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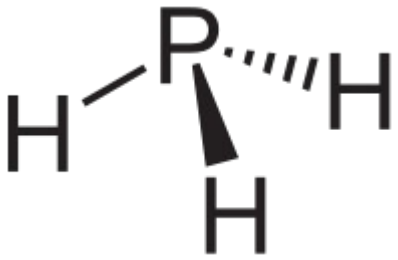
The Phosphorus-Hydrogen Bond



by Miles Mathis

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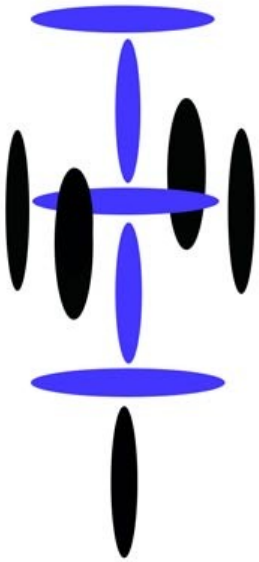
Two days ago, it was reported at Phy.org that chemists in Copenhagen had shown Hydrogen bonding to *positive* Phosphorus ions. Since according to mainstream electron bonding theory, this would be a positive-positive bond, it was not thought to be possible. Once again, this blows more than a century of molecular bonding theory, but of course they don't admit that. They try to put a positive spin on it by claiming it is an exciting discovery (which it is), but it is really just another nail in the coffin of mainstream bonding theories of all types.

Conveniently, it also proves my recent theory of nuclear charge-stream bonding. In dozens of papers over the past four years, I have shown that molecular bonding is created by charge streams moving through and between nuclei, not by electrons. In an important paper on Hydrogen bonding, I offered diagrams of these new bonds, showing that electrons—though present—were mainly along for the ride. It was the streams of real charge photons that were causing the bonds and all the real field potentials. My nuclear diagrams will enable me to easily show you the cause of the Phosphorus-Hydrogen bond.

We start by diagramming the Phosphorus nucleus:

Phosphorus

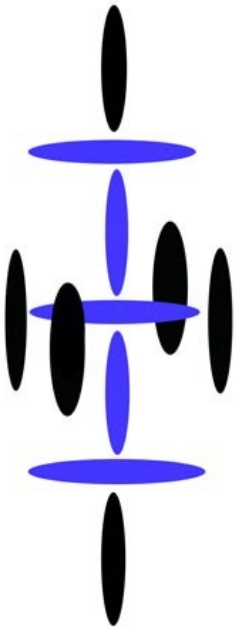


In that diagram, each blue disk represents an alpha particle, with two protons and two neutrons. So our nuclear core is five alphas or ten protons. Black disks represent single protons. In my simplified models, I do not draw the other neutrons unless it is necessary for the problem at hand. The protons tell us the charge channels without bothering with neutrons in most situations. The four central protons on the equator occupy what I call the carousel level, since this level can spin like a carousel. We then have our fifteenth proton plugged in the south pole. Since on the Earth, the south pole is more highly charged, I have (usually) matched my nuclear models to the Earth model, making the south pole dominant. To see why I do that in more detail, you will have to consult my previous papers.

This model of the Phosphorus nucleus immediately tells us why that element is often labeled positive, but why it can also be negative, as in our current problem. When Phosphorus is positive, it is because that proton on the south pole is being used as a plug, to plug into another nuclear charge stream. My model is basically a plug-and-socket model, so the plug is positive and the socket is negative.

Well, you can see that Phosphorus also has an open socket at the north pole. That is where we would first expect the Hydrogen to be plugging in this P-H bond:

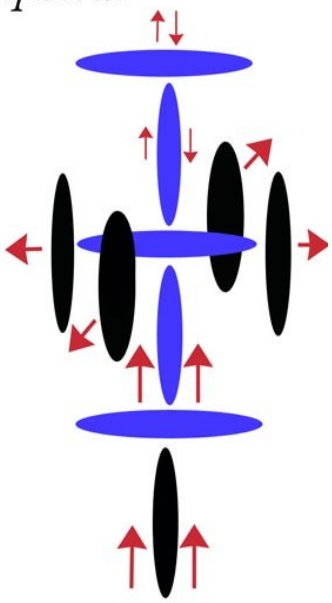
P-H



That looks fairly straightforward, so of course the question begged is why we haven't seen it before. Why is this P-H bond so rare and so difficult to create? If Phosphorus is sitting around with an open socket just the size of a Hydrogen ion, why isn't P-H common?

