The REAL "Cancer Cure that Worked" - the Hoyland Machine.

PART 1 - the History and the Evidence

Introduction

Very little is known about Phillip Hoyland. The Rife story as it is most commonly related is usually derived from the excellent book by Barry Lynes, "The Cancer Cure that Worked". In most retellings of this story Phillip Hoyland only appears as:

1. Rife's lab assistant

2. The man who took a bribe from Morris Fishbein to destroy Beam Rays

3. The man who did destroy Beam Rays by taking them to court with ridiculous claims.

4. The man who produced non-working Rife machines.

Apart from this, everybody tends to ignore and/or revile Hoyland. However, anyone who has closely examined the historical documents available will realise that Hoyland played a much bigger role than the one he is credited with.

In this paper I propose a controversial new theory. In summary, that theory is that Phillip Hoyland is the true inventor or discoverer of the machine that cured cancer, and that far from being a bad person, he was not only a brilliant engineer, but also an honest, upright and decent man. Even more controversial, I propose to show how it was Hoyland who actually cured cancer, *not* Rife.

Below I will explain my reasoning for this conclusion. A lot of it is pure speculation - but reasonable speculation under the circumstances. However there are many clues that tend to confirm these speculations. As a direct result of starting from this theory as a working point I believe I now have a proof that shows the relationship between the recorded radio frequency MOR's in Rife's original lab notes, a set of intermediate frequencies derived by Hoyland, and finally the audio MOR's which are used in most modern "Rife effect" machines.

Last but not least, I hope to show that through the application of the above theory it is possible to derive new and important information as to the characteristics of a machine that will completely cure cancer.

I propose to explain that theory in detail in two parts - I will treat them as 2 different sections or chapters of the same work.

There are gaps and holes in this theory - as is inevitable due to the gaps in the historical record, there are probably more questions arising from this theory than are answered by it - however I ask the reader to examine the evidence and think about it. It might be that this theory is completely wrong, so don't take it as gospel. If anyone can fill in historical blanks, please contact me at ascoon@postmaster.co.uk and let me know what you have. Please don't send large attachments to this address - if you think you have something important, email me first with details and I will inform you of the best way to send it to me.

Now let's look at Rife, focusing on aspects of the Rife story that have particular relevance to the above theory. The history is vital to the reasoning and to understanding what happened.

The Heidelberg Connection

There have been numerous accounts of Rife's early history. Most agree on a few key details, but some of these details cannot be confirmed.

I want to start with the claim that Rife was a student at Heidelberg University in or around 1913. At that time he would have been 25 years old.

As far as I know, nobody has been able to confirm this as fact. Heidelberg University claims to have no records of Rife. This does not mean he was not there, its possible that the records relating to him may have been destroyed over the course of time and because of the world wars.

The only account of what he was doing at Heidelberg that I am aware of is that he compiled a microscopic atlas of parasitology for the university.

I personally think that there is no reason to doubt that Rife was at Heidelberg, but there is no evidence that he was a student there. So might it be possible that in fact he was a lab technician or other ***employee*** of the university? I'll come to the significance of that in a moment.

There is another famous alumnus of Heidelberg - and that is Dr Albert Abrahms - the inventor of "Radionics" and famous for his "quackery".

Abrahms developed a very controversial theory of disease, that all diseases were caused by unbalanced resonances of "etheric" energies in the body. Although there are numerous interpretations of Abrahms work, the basic idea was that diseases caused electromagnetic type energies to resonate with particular frequencies - and that by finding the frequency corresponding to a particular disease, one could cure that disease by applying the same frequency in electrical form to the patient.

This is in accordance with the homeopathic principle that one can treat a disease by giving a medicine that is sympathetic to its symptoms.

Although Abrahms' basic premise is not all that unreasonable per se, his methods and explanations were highly suspect and quite rightly attracted the attention and ire of the medical establishment.

Abrahms and his followers later developed a whole series of radionic machines, amongst the most notable are the Oscilloclast and the Autoclast. I'm not sure exactly how these machines worked - I suspect few people do. Various machines that have been examined do not appear to do anything useful. However, for the purposes of this paper I am particularly interested in the Autoclast and will return to it in more detail later.

Back to Rife. Did Rife know Abrahms personally? There is no way to know for sure. However there is no doubt that Rife was extremely interested in Abrahms' work. In the video

made by John Crane of Rife's lab, an Abrahms machine is shown and demonstrated as having a bioactive effect - according to Crane in the narration.

There are numerous ways that Rife could have become acquainted with Abrahms' work - however I do believe that the Heidelberg connection was somehow significant. It might have been possible that Abrahms re-visited Heidelberg whilst Rife was there and explained his theories to him, or even that Rife as a lab technician may have assisted Abrahms in some experiments.

However it came about, by the early 1920's Abrahms was (in)famous for his ideas and Rife was well acquainted with them.

The Basis of Rife's Early Work

We know a few things about the character of Rife. He was described generally as a polite and considerate man. He was also somewhat obsessive. He believed in order and rigour in his work. He was known for being somewhat antisocial on occasion and disliked "political socialising". He could easily become obsessed with a particular invention and was often sidetracked by his various interests. Although it's not specifically stated anywhere I believe that there is also some indication that he was a bit vain, arrogant and prone to exaggeration of his own abilities and experiences and did not take criticism of his ideas well. This doesn't imply he was a bad person - just a normal human being.

I think that it is clear that Rife was interested in Abrahms' ideas. In particular I think he became obsessed with the idea of a specific electromagnetic energy affecting a specific disease. However Rife was also a "good scientist". Some of Abrahm's ideas were so far outside any conventional science that I believe that Rife rejected them - Rife's character was such that I don't think he could have accepted Abrahms esoteric ideas. So I think that Rife would have wanted to prove Abrahms basic idea about disease (which he believed) whilst rejecting Abrahm's outlandish explanations and instead putting the whole thing on a proper, conventional scientific footing.

