



Soundwaves

In this article we go back to the most basic music element — soundwaves.

Soundwaves are too often overlooked as an element of music. But without this essential building block, we cannot hear any of the previous elements we've explored — rhythm, beat, melody, harmony, dynamics, tempo and tonality. Soundwaves are to music as the sun is to the earth. Take away the sunlight and everything will die. Take away the soundwaves and we cannot hear anything and would therefore have no music. Other music elements are dependent on the existence of soundwaves.

A simple definition of soundwaves easy enough for a child to understand is as follows:

Soundwaves are millions of invisible molecules which bump each other to make waves which carry music to our ears.

Let's dissect the word 'soundwaves' first.

Sound

The word 'sound' comes from the Latin *sonare* meaning 'to make a noise or to

speak'. Hebrew and Greek roots in the concordance describe sound 'to make a loud sound, call aloud, cry out, sing, shout, blast, tone, noise, voice'.

Waves

The Hebrew word for 'wave' is *nûwph* (pronounced 'noof') and means 'to quiver, vibrate up and down, rock to and fro'.

God created energy in different forms of wave patterns, such as heatwaves and lightwaves. In the cosmos or universe, energy is transmitted in the form of wave patterns. Soundwaves are another wave form of energy.

The first Bible reference to soundwaves is in Genesis chapter 1:

...and the Spirit of God moved upon (was hovering over) the face of the waters. And God said, 'Let there be light' and there was light. And God saw the light that it was good and God divided the light from the darkness. *Genesis 1:2-4*

We know these verses so well but let's see them in the light of music. Herein lies the very foundation of earthly music as we can understand it. This is the origin of the soundwave 'vehicle' which carries music to our ears. The 'moving' or 'hovering over' by the Holy Spirit began energising and starting the life process on earth.

Henry Morris sums it up very well in *The Genesis Record*:

The activity of the Holy Spirit is called that of 'moving' in the presence of

the waters... Some commentators relate the word particularly to the hovering of a mother hen over her chicks. In any case, the idea seems to be that of a rapid back and forth motion. In modern scientific terminology, the best translation would be 'vibrated.' If the universe is to be energised there must be an Energiser. If it is to be set in motion, there must be a Primer.

What a mighty, powerful God we have! God has truly provided a miraculous design in His soundwaves as His vehicle for transporting music to our ears. No man could ever create something as brilliant as this. Man only manipulates what is already God-made.

Molecules

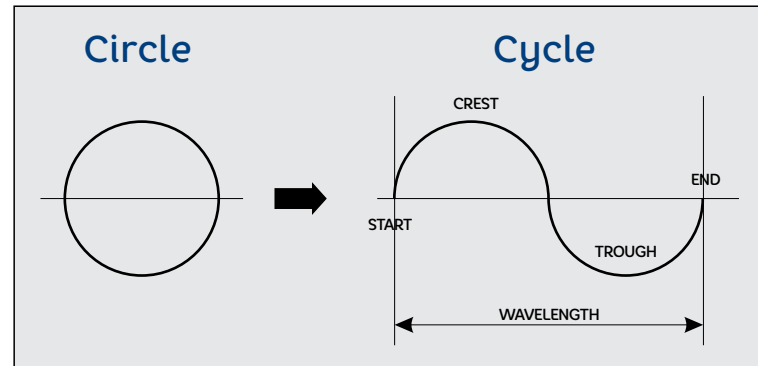
Now we move on to the next part of the definition — 'millions of invisible molecules which bump each other'.

Molecules are simply atoms joined together. Atoms are electrons, protons and neutrons zooming around in the space of their microscopic world. Electrical energy flows through tiny chains of molecules, producing power and movement resulting in a vast variety of wave patterns.

We know what waves look like when we throw a pebble in a pond — they ripple outwards in a flat circle. Soundwaves are similar — the difference being that they ripple outwards, not just horizontally but in all directions from the centre.

The cycle

The next part of our definition is 'to make waves which carry music to our ears.' The basis of a wave pattern is a **cycle**. What is a cycle? — It is basically a circle cut in half and twisted around.