Actually, the P-H bond is more common than you would think just from reading this recent press release. See Phosphine or Disphosphane, for instance, which we will study below. But to understand the P-H bond, we have to follow the charge streams, as usual. My model is mainly a model of charge streams. Each disk is to be understood as a sort of fan, channeling real photons along real paths. So to fully comprehend the model, it helps to add arrows.

Phosphorus



Since Phosphorus has a proton pulling in charge at the south pole but not the north, the charge streams are much stronger in the lower half of the nucleus (indicated by the larger red arrows). As in most nuclei, the main charge stream comes in one (or both) poles and goes out the equator or carousel level, as you see diagrammed here. This diagram can be applied to any semi-spherical body, and in my other papers we have seen the same pole-to-equator charge channeling inside the electron, inside the Earth, inside the Sun, and through the galaxy.

In some nuclei (see my diagram of iron in my paper on Period 4) we also have strong through charge, which is charge that moves from pole to pole. This happens when there are not enough protons in the carousel level pulling charge out the equator. Part of the charge moves straight through and we have charge conduction and a created sub-E field. As you see, Phosphorus has a bit of this going on itself, since it only has single protons in the carousel level while having double protons in the core. [The protons in the carousel level are also vertical, not horizontal, which limits the exiting charge. In larger elements, we plug protons into those carousel holes horizontally, helping the nucleus release charge.] But since Phosphorus also has only a single proton on the pole, the pull out about matches the pull in. This gives a weak through charge, which I have indicated by opposing arrows.

What this means for our problem here is that although Phosphorus has an open socket at the north pole, that socket doesn't have any appreciable potential under normal circumstances. It doesn't have much pull, or suction, if you like. There is only a weak stream of photons entering the north pole of this nucleus, too weak to pull in and hold a Hydrogen nucleus. So although there is a hole available for the passing Hydrogen, the Hydrogen has no reason to move into it. It may move weakly toward that hole, following the charge stream of photons, but the ambient field is about as strong as that stream, and the same photons that pull it in also act to bump it out.

However, if we manipulate the ambient or external charge field, we can also manipulate the suction of that hole at the north pole. Before I show you how that manipulation may work, let us look at another possibility for this P-H bond.

If we study the Phosphorus nucleus closely, we see we have more than one open hole in the outer level. In fact, we have three. Since the core is blue, that means we *could* plug two protons in top and bottom. Or, two in the north pole and two in the south pole. Each blue disk can accept a maximum of two protons. If we plugged the protons in firmly, we would have a variant form of Argon. Argon isn't built that way, and we will see why, but we do have open channels of that size here. In fact, that is how we build Phosphine and Disphosphane and so on. Remember, they have known about Hydrogen/Phosphorus compounds for a long time. But until now, they have tried to tell us Phosphorus had gone negative in some way to explain this. For instance, in the only sentences at the Phosphine page at Wikipedia that address this question, we find:

> The low dipole moment and almost orthogonal bond angles lead to the conclusion that in PH_3 the P-H bonds are almost entirely pσ(P) – sσ(H) and phosphorus 3s orbital contributes little to the bonding between phosphorus and hydrogen in this molecule. For this reason, the lone pair on phosphorus may be regarded as predominantly formed by the 3s orbital of phosphorus.

More mainstream fudging, in other words. P-orbitals and s-orbitals aren't even the same shape, we are told, so how are they creating a bond here? In other words, the p-orbitals of Phosphorus should exclude the electron-less Hydrogen ion, but they just choose to ignore that here. They know the s-orbitals can't be causing the bond, because that would break another of their manufactured rules: the bond angles aren't right, as they admit. So they push you into this s-p bond because it is the only other

thing available. But then they forget to tell you that breaks other rules. They also forget to show how and why Phosphorus is acting negative in Phosphine. To be rigorous, Phosphine was always just as illegal as the new P-H bonds they are touting this week. Given mainstream theory, the Phosphorus in Phosphine should have never attracted Hydrogen to begin with.

To see what I mean, remember that according to mainstream theory, Phosphorus has 3 electrons in its 3p level, and five in its 3 level. According to mainstream theory, it can lose any or all of those, being ionized from +1 to +5. It then wants to refill, which is why it is a positive ion. Well, it won't want a Hydrogen ion in that case, since Hydrogen just has a proton. Hydrogen has no electrons to "share" with it. To attract a Hydrogen ion, or *three* of them in the case of Phosphine, the Phosphorus would have to have three extra electrons, wouldn't it? And how would it have come by those? How does a stable atom attract three extra electrons, and where does it store them until the three Hydrogens come lumbering by to share them?

