Music: A Universal Language?

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"Music is the universal language of mankind..." —Henry Wadsworth Longfellow[1]

Music has long been acknowledged to be communicative in nature. Some call it the "language of the emotions," while others (like Longfellow above) refer to it as a unique universal language. German-Jewish poet Berthold Auerbach addresses both of these approaches in his famous quote: "Music is a universal language, and needs not be translated. With it soul speaks to soul." [2] Countless book titles, articles, and artists acknowledge this supposed parallel between music and language. Few of them, however, validate the claim, expound upon it, or make it relevant to society. Within contemporary culture, then, why is it so easily accepted and taken for granted? Why do people so readily embrace this philosophy of music as language?

Although some might say that perceiving music as an emotive, communicative entity is obvious, it is important to remember that this is not a historically pervasive viewpoint. (In fact, even many modern philosophers of music and the arts would argue that music is incapable of communicating any specific meaning.) This is very clearly evidenced by the changes in musical perception that have occurred between "eras": many prominent figures in the Classical music era considered instrumental music very inferior to vocal music. "In their view, instrumental music was a language of the heart, with its own rules of syntax and rhetoric. It had the power to move the passions, but without a poetic or dramatic text, it was incapable of conveying concepts of reason."[3] As the Zeitgeist changed and Romanticism flourished, however, many artists began to express a much different philosophy of music: "The abstract nature of music, they maintained,

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[1] Henry Wadsworth Longfellow, *Outre-Mer: A Pilgrimage Beyond The Sea* (Boston: Ticknor and Fields, 1856), 202, accessed 7 February 2014, http://babel.hathitrust.org/cgi/pt?id=mdp.39015030751955;view=1up;seq=210.
[2] Bertolth Auerbach. Accessed 30 March 2014, http://english.stackexchange.com/questions/130607/is-this-quote-about-music-correct
[3] Mark Evan Bonds, *A History of Music in Western Culture*. (Upper Saddle River: Pearson Education Inc., 2010): 372.

was an asset, not a liability. Instrumental music, *because* it was free from the confining strictures of language, was capable of conveying ideas and emotions too profound for mere words."[4] Such conversations about music, and seeking the best ways to communicate both concrete ideas and subjective emotions to one another through it, are certainly not isolated to times of radical cultural shifts; rather, the conversation continues because of our longing to communicate deeply — humanly — with one another.

Although music cannot literally be called a language, there are clear parallels between the structures of music and language which indicate their similar capabilities to communicate across temporal, spatial, and cultural boundaries. Our fascination with the links between language and music, coupled with our desire to share deep emotions and life experiences with one another, can hardly be reduced to mere academic study. Our search for similarities between language and music — and, especially, for a means of universal communication — reveals in part the depth and meaning of our search for humanness.

David Lidov writes, "We speak both of the language of music and of the music of language. The difficulty of dismissing the relationship as mere metaphor is just this reversibility, which we don't find so convenient with Achilles and lions or with teeth and pearls. A metaphor that works well both ways, not just humorously, suggests a genuine interpenetration of its two domains..."[5] This certainly is not to say that language and music are equivalent. The biggest criticism against paralleling music and language seems to be that, functionally, music and language fulfill very different roles: language communicates specifically, whereas music (at least, purely instrumental music) is perceived to communicate only highly subjective themes and messages: emotion, beauty, and the like. Language certainly has been seen as able to

[4] Mark Evan Bonds, *A History of Music in Western Culture*. (Upper Saddle River: Pearson Education Inc., 2010): 372.
[5] David Lidov, *Is Music a Language?* (Bloomington: Indiana University Press, 2005): 1.

communicate more objectively than music can, even within a given dialect (i.e., a person would find it rather difficult to get directions to a restaurant using music alone), and there are other seemingly obvious distinctions between the two entities. Does this mean, however, that music is utterly incapable of communicating specific messages using its own unique vocabulary? To that end, what is language, what is music, and what distinguishes one from the other?

Both language and music are difficult to study holistically. The concepts of "language" and "music" are rather broad and, in many respects, extraordinarily vague. Although most people can readily identify both language and music, precise definitions ascribed to the phenomena fall short. Merriam-Webster comprises fifteen varying definitions of language, none of which fully embody the essence of language itself. It can certainly be defined in part as an "audible, articulate, meaningful sound as produced by the action of the vocal organs," "a systematic means of communicating ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings," and "the suggestion by objects, actions, or conditions of associated ideas or feelings."[6] These definitions, however, fail to accurately and completely address language as a unique entity, even in conjunction. What of body language, sign language, semantics, inflection, and *meaning*?

This problem of definition is also true of music. In part, as in language, this is because there is disagreement as to what music actually is: is aleatory music (e.g. John Cage's *4:33*) as equally "musical" as a Bach cantata? Again, Merriam-Webster's attempt to elucidate the matter is rather disappointing: music is defined as "sounds that are sung by voices or played on musical instruments," "written or printed symbols showing how music should be played or sung," "the art or skill of creating or performing music," and as "the science or art of ordering tones or sounds in succession, in combination, and in temporal relationships to produce a composition

[6] Merriam-Webster Online. http://www.merriam-webster.com/dictionary/language. Accessed 8 April 2014.

having unity and continuity."[7] Does this mean, then, that music is merely a conglomeration of sounds according to written instructions or recognized patterns, devoid of any other meaning? Is language merely a combination of sounds which results in a single, predictable meaning? Most musicians and linguists would adamantly argue that this is not the case. As Dr. Michael Thaut writes, "Speech and music both take on meaning within the cultural background, the social context, and the intents and expectations of the situation in which the communication takes place."[8] Music and language, then, cannot be studied as isolated mediums. If both entities have some ability to carry meaning, that meaning must be communicated somehow within a particular context and culture, and within at least one specific worldview.

