not following the rules of any pre-set math, I am following simple field mechanics.

[Added, January 15, 2012] Now I will show you something extraordinary. A reader, upon seeing my nuclear diagrams, reminded me that Max Born had modelled the distribution of charge according to Schrodinger's equations. This reader sent me the models he had found on the web. Well, I happened to have the book on my shelf [*Atomic Physics*, Max Born, Blackie & Son, 1935]. Here is Born's model of the 4f electron shell [plate X, p. 149]:



Look familiar? Here is my model of the 4th level of the atomic nucleus:



Now, I made my models from scratch, as it were, just trying to match the Periodic Table. I was not trying to match any previous models or equations. But you can see that my carousel level, with four alphas spinning about a central alpha, matches the form of Born's 4f diagram. Is this a coincidence? No. We get a match because Born was diagramming Schrodinger's equation, and Schrodinger was matching charge data from experiments. That is, Schrodinger had no model, he had only data to match. But since he and I were matching the same data, it is no surprise we should arrive at similar models. What this means is that Schrodinger's equations are basically correct, they are just misassigned. I have said in many places that much of quantum physics is good physics, and that Schrodinger's equations are the best of the lot. But his equations are representing the charge field as channeled by the nucleus, not electron orbitals.

Now let us look at electronegativity. Current theory tells us that atoms have to have a different electronegativity to bond, but "electronegativity" is just a word. Up to now it has explained nothing, its has just assigned a term to a difference whose cause is unknown. **Electronegativity cannot be measured directly**. It also doesn't follow any logical pattern on the Periodic Table, given current theory. It generally runs from low to high across the table, but there are many exceptions (Hydrogen, Zinc, Cadmium, Terbium, Ytterbium, and the entire 6th period, for instance). In fact, electronegativity is simply calculated after the fact, and it has no mechanics behind it at all. We can see this clearly at Wikipedia, where it is admitted:

To calculate Pauling electronegativity for an element, it is necessary to have data on the dissociation energies of at least two types of covalent bond formed by that element.

That is the definition of *post hoc*. In other words, the math is pushed to match the data, and has no predictive qualities. Pauling was trying to build models without the charge field, and with the wrong quantum mechanics, so all his calculations were doomed.

I will be told that molecular orbit theory matches data very well, and is therefore very well respected. But my answer is that *of course* it matches data, since it has been pushed to match data for decades. Given all the work that has been done on it by thousands of physicists and chemists, it would be very surprising if it didn't match data. That was the goal, after all. But the problem is not with the math, which I admit is very clever in its ability to hide mechanics at all points. The problem is that this clever math has no theoretical or mechanical foundation. It is a castle in the air. It has been 80 years of work to fine-tune a ghost. There is no electron bonding, so it doesn't matter how well the math matches the data. The math matching the data is just proof it was pushed.

Let me put it another way. No amount of math can make inconsistent theory consistent. I have shown that the foundation of electron bonding theory is composed of electrons moving away from cations and toward stable atoms. Since that is a contradiction of the field definitions, no math can save it. The theory of electron bonding is garbage, and no amount of pretty math can make it smell sweet.

Not all the current math will have to be jettisoned, since large parts of it can just be shifted over to my theory and diagrams. Electronegativity, for instance, can be redefined as the charge potential surrounding a given atom. Atoms create currents in the field around them, as well as signature charge densities in that field, which other passing atoms must respond to. And, as current theory admits, this charge field is a function not only of the atoms present, but of the particular charge field present. The charge field can be affected by other things than just the local atoms, such as ambient E/M fields.

But I can already tell you the main cause of electronegativity, a cause that current theory is totally ignorant of because they have no nuclear diagram. The main cause of electronegativity is the proton configuration in the outer shell. That's right, it has nothing to do with electrons or electron shells, since electron don't orbit the nucleus to begin with. Because the proton configuration varies greatly, even from period to period, it won't follow a tight pattern across the Periodic Table. Nuclei aren't built by mathematical rules, they are built by structural rules, the main structural rule being stability. Each elements seeks the most stability at that number, and the only way to discover the stability is know the structure. In other words, you have to know how the nuclei are built. You have to know that there are eight holes in the 4^{th} level, for instance. You have to know how many protons each hole can take (it varies from period to period), so that you know how full or how empty each hole is. And you have to know how the position of the hole in the nucleus will cause it to act, as a matter of spin and angular momentum. For this, you must have a diagram. No general equation will work. I suggest you look at my diagram and analysis of Mercury to see how this works in practice.

Of course we can build math to fit the structure after the fact, but we have to know the structure first. We get the math from the structure, not the structure from the math. As I have shown over and over, physics has failed in the past century because it has always gotten its math before its structure. Physics has been taken over by mathematicians, and these mathematicians have pushed their maths far ahead of any structural knowledge. This has caused a physical meltdown, and physics is now non-physical. It has been replaced by virtual particles and fake symmetries (from gauge math) and borrowing from the vacuum.

My theory and diagrams also explain how things like affinity and electronegativity are communicated between atoms. In current theory, we have many instances of force or impulse at a distance. In fact, all of electron bonding theory and current charge theory is built on magical forces at a distance. This despite the fact that particle physicists put “no force at a distance” on their T-shirts. That is damage control if I have ever seen it. Without a physical charge field as I have defined it, there is no way atoms can communicate affinities or electronegativities across free space. For instance, in the example above,

how does Sodium know Chlorine is near, so that it may release electrons? Messenger photons, no doubt, which communicate via Facebook.

In my field mechanics, such things are easily explained, since the charge field is composed of real photons with real mass, radius, spin and energy. I will be told that real photons can't be fit into the gauge math, but the gauge math is not my master. Nature is my only master. If the gauge math can't deal with real photons, we need other math that can. I have already shown in a series of papers that real charge photons can and *must* be fit into the unified field equations, and I have shown you how to do it with real math. Not only can real photons be fit into the field equations, once there they begin to explain so many things we can't keep up. Just as the latest example, I have shown that dark matter is actually my charge field. I have shown how to derive the 19 to 1 ratio with simple math—something the mainstream has not been able to do. I could do it only because I had already written the unified field equations, so I knew precisely how charge fit into them, both at the quantum level and the celestial level.

Of course I will have much more to say on these matters in upcoming papers. This paper is just the first in a huge undertaking: rewriting the rules of the nucleus and nuclear bonding. But my diagrams have already set the table for a revolution in quantum mechanics. We will see where it takes us.