Flows: Dispersal and Ridges

A Lecture given by L. Ron Hubbard
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This is the first hour evening lecture, Wednesday, December 10th.

I have a uh… couple more things that we've got to cover consecutive to this afternoon's talk, but there's no reason why this material doesn't cover independently as itself.

This material has to do with the other two items, namely Flows and Ridges, pardon me, Dispersal and Ridges, having covered Flows this afternoon.

Okay, those that didn't get that this afternoon will of course get this material subsequently when they review the tapes.

Uh… the subject of Flows, Dispersals and Ridges is, of course, the subject of the characteristics of emotion. Characteristics of emotion.

Now an emotional state depends upon the wave characteristic and upon the volume of the wave. And then that combination of waves could ride with any combination of perceptic waves.

Very simple. Here we have a flow; if you want to draw in all possible dispersals on this it becomes very interesting.

We have a flow; here is a dispersal-flow, dispersal-ridge, dispersal – flow, dispersal-flow. In other words, you've got all possible combinations of this here.

Ridge.

And of course this dispersal looks like a little, tiny ridge going to hell in a balloon. And actually, any one of those ridges, those black lines there, any one of those ridges – here we'd be going right on down the tone scale if we did this – uh… any one of these ridges could be a source of dispersal.

I usually don't draw all these things or bother too much by this for a good reason, is that it's just more data than you happen to need. Some electronics engineer, though, can take this stuff and he can have an interesting time tracing a circuit.

You look through a circuit and you look through your radio receiver or your radio transmitter and you'll find out that what you're doing is… is making a flow do a dispersal, banking it up in a ridge, making it go this way and that. You're… you're reforming the forms of it. There you're mixing the wave uh… characteristics and the wave characteristics are… uh… well, as I say, they're mixed, they're straightened out, they're corrected, they're mixed up again and so on.

Well mixing and straightening out and correcting up again, the characteristic of a wave uh… wouldn't really change too much the quality of the thing. Uh… but it would take down, for instance, noise out of the wave, or it would take out random uh… things out of the wave that really weren't a part of the wave. It's trying to be – mostly the electronics equipment – quite selective with the waves that come in.

So what you do is just with, by using things that make flows and dispersal and ridges, you… you get the thing fooled around to a point where it'll take the maximum of the desired wave and the minimum of the undesired waves and you've got it.

That doesn't matter much what you're applying this to; it works about the same way.

Now what do we mean by a wave characteristic?

See, these are characteristics of energy – flows, dispersals – this is about all the kinds of energy there are. But uh… when I say „wave characteristic" this would be the characteristics of energy. Now we're talking about a wave length. We're talking about what part of the gradient scale of vibration rates we're talking about. You know, you saw that one.

That's… here… let's lay the tone scale on the side, let's put 40.0 here, 20 there and down here is 0.0. And let's find that at any point of this sort of thing uh… we've got that. Oh, it doesn't matter which way we draw this – we're just graphing it. It doesn't matter where we're graphing it.

Now that's this up here is the… this is energy characteristics over here and that… this consists of Flows, Dispersals, Ridges. And this up here is wave length, and that's still wave length. See, it doesn't matter if… it's just graphed. You can have a 1.5 operating on an aesthetic. He goes into a beautiful rage. Did you ever see anybody that went into a rage artistically? He's still at 1.5, he tears the hell out of things, but he's still going into an artistic rage.

There are a lot of actors that cultivate this as a fine art. And actually it is something that is appalling because it just chews theta up just… just madly. You can't chew theta up but I mean some guy thinks he has to protect himself and his very beingness in the face of an artistic wave, because it's terribly interesting. It is aesthetic, it has mood, it has rhythm – it has various combinations of things that you associate with aesthetics.

All right, now you see now – this is energy characteristics but what do we mean by „wave characteristic"? This is just wave length. Wave length – that… that's an easy one because this means what agreed upon distance is it from node to node on the wave length? I mean, how far apart are the wobbles?

Let's take a rarefaction condensation wave – all of them by the way are rarefaction condensation waves. They… that… that thing going through that electric line is an… a „rarefaction condensation wave.

I used to sit in physics class and say „But what you're talking about would need ether." There's the wave which you do by making a rope flick. You can tie a rope over there, you see, and then you go zong! like this and you show somebody this wave. Well, it's cute, but how the hell does electricity do that? I used to go around naive. I thought they knew. It used to puzzle me and puzzle me. They said „There's a rarefaction condensation type wave. That has to do with particles." I'll show you what that is.

Here are particles, particles all over the place, evenly distributed. See, this is Figure Three here. And uh… these particles, Figure Three, are just going – they're all the same, see? I mean, there's nothing happening to those particles yet.

Now we put a wave through those particles. And do we put a wave through the particles this way? We put a particle this way. See, they're grouping. That's Four. We've got embryonic ridges, the parts I've marked „R" here. Embryonic ridges. What… that area, the ridge, is a condensation of particles, and this area where you have few dots left is a rarefaction of particles. How long is a complete wave from wave to wave, not a half node, but how long is a complete wave in that case.