It is for this reason that music and language are difficult to define and study holistically. Since worldview varies from culture to culture (both different world cultures and different societal cultures) and from person to person, interpretations of language and music will also vary drastically. Thus, objectively studying language and music can be a difficult task. Comparing and contrasting two familiar, yet undefinable, entities cannot be accomplished merely by presenting broad overviews of the concepts; if this were not the case, definitions alone would serve to distinguish one from the other. Since the "definitions" we do have of language and music are fluid and rather indistinct from one another, comparing and contrasting these two mediums must be accomplished from within each field. Rather than analyzing holistic concepts from the start, we must first compare the smaller, more distinct elements which comprise both language and music respectively.

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[7] Merriam-Webster Online. http://www.merriam-webster.com/dictionary/music?show=0&t=1396972856. Accessed 8 April 2014.

[8] Michael Thaut. *Musical Communication.* "Rhythm, human temporality, and brain function." (Oxford: Oxford Press, 2005): 172.

Language has long been analyzed and broken down into distinct parts of speech. The English language, for example, consists of eight parts of speech: nouns, verbs, pronouns, adjectives, adverbs, prepositions, conjunctions, and interjections. These various elements of speech, when combined, formulate meaningful expressions (sentences, paragraphs, and complete thoughts). These parts of speech cannot exist, however, without *phonemes,* the discrete sound units of which they are composed. Phonemes are recognized as the basis of speech: they are organized to form words (parts of speech), and those words are used to form complete thoughts which describe the world, give warnings and commands, and pose questions.

Although specific parts of speech may vary from language to language (e.g., some languages do not comprise articles ["a," "an," "the"]), the most basic components of language (e.g. phonemes) are indeed universal (even though no language utilizes every known phoneme). As noted above, phonemes are the smallest sound units of a language, and they are incapable of carrying meaning in isolation. When a phoneme is changed in a word, however, it can completely change the meaning of that word (e.g. "cat" to "bat").[9] The next structural element of language is the *morpheme*: morphemes are the smallest units of language which do have independent meaning (e.g. "learn," "blue," "car"). These basic "building blocks" of language are then combined according to *syntax* (the study of the rules by which words are organized into phrases or sentences in a particular language), *semantics* (structures such as word categories, word relationships, synonyms, antonyms, figurative language, idioms, and ambiguities), and *pragmatics* (the ability to use language appropriately in social and interactive situations).[10]

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[9] "Language Acquisition - The Basic Components of Human Language, Methods for Studying Language Acquisition, Phases in Language Development." http://education.stateuniversity.com/pages/2153/Language-Acquisition.html. Accessed 8 April 2014.

[10] "Language Acquisition - The Basic Components of Human Language, Methods for Studying Language Acquisition, Phases in Language Development." http://education.stateuniversity.com/pages/2153/Language-Acquisition.html. Accessed 8 April 2014.

In this regard, music and language are observably similar: music, too, is composed of discrete units which, when appropriately combined, form larger structures (chords, melodic sequences) and progressions. Dr. Thaut writes,

> Music has been frequently described as a language-like form of human expression although musical sounds do not carry designative meaning like speech sounds. Communication, defined in broadest terms as the process involving any exchange of meaningful information between two or more participants, requires signs and symbols to exchange information between the originator and the recipient... Both speech and music have structural acoustical similarities in regard to prosodic features: pitch, duration, timbre, intensity, and inflection patterns build from these elements. Music can also be studied in analogy to phonological analyses of single speech sounds. A case could also be made for possible morphological analogies in regard to the analysis of smallest sound units that convey meaning. One of the most important overlaps in comparative analysis between music and speech occur within syntax and pragmatics. Music and speech both are built on syntactical systems which organize sound patterns into rule-based structures.[11]

Aniruddh Patel, a leading researcher in the psychology of music and language, also argues that syntax is a crucial foundational element shared by language and music:

> Like language, music is a human universal in which perceptually discrete elements are organized into hierarchically structured sequences according to syntactic principles... Syntax may be defined as a set of principles governing the combination of discrete structural elements (such as words or musical tones) into sequences. Linguistic and musical sequences are not created by the haphazard juxtaposition of basic elements. Instead, combinatorial principles operate at multiple levels, such as in the formation of words, phrases and sentences in language, and of chords, chord progressions and keys in music.[12]

Music is thus recognized as being composed of unique elements which must be carefully woven together to produce larger structures. These elements might be compared to the elements or components of language. At the most basic level, phonemes might be compared to individual notes: just as phonemes combine to form syllables, words, complete thoughts, sentences, and larger units of linguistic meaning, so individual notes combine to form chords, chord

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[11] Michael Thaut. *Musical Communication.* "Rhythm, human temporality, and brain function." (Oxford: Oxford Press, 2005): 171.
[12] Patel, Aniruddh D. "Language, music, syntax and the brain." *Nature Neuroscience* 6, No. 7 (July 2003): 674.

progressions, and larger units of musical meaning. Neither individual notes nor phonemes can be randomly combined to achieve coherent linguistic thoughts or musical passages: rather, phonemes and notes respectively must be combined in specific manners to form recognizable hierarchical structures. In other words, both different languages and different types of music follow specific (though perhaps individualized) sets of structural rules. If phonemes, morphemes, or even full sentences are arranged haphazardly or randomly, clear linguistic communication cannot occur. Given the profound similarity between language and music, then, would it not follow that the same truths could be spoken of music? If individual notes, chords, or even musical phrases are not arranged according to some logical, structured system, can musical communication occur?