I propose now that Rife's thinking was as follows. A particular disease is associated with a particular frequency of electronic "emanation". But, a particular disease is also associated with a particular pathogen. The accepted theory of the time (and generally still today) is that one pathogen is responsible for one disease. Putting these two pieces of information together results in a fairly obvious conclusion - if one pathogen is responsible for one disease, and if that disease has a specific electronic "frequency", then it follows that each pathogen has a specific electronic frequency. From that the final step of reasoning is: if Abrahms can cure a disease by exposing the patient to its frequency, then exposure to its own specific frequency must kill a specific pathogen.

Following this simple reasoning we arrive directly at the "Rife principle" which formed the basis of all his later work. The historical theory above provides a plausible and logical explanation as to how he might have arrived at this idea.

Now given Rife's character, its clear that he would have been determined to prove this theory. The first logical step is to find some way of observing a specific pathogen; the second is to develop a device by which a frequency can be determined for the pathogen, and finally, to develop a way of applying that frequency to the pathogen and recording the effect.

The first step is indisputable - Rife developed his microscopes. The second is more interesting.

By the time Rife had a working microscope, there was a substantial body of Abrahms' supporters who were compiling anecdotal accounts of cures effected by Abrahms' machines.

Abrahms died in 1924 but his following actually increased with his death - bizarrely because Abrahms had predicted his own death almost precisely several years before, supposedly on the basis of his own theories of energy and disease. His death was the greatest confirmation of his own ideas and increased his following.

I believe that Rife may have been influenced too - not by Abrahms "psychic" predictions, but by the anecdotal accounts of the curative value of the machines. I believe it occurred to Rife that these machines were worthy of examination. In fact we can say so definitively because we know that Rife ***did*** examine these machines.

Now this is where I make a speculative leap. Assuming that Abrahms' machines did work (at least in Rife's mind) then which machine would be most useful to further Rife's own investigations? The answer I believe is the Autoclast.

How the Original Rife Machine Evolved

I haven't been able to find out much about the operation of the Autoclast except that it comprised a box with electrodes that were attached to the patient. Another set of electrodes was attached to a metal footplate. The machine had a telephone attached to the top. The machine contained a powerful super-regenerative amplifier - super-regen was arguably the best way at the time to amplify very tiny signals by very large factors (more on this later).

The Autoclast was supposed to work by picking up very faint electronic disease frequency emanations from the patient, amplifying them, and then feeding them back into the electrodes which were attached to the patient. The telephone was an important accessory. By means of the telephone, a doctor treating the patient by means of the Autoclast could listen in and hear the specific disease resonances that were detected.

There are two important factors to take into account here. Firstly, that the Autoclast provided a means to measure the resonances and determine what they were. Secondly, ***that the resonances were all in the low audio range*****!**

Imagine now what Rife must have thought of this. Here is a machine which can ostensibly detect the very resonances he is looking for and which is able to apply them in reverse. Logically, it makes sense that if Rife is going to prove his theorem, the Autoclast would be an ideal starting point to work from.

Let's now look at how Rife could apply this to his experiments. There is an immediate problem. How does he attach the electrodes to a tiny, microscopic sample to test it under the microscope? Obviously he needs a way round this. Secondly, will the super-regeneration of a standard Autoclast be sufficient to amplify the resonances of a small sample of pathogens on a microscope slide?

So there are two problems here. What Rife needs to solve these problems is ideally some sort of "wireless" way, some kind of directional antenna perhaps, to apply the electronic signals to his slides. He also needs an expert in electronics, particularly super-regeneration, to advise on refining the output of the machine. Now as it happens, Rife was in luck - one of the foremost experts in the field of super-regen, had just supposedly invented a "directional antenna" that could selectively apply radio beams under fine control - not only that, but this "directional antenna" was known to have peculiar influences on ions - which would be ideal when dealing with ionic solutions of bacterial samples. That expert was none other than Lee De Forest.

The exact connection between Lee De Forest and Rife has never been documented as far as I know. But we know from Ben Cullen, Rife's long time friend, and one of the partners in Beam Rays Inc., that De Forest visited Rife at his laboratory.

Now Lee De Forest was a controversial figure in his own right. He had been embroiled in an argument with Edwin H. Armstrong over who had actually invented the super-regeneration technique. Armstrong held the patent, but De Forest argued that he was the true inventor of the theory (independently from Armstrong). We don't need to go into that, but De Forest was undoubtedly an expert in super-regeneration techniques.

What De Forest was most famous for was his "Audion tube". The audion tube is generally known today as the triode valve or tube - an evacuated cylinder with an anode, cathode and a grid, basically the forerunner of the modern transistor. However, what most engineers don't know is that De Forest's original "audion tube" was very different. It was a basically a glass tube with low pressure gas and no grid. It was in effect what we recognise today as a Rife tube. Now despite the later fame and success of the evacuated triode, De Forest always insisted (against the opinion of other mainstream engineers) that his original gas filled audion tube was a perfect directional antenna ***for audio signals***. This was never accepted by the scientific establishment - and as far as I know, apart from De Forest's own claims, no conventional engineer recognises the De Forest audion as a directional antenna. At the time, most engineers laughed at De Forest and dismissed his ideas as pure eccentricity. The reason it was called an "audion" was because De Forest discovered he could send and receive audio signals with it by means of ionic displacements - so "audio" and "ion" became "audion".

We see from Rife's own later description of his device that the tube "acts as a directional antenna". What is more Rife's lab notes refer to one of the frequencies that was input as the "wavelength of super-regeneration of audion tube". This in itself is clear evidence that Rife did not just think of it as a plasma tube but as a true De Forest "audion", operating as a directional antenna. In other words, Rife accepted De Forest's ideas.

There is an article written in 1907 by De Forest for Scientific American about his development of the audion plasma tube which makes fascinating reading.

As a result of the above I am speculating that if Rife wanted to beam audio signals at his samples - what better way than to take a version of the super-regenerative autoclast and add a De Forest audion "directional antenna" to it instead of the electrodes. Such a machine would be exactly what Rife describes as using for his original experiments.

It is possible, and in fact probable that Rife hoped to be able to somehow detect resonances in his samples by their effect on the audion tube. The tube itself could act as a high gain

selective amplifier and receiver as well as being a directional antenna as described by De Forest. With a super-regeneration stage added it would have exceptional amplification and theoretically be able to detect and lock on to the tiniest resonance. Now I don't know if Rife ever succeeded in measuring resonances in bacteria etc., by way of the effect on the audion - I suspect that he didn't. And this becomes a key factor in his dealings with Phillip Hoyland.