A complete wave is from, in Figure Four, point A to point B – that's a complete wave. That is to say, it runs through a full cycle between those two points, a very full cycle. It goes from being a ridge up through to the point where it's almost a ridge again.

Now… now look. Don't get ahead of me, don't – just… let's not look at Figure One here – let's not look at Figure One and compare it with Figure Four. That's not fair.

You realize – you'd better not do it, because you realize that you would be, at that moment, way ahead of physics. And you mustn't get ahead of them because there would be a lot of boys in universities lose jobs and it's important that they eat. It is.

If you examined, stroboscopically, the particle flow of a rarefaction condensation flow, you would get minute patterns which would demonstrate that there were, at any given instant, rarefactions and condensations taking place, and that some of the particles between the rarefactions and the condensations were expanding suddenly and some of the particles were crashing in, and the pattern of particle action would give you a pattern which you see more or less in Figure One.

Well, it doesn't matter whether you figure this out, then, in standing wave.

Now supposing we got this rarefaction condensation wave going here good enough and heavy enough and then said whoa! We're going to have it. And we just grind and stop it. And we – and that pattern if closely examined, I mean Four, would become the pattern, more less, of One. The ridges would stand.

Now, what's the definition of that whole thing? I mean, we talked about what is… talk about Death is Stop. Deaths are very aberrative – quite aberrative, you know. Those sudden stops that you don't want it to stop. And here's all this inflow and outflow and flows and rarefactions and particles and all sort of things. Well brother, when a fellow all of a sudden starts to stop motion, when he just turns on the brakes and let's say his… his… his horsepower, the horsepower rating of this thetan at the time he put on the brakes was a potential milli-G (that's a new quantity I just developed) uh… a milli-G – if he had that as a horsepower, then these ridges would stand at one milli-G. That's how much energy was radiating around this thetan.

So we look… go and look at Figure Five here. All right, this gets more and more interesting as we go, so don't go to sleep.

Here's a lot of loose particles. The fellow did… this milli-G thetan did a lot of loose living. and they're all around here and… and here he is. You say „Well, where is he in this… this whole matter here in Figure… Figure Five?" I can't answer that question, because that's him. You say „Where is he?" Well, that's him… that… that… that's the boy; that's our boy.

Now all of a sudden – it doesn't matter how far across that is – doesn't have to to have the dimensions. Now all of a sudden a one milli-G thetan, has already started to specialize slightly in energy, and something hits him or convinces him that at some instant he has to come to a stop, you see. But the thing that convinced him he had to come to a stop was a horrendous blast of something or other. A two milli-G thetan came to call and didn't like the tea – something like that.

Well, the way you get rid of one of these… these dispersed characters and that sort of thing, it's a very simple way of getting rid of him, is… is just to undisperse him. Just solidify him a little bit and give him a shock so that you get a… an upset of particles – now he's got particles kicking around, he's made hoo-ha and so on. So you'd possibly get our lightning bolt hitting somewhere in here. It'd be just on the order of a lightning bolt. What do you suppose would happen? Well, we have to go to Figure Six to find out what would happen.

And Figure Six is on the next page.

All right, Figure Six here shows us now something has happened. This center here tried to rush in and condense to drive it back and Figure… as I understand this, it… its tendency was to do this: trying to rush in, see? But it's tried to rush in toward the center to block off Mr. Lightning Bolt, so we're just going to stop that by putting a lot of particles there suddenly and letting it hit matter. That's the good, sensible way to stop things.

Of course, the best way to stop them is, of course, cause a rarefaction right there and the lightning bolt goes on through and the two mill-G thetan looks sort of apathetic for a moment and says „Well, I guess the tea wasn't so bad."

But the other way of going about it and what's wrong is to suddenly… suddenly have here uh… one of these… one of these uh… condensations right at the center.

So, let's go to Figure Seven. A lightning bolt hit this condensation here at the center and a vector started to go out. The impulse here was out, see?

Now he condensed, it started to go out – and what are the laws of motion and emotion? It says, „We've got to run away from this because we're scared." You see, you couldn't stop it, so you had to depart from it.

Now that, in essence, is what happens in an injury. You can check this in an injury. A guy is hit and at the instant he's hit, just before the blow strikes his skin, oddly enough, just before it hits him, there's this odd one.

Fellows always get their hands hurt just before they hit the table. They… they come in and they start to hit the table and they know their hand is going to hit the table; an instant before it hits the table their hand hurts. In they come and they hit the corner of the table and it hits the hand and their attention units or particles rush to that point to defend, and blow off the injury, find out they can't do it, penetration continues and those particles which rushed in now try to rush away from the injury.

You can test this out, if you want to. Go around and stab yourselves. I mean, you'll find out just that it's just exactly what… what happens there. And you get a rarefaction and condensation action. It rushes away, the particles try to come back again and stop it some more. Then they rush away and then they try to stop it again.

But this thing is making more and more ingress all the time. And it rushes away and tries to stop it again. And all of a sudden he goes into apathy and he's just null.