To address this question, we must first question whether music operates according to a "logical, structured system" — and whether it *must* do so to truly be considered music. The latter is a matter of great philosophical debate; aleatory music (also known as chance music) is a prime example of trying to create music which does not follow conventional Western music rules. Even rolling dice or sitting in silence at a piano for a determined period of time provides a sort of structure, atypical though it may be. Steven Brown and Joseph Jordania, prominent researchers in the field of musical universals, put it this way:

> We think that there is much to be learned by the fact that the set of states that characterize range universals are, in general, small in number and wide in distribution. This argues against the idea that anything is possible in music, and instead suggests that there are a few discrete ways in which a given property of music or musical behavior can be realized or constituted.[13]

For this reason, the remainder of this paper will assume that some sort of spatial, temporal, or auditory framework must be in place for music to exist (i.e., there must be observable recognizable musical elements present for music to occur).

[13]Steven Brown and Joseph Jordania. "Universals in the world's musics." *Psychology of Music* 41 (2013): 243.

Setting the bulk of aleatory music aside, then, what elements of music provide the logical, structured system which alerts us to the fact that we are hearing music? Some of the most prominently recognized elements of music (particularly concerning Western music) are rhythm, dynamics, pitch, timbre, melody, harmony, texture, and form.[14] Not all of these, however, are universal musical qualities, however, and it is essential that universals of music be noted when considering music as an entity. As Jordania and Brown note,

> The question of musical universals is inextricably linked to the question of *what music is*. An understanding of the universal features of the actual musics of the world provides important insight into the necessary features of the possible musics of the world. This is especially so with reference to distinguishing music and language.[15]

Jordania and Brown's approach to discovering "what music is," then, has been to compile lists of universals in music. "Type 1" universals, or conserved universals, are those musical universals which apply to every musical *utterance* (that is, a single phrase or piece of music). This category comprises the following elements: use of discrete pitches, octave equivalence, transposability of music, music organized into phrases, and arousal factors in emotive expressions (tempo, pitch range, and register).[16] "Type 2" universals, or predominant patterns, are universals which apply to all *systems* or *styles* of music. This category comprises scales with seven or fewer pitches per octave, a predominance of precise (isometric) rhythms in music, divisional organization of rhythmic structure, use of motivic patterns in melody generation, use of drums and idiophones. Also included are religious or ritual contexts for music, the pairing of verbal texts and vocal music, and pervasively positive attitudes toward music.[17] Although Jordania and Brown note other "universals," Type 3 and Type 4 universals are respectively "common patterns" and "range universals"; that is, characteristics which are common of many musical styles, and "a discrete set

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[14] Allen Schantz. *Arts in the Key of Joy: Aesthetic Excellence in Action*. (Denver: Aesthetics Arts Press, 2012): 52.
[15]Steven Brown and Joseph Jordania. "Universals in the world's musics." *Psychology of Music* 41 (2013): 231.
[16]Ibid, page 236.
[17]Steven Brown and Joseph Jordania. "Universals in the world's musics." *Psychology of Music* 41 (2013): 236.

of possible states for all musical systems/styles."[18] In other words, those elements and characteristics which are truly *universal* of all world musical styles are classified as Type 1 and Type 2 universals.

Closely observing these universals, then, we might be able to draw conclusions as to those elements which combine to create *music*, as music is universally recognized. Not every universal is guaranteed to be a necessary element of music, of course. For example, drums, though universally present in musical styles, are not necessary in all musical utterances; therefore Type 1 universals (those universals which are true of all musical utterances) will be most helpful in determining the absolutely necessary elements of music. Comparing Jordania and Brown's list with the eight commonly recognized elements of music (rhythm, dynamics, pitch range, timbre, melody, harmony, texture, and form), we do find considerable overlap. Not all of the eight elements remain, however, and some of them are altered slightly or replaced. "Use of discrete pitches" addresses the use of particular scalar systems ("octave equivalence" might be included in this category, as might "transposability of music," which is impossible without intervallic recognition); "music organized into phrases" aligns with the element "form"; and "arousal factors in emotive expressions: tempo, amplitude, and register" are basic equivalents of rhythm, pitch range, and dynamics. Given that something must produce sound (whether that "something" be voices, instruments, or some other means of noisemaking) in order for music to exist, timbre is also a universal musical quality.

It is somewhat shocking to note that a list of universal musical elements formulated according to this system is devoid of melody, harmony, and texture. This certainly isn't to say that these elements are atypical of most musics; it merely means that they are not universally present in all musical systems, or that they are not necessarily named or recognized as such in all

[18] Ibid, page 236.

musical systems. The latter is perhaps most true of melody, particularly because "melody," like "music," is inherently difficult to define. The "melody" of musical works composed solely of varied drum beats, clapping patterns, or other sounds created by beating or pounding (e.g. the popular group STOMP) may be difficult to discern. Is this because melody involving a series of notes in a scale is not present, or is it because "melody" takes a form which doesn't require specified scalar pitches? If we return to Merriam-Webster for a definition of "melody" ("a sweet or agreeable succession of sounds" or "a rhythmic succession of single tones organized as an aesthetic whole"[19]), we discover that it cannot define purely rhythmic and textural music as described above.

