

**FEATURES: "Almost Blind" – Limits of the Senses
Discovery vs. Revelation**

- VOICE: Even if our vision is perfect, we're almost blind.
- PROF.: Let's talk about how little our eyes, ears and other sense organs can detect – and what else there may be to discover.
- FORMAT: THEME AND ANNOUNCEMENT
- PROF.: I read a striking statement the other day. Even those of us with perfect vision are *almost blind*. Even with microscopes and telescopes, there's still a lot that we can't see.
- VOICE: Are you referring to the fact that visible light is only a small portion of the electromagnetic spectrum?
- PROF.: Yes, that's *part* of what I mean. We're surrounded by many different kinds of waves, each with its own specific frequency of vibration. One of the slowest is electricity from our power lines. In most countries, that's at either 50 or 60 Hertz. Among the fastest are cosmic rays, vibrating at about 6,000 million million megahertz.
Between the lowest and the highest are radio, heat and light waves, X-ray and gamma rays – plus maybe others we haven't discovered or categorized yet.
- VOICE: So we're "almost blind" in the sense that our eyes can see only a small part of the spectrum?
- PROF.: Yes, a very, very small fraction. Suppose we put the entire spectrum on a graph. Let's represent the *waves our eyes can see* with a line *one millimeter wide*. The rest of the graph – *the part we cannot see* – would be *18 thousand million kilometers* wide.
- VOICE: We can see the equivalent of one millimeter, out of 18 thousand million kilometers?
- PROF.: Yes. Our eyes are sensitive to less than a trillionth of one per cent of the waves vibrating around us. So our eyes give us an "ignorance level" of 99.99999999999999 per cent!
- VOICE: If the eyes were our only sense organs, we would miss a lot of things. So we should be happy we have ears.

- PROF.: Well, the ear is a fascinating mechanism. The part of the inner ear that receives mechanical vibrations and converts them to electrical waves is the cochlea. It's called by the Latin word for snail, because of its winding shape. The cochlea is smaller than the end of our little finger. Yet it can detect not only the differences between do, re and mi – but at least 20 tones between each pair of notes. Although it can differentiate small differences in pitch, the ear can stand the loudness of a jackhammer or a jet engine. Yet it can hear whispers.
- VOICE: Would you say our ears are partly deaf? I'm thinking of the fact that some animals can hear frequencies higher than human ears can detect. So some people use super-sonic whistles to call their dogs.
- PROF.: Right. And on the low end of the sound spectrum, there are tones we can feel but not hear. Furthermore, some vibrations – like those following an earthquake – are too low-pitched for humans even to feel.
- VOICE: So when we add the fraction of 1 per cent of the spectrum that our eyes can see, plus what our ears, nose, taste buds and organs of touch can detect, how much of reality can we discover?
- PROF.: Adding up the signals all our sense organs can detect, they combine to bring our ignorance level down very slightly – to 99.999999999999998 per cent!
- VOICE: But I thought you believed a wise God made us. If that's true, why would He have made us with senses that miss so much information?
- PROF.: Let me answer your question with another question. What would happen if we could detect every vibration and pulsation around us?
- VOICE: Well, even in my “almost blind” and “almost deaf” condition, I sometimes have to concentrate hard to separate important information from the unimportant. If what I see and hear is only a fraction of 1 per cent, I guess it would be very confusing if I could detect 100 per cent of the waves that exist.
- PROF.: What would happen if we could hear the subsonic and the supersonic – and see the infrared, the ultraviolet and other wavelengths? What if we heard every radio station mixed together? One is playing classical music; another has rock. One is giving the news; another is broadcasting a speech – some in our language, others speaking and singing the various languages of the world. How long would it take us to lose our sanity completely?

- VOICE: So you're implying that God was merciful when He gave us only limited abilities to see and hear things. If he equipped us to hear every dog whistle, or every radio station, we would be overloaded with more information than we could handle.
- PROF.: I see several points in the fact that we humans are blind to much of the information that surrounds us.
First is humility – the realization that we don't know very much. The late Nobel-prize winning geneticist George Beadle [BEE-dul] said, quote, "...science is an endless opening of sealed boxes, which turn out to have more sealed boxes inside. The more one learns, the more there is to learn. There is never a last word."
- VOICE: So people who think natural science can learn everything, overrate science. They have an unrealistically high opinion of how powerful science is.
- PROF.: Yes. To elaborate on the first point: That which we can discover through the natural sciences is quite limited. That's one basic problem of all scientific research: How can we discover facts, when our senses are so limited? And how can we *interpret* the facts we discover, when our brain has only a finite ability to reason and to analyze, and such limited data with which to work?
- VOICE: So we need to avoid being very dogmatic about what we think we know.
- PROF.: Yes. The second point is that God gave us *the abilities that we need*, not those that some other species may need. The senses God gave, enable us to avoid danger and to live a life that is physically and mentally active.
- VOICE: We call our program "Truth in the Test Tube." But you seem to be saying there's a limit to what we can discover by testing.
- PROF.: Yes. Some of the most important things in the universe are beyond our ability to discover. For example, the Bible asks, quote, "Can you fathom the mysteries of God? Can you probe the limits of the Almighty? They are higher than the heavens – what can you do? They are deeper than the grave – what can you know? Their measure is longer than the earth and wider than the sea." (Job 11:7-9).
- VOICE: In other words, in nature we can discover hints that there might be a mind and purpose – and a Creator-God – behind nature.

PROF.: Yes. But human discovery reaches its limit before it gives an adequate understanding of God. Therefore, God provides additional information about himself, through what we call *revelation*.

Discovery is man peeking behind a curtain. Revelation is *God lifting more of the curtain, to show more of Himself than we could ever discover by our own efforts*.

VOICE: Discovery is man peeking behind a curtain? Revelation is God lifting some of the curtain?

PROF.: Yes. The curtain behind which we find God, is too heavy for the human mind to lift. God has to reveal Himself, or we'll never meet Him.

VOICE: How does God reveal himself?

PROF.: God's primary revelation is the Holy Bible. We can read it with wavelengths our "almost blind" eyes can see. It is read and taught in words our "almost deaf" ears can hear.

VOICE: So we can go beyond what our discovery of nature teaches about God. We can take advantage of the additional information God reveals about Himself in the Bible.

PROF.: Yes. And we can learn more about God by attending a church that studies the Bible – and by listening to the programs that Trans World Radio provides on the air and on its website.

FORMAT: THEME AND ANNOUNCEMENT

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