The Johnson Letters

In the early 1930's Rife became associated with Millbank Johnson. Barry Lynes describes Johnson in his book as being "a force of nature". This is a very apt description of the man in my opinion. For years Johnson basically hassled Rife at every opportunity to develop his instrument. It was clear that Johnson wasn't interested in money or commercial applications (he was a very rich man). But Johnson wanted to progress the work to a point where he could use the Beam Ray device to cure human diseases - he also wanted fame as well.

When Johnson first met Rife, Rife was doing very basic experiments with his microscope and his prototype of the Beam Ray machine as described above. Most researchers have assumed that Rife knew what he was doing, but in fact he didn't. Letters from Johnson clearly indicate that Rife just moved dials that affected the frequency and power output of the machine, but had no idea of what actual frequencies were involved or what kind of output or energy was produced by the machine etc. This seems strange in the light of Rife's character and his obsessive need to catalogue things, but may be explained in that Rife was more obsessed with finding the organisms that he theorised caused particular diseases. Rife was always more interested in optics (and bacteriology) than anything else, as is evident from later documents which indicate that several times he more or less abandoned his work with the Beam Ray to pursue designs for telescopes, telephoto lenses, other microscopes and zoom lenses. There is an amusing letter from Johnson in which he reminds Rife that it's more important to cure cancer than to look at the stars through a telescope because the stars will always be there - and without an immediate cure the cancer patients won't be!

It's clear that Johnson was frustrated with Rife. Johnson wanted to find out how the machine worked and why and wanted to develop the design. In the end, he commissioned an engineer to go in and to get the information he wanted. That engineer was Phillip Hoyland.

I don't know exactly when Hoyland started working with Rife. Earlier documents I'd seen indicated 1937, however upon examining further documents Hoyland is mentioned clearly at the end of 1933 and may well have been present long before that. So Hoyland was in the process of development of the Beam Ray much earlier than is commonly assumed.

One relevant fact is noted. Rife was having trouble getting the Beam Ray to light consistently. Now this is unusual because it is commonly assumed that Rife was using a high frequency carrier wave with a large DC bias voltage. Under these conditions the tube should have lit quite easily. In one letter there is a reference as to how Phillip Hoyland cures this problem - he adds an additional high frequency carrier to the machine.

This begs a question. If the machine already had a high frequency carrier, why did it need another one to light? And the answer, I believe, is that the machine did ***not*** originally have any high frequency carrier. In the light of the Abrahms work on audio frequencies, and the fact that Rife was clearly following De Forest's idea of the plasma tube as a directional

antenna for audio - I believe that ***Rife started out by trying to feed audio frequencies directly into the plasma tube*****!**

This in itself is a controversial idea. It is commonly accepted that Rife started his work with radio frequencies. Much later on, John Crane produces machines which work with audio frequencies and Rife seems to passively go along with this. It is often assumed that somehow Crane diluted Rife's work by reducing his RF frequencies to audio, and mysteriously Rife didn't object. But I believe the evidence shows that it was Rife who started with audio frequencies right at the beginning.

So where did the radio frequencies mentioned in the lab reports come from? The answer, I believe is Phillip Hoyland.

The Hoyland Modification

Phillip Hoyland was a very capable engineer, brilliant even. Even Rife himself publicly admitted that fact at the height of his dispute with Hoyland. Johnson obviously recognised it, and in fact, "reading between the lines" of many of Johnson's letters, one gets the distinct impression that Johnson trusted Hoyland's technical abilities with the machine more than Rife's. There is explicit evidence too; in a 1937 letter to Mildred Schram, Johnson clearly says that Rife has no idea how the machine works.

I believe that Hoyland's addition of the RF carrier to the machine was the real breakthrough that resulted in the "Cancer Cure that Worked". I propose to explain this in more detail later, however I believe that when Hoyland added the carrier and tried to drive the machine as normal he noticed a strange effect which wasn't present before.

Setting aside De Forest's theories of the audion tube as a directional antenna, and ignoring the possibility of measuring resonances with super-regeneration, the addition of the second carrier created a machine in which two different signals (the carrier and the super-regeneration frequency) were intermodulated inside the plasma tube. The plasma tube itself acts as a highly non-linear mixer and a low pass filter, not a directional antenna. The filter effect is easy to imagine if one considers that the ions in the tube had normal inertia which would manifest akin to an inductance, in addition to their true inductance.

Now the essence of super-regeneration is positive feedback. You feed the output, in phase, back into the input. This sets up an oscillation which is greatly amplified (exponentially) until it is quenched (either by an external signal or a trigger) when it reaches maximum amplitude. During the phase of exponential growth, a normal super-regen system locks on to a signal and selectively amplifies it. However, it also amplifies ambient noise as well. Super-regen systems can be notoriously noisy. In this case however I believe the introduction of the plasma tube as a non-linear mixer into the feedback circuit of the system tended to lower the selectivity of the super-regen stage and basically made the whole system into a highly sensitive noise amplifier with a tendency to emphasise low as opposed to higher frequencies.

Now considering this in more detail, one possible result of this would be that the two initial frequencies fed into the tube, the super-regen wavelength (SRW from now on) and the carrier would be intermodulated. If we call the carrier frequency "A" and the SRW frequency "B",

the output of the tube would contain frequencies A, B, (A+B) and (A-B). In the last case, if A<B then take the absolute value, because you can't have negative frequencies.

This is conventional mixer/modulation theory and is recognised by most Rife researchers. Many have gone on to speculate that the MOR produced by feeding two frequencies into the tube was in fact one of the mixer products. And some have also, without any scientific justification at all, proceeded to claim that it is the A+B frequency which is the real MOR for cancer.

However, what occurred to me was that everyone seems to have overlooked the positive feedback combined with non-linear mixing. Because of the positive feedback, whatever is ***output*** by the tube, is also ***input*** to the system as well. And so, if at some finite time after starting we have 4 frequencies out from 2 frequencies in, then at some infinitesimal time later we will have 16 frequencies out. Because the 4 original outputs have now become inputs. And at some further time the 16 frequencies output at step 2 will become 256 frequencies output at stage 3 - and so on until the super-regen wave is quenched.