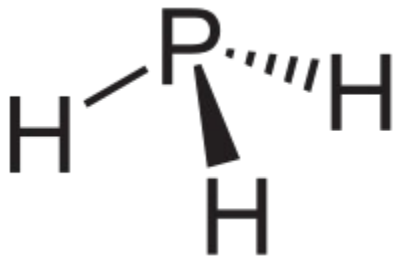
I will be told that Phosphorus shares the 3p electrons it already has, but by what field potential would it want to do that? If it *has* the 3p electrons, it isn't an ion. According to mainstream theory, ions have potentials because they are charge imbalanced, but stable atoms don't and aren't. Well, if the Phosphorus has the 3p electrons, it is not an ion. If it doesn't, it can't share them. So in neither case should it bond with Hydrogen. As I have said, electron orbital bonding has never made a lick of sense, and it breaks its own field potentials all the time. The entire theory is based on bold contradictions which have existed in the open all along. Which is why I know this new experiment won't change anything in chemistry or physics. Both physicists and chemists have been ignoring the crushing illogic of their theories for many decades, so this new experiment will not seriously trouble anyone. They will just fudge it like they did Phosphine and go on as before.

But with my model of the nucleus, I don't have to fudge anything. I can show you the bonds in a completely logical manner, along with the charge channels that cause them.

So let us return to my diagrams. Remember, I was showing you that Phosphorus actually has three open sockets in its outer level, although under normal circumstances those sockets have little potential. The two north pole sockets have little potentials because there is nothing pulling charge in at that pole. No proton fan is there to lead the charge in. At the south pole, we have a strong charge stream going in, but since we only have single protons on the carousel pulling charge out, there is no potential at the south pole for a second proton. Again, there is an open hole, but no pull from the charge stream to attract a second proton.

However, if we manipulate the external or ambient field, we can change that. There are several ways to do that. We can make the ambient field very hot or cold, by adding or subtracting photons. This raises or lowers our field densities. We can also make the ambient field more or less coherent, by forcing all the photons to move in the same way. We could do this with some sort of current. Or, we could do it by using the charge stream of a stronger molecule. This is what happens with the preparation of Phosphine, for example. Phosphorus is mixed with Potassium Hydroxide, and the KOH acts like an applied current, making the ambient charge streams far more coherent. Any free Hydrogen then goes to the poles of the Phosphorus nucleus, creating through charge streams. These through charge streams act as the glue that we call the P-H bond. So you see it has nothing to do with electrons or electron orbitals.

In fact, this allows us to explain the varying strengths of the Phosphine bonds.



That is how the mainstream now diagrams Phosphine, indicating the variance in bonds. But using electron bonding theory, there is no good way to explain the variance there. If the bond is in the 3p level, how are those 3 electrons different? However, if we use my model instead, we have an immediate and easy explanation of the variance. One of the three Hydrogens in Phosphine has to go to the south pole, alongside the existing proton there. Since there is an existing strong stream of charge already going in the nucleus there, the Hydrogen will naturally align with the existing proton, creating a strong and straight bond. The other two Hydrogens have to go to the north pole, where things are not so tidy. Being on the weak side of Phosphorus means they will be bound much less tightly. In fact, they will have to compete with a neutron that already lives in that hole.

Yes, if we return to my first diagram, we see that the Phosphorus nucleus is lopsided. This is because Phosphorus exists at the number 15, of course. Fifteen protons will always be lopsided. But the element solves this problem by keeping a neutron at the north pole to maintain balance. This makes the nucleus very nearly symmetrical, and keeps it from breaking apart or spinning wildly in the ambient charge wind.

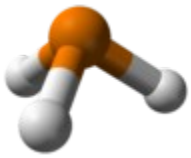
You will say, “If the element doesn't have the charge potential to pull in a proton at the north pole, how does it 'keep' a neutron there?” It happens because neutrons turn out to be much easier to herd in the charge wind than protons. This is because neutrons channel charge pole to pole while protons channel pole to equator.* So while protons act like little fans in the field, neutrons act more like little lightning rods. Or, protons are more 2D while neutrons are more 1D. Protons channel in a plane while neutrons channel in a line. Being more linear, neutrons are easier to channel. Channels are linear by definition, so any body that channels linearly itself will respond more quickly to linear channels. I probably need to write an entire paper on this, but it needed to be glossed here, since it will come up for some readers. So while protons won't respond to very weak channels like this, neutrons will. This is the main reason the nucleus tends to soak up neutrons.