But he's… each time he's trying to stop, stop, stop, stop – and you can practically hear the… you can practically hear the… the brakes squeal on an injury. And if you're running by Effort Processing – you know Effort Processing – just start to work out one of these injuries and you'll find out that it's going this way. And you work a little further and all of a sudden why, the last efforts are run and it all weakens down and bong! There goes the injury.

You'll find that's a pattern of rarefaction and condensation of attention units which are rushing in periodically to PUSH the thing back out, finding out they can't and rushing away. Then gathering a sort of force and coming back in to stop it again and then pushing it away. You get the same action as you get with flows, dispersals and ridges – that sort of thing. You see how that is?

I… I see you're looking at me rather alertly. You… some of you that are looking at me that way haven't listened to Technique 88, then. Or, it wasn't stated in there uh… as clearly as it ought to be stated, because the truth of the matter is there's nothing simpler than this.

You can actually, and should, right at this moment, if you have some curiosity in the matter, simply pinch the back of your hand. Hold it like this and you will feel the skin is tight – it starts to tighten up on you. Now pinch it like that and you'll feel the attention units rush away from there – not just the pain. You can feel the attention units rush away from there. Now you un-pinch the thing and you'll feel the attention units come back into it. You can feel the path of those units…

Now you know that if you hurt your hand a little bit like that, you probably only feel it for a couple of inches around and about the injury. But if you hurt your hand real bad and so forth, you could hurt it so that it would shock clear up here and hurt the elbow. There attention units are rushing down the whole length of the elbow and then they're dispersing back up the whole length of the elbow and then they're dispersing back up the whole length of the elbow and they're… that's an energy flow and it's flow and it follows the pattern of flow.

So, what do we get here? We get right here in the center as the second stage – this was stage uh… two on this lightning bolt, and this was stage three on the lightning bolt, and we get this sort of an action.

But what happens to these when these little arrows here get out and hit these outer particles. The outer particles say, „Hey, we're getting an injury!“ And they say, „To hell with that!“ So they brake. And they say, „No! No!“ And they start in like this – Whong! Whong! Whong! See these little arrows? All right, these little arrows come in here and they brake – or put the brakes on fast. See the particle directions?

So the little arrows… every time you hit that receding wave an injury actually goes – and explosion goes – if you took a picture of an explosion you'd find it was going whong – whong – whong! See. It's getting bigger and braking itself at each moment. Like a bird would flap its wings, or something of the sort. It's down-up, down-up, down-up. Out-in, out-in, out-in, out-in, out-in, all the time getting bigger. What's it doing.

It finally winds up as in Figure Eight – you're very lucky people to hear this lecture. I'd never intended to give it. I keep forgetting this one because the subjects is so big, as you will find out in a moment.

You'll finally wind up with a kind of an empty spot here and with a… some scattered particles here and some scattered particles here and some scattered particles out here. And what are these things? Well, here's the center hardness, and there's a ridge, and there's a ridge and there's a ridge, resulting from that explosion, see? These particles out here at this gradient scale in Figure Seven are still scattered and still influenced.

Now this shows you here… gives you a pretty good idea of what goes on in an explosion. I wish I had some stroboscopic pictures of an explosion. That is, something that just split instant stops the wave motion or formation which takes place during an explosion, so that you can examine it.

For instance, you see a stroboscopic picture of a drop of water. It forms the doggondest pattern. It just drops into a bucket and you can watch that drop go down and then the pattern that it makes and so on as it finally drops. And you'll say, „Good God! Could one drop of water cause that much commotion and that many patterns?" It sure can.

Well, if you were to take a picture of the guts and anatomy of an explosion in action, you would find there's rarefaction condensation areas in the middle of it. If anybody here has ever served with artillery, you're quite well aware of this, because you can actually feel on the explosion of shells as they hit. Uh… they go 'bah-ow-wah-ow-wah-ow-ong'. You're hitting those ridges, see – sound ridges are going by.

There's this 'bo-ong'. You'd think… you'd think a shell would just go 'boom!' – it doesn't. It goes 'Bo-oo-oo-oo-oom!'. You could forget it.

For instance, if an artillery shell went off, if… if there's just a sound, solid blast – why do you think windows cave in? Well, they… they would… could probably be braced. Your window would stand up to a pressure so the pressure would hit the window, you'd think, and if it were a solid blast, it would just sort of stretch the window pane in.

Waves will break out an anchor. You can lie in a hurricane of wind and the hurricane of wind won't blow your ship away from its moorings – just won't. That anchor will just dig in and dig in and dig in. But once you get waves going, they lift that bow and they drop that bow and they lift the anchor buoy and they drop that anchor buoy and it keeps yank on the anchor and yank on the anchor and yank on the anchor. And all of a sudden the anchor course moves and drifts.

Rhythm… rhythm does this. So as the sound of an artillery shell outside that window would hit the window: the first wave would hit it – bong! And then the window comes back toward the direction of the sound and then the second wave hits it – boonng! And it goes just a little bit further and then back toward the direction of sound. And then the third ridge in that ball of sound hits it and it goes boom-crash!