All the frequencies that are output will be intermodulation harmonic products. If we now take into account the low pass filtering effect of the tube itself then there should be more low frequency products than high frequency ones. And if that is the case, ***the two original RF frequencies input will ultimately output harmonics in the low audio range.***

If this theory is valid, then maybe by performing a simulation or analysis of the intermodulation of the two RF carriers which acted as an MOR for any given known pathogen it may be possible to derive the well known audio MOR that corresponds to that same pathogen. Although many attempts have been made over the years to discover a direct relation between these apparently contradictory sets of figures, as far as I know nobody has ever been able to work a consistent and logical scheme that proves the link.

I performed just such an analysis and discovered that by using the RF carriers from Rife's original lab notes I was able to ***dead accurately*** derive the equivalent well known audio MOR's that are used in Crane machines and the modern Rife/Bare type devices. Not only that, but I was able with absolute accuracy to derive other forms of the same MOR's (more on that in a moment) and also very surprisingly, from the original BX figures, to derive a simple harmonic series that hits directly most of the known MOR's for cancer in one go.

I will explain the detailed calculation of the MOR's in the second part of this paper.

The implications of this are very far reaching and historically significant.

A Bone of Contention?

If we go back to Rife and Hoyland: assuming the above to be correct we know that Rife was probably convinced that the real MOR's were in the audio band. He was probably right - although I personally believe that the MOR's re-occur as harmonics in many frequency bands. Along comes Hoyland who has now turned Rife's "pure" audio based Beam Ray into

some sort of RF hybrid that as far as Rife knows, puts out the most horrible mess of harmonics imaginable.

One can almost imagine Rife's horror at this desecration of his "pure" machine. However there are three factors that prompt him to actually use it. One is that Johnson is funding his work and is driving him for results. It's possible to imagine Johnson telling Rife just to use the Hoyland machine despite his personal opinions - because Johnson trusted Hoyland. The second is that the machine actually does kill pathogens in the lab. The third is that the new machine which was revised several times by Hoyland, is much smaller and easier to handle than the original. In fact it's portable - the original machine filled half a room.

But I think Rife now wants to clean up the machine. Given that the carrier is apparently necessary to keep the tube lit, I imagine that Rife just wants to scrap the super-regen stage and use the carrier with direct audio modulation. There would be much fewer harmonics in the output and Rife would be able to directly input his audio signals. The result would be what is in effect a later Rife or Crane or Bare machine.

But I believe that this became a source of dispute between Rife and Hoyland. Perhaps not so much initially but later on.

Up until the Scripps Ranch Clinical Trial in the summer of 1934, Rife had mostly used his big, original machine for his lab work. However I believe he was pressured by Johnson into noting down the frequencies of the carriers for specific MOR's using the newer Hoyland machine, or the Hoyland modified lab machine. I believe that these are the lab notes we have today.

There are a few other interesting facts that may confirm that Rife was using the Hoyland machine at that time. One is a letter from Johnson indicating that Hoyland was working on a new machine in January 1934. Another letter confirms it as operational in April 1934. This was before the Scripps Ranch Trial. In a third letter concerning a financial matter, Johnson suggests to Rife that he might like to ask Mrs Bridges (the sister of Henry Timken, the roller bearing millionaire) to pay some bill for him. The implication is that Mrs Bridges is so indebted to Rife that she will happily pay his bills. Now Timken was indebted to Rife but had already shown his appreciation by building Rife's laboratory for him. The reason why Mrs Bridges was indebted to Rife was because Rife was treating her for some medical condition.

So Rife was already treating Mrs Bridges in early 1934. Years later, John Crane set up a tape recorded interview with Henry Siner, and Bertram Gonin, the English doctor who was caught in the Beam Ray trouble. In that recording Henry Siner (who was one of Rife's lab assistants at the time) describes how Rife treated Mrs Bridges' medical condition. And Siner says that for several years he and Rife used to go every day to treat Mrs Bridges at her home with the Beam Ray machine. At one point Siner's wife interjects and although her exact words are unclear on the recording she asks Siner how it was possible to move the huge lab machine every day to Mrs Bridges home. And Siner replies, "We didn't, we took the other portable machine honey". So here is a clear reference that seems to confirm that Rife was using the Hoyland machine back in early 1934. And aside from this I think it's fair to assume that the big lab machine had also been modified by Hoyland - this was the original one he added the extra carrier to.

So the evidence clearly shows that all the machines actually used for real work from 1934 onwards were either variants of independent Hoyland designs or had been modified by Hoyland. They were not pure Rife designs.

There is no doubt that Hoyland was producing various new machines. Johnson clearly states this in his letters. Furthermore, Hoyland was not based in Rife's lab in San Diego. He was working somewhere else on his own - he just delivered the new machines every once in a while. Also there is a clear reference in the documents that Hoyland knew how to prepare and test the pathogen cultures by himself without help from Rife. And finally, in a letter from Jack Free (Rife's other lab assistant) to Johnson, Free asks if he might be allowed to operate the machine if Hoyland is too busy - clearly indicating that it was Hoyland who usually operated the machine for the most important tests.

All of these factors indicate that Hoyland played a much larger role than he is usually credited with. He is often described as a lowly lab assistant who was permitted to make repairs, but in fact he was obviously the technical expert on the machines and the real developer as well.

Now the first reported outright cancer cure occurs at the Scripps Ranch trial in summer 1934 where Rife is said to have cured the 16 cancer patients. In fact Rife worked with the first 14 and Dr Couche took over the treatment of the remaining two. However, since Hoyland was the real expert on the operation of the machine, and given the importance of the trial, I believe it was extremely likely that Hoyland actually performed most of the treatments himself. Rife was present, but in a medical capacity, not as the machine operator.