At any rate, there is a neutron already existing in the north pole of Phosphorus, though its existence there isn't important until we start looking at a tough problem like Phosphine. When we are studying Phosphorus by itself, that neutron in the north pole isn't doing much to define the charge channels of the element. It does pull in charge, since neutrons aren't really neutral in this position, but the top half of Phosphorus is charge-weak nonetheless. But because that neutron is already there, the two Hydrogens of Phosphine have to share the hole with it. This is why we find them angled.

This neutron at the north pole also helps us understand why Phosphorus has little potential to attract Hydrogen under normal circumstances. The socket that at first appears to be empty is not: it is filled with a neutron. So the passing Hydrogen cannot go in the socket filled by the neutron. Yes, the neutron is pulling in some charge up there, since neutrons are not really neutral in that position, but it isn't pulling in enough charge to attract the Hydrogen proton. If we look at its magnetic moment, we see why. If the magnetic moment of the proton is 1, the magnetic moment of the neutron is .685. It is

pulling in .685 amount of charge, but needs 1 to pull in the proton. So the proton may be weakly attracted to the north pole of Phosphorus, but the ingoing charge stream there isn't enough to create a bond.

But let us return to Phosphine. Using my diagram, we can easily calculate the bond angle of Phosphine, something the mainstream cannot do. The angle is known to be 93.5°. This seems mysterious, since if we multiply that by 3 we get 280.5°. If the Hydrogens had bonded equally around the central Phosphorus, we would have expected an angle for each of 120°.

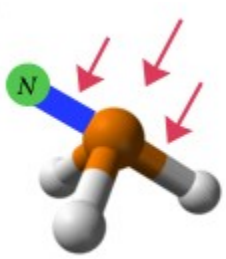


Why are the Hydrogens all on one side? What is causing that huge asymmetry? We now know it is the neutron. Now that we understand the Hydrogens are sharing space with that neutron, the angle begins to make sense.

At a glance, it would seem the neutron would be filling the other 79.5° of space. However, that quick analysis fails for two reasons. One, it assumes all the bodies will occupy one plane, which they won't. Four or more bodies arranging themselves around a sphere don't have to occupy one plane. Two, it assumes the neutron moves over to share space equally with the protons, which is not a good assumption. Since the neutron is part of the original Phosphorus nucleus, we should assume it is plugged into the socket much more strongly than the Hydrogens, which are just in a molecular bond. The Hydrogens do not become part of the nucleus, for if they did, we would have some weird form of Argon, not PH3. Therefore, we should assume the neutron is bound more closely and more tightly, and that although the Hydrogens may affect its bond angle, they should not effect it equally with themselves.

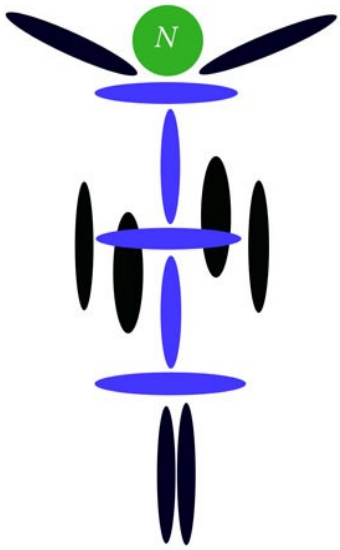
How can we solve this? Well, we solve the same way I have solved similar problems: we use the known magnetic moment of the neutron, which is .685 that of the proton. We then let the neutron initially bond in a straight line with the proton on the south pole. The neutron/proton angle is then 180. Then we bring in the three Hydrogens of Phosphine. One will go in the south pole and align, so we can ignore it as a matter of angle. The other two go to the north pole and arrange themselves next to the neutron.