But it took ‘bong – bong – bong!’, you see, to break the window. If you just had a sound pressure – solid pressure – on it, it wouldn’t have broken the window at all, usually. You could tape your windows so they wouldn’t break. There is no taping a window so it won’t break in a good sound barrage.

All right, you see? It’s interesting here. Funny part of it is, that if you were to trace these ridges in any pattern of explosion, you’d find out they were really… of course, I’m drawing here… a flock of spheres.

Now, watch a pebble being dropped in a pool of water. Water… of course the physical universe runs on the laws of the physical universe and never varies – pooey!

Water freezes from the top down; it’s noncondensable – the most confounded things happen in water.

Now you can drop a drop of water in a pail, or a rock in a pond and you can watch these waves going out. And they’re linear waves. Why are they linear waves? They’re just linear waves because you cross-section them and they’re applying, really, only to the surface. You’re getting a particle yanked up and down. You’re moving a particle up and down. But that’s because… that’s because you have air above the wave and the wave cannot compress of itself; water’s noncompressible. So you get a strange and peculiar attitude on the part of the water. So it raises and lowers. And you get the particles raising and dropping.

And then they tell the physics student, „Well now you see, waves are just like this piece of rope. And if you want to prove it, go on out and look at a pond of water. And here we show this rope and we give it a whip and we’ll see the wave travel down and come back again. And isn’t that cute and it’s just…“

I wonder where the hell these professors ever did any observation. Why don’t they go out and jump in a lake and find out what happens? Because what you’re getting is an interplay of an incompressible with a compressible. And that is a very peculiar wave indeed. It’s a wave peculiar to a condition where two fluids are involved – fluid one is air and compressible, and fluid two is water and not compressible. You’ve got a commotion; there’s motion there someplace. So your first splash sets air waves in motion which react back against the pond and make these silly-looking pools and things like that – very, very interesting.

You take a stroboscopic picture – if you could – that would take one that showed actually the particles of air, you’d see that you had an interaction between two fluids. So this is a very, very peculiar wave.

Well, you get down under water and water has no compressibility, it says right in the physics textbook, so of course it’s impossible for sound to pass through water. What’s the matter? Some disagreement with this? I mean, you… somebody heard sound through water here?

The way… the way the scholastics used to teach uh… almost anything, is always worthy of… of comment and notice. They… in 1500 universities taught on the scholastic principle. They had a number of books and the. books were quite authoritarian and they said so-and-so and so-and-so, and then the student would read the book and listen to the lecture and then take the examination that said so-and-so and so-and-so and so-and-so. They had… didn't have to make any comparison with the real universe. And uh… uh… having taken the examination, he would get his grade only on this basis. It was a very peculiar custom and uh… it uh… ceased, I'm sure, about 1500 or 1600. It's – noways – been carried through into modern times.

Of course, modern classes, when they teach a student some principle or other in physics, they say, „Now, uh… we don't care whether you believe this or not. Uh… why don't you go out and look. And by the way, by the virtue of your looking, you might find out something you can tell us." No, they never said that… they… I mean… pardon me! I mean, they… they undoubtedly do that, because this is a modern age.

The scholastic came about through Aristotelian logic, and so forth. It was all black and white; therefore anything that was written was right. And things that weren't written were wrong. Or I… I don't know how they figured this out, but that's more or less the way it was.

Natural History… Natural History and that sort of thing was taught by rote. We didn't have to go observe it.

And that's actually – physics as a science prides itself upon its observation. Oh, it just prides itself just straight through on its observation.

Your engineer gets out of class and he goes over and he. starts working on – and all of a sudden he plugs in the ruddy-rods on the wrong side of the whatchamagujits and he graduates up and he finds himself working at Los Alamo Pork Pie or someplace and he throws the cross-pile against the cross-pile and this doesn't quite agree with the conservation of energy, but he kind of looks dogged about the whole thing. And he says, „Well, I guess it really doesn't make the basic laws of elementary physics wrong – I hope – because I signed a pledge that I wouldn't disobey those things. I wrote on the examination paper and said, „These are right and they will always be right and they will always hold true for the whole universe – signed and sworn to and subscribed before me this Umth Day of Umth. Charles Jones, C.E." Or something like that.

All right, here's one that you could very easily miss: Rarefaction condensation.

The number of linear waves which you are going to find in the universe will be when two fluids come together or three fluids or six fluids, in some eight-dimensional torsional G space.

Uh… but uh… let's not throw that rope around and say, uh… „Well, it's all linear space and uh… uh… that's why a radio wave travels in this fashion and that's why a broadcast station works, is because you've got this long line. And actually what you do is you go out and attach this line to this television antenna of John Jones and when you've attached it to John Jones's aerial, then you go back to the station and you keep flipping it from this station. This… this… this wave, then, jumps up and down and he only then receives television.

God! If that were the case! That's really the way they explain it in elementary physics.

No, it looks just like this: Figure Eight might as well be television, might as well be television.

And what do you know? Let's add something else in Figure Eight here. Just before you get there… there's a little tiny dispersal, see? Out here in this third ring – third ring out. You get these little dispersals just before it forms in a ridge. And in here you have an indecision on „Which way did he go? Which way did he go?"