After the success of the Scripps ranch trial, Hoyland builds at least 4 other machines. These go to Johnson, Dr Couche, Dr Yale and Dr Hamer. Each sets up a clinic and reports amazing successes - complete cures of cancer and other amazing cures. Much later, when Johnson closes his clinic his machine is shipped to Dr Gruner in Canada - who apparently never uses it (because of fear of the medical establishment) and gives it to a Ham radio operator for spares!

Hamer's machine is seized and destroyed by the AMA. And Yale's machine is later returned to Rife, leaving only Couche's machine in the field where it is used successfully for many more years.

Rife, Hoyland and Beam Rays Inc.

I cannot recall exactly when the Beam Ray Corporation was founded, around 1936 I believe. The idea was to produce machines commercially. The partners were Rife, Ben Cullen, a promoter called Hutcheson, Hoyland and Dr Couche. Rife puts a condition on the company - that all machines have to be approved by him. Each of the partners in the company is given 6,000 shares.

Now although Beam Rays has all these partners, Rife isn't an active participant. Of the remainder only Hoyland knows how to actually build machines - which is the core business of the company and its main potential source of profit. Although the company sells several machines (14 I believe) Hoyland is the one who has to design and actually build them all.

Now based on what I theorised before, I believe that the question of the operation of the machine is still a bone of contention between Rife and Hoyland. Rife wants the final say in the design, yet Hoyland is the one who actually designs working machines and has to do all the work of building them. If Rife doesn't really understand the operation of the machine - and in particular how all these RF harmonics create audio frequencies - one can imagine him telling Hoyland to revert to his original design. One can equally imagine a rather stressed out Hoyland telling Rife that he doesn't know what he's talking about and that the machines work just fine as they are. Hoyland, the engineer, knows that Rife's original machine design is hopelessly inefficient - what's more Hoyland has been doing his own experiments and has found a new range of RF MOR's that seem to work much better and are much easier to produce stably than Rife's pure audio ones (more info on this in section 2). And finally Hoyland has noticed that his machines appear to have an additional benefit - one that is noticed by Johnson. In one of his letters Johnson notes that a machine which can put out multiple MOR's simultaneously is much more likely to cure a cancer patient in practice ***because it hits the MOR's of all the pleomorphs of cancer simultaneously.***

To digress for a moment. Rife by this time has identified what he believes are 3 different pleomorphs of cancer. One is the BX virus, another is the E. Coli bacterium and a third fungal form which he calls Cryptomyces Pleomorphia (often referred to by Johnson as "the bananas"). Johnson theorises that if Rife just kills the BX form in a cancer patient, the cancer won't go away permanently because it still exists in one or more of the other forms. And so the only way to cure cancer outright as opposed to just reducing it, is to kill all 3 forms at the same time. And the 3 different forms have different MOR's.

Rife's original machine definitely produced one single MOR at a time. But Hoyland's machines, presumably through the mechanism described earlier produce multiple MOR's at the same time. The implication is clear - Rife's machine does not actually cure cancer in a patient, but Hoyland's does!

Now the evidence clearly supports this. And so the further implication is that whilst Rife knows how to kill BX in the laboratory, ***only Hoyland knows how to cure cancer in real patients.***

By 1937 Rife and Hoyland have fallen out over this. It's clear that Hoyland is fed up with Rife and his insistence on returning to his original principle. Also Hoyland appears to be the one doing all the real work of producing machines for Beam Rays - and at the end of the day, he gets no more out of the company than anyone else. It's easy to imagine Hoyland feeling very upset with this. And so at some point Hoyland has enough and decides to sue Beam Rays. What he wants more than anything is to get Rife off his back, to achieve the recognition he feels he deserves and to be paid commensurate with his far greater workload.

At that time, Beam Rays ships 2 machines to Gonin in England. They arrive unwired. Rife says this is because Hoyland wants a free trip to England! But a Dr Parsons, an associate of Gonin's actually manages to connect the wires in one of the machines. They notice that the machine is putting out a horrendous mess of harmonics. Gonin recognises that this waveform is nothing like the one of Rife's original lab machine and writes to Rife about it. Rife, in the famous letter in reply tells Gonin that the machine is too deviated from his original principle and that he (Rife) believes that it's impossible to control a machine solely through harmonics. This is prima facie evidence in support of the theory above. The Hoyland machine created a

whole harmonic spectrum and Rife strongly disagreed with this. A clear indication of the disagreement between him and Hoyland.

Ironically, although Gonin rejects the machine, Parsons continues with experiments on it. After a few months Gonin and Parsons fall out because Parsons is claiming that the machine really does work (which Rife denies - and Gonin believes Rife) and that by examining it he has managed to derive and understand the frequencies and the true principle by which the machine cures cancer.

A further telling clue is Johnson. For many years Johnson writes to Rife regularly. As soon as the disagreement with Hoyland blows up, Johnson backs off. And after that he never writes to Rife again as far as I can tell. Is this an indication that Johnson recognises that Hoyland is right? Either way, Johnson is clearly disillusioned with Rife in some way.

The Beam Rays Trial

So the Beam Rays trial commences. Hoyland insists on calling Rife to the witness stand. Something that makes Rife so nervous he starts smoking and drinking. Possibly because Rife knows that if he is technically cross-examined as to the operation of the Beam Ray he won't be able to answer. The drinking is what leads to his later alcoholism.

Now at this time Fishbein wants to buy into Beam Rays - it's possible that Hoyland was upset by Rife's outright rejection of Fishbein's offer for the rights to the Beam Ray. It's likely that Hoyland considers the rights to be his, not Rife's, as its his design at issue here. But somehow the AMA gets dragged into the battle. Exactly how is not clear, but the issue raised against Beam Ray by the AMA is that the company is producing medical equipment without a licence. Also, they offer Hoyland $25,000 to help them against the company. Now it's often stated that Hoyland took the bribe but in fact there is no evidence to show he did - in fact I believe the facts show he almost certainly ***didn't*** take it. In a document which has been described to me but which I haven't seen, Ben Cullen apparently relates how he catches Hoyland coming out of a secret meeting with Fishbein's people. When Cullen physically threatens Hoyland, Hoyland admits that they ***offered*** him $25,000. But there is no evidence that he accepted it. Years later, in a secretly recorded interview with Crane, Cullen says, "I've never seen any evidence to contradict the idea that Hoyland took a bribe from Fishbein" - or words to that effect. But this is not the statement of a man who is sure of the facts. He doesn't say Hoyland ***did*** take a bribe from Fishbein, just that he has never seen anything that proves he didn't. So Cullen was never sure of this, and it appears the allegation has been reported as fact.