We must also consider other cultures' perceptions of melody: both contemporary foreign cultures and those cultures of the past which were formative in shaping Western music. Even the presence of recognizable pitches and intervals in a musical work do not guarantee the presence of "melody," per se. Indian ragas, for example, are the rough equivalent of scales in Western music. In this culture of music, however, fixed ragas are not necessarily regarded as melodies. Although ragas may be played in their basic ascending and descending state, they are not considered melodic figures until they have been associated with an appropriate rhythm; if the root note is missing from the raga, it is no longer considered a raga.[20] This system is reminiscent of Western music's origins in modal systems. Recognition of church modes first came about in Medieval times to describe the foundations of pre-existent Gregorian chants. The scalar patterns of the modes themselves (and, in present Western music, scales) are not generally considered "melodies," but they can be used melodically, and they provide the necessary structure within which melody and harmony can occur. It is interesting to note that scales being played do fit

[19] Merriam-Webster Online. http://www.merriam-webster.com/dictionary/melody. Accessed 11 April 2014.
[20] Sadhana's Raag-Hindustani. "What Is a Raga?" http://raag-hindustani.com/Scales1.html. Accessed 12 April.

many given definitions of "melody" (including the one above) although we do not necessarily recognize them as such. Are scales merely melodies which we do not recognize as "melodies," then, or are scalar foundations of musical systems different entities entirely?

A parallel question, which might provide some enlightenment to the matter, could be asked of languages. If linguistic qualities and parts of speech are not recognized within a given linguistic system, do those qualities actually exist in that context? Donald Brown, a prominent figure in modern anthropological studies, answers thus:

> A distinction among universals that figures large in anthropological thought is the distinction between "emic" and "etic." These terms — taken from the linguistic terms "phonemic" and "phonetic" — distinguish features that are overtly or consciously represented in a people's own cultural conceptions from features that are present but not a part of the overt or conscious local cultural conceptions. Thus every people has a language with grammar, but not all peoples have an overt cultural representation of the idea of grammar. Having grammar is an etic fact. If it is culturally represented, then it is an emic fact too.[21]

Although a particular structural element may not be recognized within a culture, that element's impact on music and/or language still exists (this would be an etic fact). To return this comparison to music, we must ask what function(s) grammar has in a language and which elements fulfill similar functions in music. Within language systems, "grammar" provides a framework in which combinations of words make sense (in other words, grammar provides the framework of syntax). Within music, however, that framework of syntax is much less certain. As Patel states, "grammatical categories in language, such as nouns, verbs, and adjectives...have no counterparts in music..."[22] Although polysemy is a human universal (that is, all languages contain words which have multiple meanings),[23] words are generally more limited in function

[21]Donald E. Brown, "Human Universals, Human Nature, Human Culture," 2, http://www.humiliationstudies.org/documents/BrownUniversalsDaedalus.pdf, accessed 17 March 2014.
[22] Aniruddh Patel, *Language, Music, and the Brain.* (Oxford: Oxford University Press, 2008): 263.
[23] http://condor.depaul.edu/mfiddler/hyphen/humunivers.htm

than notes and chords, which can function in virtually unlimited capacities musically (depending on the musical style, of course).

We must remember here, however, that (as mentioned earlier) not all grammars comprise equivalent parts of speech. In other words, components of a particular grammar are not universal merely because grammar is a human universal, and not all grammatical categories are utilized in every occurrence of language. Variances in the structural systems of language and music, whether that be a different scalar patterns or different grammatical systems, do not negate that overarching structural systems are in place, nor do they negate that those structural systems are tantamount cross-culturally:

> To say that the scales of the world have seven or fewer pitches is not to say that they are all alike. And in fact, the tonal systems of the world show a very wide diversity, which has led many ethnomusicologists to reject the idea of comparability of musical systems. The musical universals shown here are broad and grammatical. But so too are such universals in phonetics and anthropology. Saying that all cultures have some form of funeral rite does not mean that all such rites are identical in form. Likewise for funeral musics. The basic point is that universality and diversity are flip sides of a coin when doing cross-cultural analyses."[24]

Returning again to the concept of universals in music, then, we can see that melody, although recognized and prominent in all musical styles (i.e., it is a "Type 2" universal per Jordania and Brown's analysis), is not a necessary element of all musical occurrences. Given that melody stems from scalar passages, and that most cultures utilize very melodic music, it follows that melody is *dependent* on a culturally accepted scalar basis (whether or not that scale/mode is acknowledged; i.e., that it is an emic fact). In other words, *scalar basis* is the musical universal (or, we might say, a key component of the "grammar" or "structure" of the music); even monotonous drumbeats can fit somewhere on the scalar spectrum of culturally recognized

[24]Steven Brown and Joseph Jordania. "Universals in the world's musics." *Psychology of Music* 41 (2013): 242.

pitches. Melody might thus be considered a "grammatical category" which, though essential in many occurrences of music, is not essential for music to exist.

We have determined to this point that the Type 1 universals of music (that is, those elements which are essential to every musical occurrence) are these: rhythm, dynamics, pitch range, timbre, scalar basis, and form. We might also analyze this list as a spatial depiction of music: horizontal/linear space (rhythm), volume/three-dimensionality (dynamics), vertical/linear space (pitch range), thinness or thickness (timbre), its core or axis (scalar basis), and its characteristic shape (form). Observing musical elements in this way, it is suddenly easy to see why language is not the only art form to which music has often been compared: many musicians throughout the eras have considered music to be highly architectural and mathematical in nature as well. As Deryck Cooke writes in *The Language of Music*:

> Analogies...are continually being made between music and the other arts. Besides speaking of the 'architecture' of a piece of music, we use the term 'tone-painting,' and we say that composers who are preoccupied with expressing character, mood, and feeling, have a leaning towards the 'literary.' And there is no doubt that music can be analogically related to each of these three arts: to architecture, in its quasi-mathematical construction; to painting, in its representation of physical objects; and to literature, in its use of a language to express emotion.
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> In various periods of musical history, composers have concentrated on one of these three aspects to the partial exclusion of the others. Medieval music was largely architectural in conception: the romantics were much concerned with the literary, the impressionists with the pictorial; modern music has swung back again to the architectural. Yet all three aspects have persisted in all periods...[25]

Observing art spatially and architecturally, we find that some small building blocks must be in place for the whole to be formed. In architecture, those are literal building blocks of some sort. In painting, they are the primary colors of paint with which to work. In music, those building blocks are given notes of a scale or mode. In language, they are phonemes. And just as

[25]Deryck Cooke. *The Language of Music*. (Oxford: Oxford University Press, 1982): 1-2.

the elements of music are organized uniquely to create coherent musical forms, so parts of speech are organized to create coherent verbal forms.

