Seminar Series Topics in the Aesthetics of Music and Sound

Thursday, September 25, 2014 • 3:15-5 p.m. in U67



What Chords Are Doing: On Tonality in Jazz Improvisation and in Tonal Music in General - From Schönberg to Bill Evans

Per Aage Brandt, Professor Adj. in Cognitive Science at Case Western Reserve University. Founder of the journal *Cognitive Semiotics*. Jazz pianist.

Abstract: This will seem very elementary to you: Tonality is based on the very peculiar phenomenon of *tone*, truly parallel to that of symbolic units such as, speech sounds (phonemes) and graphs in writing (graphemes) and certain colors (chromemes). A tone is a sound with a clear F0 (zero formant); it does not refer to its source but instead to other tones – mental entities that 1) form syntactic compositions 2) associated with meanings and 3) admitting widely variable expression.

Tones are identified by octaves, whereas non-tonal sounds do not have octaves. The tonal octave gives rise to a huge array of possible scales that again feed the melodics of tonal phrases; this is as far as we know a universal phenomenon, which also determine the configuration of musical instruments. The scale-to-phrase relation is basic in all forms of music, musical transmission and musical learning. But in many forms of written and unwritten music, something happens between scale and phrase, namely so-called harmony, a practice built on selections of tones from a given scale that are allowed to be sounding simultaneously for a number of beats in so-called measures, or 'bars': chords (a term motivated by the instruments that can easily do this). One chord at a time. The phrase will consequently sound as figure on a 'ground' created by the chord. The next step that complicates the situation is modulation, that is, an autonomous use of changes from chord to chord that alters the underlying scale! This move creates a new situation for the formation of phrases. Now the phrase will have to conform to changing scales, so that the eligibility of tones changes, sometimes instantly. The musician will know when that happens by listening to the chord changes and swiftly calculate what they do to the scale that a piece, or tune, started with or otherwise is dominated by (and which has a base tone called the 'tonic' or key note and an internal so-called 'functional' order based on the formants of the base tone), so that the melodic phrasing does not get out of 'tune'. Modulation with changing basic tones now becomes a highly sophisticated sport, until so-called atonal and serial music stopped the entire process of complexification and reverted to inventive forms of the scale-to-phrase organization.

Arnold Schönberg has a nice dynamic interpretation of the internal principles of functionality and modulation, as they were developed from the Renaissance music and up to late Romantic harmonization. Here is historically where jazz music takes over by developing canonical and cyclic patterns that allow musicians to coordinate their inter-playing online and cultivate polyphonic but personalized improvisation as a new art form. I will study a couple of examples from great masters incl. saxophonist Coltrane (*Giant Steps*) and pianist Bill Evans (*Time Remembered*).

Kamraan Z. Gill & Dale Purves 2009, "A Biological Rationale for Musical Scales" offers a wonderful overview of scales in the world's music.

Arnold Schönberg, (1911) 1922, Harmonielehre, Universal Edition.