So what happened in the actual trial? I don't know. The judge in the trial, judge Kelly, criticises Hoyland in his summing up. But the wording of the criticism implies that the judge believes Hoyland to be in the wrong, principally because he stands alone against all the other partners in the company who have testified against him. At the conclusion of the trial, Hoyland has lost. And apparently he is nearly bankrupted by the costs. He has to sell his house to pay them. After that he is only able to open a tiny repair shop which goes bust after a few months. And Hoyland ends up becoming a tenant dairy farmer. Apparently in spite of the trial Hoyland and Rife part on amicable terms - which doesn't fit with the commonly accepted idea of Hoyland as a treacherous misfit out to destroy Rife and his work. Hoyland remains a farmer for the rest of his life (I believe he died in 1967), and later becomes known as a highly respected member of the farming community.

Now at the conclusion of the trial Judge Kelly is incensed at the action of the AMA and offers to represent the company against the AMA. He never does. But there is a clear indication that the AMA matter is actually a separate trial which is somehow confused with the Hoyland trial. After all, the judge in any trial can't represent one of the parties!

At the conclusion of the AMA trial Beam Rays loses and the AMA obtains an injunction preventing Beam Rays from selling any more medical machines. Rife mentions in 1944 that they had to close the company because of the injunction.

So the evidence tends to show that contrary to the traditional story, Phillip Hoyland was not the destroyer of Beam Rays Inc. He certainly precipitated the confrontation, but perhaps for good and understandable reasons.

Now the final clue in this puzzle is what happens after that.

The "Post-Hoyland" Period

Interestingly there is a document that mentions that Rife obtained Yale's (Hoyland) machine and had it re-engineered to his "original principle" by an engineer called Verne Thompson. After that the machine became inconsistent and unreliable. With Hoyland's original design it had worked effectively for years before.

But the general answer as to what happens is - nothing! Rife teams up with Crane in 1950 and they start producing machines that use audio modulation of RF carriers. The principle behind the Hoyland machines is abandoned. But the most interesting thing to note is that of all the machines built by Rife after Beam Rays, none of them ever cures cancer outright again. Although some good results are obtained by Stafford, Jepson and others, the machines are very inconsistent and unreliable.

Conclusions

If Rife is the real inventor and brain behind the Beam Ray, how is it that he can't manage to reproduce the machine which stably and reliably cures cancer and virtually everything else? And upon rigorous examination of every document and statement I can find, I notice that every single machine which is ever reported as actually curing cancer in real patients was one that was apparently built by Phillip Hoyland.

As I mentioned at the beginning there's a lot of conjecture here. But there's also a lot of evidence. There is no doubt that Rife originated the idea of curing disease with a ray machine. But the actual design of the machine which really did cure cancer seems to be exclusively that of Phillip Hoyland. And furthermore, there doesn't seem to be any outright evidence that Hoyland was a bad person - might it not have been possible that he was just a good engineer frustrated at never having been recognised for his real and valuable work?

And finally, if Rife didn't know how to cure cancer in patients, then all the information which is still used today is of limited value. Because until someone reproduces a true Hoyland style machine maybe the best that is possible is a temporary reduction of tumours.

The startling conclusion that arises from this research is that Rife probably did not start with RF frequencies and drop to audio ones. I believe he always used audio frequencies, right at the beginning and also at the end. So the audio frequencies which are commonly attributed to Crane are probably the real, original Rife frequencies. The famous RF frequencies, usually described as Rife's original ones, are actually Hoyland frequencies! I believe it was the Hoyland frequencies that actually cured cancer, and in the next section I propose to show how.

Aubrey Scoon
16 June 2001

PART 2 - Derivation of the MOR's

In this section I propose to show how the relationship between various sets of different MOR's in different bands and how I propose they were generated by the Hoyland machine. I will concentrate on the actual working of the BX MOR's. I have tested the theory on Rife's lab notes for Actinomycosis and Anthrax with the same accuracy in the results. The chances of being able to do this by mere coincidence are billions to one against. I had to write programs to perform the extremely complex calculations involved but these programs take a long time to run, many hours in some cases and so I have not yet been able to check all the known RF MOR's. But a 100% success rate in the 3 I have tried so far is very encouraging.

I have also derived a simple harmonic series from the BX data that I believe may be the "MOR super-band" referred to by Johnson in one of his letters - a band of frequencies that seems to kill just about any pathogen in one go. Even if this is not the same band, the one I have derived is of critical importance.

Lets look in detail at BX - Rife's carcinoma cancer virus.

I am aware of 3 sets of MOR's for BX.

The first is the commonly known RF set from the Rife lab notes which is:

Carrier Frequency - 11,780,000
Wavelength of Super-regeneration of Audion Tube - 17.6 Metres.

The second set is not widely known - it is apparently a set of frequencies that was shipped out with a Hoyland machine. This comes from a 4th generation Hoyland machine. I will reproduce the whole list below - all the frequencies are in KiloHertz:

BX 1604
Typhoid, filter passing form 1445
Typhoid rod 760
Actinomycosis 192
Staph 478
B Coli rod 417
Diplococcus pneumonia 427
Tetanus 234
Strep Pyrogenes 720
Tuberculosis Rod 369
B Coli filter passing 770
Anthrax 139.2
Treponema Paludium 789
Gonorrhea 233

So the Hoyland frequency for BX was in fact 1,604,000 Hz.

Finally, we have the well known audio frequency for BX, courtesy of Crane which is 2128 Hz.

The Calculation

Lets start by converting the SRW from the lab notes into a frequency. I've seen various researchers attempt to do this by dividing 3E8 by 17.6. In this way one achieves a result of 17,045,454. But this is actually extremely inaccurate. To derive a proper value it's important to use the real speed of light, not an approximation.

The real speed of light is 299,792,458.

So the real frequency of the SRW is actually 299,792,458/17.6 = 17,033,662.