So you've got your complete rarefaction in here where I have marked Point uh… M – midway in between those two waves, see? And… and that… that point is… could stand for „Which way did he go?"

Rarefaction comes in, it goes 'bo-oo-ong', see? And you've got that point.

Now, there's a dispersal, but just as it leaves that rarefaction – I mean, just as it leaves this ridge, first ridge out from there – just as it leaves that, there's a little bit of a dispersal there.

Now let's magnify that up and have on Figure Nine, then, the action there that happens in that ring. So here we've got a… a ridge and it's travelling from right to left. We've got a little dispersal here as your particles… particles leave there, and this comes over here in this direction; and you've got your particles lining up for any given moment and you've got which way did they go, and there's a dispersal sort of a thing at this midway point in here.

And then we've got – let's see now. If we'll get it at the same instant. Whong, yeah. The same instant here would be a little bit of a lag. We won't bother with that. So let's get it over here and this is actually coming in like this. And here's your next ridge.

So let's break this thing down and we get – and you've actually got ridge at 'R-1' here discharging toward Ridge 2 and it gives us, in Figure Nine a… it gives us a ridge, a tiny dispersal, a flow to a dispersal, to a flow, to a dispersal, to a ridge. You get that?

Now we look back at that first one that I drew, you will see we are dealing with the characteristics of energy. And energy then, it always bears some relationship to the characteristics of a floating sphere.

Rarefaction condensation waves as they go down a copper wire are really rarefying and condensing electrons. The electron does not flow down the wave like a drop of water; it rarefies and condenses.

In a whole day of electrical flow on DC, probably an electron doesn't move a hundred feet. I don't know – it… I don't know how fast it moves. Might move a mile, but th… that stuff is supposed to be travelling at a hundred and eighty-fi… – six miles a second. They are trying to agree on it.

All right, so… so that's very… very… very amusing there to find out that we are dealing with a rarefaction and a condensation in such a way that we've got the – what?

Let's draw a picture here and let's call it Figure 10 of Mr. Preclear at the moment he put on the brakes. He found out that this reaction was taking place and he said, „Stop!" Here's your reaction center, here's your next ridge out, R-1; next ridge out is already beginning to go; the explosion has hit him; he's in this form at… that's R-2, And he gets out here and he says… at this instant he says „Stop!"

Now that's a sphere you're looking at; that is not a two-dimensional plane, that's a three-dimensional sphere. What's it give him? It gives him the shape of an electron. Of course this doesn't bear any relationship to the shape of an electron. We're not supposed to talk a-bout that because we're not licensed to. It requires a special license from the Atomic Energy Commission to talk about electrons. They're sacred property now and they're the only ones who can have any.

And uh… I… I regarded this with considerable sorrow because I probably will have to give up a couple of electrons that I kept around for old keepsakes.

What's an electron? It's one of those spheres. And if you can get one of those spheres to jump once, R-1 to jump out to R-2, it releases what? One quantum of energy. And this is the subject called Quantum Mechanics, because it takes a… a… a mechanic to be as jerry-rigged and jacklegged about explaining this as they are. It really takes a mechanic of the kind and variety that Rube Goldberg employed to repair his models.

There's nothing much to this. The way you get atomic fission is this way. The artillery shells – you want to know? No, we're not going to give you any real atomic fission. Uh., the shell… the shell doesn't… the explosion from the shell doesn't go 'Boooooom!', you see? It goes 'Boo-oo-oom!'. Now the way… way you do, is you've got… you've got something which is floating around and it's making this sound. What's happened is sound, uh… what's happened is you've taken… the artillery shell has exploded and it's gone 'Boooom!', see. But what… what you did was go 'Boo-' – and it said „Stop," right there. And there it's been for just ages and ages and ages and ages. And what do you do to make an atomic explosion? You just let the artillery shell explosion go 'Booom!'. That's all. You've cut the thing loose on its timetrack, what do you know?

That's all you do, because you just let it go from R-1 to R-2, hit the next rarefaction out. And if you let… let the thing clip on its time track and go 'Booom!', see, and then you've… it's stopped right there and it's been stopped for some ages. It's been sitting there on a rock. The fellow that made this energy let it go just that far, see? And then the next step on it, and the way you get chain reaction, is to start it suddenly off of its time track and let it finish out its 'Boo-oom!'. And it will knock out Hiroshima, of course, or anything else.

Now theoretically you could do this to a preclear. You could get his ridges, his spheres out here, going in and out, in and out, in and out, in and out, and they would go 'Bow-oo-oom!'. They probably wouldn't even hurt him. He's indestructible.

That's right, he is. I said that very seriously. Some guy's going to try this and blow up half of this universe.

So it isn't any kind of a specialized or silly condition – is it at all? We're looking at a preclear when we're looking at Figure 10, only we're not looking at near as far or near as complex as the preclear is.

So this… to finish off Figure 10, this would really have to be all in spheres. We would have to put R-3, which is your next ridge of particles. You understand, there's just countless billions and billions of particles in any one of these ridges, see?

