

## Re: Math and music

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**From:** Jon Slaughter ([Jon\\_Slaughter\\_at\\_Hotmail.com](mailto:Jon_Slaughter_at_Hotmail.com))

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Date: Thu, 14 Oct 2004 04:48:26 -0500

"David Webber" <dave@musical.demon.co.uk> wrote in message  
news:ckl173\$531\$1\$8300dec7@news.demon.co.uk...

>

> "Jon Slaughter" <[Jon\\_Slaughter@Hotmail.com](mailto:Jon_Slaughter@Hotmail.com)> wrote in message  
> news:10mrf125rgb2pc8@corp.supernews.com...

>

>> This is a quite from <http://geodyne.com/schillinger/index.html#top>:

>>

>> "Music has remained in the dark, without geometric form, because we still  
>> refer to C as 1 instead of zero. Geometry begins with 0, not 1. With C as  
>> 0, coherent visual form ensues. The twelve notes in our primary selective  
>> system are used because 12 is the most versatile number; 12 is the  
>> smallest number with the most divisors."

>>

>> Now, as an "advanced" mathematician, does that make sense to you? If it  
>> does, then your not as advanced as you think.

>

> Indeed, it is a load of cobblers (as we say over here). The fact that we  
> use 12 semitones has nothing whatever to do with the fact that 12 is an  
> abundant number (ie one whose divisors sum to more than itself) and  
> everything to do with the intervals found by generating pitches at  
> intervals of a 5th. OTOH intervals would be much simpler if we labelled a  
> unison 0 instead of 1, but that has little to do with "geometry".

>

>> I've been studying music theory for about 5 years now and math for about  
>> 10 and, while music can be setup in a very mathematical way (such as using  
>> musical set theory, etc...), they all only seem to confuse the subject...

>

> Mathematics is a convenient framework in which to give a \*description\* of  
> a number of aspects of music. Nothing more.

>

Well, I personally believe that mathematics is more prevalent than that. Mathematics is the language of nature, just cause no one speaks it well doesn't mean that its not there. Math is all about patterns. Without patterns, you couldn't make sense of the world. Your brain looks for the patterns to reduce the complexity. This is learning the language of math...

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learning how the world works. This is why we are human. While I do think there is a theory about music that can be useful in making good music, I don't think we are even near the lvl were we can begin to understand whats truely going on. Maybe one day, but will probably be awhile.

>> *What I have "discovered" is that music theory is no theory at all(not in the mathematical/physics sense)... but just a set of so called common guidelines*

>

> *If you want an analogy of music theory in science then the closest is probably taxonomy in biology: music theory provides a framework to describe what is there – not a set of prescriptive rules, or even guidelines, and it doesn't make predictions like (say) theoretical physics.*

>

well, since I came from a scientific background, I figured "theory" ment scientific theory. Such as when one says "theory of relativity", "theory of quantum mechanics", "theory of gravity"... All these theories are scienfitic, the "theory of music" is very unscientific, and in my opinion, doesn't deserve to be called a theory. So, when I applied this "theory" to composing, it helped out some, but I was no where near what I wanted and what I thought I should get out of "learning" the theory. Now, I could have just went about it the completely wrong way. But I'm following what I've learned(unfortuantely, what I've read... if only books could talk). Now, if I would have known that what I'm learning is really just some basic guidelines that really don't hold much water, then maybe I would have not been so confident that if I learn all those rules they presented, then tried to apply them, that I would sound good. Those rules are useless by themselves. Music is a listening art, and if you don't listen and figure out where those rules came from and in what context they are mainly used, then you probably won't get very far.

>>...

>> *So, I think, if you just dive into music theory you might become frustrated*

>

> *Well that is the outcome of many fields of human endeavour. It doesn't mean one doesn't learn something useful along the way.*

Well, that is true, but it doesn't have to be.

>

>> *Anyways, There are many music theory books, but you might want to pick up something to teach you how to play an instrument such as piano*

>

> *To do that you need (a) a piano (b) some appropriate music and (c) a teacher. A book would come a very poor fourth.*

Well, you can get a cheap electronic keyboard for 100 bucks and hook it up to your computer and get great sounds from it. Tons of music is available

online for free. A teacher is well worth it if you can find a good one... I'm sure that many of my problems would easily be solved from one on one with a good teacher. Books are great if you have the first 3. Say, if you live in the artic or something, then they are even better... I think a good book and a good teacher with a little piano skills would be a good combination. You can read the book and ask the teacher when you run into a problem... that why, you are basically teaching yourself. The teacher I had wouldn't answer any questions, wouldn't even take a listen to the type of music I was interested in so he could tell me what I need to work on to play in that style. It was just do this, this and that... and most of the theory stuff I already knew... only good thing I got out of it was practicing on the instrument. But I didn't learn anything as far as theory. and I kinda got the feeling that he wasn't really interested in teaching me, cause everytime I asked him a question(Well, almost everytime), he would get defensive... then finally he asked me if I wanted him to teach me or not, cause I was always asking questions(cause I guess he thought I was questioning his ability or something... when I really just wanted to know why he was teaching what he did so I would be able to understand it better.. I mean.. if I'm going to learn this concept, it helps if I know why its useful).

>  
>> *(I think you need to learn piano first)...*  
>  
> *How odd!*  
>  
>> *and almost all books, atleast ones for adults, have basic music theory in*  
>> *it...*  
>  
> *But no mathematics.*

well, mathematics is everywhere! ;)

>  
>> *Then, by the time you can play some songs and you know your chords, you*  
>> *can dive into a harmony book and start playing around with harmonic*  
>> *concepts such as modulation... which you might have already discovered*  
>> *while learning the piano... and just didn't know what you were doing and*  
>> *why it sounded good/bad.*  
>  
> *It certainly helps to be able to hear the effect of different harmonies,*  
> *but for that it is surely not necessary to become a pianist! If it*  
> *were, then there would be no jazz musicians on any instrument who were not*  
> *also accomplished pianists!*

Well, its not necessary, but it helps. Its much easier to sit down at a piano and work out different harmonic concepts than it is on a flute or a violin. Also, since the piano is layed out in a linear way, its easier to conceptualize on the paino. Chord and scales are very easy to see as compared to most other instruments.

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> *Dave*

> --

> *David Webber*

> *Author MOZART the music processor for Windows – <http://www.mozart.co.uk>*

> *For discussion/support see <http://www.mozart.co.uk/mzusers/maillinglist.htm>*

>

>

Anyways

Jon