Since there are only two of them, it seems at first they would go opposite sides of the neutron, and the three bodies will be in the same plane as the nuclear pole. But, again, this is assuming a symmetrical external charge field, which is a bad assumption. The charge field around Phosphorus is not symmetrical, as we have seen. We have already seen that the charge densities are greater at the south pole, due to the proton there pulling in charge. But the field is also not symmetrical left to right. This is because the nucleus is spinning. Well, it must be spinning either left or right, but not both. This means the entire nucleus is acting like a fan in the ambient charge field, pushing that charge left to right (say). This will act to push both our Hydrogens to the right also, destroying the alignment. So let's return to the mainstream diagram and fix it to show this:



The red arrows indicate the direction of the ambient charge field around the spinning nucleus. Since the two Hydrogens not on the pole are loosely bound, they will be pushed over by this field, as you see. The neutron, being tightly bound and part of the nucleus itself, will not be pushed over, but will stay right on the north pole. If we use my diagram instead of the mainstream diagram, we see better how that works:

Phosphine



In that diagram, the ambient charge wind would be blowing into or out of the page, so I couldn't really draw the red arrows. But you can see how the angles are created. They aren't created from the center of the nucleus, they are created from the north pole.

My diagram allows us to see how the three Hydrogens plug into Phosphorus in the Phosphine molecule. One goes on the south pole, in line with the existing proton there. I have drawn it right next to the existing nuclear proton, although it doesn't actually fit tight like that. A more precise diagram would have the Hydrogen backed out some distance, to indicate the weaker plug; but this is fine for our purposes. I don't want the diagrams to be too sprawling. Having it tight in there also acts to remind us that this is why this Hydrogen acts slightly differently than the other two, bonding to the Phosphorus the best of the three. You can see that this Hydrogen is in line with the nuclear pole, which is what explains its bond strength.

The other two are angled from the north pole, and this is different from the mainstream diagram, as you see. The mainstream diagram is naïve, seeming to indicate the bond angles are created from the center of the Phosphorus nucleus or atom. But as you see here, the angle is from the north pole.

But we still haven't calculated the actual angle. It seems quite odd that the ambient charge field would push them 3.5° short of 90°. To understand it, let us look at the two main charge streams of this molecule. That is to say, the polar charge stream and the equatorial charge stream. If the molecule had only a polar stream, going straight through from south pole to north, the upper Hydrogens would align to it, being completely vertical with an angle of 0° (or 180° from the south pole). If the molecule had only an equatorial stream, the Hydrogens would align to it, being completely horizontal at an angle of 90°. But since the molecule has both an entering and exiting stream, we have to take both into account when calculating any angles.

This takes us back to the magnetic moment of the neutron, which we know is about .685 that of the proton. That is a 31.5% variance between the two particles. Well, we know the neutron is responsible for any entering charge stream at the north pole, so it sets the strength of the vertical or polar stream at the north end of the Phosphorus nucleus.

Some will butt in here to tell me once we plug the two Hydrogens in up there, they will add to that stream, which is true. However, to calculate the angle they take in the stream, we can't include their charge *after* they take their positions. Their positions are determined by the charge stream that exists *before* they get there, you understand. Otherwise, they would be creating forces on the themselves, and physics doesn't allow that.

So, the neutron is responsible for the strength of the vertical stream entering at the north pole. The exiting stream is then determined by those four protons on the carousel level. Therefore, we have to compare the neutron to those *four* protons. Or, since the exiting stream is split four ways, we split our neutron/proton variance four ways. Which means we divide the 31.5% variance we found above by four, obtaining a variance of **7.875%**. Is that what we find from data? **Yes**. The angle from the protons to the new Hydrogens is 93.5°. The angle from the neutron is therefore 180 – 93.5 = 86.5°. The variance between those two numbers is about **7.5%**. We have a pretty close match.

Which leads me to believe the average angle is more like 93.7°. In fact, I will go ahead and predict that the Phosphine angle will be corrected in that way soon. I do that because if the angle is increased by .2, the numbers will match the magnetic moment variance of neutron and proton, as I showed with simple math.

But there is one other possibility, which would nullify my prediction. It may be that the ambient charge wind is able to push the neutron over a small angle, pushing it off the north pole. If the neutron shifted even .1°, it would change all the other angles. So it may be that this neutron shift is what is causing the error here between 7.5 and 7.875. But if that is the case, then the angle should be slightly variable, depending on the ambient field. What I mean is, if we apply a strong current to Phosphorus, aligned on its pole, this will increase through charge. This increased through charge should act to stabilize that neutron, making any angle it has smaller. A stronger through charge should push the neutron angle closer to zero, which will then change the bonding angle of the top two Hydrogens slightly.