Now we're looking out here at R-4 – of course, in between these things in here at… at uh… these points I've marked 'F' and these parts I've marked 'D' – all through here there's 'D', 'D', there's dispersals, dispersals. And there's flows above the dispersals, and flows and… and tiny dispersals – dispersals. We're getting this pattern, see. And we've got these patterns on these ridges. And this is the pattern. And I'm drawing you a pretty picture – portrait of a preclear. This is what you're working on. Of course, the second they find out that we're working with atomic energy, they'll stop us, but, uh…

Honest to Pete. There… there's really nothing to this problem. This is one of those silly damn problems. If this problem were complicated and if anybody made this problem complicated for the last eight thousand years, he ought to be spanked, to tell you the truth, because it's too simple a problem.

You see those dispersals and you see those flows? Now, it all… it's all adding up into, again, this ridge, dispersal, dispersal – that's a flow, little dispersal, uh… dispersal, flow, dispersal, ridge. That's the pattern. Only you've got – good God! I mean, all this stuff is standing out here.

Now your preclear just shifts just a little bit in this flock of onion skins which he's living in. Or, you all of a sudden stop him at a point where he's been arrested and it sort of goes 'Boo-oom!' for a second, and he'll shift a ring, or something of this sort.

I've had this happen to preclears, by the way. It's not dangerous because you think atomic bombs are dangerous. They're not. YOU'RE dangerous – not some bomb. Maybe you particularly.

Now I've had them shift, I've had them shift a ring. And I didn't get a quantum of energy kicked back, all I got was maybe – I don't know – maybe something like a thousand, well maybe a hundred thousand watts, something like that, exploding in the preclear's face – a slight singe, just a tiny singe, maybe eyebrows and just… nothing. Nothing. The fellow said, „My God! It's like the Fourth of July!" And felt much better the next couple of minutes – kind of mystified as to where all this electricity came from suddenly.

Of course, I wasn't doing it – I didn't have anything to do with it at all. No responsibility for that energy. I was merely coaxing him to try to reach out and pull in that outside ring and let it go again suddenly in rhythm. 'Song-bong-vroom! Pow!'. It hardly made any noise at all.

Now you understand that when your preclear's in this terrible state of affairs, stuff hitting him bang! bang! bang! all the time… Stuff keeps hitting the preclear and hitting him – it gets terrific condensation to this point, through that rarefaction, that one, and the more ridges he's got and the more heavily stacked these things get up… because he's sitting there in a stopped motion. He's stopped someplace on the time track, otherwise he wouldn't have a single ridge. He's stuck on the time track. He's holding on to these particles in that formation.

And he's holding on at a high energy input incident – a few milli-G's of impact, way the heck and gone, back on the track.

And of course he'll use… running around with one… one uh… one grasshopper erg, or one one hundredth of one grasshopper erg being normal, and you all of a sudden say, „All right, now let's reach out there and run that ridge.“ „Nooo,“ he says. Because he instinctively knows what's really on those ridges. He… he knows really that they're all ready to go 'Boo-oom!' and when your preclear won't change, he… he knows what his penalty of changing is. So that's your build-up and your energy pattern – that's a picture of your preclear. That's a portrait, Figure 10.

Now somebody who is really very good ought to really build one of these things out of sectionals half cut through plastic spheres just to show somebody. It'd be pretty hard to do, little sketch network of… of rarefaction and… and the pattern of particles and so forth, in one of these, so that you really get an idea. See, there's particles all through the ridges, they're hard now. There's particles in between the ridges and there's particles – you're doing just very specific things.

Now I tell you, as you look at this galaxy and you look at the Milky Way, the number of engrams which you can run off the Milky Way aren't anywhere as near as important as getting the fellow in command of the Milky Way. And when you look at the central hub of this galaxy and treat it in one fashion or another, you must remember that it's awfully happy to have an arrested 'Boom!' – very happy to.

And this of course, bears absolutely no resemblance whatsoever to the pattern of the MEST universe. Now just remember this when you take a look at it. And sometime when you're out in the s… stars or around someplace or another, just take a look at some of the patterns which you see up there, and you get a very clear picture of a preclear. They're sort of elliptical; they're not spherical. They're not even an oblate spheroid. I mean, they're quite flat. They're just sort of a wheel variety of the thing.

And when I say, „Build your own universe by restoring your capabilities to do so,“ you… this MEST universe has gone hog silly on particles. And don't think that just because there's those great big chunks of MEST and energy out there and they're so great and big, remember they're just great and big in comparison to you and nobody else.

So you're looking at the pattern of a galaxy, you're looking at the pattern of a preclear, and you're looking at the pattern of an atom.

Now, is an atom sentient? Is the atom a building preclear? Is it something which will graduate up to the rank of a preclear? Just as a preclear will eventually graduate up to the rank of a galaxy? Is that a gradient scale – goes on? Lucretius said so. I don't know how much he knew, I don't know which navigator he was on what spaceship before he arrived here. I seriously doubt this gradient scale has any actuality whatsoever…

For this reason, is, I've put together one of these island particles. You get down real small, see, and you scatter a lot of little particles around, and you p… postulate that there are a whole bunch of particles and then you say… you say, „Booh, stop!“ And what do you know? You've got an atom – you can make an atom of any size.