In this way, the essential elements of music are parallels of the essential elements of language. Phonemes, morphemes, and (to a lesser degree) syntax can all be related to scalar basis: individual notes are like phonemes, whereas musical "morphemes" might be chords (which can change drastically if one note and/or the placement of the chord is changed). Syntax is determined in part by the scalar or modal bases which exist in a particular musical system, but syntax (again, defined in language as the "set of principles governing the combination of discrete structural elements") moves past the most basic structural foundation of music and provides rules for the ways in which phonemes (notes) and morphemes (chords and/or combinations of notes) can be arranged. Therefore, syntax within a musical system might address chord progressions or accepted (and unaccepted) note or beat patterns; thus, form is a critical element of musical syntax. The "semantics" of music, then, are dependent primarily on rhythm, dynamics, pitch range, and timbre: syncopation communicates something fundamentally different than perpetuated quarter notes, and this sort of contrast of meaning is true between loud v. soft pitches, high v. low tones, and hollow v. brash sounds. Musical pragmatics, then, are concerned with whether musical syntax and semantics are given appropriate attention within a given musical style (or, one might say, within a given musical language). Although jazz music and Classical-era music are both essentially Western types of music, for example, each style utilizes a very different musical vocabulary; each uses the elements of music, but in very distinct ways.

The next question we must address then, is this: if music and language share so many critical elements and universal characteristics, what (if anything) distinguishes one from the other? Many people have written to address this particular quandary, and though few present

exactly the same answer, all seem to share common threads of thought. Ian Cross, for example, writes this on the subject:

> Music...seems to embody an essential ambiguity , and in this respect it can be suggested that language and music are at the opposite poles of a communicative continuum, almost meeting in the middle somewhere near poetry. This inherent ambiguity, together with the quality of the actions and interactions...integral to music, suffice to differentiate music from language. Music's attributes of *embodying, entraining,* and *transposably intentionalizing* time in sound and action enable it to be efficacious in contexts where language may be unproductive or impotent precisely because of its capacity to be interpreted unambiguously..."[26]

To Cross, the essential differences between music and language seem to first concern differences in the use of time, then differences in the capacity for meaning. Dr. Michael Thaut also mentions these differences, but approaches them from an alternate perspective:

> Music unfolds only in time, and the physical basis of music is based on the time patterns of vibrations. Within this temporal basis two additional dimensions emerge: sequentiality and simultaneity. Music's particular nature permits to express both at once. Language is sequential but monophonic.... Music's whole physical and cognitive-perceptual nature, however, rests solely within this two-dimensional temporality. Translated into musical terms, we may speak of rhythm and polyphony as the two core dimensions of music. Rhythm and polyphony organize sounds sequentially and simultaneously into meaningful patterns and structures that create 'the language' of music. However, distinct from speech, music is not a referential, associative language -- it is initially a perceptual language whose intrinsic pattern structure conveys meaning to the human brain. The significance and meaning of the musical symbols within that pattern structure depend on their place and role in the pattern, relative to the other symbols in a syntactical network which is organized sequentially and simultaneously in time.... In music, the human brain creates and experiences a unique, highly complex time-ordered and integrated process of perception and action.[27]

Both of these men see music as being intrinsically related to time. Outside of time, music cannot exist; this is also true of language. Carol Krumhansl affirms this by writing, "Music, like

[26]David J. Hargreaves et. al. *Musical Communication*. "Music and meaning, ambiguity and evolution." (Oxford: Oxford Press, 2005): 35.
[27]David J. Hargreaves et. al. *Musical Communication*. "Rhythm, human temporality, and brain function." (Oxford: Oxford University Press, 2005): 173.

language, can be described in terms of hierarchically embedded temporal units."[28] At least this one thing — the presence and passage of time — is thus communicated through music; therefore, *time* is the most fundamental element of music (and, thus, rhythm — the way in which discrete pitches and silences are arranged in time).

Time's importance in music is widely acknowledged; whether any other concepts or emotions can be transmitted through music, though, is an argument of great debate. To some degree, this can be observed in the quotes above. Whereas Cross argues that music's "embodiment" of time "enable[s] it to be efficacious in contexts where language may be unproductive," Thaut holds that "distinct from speech, music is not a referential, associative language..." In short, Cross believes that music, in its ambiguity, is capable of communicating emotions and concepts, at least to individuals. This is representational of intrinsic and associative models of musical meaning: "Music...can be broadly categorized in two ways. First, music has intrinsic qualities in its sounds that communicate various motions, which people connect with various emotions. Second, music communicates to individuals according to their own experiences and associations with that music."[29] Thaut, however, seems to hold that music's sole capacity for meaning is to represent the passage of time. According to this stance, music does not intrinsically communicate emotions; any emotions which people associate with music are extra-musical (that is, the music itself does not communicate those emotions). This particular view is extraordinarily reminiscent of Igor Stravisnky's philosophy of music:

> For I consider that music is, by its very nature, essentially powerless to *express* anything at all, whether a feeling, an attitude of mind, a psychological mood, a phenomenon of nature, etc.... *Expression* has never been an inherent property of music. That is by no means the purpose of its existence. If, as is nearly always the case, music appears to express something, this is only an illusion and not a reality. It is simply an additional

[28] Mari Reiss Jones, et al. *Cognitive Bases of Musical Communication.* (Washington, DC: American Psychological Association, 1992): 205.
[29] http://www.bible-researcher.com/shafer1.html. Accessed 13 April 2014.