This only leaves the bond variance between the two upper Hydrogens for me to explain. Remember, Phosphine is drawn with three different bond strengths. Well, I have drawn the upper two the same. What causes the variance there? Once again, it is the spin of the molecule. Since we have no bonds on

the carousel level, this molecule is free to spin. Well, it has to spin either left or right, but not both. As it spins, one of the two upper Hydrogens will be leading and the other following. The leading one will block a small percentage of the ambient charge wind from the following one, making the leading bond slightly weaker and the following one slightly stronger.

Now that we understand an old molecule like Phosphine, we can return to the new molecule created in Denmark. The greatest difference between old P-H bonds and the new one is that they now *admit* the Phosphorus is positive going into the molecule. They didn't admit that before, although there isn't really any +/- difference in either case. As we have seen, any time Phosphorus is bonding to Hydrogen, the Hydrogen has to be fitting into a socket somewhere, which makes the Phosphorus negative in some sense. The socket is negative, by definition. What they mean by positive is that the Phosphorus they are using in the new experiment is known to be ionized, missing one or more electrons. But we see that is beside the point. They keep looking at electrons, which is why they keep misunderstanding these bonds.

There was no link out of that announcement at Phys.org, so I don't know exactly what new molecule they created, or how. But we can look at some possibilities here, just using my diagrams. Let us imagine they created PH, one to one. To do that, the Hydrogen has to plug in on one pole or the other. As we have seen, it won't do that under normal circumstances, since at STP there is no potential for that to happen. To get Hydrogen to bond to Phosphorus, we have to create increased through charge, turning the molecule into an analogue of Iron. In other words, we are toying with the diagram of Phosphorus to make it look more like Iron. Iron has more baryons on the poles than on the equator, which gives it more through charge. We are doing the same thing with Phosphorus, by adding protons to it. We can't plug the protons in forcefully, like a star might, so we aren't creating a larger nucleus. We are only creating molecular bonds. But still, we are—in some ways—pushing the diagram of P-H to the diagram of Iron.

In creating Phosphine, we used KOH to increase charge on the pole of P. But, as I said, you could also do that by adding heat and current. The heat would increase the available charge, and the current would make the charge coherent. If we aligned the external E field to the pole of P, we could create more through charge. That would make it easier for Hydrogen to bond on the pole.

Another thing we could do apply a magnetic field to P. If we applied the right field at the right angle, we could slow or stop the carousel spin. If we did that, we would decrease the equatorial charge stream, which would make the pole stream relatively stronger. Again increasing through charge.

In a similar way, we could achieve the same effect with extreme cold. Extreme cold helps conduction because it also slows the carousel spin. If the carousel isn't spinning, the atom can't pull charge out the equator, and any charge in the field then has to go from pole to pole. In which case it is through charge. Through charge would create potential at the south pole of P for a second proton to align giving us P-H. However, using this method is a bit trickier, since any current adds heat. Charge is heat, so supercooling will always suck out local current. Adding current will always add that heat back in. So your adding and subtracting of charge has to be very coherent or you are just reheating your material with the conducted charge.

I suspect the chemists in Copenhagen are using E and M fields to increase through charge, which increases the likelihood of a P-H bond on the nuclear pole. Which means electrons have nothing to do

with it, which means the current definition of positive/negative also has nothing to do with it.

What you should have learned from all this is that nuclear bonding theory is far superior to electron bonding theory. Electron bonding never had any mechanism for creating a bond, since electrons crossing paths doesn't create a bond. According to the field definitions, electrons should repel one another, not create bonds. For electron bonding to work, all electrons would have to be towing grappling hooks, like the batmobile or something. Since we have no indication they are doing that, all electron bonding theory was illogical and non-physical from the beginning. It was never a physical theory, it was just an unsubtle effort at hypnosis. Electron orbital theory has survived on nothing but bluster for over a century, and we are well rid of it.

Which is not to say my theory is finished or complete. Far from it. I have many questions yet to answer, and I will probably not be able to answer them all in detail if I live to be a hundred. However, I think it is already clear that nuclear charge bonding is superior in every conceivable way to electron bonding theory. It is physical, mechanical, and easily diagrammed. It is real, local, and always visualizable (with some effort). It is never virtual, never borrows from the vacuum, and requires no esoteric fudge-math. If it weren't demonstrably superior to electron bonding theory, there is no way I could have made such quick progress through so many old and new problems, including now this problem of the P-H bond.

*See my first paper on baryon composition for more on this.