A circle becomes a cycle. The highest part is called the crest and the lowest part is the trough. It has a start, a middle and an end. The next circle/cycle starts and the pattern continues to form the soundwave. There are many different types and shapes of soundwaves and they all move along a timeline. We have already seen in previous articles how music moves along a timeline. This is because soundwaves need time for energy to flow.

The creator

Energy for anything, including soundwaves, cannot create itself. It must have a source or wave generator. God, of course, is the original Source. He created the earth and all that is in it just by speaking and calling out. Remember the Hebrew and Greek roots for 'sound' — 'to make a loud

sound, call aloud, cry out, sing, shout, blast, tone, noise, voice'. God's words are extremely powerful. They are energising and life giving. When God said, 'Let there be light,' He saw it was good. It was absolutely perfect, the exact way He designed it!

The energy flowing through atoms and molecules to make wave patterns was created on Day One. It became the means of transportation (or vehicle) which carries music with its elements to our ears. This vehicle was created on the

first day of Creation in preparation for the culmination in man on Day Six.

Herein lie the origins of the soundwaves which are the means of transport for music today. This reveals a great deal about the character of the Creator, God. He wants us to know that He is the Giver and provides the vehicle which carries music to our ears. He gives us the gift of music via the vehicle of soundwaves. Where there is a gift, there has to be a giver. And that Giver is God.

Colossians 1:16 tells us:

For by Him were all things created that are in heaven and in earth, visible and invisible, whether they be thrones or dominions or principalities or powers: all things were created by Him and for Him.

'All things' includes soundwaves and music.

Thou art worthy O Lord, to receive glory and honour and power for Thou hast created all things and for Thy pleasure they are and were created.

Revelation 4:11

God created them because He wanted to. It was His will and decision. It wasn't as if man came along and said, 'God, we need some soundwaves so we can hear music.' No! God created soundwaves before man even came into being. Man had no say in it.

The deeper message

As we learned in previous articles, God wants us to understand deeper things about Him as well as the pleasure music gives by learning about music elements. For example, melody taught us that God wants to communicate with us. Harmony shows he wants agreement between Himself and man. Tonality shows that He wants a relationship with each individual. Rhythm and beat reveal how He gives time for activity and rest. Soundwaves teach us that God is a Giver and Provider.

Rom 1:20 tells us

For the invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and Godhead; so that they are without excuse.

'The invisible things' is where the soundwaves and music fit in. So often we overlook them — but they are basic of basics. God

speaks to us through music which automatically involves soundwaves. If we open our spiritual ears as well as our physical ears we will understand more and more of God's enormous love, His character, eternal power and divine nature through music.

Soundwave stewardship

The gift of soundwaves carries a responsibility for man. We've seen how soundwaves are God's creation and belong to Him because He created them. In His great love He gave man dominion to look after everything on earth:

Thou madest him to have dominion
over the works of Thy hands; Thou
hast put all things under his feet.

Psalms 8:6

This includes soundwaves which are only on loan and come with the responsibility of stewardship, and ultimate accountability to the Creator.

It's like asking someone to house-sit for you. The house is still yours but you give the housesitter free reign over the property and entrust them to not damage anything. Likewise everyone who sings, plays an instrument, composes music or just listens is looking after God's soundwaves. We are given free reign over them and are entrusted to be good stewards of them. We are not to damage them or use them harmfully. We are to always keep in the back of our minds that the soundwaves are still God's and just on loan to us.

In his great love, God gave us the ability to choose how we look after the soundwaves. If we choose to acknowledge Him and use them for His glory, then He will be very pleased and bless us more. If we choose not to acknowledge Him and worship the creation of soundwaves, music and man instead, then He allows the natural consequences to follow.

In previous articles, we have already seen many consequences of abusing soundwaves by excessive use of dynamics, rhythm, beat and tempo and how they affect our bodies, minds, emotions and spirit.

Please keep this article in mind because an understanding of soundwaves serves as an introduction to the next article which will be specifically about a touchy topic — the use of instruments and their soundwaves. ■

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