> attribute which, by tacit and inveterate agreement, we have lent it, thrust upon it, as a label, a convention — in short, an aspect unconsciously or by force of habit, we have come to confuse with its essential being.
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> Music is the sole domain in which man realizes the present. By the imperfection of his nature, man is doomed to submit to the passage of time — to its categories of past and future — without ever being able to give substance, and therefore stability, to the category of the present.
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> The phenomenon of music is given to us with the sole purpose of establishing an order in things, including, and particularly, the coordination between *man* and *time*. To be put into practice, its indispensable and single requirement is construction. Construction once completed, this order has been attained, and there is nothing more to be said.... One could not better define the sensation produced by music than by saying that it is identical with that evoked by contemplation of the interplay of architectural forms. Goethe thoroughly understood that when he called architecture petrified music.[30]

Thus, Stravinsky would argue that music does *not* intrinsically convey any specific messages or emotions; rather, music's embodying time is its only function, and establishing the relationship between time and man is its only capacity for meaning. In other words, to Stravinsky, time *is* musical meaning. Anything else which we might perceive in music stems from our own personal associations with it, or with music (and/or experiences) similar to it. Language, on the other hand, communicates specific messages to specific individuals.

Of course, not everyone would agree with Stravinsky and Thaut on this matter. Others, like Cross above, adamantly hold very different opinions. In his article "On the Possibility of a Determinate Semantics for Music," however, Robert Kraut presents yet another view of the issue. He begins his essay in this way:

> There are--I am told--facts of the matter as to what a natural language sentence means, but there are no facts about the significance of a musical event (and thus, there is no syndrome of perceptual-phenomenal experiences of the musical event which, to the exclusion of others, is 'correct'). This is an interesting set of intuitions: Either (a) it signals a profound difference between music and natural language; or (b) we should side with...the "semantic pluralists" and insist that linguistic meaning is indeterminate; or (c) we should insist, against the musical pluralist, that musical significance is determinate.[31]

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[30]Igor Stravinsky. *An Autobiography*. (New York: W.W. Norton & Company Inc., 1936): 53-54.

[31] Mari Reiss Jones, et al. *Cognitive Bases of Musical Communication.* (Washington, DC: American Psychological Association, 1992): 16.

Kraut goes on to argue, however, that looking for "musical determinacy" (definite musical meaning) as we look for linguistic determinacy (definite linguistic meaning) might be a wild goose chase. It is not that music is too ambiguous to convey specific meaning; in fact, he states that "*ambiguity is not indeterminacy.*" He continues his argument, rather, by presenting the idea that it is impossible to separate a music from its community with the intention of analyzing it objectively and scientifically:

> Musical understanding, like natural language understanding, is attributed against a backdrop of several parameters, foremost among which are the relevant community and standards of normalcy for within that community. Every attempt to specify a procedure for determining unique values for these parameters invites charges of arbitrariness. Musical significance, like linguistic meaning, *can* be made to appear indeterminate if we dwell on this... [32]

In other words, personal worldviews and experiences of music will always prohibit a truly objective study of music. Musical meaning, to Kraut, *cannot* be separated from its cultural roots.

This brings us once again and at last to our original questions: can music aptly be called a universal language? If it can be, what does it communicate? Does it represent time, as Stravinsky and Thaut argue? Does it convey ambiguous, yet powerful messages, as Cross proposes? Or does it fulfill functions only in specific cultural contexts? If it does none of these things, why does the metaphor of "music as language" continue to circulate in the modern philosophy of music? It is my theory that music is indeed communicative; whether that deems it a "language" is another matter entirely. As previously discussed, music cannot communicate as objectively as language supposedly can; musical "vocabularies" can vary significantly between musical cultures; and, as Kraut seems to propose, music loses at least some of its determinant meaning when it is removed from its culture (or, as Wolterstorff would say, when it is removed from its function).

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[32] Mari Reiss Jones, et al. *Cognitive Bases of Musical Communication.* (Washington, DC: American Psychological Association, 1992): 19.

Even if music is technically not a language, then, the fact remains that it is highly communicative in nature. For communication to occur, a transaction of meaning must take place: that is, one person or entity must receive information from another person or entity via signs, symbols, words, sounds, or behaviors. Patel writes, "Meaning exists when perception of an object/event brings something to mind other than the object/event itself... That is, 'meaning' is inherently a dynamic, relational process."[33] If determining "meaning" is indeed dynamic (that is, an active and changing) relational process, it follows that one person's relational process to music (and to language, for that matter) may be very different than another's. Depending on the sort of extra-musical meaning which someone associates with a given musical work, that person's experience of meaning may be incredibly individualized. If a song was performed at his wedding, for example, he is likely to associate the piece with happiness and fond memories (unless the marriage soured, or if a spouse passed away). Disregarding such extra-musical experiences of meaning, however, how would two people who have never heard a piece of music describe it and respond to it? Would they both have similar musical experiences? Possibly, but not necessarily. Why is this?