Derivation of the Hoyland MOR

Firstly I'm going to try deriving the Hoyland RF value. It's clear that most of the Hoyland frequencies are actually rounded off to the nearest Khz, and so I'm going to do the same with the starting values. So the actual values I will use are 11,780,000 and 17,034,000.

Lets look at the theory and the calculation:

Start by considering a simple mixer. You feed in two frequencies A and B. These two frequencies heterodyne each other to create a total of 4 output frequencies, the two original and the two sidebands caused by heterodyning. So the initial output is:

A, B, |(A-B)|, (A+B) (taking the absolute value in case A<B)

Now lets introduce the regen feedback loop. And lets also assume that there is some low pass filtering in the feedback loop - not intentionally but which occurs simply as a function of the capacitance and (particularly) the inductance of the tube and the loop.

The super-regen cicuit will naturally tend to be selective and to enhance the higher harmonics - so you would expect (A+B) to come out stronger than |(A-B)|. But with a little bit of low pass filtering and allowing for the non-linear properties of the plasma tube that can easily be reversed or compensated for.

So now, with the feedback loop in place, there is a new input which is equal to the previous output. So the new input will be:

A, B, (A-B), (A+B)

and the new output will consist of the above PLUS additional frequencies caused by heterodying between them i.e.

A, B, (A-B), (A+B), (A-(A-B), (A-(A+B), B-(A-B), B-(A+B), A+(A-B), A+(A+B), B+(A-B), B+(A+B) and so on.

The signs are relatively unimportant we're only talking about mathematical differences here.

As soon as the output changes to all the above, so does the input because of the feedback loop! And so a short time later there will be even more frequencies output, and more input, which will lead to still more output and still more input! The number of frequencies output

will grow with the exponential rise of the signal amplitude - but the number of different frequencies will not be exponential because there are duplicates. So the number of new ***unique*** frequencies is finite. Given the assumed low pass filter element in the feedback loop, there will be a preference for intermodulated products that are ***lower*** in frequency than the originals and so there will be preponderance of ever decreasing frequencies output, tending toward the audio range in very few steps.

Using this technique you will hit the audio range in very few iterations.

Here is the real example:

Using the real BX frequencies above: A=11,780,000 and B=17,034,000

STEP 1. |(A-B)| = 5,254,000 and (A+B) = 28,814,000

STEP 2. But after that, because of the feedback, the 11.780 Mhz will combine with the 5,254,000 to also give 6,526,000

STEP 3. Shortly after that the 6,526,338 will intermodulate with the 5,253,662 to give 1,272,000 which in turn will recombine with all the others to give yet more frequencies etc.

Lets carry on for just a few more steps:

STEP 4. 5,254,000 - 1,272,000 = 3,982,000

STEP 5. and 6,526,000 - 3,982,000 = 2,544,000

STEP 6. 3,982,000 - 2,544,000 = 1,438,000

STEP 7. 1,438,000 - 1,272,000 = 166,000

AND

STEP 8. 1,438,000 + 166,000 = 1,604,000 ! <==== DIRECT HIT IN 8 iterations!

And so I submit this as an example of the first proof. Starting only with the two BX frequencies in Rife's original lab notes I have dead accurately derived the Hoyland MOR for BX, in very few iterations.

Now you can carry on doing this almost indefinitely. The ultimate number of possible iterations that generates new frequencies is finite and in fact it can be shown mathematically that the calculation will stop when it hits the Greatest Common Multiple of the two values - which in this case is 2. And so in the mathematical limit the number of output frequencies will also be extremely large but finite.

In the real world each extra sideband requires energy to produce and so the limiting value of the energy input will limit the number of generated harmonics to a smaller number than the possible mathematical limit. So even though the calculation can be worked down to include ***all*** frequencies in 2Hz steps (which would basically prove anything you wanted it to!) in

practice the real system will never go this far because the quench of the super-regenerative wave and the finite energy input to the machine will stop it.

Now the quench is an interesting item in itself. Nowhere in Rife's notes is there any mention of the quench frequency of the super-regen wave. This implies that the system was self-quenching - i.e. when a certain amplitude of output was reached, the system triggered its own quench automatically.

I believe that any quench frequency derived in this way would have a mathematical relationship with the starting frequencies and this will become significant when we work the same calculation further down the audio range.

Derivation of the Audio MOR

I can't show the exact working - I haven't been able to work it out in visible steps because of the large number (millions of calculations needed even for a few iterations), but it is possible to describe the results obtained from a computer program which was set to generate these series.

I have found that although I can calculate higher audio MOR's by hand, usually in less than 20 iterations, my program that I wrote usually shows me that it is possible to arrive at the same value in much fewer iterations - it just tells me ***when*** it hits the value, not ***how*** because it's doing a brute force reduction by millions of calculations. I will need to write more sophisticated programs to get more information - or as I am not actually a programmer maybe some kind contributor can write a better program and post it.

I was not able to hit the audio MOR directly using the starting numbers above. I wondered about this until I remembered that the Hoyland values are rounded to the nearest Khz, and the audio MOR's are accurate to 1Hz or better. So I re-ran the calculation, this time with the accurate values, A = 11,780,000 and B = 17,033,662.3864. Using these numbers in less than 15 iterations I was able to hit the frequency of 2127.32896 - which is almost exactly the "Crane" (in my theory - Rife's) audio frequency for BX.

But there was an interesting further aspect to this. Each frequency can be calculated in more than one way. In fact most frequencies can be derived in thousands of different ways from the various sub-harmonics. By looking at strong peaks - i.e. frequencies that can be derived in many different ways, one frequency drew my attention - it was a frequency of 66.47903 Hz and seems to be an important output of the process.

The "Super-MOR"

Looking at the spectral content of the proposed output wave and working back a crude approximation to an actual waveform, one sees mainly a noisy, spiky exponential wave envelope. This is exactly what you would expect from a super-regeneration process. This exponential envelope has an interesting property when subjected to Fourier analysis - it basically contains all the harmonics, both odd and even with equal amplitude of the quench frequency.