Now if you did this several times and so forth, and you jammed all these things in proximity and you sort of set them in positive and negative, you could actually get these things to changing space – you know, they go 'Pok! Pok!' to give us a space to change in one way or the other. And then blow them up. That's matter.

It's a gradient scale of this kind of ridge. You've got to have space, you've got to have particles and so forth to build this way. But this is not… this isn't necessarily a way of building, it's not a pattern of building, it's not a pattern you have to know about anything except auditing. It's merely very amusing that it does happen to exactly approximate the pattern of a galaxy; it has the approximation of the pattern of an explosion; it has the approximation of the pattern of an atom.

It also, to some vague… vague fashion has the pattern of a solar system. You see the solar system out here? The sun is collecting particles on a 'boom!' basis, but it's not a good example of it at all. That once upon a time it had rings all around and they were all solid rings and then the rings sort of uh… solidified, the ridges sort of drew together, you could postulate that this was the way planets come into being. Here's your sun – here in Figure 11, and uh… your sun's shining here in the center and uh… here's Earth – oh, uh… pardon me. Venus – oh, pardon me. They're… they're… they're much much further apart than this, honest… honestly. The Earth and the size of the sun, if you were to plot them out, oh, on a square mile piece of paper, why you… you… you'd have to use a very fine pointed pencil to put the planets into size.

It's uh… people get an awfully exaggerated idea of how much matter there is wrapped up in one of these systems.

All right. And here's the… here's Mars, and so on. There's a terrific amount of difference between these things. So you could – Jupiter, Saturn.

Now you could then postulate that once upon a time there were some… there were some rings around here and that these rings gradually caught up with themselves and tripped over themselves and finally got into a congealed mass and got there, but it would be in direct controversy to… to Professor Yumphgallah, and he's a man I put lots of confidence in. He writes with so many commas that he's very convincing. I remember one adverbial phrase he had there and I… it took an entire afternoon to find out whether it fitted in the sentence or not, and I finally found out that although it was in chapter one, it referred to the fifteenth sentence of the appendix. And uh… I… I respect a man who can do that. He wrote it in English too. It is completely incomprehensible.

So it would be in conflict with his basic theories and I wouldn't want to advance this as a basic theory. So you'll pardon me if I don't mention the fact that maybe your preclear can just as easily walk around dragging some planets.

Well, regardless of all of that, it gets very amusing when you look at Mr. Preclear and uh… realize that you're really looking at a standard pattern of an explosion, which is arrested. The explosion is arrested in midair, you might say… it's just sudden – 'Yeoeow – whoomf!' – stop. Well now, what's he using for energy?

You see, now I've been talking for a few minutes here about: „Oh boy! It looks like the galaxy and the preclear looks like an atom and the atom looks an…" And true enough. These things are all related, because it's a pattern of a method of making a universe – it's just patterns.

Uh… guy was on… he had a one pattern mind, you might say. He probably worked for the Ford Motor Company back about 1915. All he could build was a Model T. And uh… one pattern mind.

And it just seems uh… that everywhere you go in the universe you find that one pattern mind; you find this rarefaction condensation thing.

Now when you're looking at these… these pictures, you're also looking just right straight at… you're also looking at a radio wave, you're looking at uh… so on. And it's the distance from one ridge to another ridge, which is the wave length.

Now that wave length can be eight miles or the wave length can be uh… the wave length can be 15 centimeters or the wave length can be, oh, a couple of inches, or it can be a half an inch – that is from ridge to ridge. Or it can be uh…5 inches – that's radar by the way. That's about the shortest they got radar, I think. They may have a shorter one by now. If they have, they're keeping it secret. They have to keep all these things secret because merchant ships and automobiles groping in the fog can't use radar.

And uh… you get uh… down, you see you're getting down from, oh, various types of waves, electrical waves. You're getting down further, getting down to radar. Now radar is hot – radar is almost solid.

Radar is very amusing stuff. Uh… when you get down to, I think it was a half an inch, or maybe it was a half a centimeter – I've forgotten which it was – doesn't matter much – if you're rigging them up, you can change them from one to the other pretty fast.

And uh… uh… you can take one of the radar beams and – I'm afraid that there is an unserious streak in me, that I will have to do something about. But I had about a… at one time about 50 thousand dollars worth of radar – or maybe it was 200 thousand – and I put it up – it was all up on everything. And you weren't supposed to be able to do anything with it, and they said its… its wave was somewhere down around a half an inch or a half a centimeter or something of this sort. And I said, „How… how short?" And they said it was so and so and so. I said, „My golly! That's awfully, awfully hot." „Yes," he said, „the reason we're telling you is so that you won't let your operator…" I said, „Wait a minute! You're talking about hard radiation. That… well, that's almost into the hard radiation band." He said, „Yeah, yeah, yeah. That's why we don't want your operator uh… reaching into this thing and crawling into it to change his pants or something of this sort, and because he's liable to get a bad burn. And so let's… let's not do this and uh… they… by the way, these waves are secret, so don't let anybody know I told you what this wave was.