It is true that the images and general sentiments a composer intends to evoke with his music (i.e., those things he wishes to communicate) tend to be those which are most often recognized by listeners.[34] Even if the composer did not intend to communicate anything in particular other than an example of good music, listeners tend to describe musical works with similar adjectives (at least within a given culture, if not universally). In Western music, for example, listeners are culturally conditioned to hear music written in a major mode as "happy" and music written in a minor mode as "sad" (though individual responses certainly extend past

[33]Aniruddh Patel. *Music, Language, and the Brain*. (Oxford: Oxford University Press, 2008): 304.
[34] David J. Hargreaves et. al. *Musical Communication*. "How do people communicate using music?" (Oxford: Oxford University Press, 2005): 5-7.

these generalized terms). This same principle is also true in language: the things which a speaker intends to mean by his use of sentences, idioms, and even short interjections are generally recognized as meaning what was intended. Miscommunication occurs when one person interprets a verbal sentence differently than the speaker intended. Despite this, though, general verbal meanings and tones (e.g. harshness v. tenderness) remain intact. Even when analyzing poetry and other such highly crafted (and often ambiguous or subjective) forms of language, most students and scholars of literature arrive at similar interpretations of the text.

Here we find, however, an essential point: one must be taught to analyze poetry. Although some people might find reading poetry more natural and easy than others, most have to be taught about and shown examples of poetic devices before they can understand the general story or lesson which the poet intended to communicate. This is also true of language. Infants are certainly born with the necessary skills to learn to speak; still, no one is born speaking. Through long periods of listening, observation, and repetition, children slowly learn the nuances of their mother tongue. They must also be taught the inner workings of their language: even a native speaker of a language is not innately aware of its grammar, its phonemes, its alphabet. People can confidently recognize when their language is spoken incorrectly; whether they can tell you *why*, however, is another matter. Does it not follow, then, that these things might also be true of music? If someone cannot interpret musical meaning in a way which is similar to either the composer's intent or to other people's interpretations, this may indicate that he merely has not learned to interpret music properly — or, we might say, to "speak the language." This may be true of music in general, or of a specific style of music. (A musical style is "the distinctive manner of presenting the elements of music."[35])

[35]Allen Schantz. *Arts in the Key of Joy: Aesthetic Excellence in Action*. (Denver: Aesthetics Arts Press, 2012): 168.

A direct comparison to language is helpful here. A native speaker of French speaks the language fluidly and fluently, understanding not only how to speak grammatically correctly, but also to correctly engage in semantics and pragmatics. Someone learning the language in a classroom setting may understand French grammar well, yet still have to learn how to engage that grammar properly in cultural settings. Still others may recognize a word or two of the language, yet have no idea whether they are listening to a French politician's speech or a piece of classic French poetry. This last person's inability to recognize what is being spoken does not negate that a very specific message is being communicated; it merely means that he lacks the skills to recognize anything which is linguistically meaningful to him. Music is much the same way. From childhood, we hear our culture's specific style(s) of music. Although we may not be able to explain its internal structure, we can generally recognize when something sounds foreign, strange, or "wrong." Individuals who study music learn the "grammar," and then learn how to analyze their own culture's musics and to differentiate between styles. The primary "grammatical" difference between music and language, however, seems to be that music's grammatical rules can be (and often are) broken, at least to an extent, without sacrificing musical meaning:

> First, in music the distinction between what is grammatical and what is ungrammatical is not clear. One can judge whether a sequence fits norms of well-formedness, but intentional deviations may serve artistic purposes. In other words, these rules are meant to be broken. Second, the role of ambiguity in music seems much larger. For example, a chord may be heard simultaneously in its multiple roles in different keys, with the effect that modulations between closely related keys are easily assimilated.[36]

This would seem to indicate that musical syntax alone — musical grammar — cannot be credited with giving music meaning. If this is true, any musical structure dependent upon syntax cannot necessarily be responsible for the transmission of musical meaning. L. Henry Shaffer

[36] Mari Reiss Jones, et al. *Cognitive Bases of Musical Communication.* (Washington, DC: American Psychological Association, 1992): 199.

writes,

> Some theorists identify meaning with musical structure, which in Western music can be analyzed in terms of harmony, rhythm, timbre, melody, repetition, sequence, and counterpoint. These structures are seen as creating a play between tension and relaxation over the large scale forms of sonata, fugue, rondo, and so forth. The descriptions of this play of tension and the structures that create it are considered sufficient to characterize the music.
>
> This view of musical meaning has a pleasing appearance of objectivity, and it can have the desirable effect of making audiences (and players) listen more carefully to the sound patterns. However, it may not be sufficient. Listeners tend to hear moods and emotions expressed in the music, performers feel they are conveying those moods and emotions, and composers may conceive these moods and emotions as part of the musical intention.... Although the expression players use in a performance can be objectively described in terms of deformations of notated values of pitch and time, doing so may miss the point that the sounds shaped by these gestures often seem related to the gestures people make when they feel emotion.[37]

Just as the structure of language alone cannot evoke emotions or allow for semantics, only communicating basic concepts and ideas, neither can musical elements, notes, or structures alone convey anything more than mere musical patterns. In language, voice inflection (never mind body language or other extra-linguistic occurrences) can drastically change the meaning of a sentence, or even of a word. Mere structural elements of language alone cannot suffice to define and interpret linguistic meaning. This is also true of music. Although the elements of music and language act as the vehicles for semantic meaning and differing emotional inflections, they require a speaker, performer and/or interpreter to gain those extra-linguistic and extra-musical meanings. The fact remains that both linguistic and musical meaning are highly subjective and entirely dependent on interpretation, both by the speaker/performer and the listener. Music and language are merely vehicles for meaning. Without human interaction, interpretation, and creation, neither has any meaning whatsoever; neither has *function*. As Shaffer continues,

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[37] Mari Reiss Jones, et al. *Cognitive Bases of Musical Communication.* (Washington, DC: American Psychological Association, 1992): 264.