This implies that the quench frequency itself is a critical factor in the harmonic content of the wave produced by the "Hoyland machine"

It then occurred to me - if the 66.47903 Hz frequency is dominant, then maybe, somehow this is the quench frequency. Since audio MOR's are usually integers I decided to round up the number to 66.5 Hz - the result was amazing!

Remember that the proposed "Hoyland machine" will put out both odd ***and even*** harmonics of a quench frequency ***with equal amplitude*** - a typical current Rife /Bare unit driven by square waves will put out dominant ***odd*** harmonics (it will generate some even ones by intermodulation but I predict they will be weak) and those harmonics will rapidly drop off in amplitude.

By considering all the harmonics, both odd and even of 66.5 Hz one finds the 32nd harmonic to be nothing other than 2128 Hz - the exact audio MOR for cancer. The fact that it has such a high harmonic number does ***not*** imply that it will be weak - in this waveform all harmonics are equal strength.

But the other harmonics of 66.5 Hz are equally interesting. Not only does this series hit many MOR's derived empirically for Cancer it also seems to hit MOR's for E. Coli (Rife's second pleomorph of cancer) and also various fungal MOR's (Rife's third pleomorph of cancer is a fungus - Crytomyces Pleomorphia). Interestingly I found in addition that it seems to hit multiple MOR's for Herpes 2A. Upon discussing this with a professor of Microbiology, he informed me that Herpes 2A has known oncogenic properties - i.e. it appears to cause some kinds of cancer.

At the end of this section I will produce a chart showing the MOR's derived from this series annotated with important correspondences from the Frex database which is derived from the CAFL.

There is a lot more I could say and/or speculate about this process - but in the meantime I feel it's more important to release this information to the Rife research community at large.

Conclusion

Starting from only the two BX frequencies listed in the original Rife lab notes, I was able to accurately generate the alternative Hoyland machine MOR for BX and also the commonly known audio range MOR for BX. In addition, I was able to derive a related series that implies it will be exceptionally effective at destroying cancer.

Although I have had to make some "fudges" to the numbers to work it out, these have only consisted of simple roundings which are quite reasonable in context and do not represent any tricky mathematical ploy to get the numbers to fit.

I believe that this represents a proof of my theory that it was the Hoyland machine that actually cured cancer in real patients, not the original Rife design. And the reason it did so was because the Hoyland machine with its rich harmonic spectral output was able to simultaneously destroy multiple pleomorphs of the same organism - something the original Rife machine was unable to do.

Credits

This work would not have been possible without the contribution of various people who provided me with historical information and also gave me the benefit of critiques, comments and discussion of points arising from the work itself.

I would like to say thank you to Bob Haining, Stuart Andrew, Dr James Bare, Ed Heft and Dr Karl Gensberg for their help.

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Appendix A - The Harmonics of 66.5 Hz

The first number is the harmonic number, the second the frequency. I haven't included all of the harmonics that I couldn't find correspondences for, but I have included a few intermediate ones as these may be worth trying to see if they have any bioactive effect.

1	66.5	
2	133	Nagel trichophytie - 133
3	199.5	Furunkulosis herpes - 200
4	266	Breast: fibroid cysts - 267
5	332.5	E. coli - 333
6	399	Sinusitis (1) - 400
7	465.5	Candida - 465
8	532	Mycosis fungoides (cancer) - 532
9	598.5	Trichophytie nagel secondary - 592
10	665	"Cancer, prostate - 666"
11	731.5	Herpes type 2A secondary
12	798	E. coli - 799
13	864.5	Candida (1) - 866
14	931	"Cancer, leukemia ""hairy cell"" - 932"
15	997.5	Feline leukemia - 997
16	1064	Rickettsia - 1062
17	1130.5	"Cancer, breast (4) - 1131"
18	1197	Mucor racemosis secondary - 1200
19	1263.5	"Streptococcus infection, general - 1266"
20	1330	Leukoencephalitis - 1333
21	1396.5	Herpes type 2A secondary - 1402
22	1463	Microsporum mix B - 1463
23	1529.5	
24	1596	Cancer maintenance secondary - 1600
25	1662.5	Arthritis - 1664
26	1729	E. coli - 1722
27	1795.5	Herpes Simplex I (2) - 1800
28	1862	"Cancer, general, set 2 - 1862"
29	1928.5	Bacillinum - 1932
30	1995	"Cancer, prostate - 1998"
31	2061.5	"Cancer, rhabdomyosarcoma, embryonal -2060"

32	2128	Cancer - BX
33	2194.5	Carcinoma -2192
34	2261	"Cancer, breast (2) - 2263"
35	2327.5	
36	2394	
37	2460.5	"Cancer, general, set 3 -2454"
38	2527	
39	2593.5	
40	2660	H#3 - 2664
41	2726.5	"Cancer, breast (1) secondary - 2720"
42	2793	Immune system stimulation - 2791
43	2859.5	Immune system stimulation -2855
44	2926	Immune system stimulation - 2929
45	2992.5	
46	3059	Multiple sclerosis (1) - 3057
47	3125.5	Influenza triple nosode - 3122
50	3325	Euglena - 3325
53	3524.5	"Cancer, BY virus (sarcoma) - 3524"
56	3724	Leukose - 3722
62	4123	Cryptosporidium - 4122
66	4389	Sinusitis (2) - 4392
77	5120.5	"Cancer, leukemia ""hairy cell"" - 5122"
83	5519.5	"Parasites, tapeworms - 5522"
85	5652.5	Papilloma virus - 5657
92	6118	Hemorrhoids - 6117
96	6384	"Cancer, rhabdomyosarcoma (1) - 6384"
97	6450.5	Euglena - 6448
98	6517	Tuberculosis Klebs' - 6516
102	6783	Salmonella paratyphi B - 6787
105	6982.5	Influenza (1) - 6984
117	7780.5	Penicillium notatum secondary - 7780
118	7847	E. coli - 7849
124	8246	"Influenza virus, general - 8250"
130	8645	Herpes Simplex I (3) - 8650
132	8778	Herpes type 2A secondary - 8778
133	8844.5	CMV - 8848
134	8911	Influenza 1993 secondary - 8911
140	9310	Bilirubin - 9305
178	11837	Blastocystis hominus - 11841