Uh… they're… they're different from vessel to vessel and… and so forth and uh… they have a complete system worked out. And there's IFF Systems and so forth. And it's all very confidential, so don't let it out. Uh… and uh… I'll give you a diagram if you stay after class."

Yeah, any spies present? The diagram is proximity shells. The Bell engineers… Bell engineers – I'm just taking off, by the way, on a Bell engineer. He'll come in with the newest, latest piece of Navy equipment, see, and he'll have it all sawed up and he's… he's refining it somehow; he's decided that the production copy is not good enough. He's got it in his grip and uh… he says, „I just brought it over to show you," and so forth. He says, „This is the latest device, and this explodes the torpedos in a submarine uh… if you fire it within ten or twelve feet of the submarine's radar," or something of the sort, see? And… and so on, and, „Isn't this cute? It's built right into the shell here," and so on. And he talks about it because, of course, he's making… he's making robots. He's making things that think and act without being told right away. They were told a little earlier by him. And he's got a delayed action of doing what one is told – after a while. And that's quite a trick. If they'd only make one that would do what it was told before it was told it, that would be good.

Well, anyhow, he'll… he'll bring this in and he'll show it to you and it'll be just beautiful and uh… he'll get a… he'll show you all the diagrams and so forth. And after he's all through, he'll say, „By the way," he said, „this is dead secret – this is top secret. I don't want you to let anybody know about this." And you say, „Well, does your wife know?" „Yeah, well sure. We're under good heavy security on this though." And I said, „Well then the lady next door kind of knows about this too." „Yes, she was very interested."

Well the three or four callers that you had, to which you had introduced him indifferently, of course, they've appreciated it too. But that's all right. Bell Labs could make all that stuff obsolete tomorrow if they wanted to.

But uh… the government, if he were to leave a copy of the drawing open on his desk at the office and move away from his desk, he would probably come back and find himself on the Communist Party list. Everybody in the office is secure, see. They're all nailed down. And if he left the drawing open, he'd get ruined. Fascinating business, security.

Well, anyhow, having no… not quite a serious streak about all this, we trained this radar beam on the front of the focsle head. We just went up and yanked out some pins and warped it around and took its antenna around, you know. They've got big cages. Those mattress-like things that look – mattress springs on masts and things like that… that – oh, that might be radar and it might be a new way to dry the captain's cap covers, you never know these days.

And uh… so just turned it around, cocked it over on one side and turned it around to get how hot it was to tune it in, and so on, because I was actually working for something serious. I wanted to be able to pick up a landing craft or a torpedo closer than 700 feet to a ship. And I thought this would be a very good idea – this would be a very smart thing to do.

By the way, your landing craft could come in at that time – they were about 700 yards, I think, was the closest. Landing craft could all be in… in the fog and losing the ship all the time and passing by it in all directions, still too far away to hear very much and your radar couldn't pick them up. You'd be sitting there looking all around on the water for the ships and you just couldn't pick them up. They were too close to you. So, anyway, we put some weinies up on the bow and fried them. That was a good – good application. It was about all I ever did use that radar for, but it was uh…

Now you get how hot a wave like that is getting. It… it's really getting hot. You're getting shorter and shorter and shorter stuff. And if you could keep up volume with the shorter stuff, oh, that'd really be fascinating.

That radar gets hot – radar of longer beams than that – you go out and you shoot it against the wall and it would come back in practically a ball of fire. You're making a directed part of this sun deal. You're taking a little section, see, and you're shooting – there'd be a bunch of beams out here and then you rarefy and condense them. And you've got them all rarefied and condensed and then it comes back rarefied and condensed and goes out rarefied and condensed and back; you just fill the hell out of the air with particles, see?

And it comes back in – slosh! And it reads and you turn it on and it says it was 762 yards and a half.

The British were very conservative, by the way. During the last war the poor old Hood and the Bismarck fired a simultaneous salvo practically. And I think the Hood got in her salvo first, and they… they – according to the reports, the Hood took optical range on the Bismarck because that radar was pretty new. And their shell hit at exactly the optical range. Optical range was very good and it hit very good. But the only trouble was, the optical range could be far wrong and the Bismarck was almost exactly the distance that the radar range said it was and the Bismarck fired, by radar, on the Hood and shot her right into the magazine „Kaboom!" – first salvo. „Bang" – there went the Hood. Great big battle cruiser. They didn't believe in these new gadgets.

The fact of the matter is that radar is very sharp, so you're getting a… a highly directional wave when you're getting up there – terrible directional.

Well, you go on up into the other waves, uh… terribly directional, very reliable, work with it very sharply and so on – better and better directed.

Now we go up there above a little bit and we go upstairs from that and we get a little higher and we get better and better directed waves. And they go up above that and we get higher and a little bet better directed waves. And when you get high enough and run out of waves, what do you know? One thinks. So, this proves that one should think. Let's take a break.

(TAPE ENDS)