> In natural language there are many rhetorical devices that take meaning beyond the literal meanings captured by logic. These include the uses of metaphor, allusive reference, ellipsis, and the prosodic modulations of tone and rhythm in speech. Expression in speech has a function similar to that in musical performance: It can convey moods and attitudes underlying an utterance and so shape its meaning... Understanding the character of the speaker helps us to interpret these subtler aspects of meaning...
>
> If the structures in the music, particularly those governing tension and relaxation, define the implicit event, then structure should be the primary determinant of the patterning of expressive gesture over the musical surface. On the other hand, the shaping of expression and the choice of expressive features—timing, dynamics, timbre, and articulation—is a function of the musical character, and is, at least partly, created by the performer.[38]

Musical and linguistic meanings, then, are not dependent so much on music and language themselves as they are on the humans who create them. It is humans who determine music's functions and meanings. Nicholas Wolterstorff says that "The universality of art corresponds only to a diversity and flux of purposes, not to some pervasive and unique purpose."[39] Thus, a single style of music (or even a particular piece of music) cannot be said to have a universal meaning. That will change depending upon the culture, the people performing and perceiving it, and any number of other extra-musical factors.

Does this mean, then, that Stravinsky was right in saying that music is merely man's means of relating himself to time? This is arguably not the case, although he does have a significant point. Both language and music do move through time, which communicates that humans live and function within time. Simultaneously (whether extra-linguistically/extra-musically or not), they aid in communicating emotions and messages which are meaningful to individuals (whether intrinsically or associatively). Ultimately, the relationship between language/music and time communicates our humanness, and thus our temporality. Stravinsky, however, stops here, virtually saying that time equals meaning. This does not take into account,

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[38] Mari Reiss Jones, et al. *Cognitive Bases of Musical Communication.* (Washington, DC: American Psychological Association, 1992): 265.
[39] Nicholas Wolterstorff. *Art in Action*. (Grand Rapids: William B. Eerdmans Publishing Company, 1980): 8.

though, that time itself is a human creation: a means of relating ourselves to the world as we experience it. Thus, time itself cannot equal meaning. Rather, time is a representation of our present reality, in which we find meaning — or in which meaning is revealed to us.

Paul Tillich writes, "Art is an expression of responses to, and understandings of, ultimate reality..."[40] Following this logic, we might say that language is the human expression of responses to our present reality. Calling music a "universal language," then, might be a means of attempting to find a universal response to reality — and a universal definition of humanness.

What, then, does it mean to be real — and to be human? What, in fact, *defines* a human and sets one apart from other species? These unanswered questions have been the topic of debate for millennia. The mystery of "humanness" by no means limits our ability to recognize singularly human attributes, however: anthropologists have compiled lists comprising hundreds of human universals.[41] Acknowledging these common bonds among humanity, then, it must follow that we need not be able to define "humanness" to recognize it, much like we need not understand the nuances of grammar or music to recognize a language or a particular musical style. As members of the human race, we relate to other peoples' habits merely by our own experiences; and even when those experiences vary somewhat (e.g., when a person speaks a different language), we relate to the phenomena. We explore the similarities of our actions, their nuances, and our motives; we draw parallels between the ways we individually think, act, and speak and the ways we see others act.

One of the greatest ways we do this is through music. Although our musical systems and styles vary greatly between cultures, music itself is present within every culture. We

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[40] Nicholas Wolterstorff. *Art in Action*. (Grand Rapids: William B. Eerdmans Publishing Company, 1980): 119.
[41] Donald E. Brown, "Human Universals, Human Nature, Human Culture," 1, http://www.humiliationstudies.org/documents/BrownUniversalsDaedalus.pdf, accessed 17 March 2014.

communicate humanly through art, so much so that it is difficult to think of a truly human person in total isolation from some sort of art, whether it be language, music, visual art, textiles, or any other form of creative expression. As Wolterstorff says,

> Works of art are instruments by which we perform such diverse actions as praising out great men and expressing our grief, evoking emotion and communicating knowledge... Works of art equip us for action. And the range of actions for which they equip us is very nearly as broad as the range of human action itself. The purposes of art are the purposes of life. To envisage human existence without art is not to envisage human existence. Art—so often thought of as a way of getting out of the world—is man's way of acting *in* the world. *Artistically man acts*."[42]

Acting artistically, however, extends past what we do and into what we *are*. Our search for meaning in the arts — in music — is, in part, a reflection of our own search for meaning. That meaning is not grounded in words or actions, but in identity: an identity which can only be found in the humanness for which we were created.

"So God created man in his own image, in the image of God he created him; male and female he created them" (Genesis 1:27, ESV). All of humankind has been breathed into existence with the purpose of reflecting God. As He is a Creator who created us in His image (*imago Dei*), so we try to create things which are, in some way, in our image. This can lead to idolatry if we elevate ourselves too much above our creation (we are to be stewards and servants, not dictators); however, making music and art which reflects ourselves is a means of exploring our humanity and worshiping the One who has given us our creative capacities. As we find meaning in being created *imago Dei*, we also find and impart meaning in our creations. We are temporal beings: thus music is temporal, and communicates our own temporality. Not only this, but music aids us in expressing ourselves very deeply, and in communicating differently than we can through language alone.

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[42] Nicholas Wolterstorff. *Art in Action*. (Grand Rapids: William B. Eerdmans Publishing Company, 1980): 2-3.

On the surface, calling music a universal language seems to demand a particular function of music itself; instead, we find that music is incapable of functioning without human interactions, whether that involves multiple people or a single musician with an instrument. The universality of music has very little to do with characteristics of music itself, and everything to do with recognizing and embracing our own humanness — our own identity. Music can be a means of creation and worship, helping us both to form community with others and to discover our truest identities as creations of the Triune God. Whether we acknowledge Him or not, His likeness (in which we are created) shapes us, breaking through language barriers. Although music itself is not a universal language, it communicates something much deeper than language itself can fully grasp — the essence of who we are and from Whom we came.

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