

KEYNOTES

Torstai, 27. maaliskuuta 2008 – Thursday, March 27, 2008

11:00–12:00 Pinni LS B1100

Prof. Gerald Langner

Neuroacoustics, Darmstadt University of Technology, Germany

Neuronal Basis of Pitch and Harmony

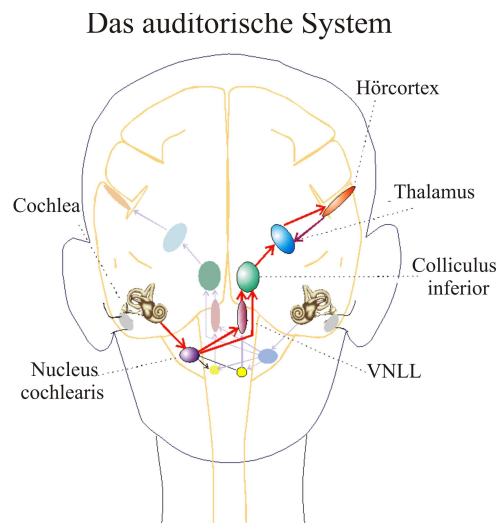
The periodic temporal structure of harmonic sounds in speech and music is perceived as pitch. While spectral analysis of such sounds is performed in the cochlea, the analysis of periodicity information is performed in the auditory brainstem. As a result of these mechanisms pitch and spectral timbre information are mapped orthogonal to each other in neuronal layers of the inferior colliculus in the midbrain. A similar neuronal map exists also in the auditory cortex.

The temporal information processing is enhanced by inhibition from the lateral lemniscus. This auditory nucleus in the brainstem is reminiscent of the psychophysical pitch helix. It represents 7 octaves in 7 helical turns composed of inhibitory neurons. The periodicity analysis in the brainstem provides an explanation for the prevalence of harmonic relations in music.

Sävelkorkeuden ja harmonisuuden neuronaalinen selitys

Ihminen tajuaa puheessa ja musiikissa olevien harmonisten äänten periodisen aikarakenteen säveln korkeutena. Tällaisten äänten spektrin eli yläsävelrakenteen analyysi tapahtuu ulkokorvan simpukassa (cochlea), kun taas värähdyksen kestoajan määrittäminen tapahtuu kuuloaivorungossa. Näiden mekanismien seurauksena tiedot sävelkorkeudesta ja spektrin äänenväristä yhdistyvät kahdeksi kartaksi, jotka asettuvat toisiinsa nähden suorakulmaiseen suhteeseen keskiaivojen alakukkulan (colliculus inferior) n. 30:een solukerrokseen. Samanlainen hermosolukartta ilmaantuu myös kuuloaivokuorelle.

Lateral lemniscus -tumakkeesta (eli kuulovempeleestä) lähtevät estosykäykset tukevat värähdyksen keston määrittämistä. Tämä kuuloaivorungon tumake muistuttaa psykologien tuntemaa säveltasospiraalia. Se ikään kuin edustaa seitsemää oktaavia ja rakentuu seitsemästä spiraalimaisesti keskustan ympäri kiertävästä kehämäisestä solukerroksesta. Juuri sen solut lähettävät mainitut estosykäykset. Aivorungossa tapahtuva jaksoanalyysi (eli yhden periodin keston määrittäminen) tarjoaa selityksen siihen, miksi musiikissa suositaan harmonisia suhteita.



Perjantai, 28. maaliskuuta 2008 – Friday, March 28, 2008

9:00–10:00 Pinni LS B1100

Prof. Roger Wallis

Multimedia, Royal Institute of Technology, Sweden

Music in digital networks and cultural diversity – threat, opportunities, and the role of copyright/competition law

Technology paradigm shifts have always created havoc in the music industry, and much can be learned from previous upheavals (the phonogram, radio, cassette technology etc.) The shift towards digital technology means that costs for storing, copying and distributing approach zero. In a market economy it is hard to charge for something which involves minimal costs, so how should copyright revenues be accrued for the purpose of providing an economic incentive for authors to create new works?

The established music industry's response to widespread use of collaborative computing applications (e.g. file sharing networks) has been dramatic, involving legal actions, technical attempts to clog up networks, as well as monitoring. Random samples of users have been the focus of lawsuits. Politicians have been subject to intense lobbying and a multitude of myths have emerged. At the same time cultural diversity in digital networks is steadily increasing. Will the legal copyright and competition regimes thwart this process, or do we see the beginning of a new range of opportunities for music creativity in society? This keynote address argues that a different approach to the legal issues is of paramount importance, one that in effect makes current "illegal" activities "legal" via some means of licensing. At the same time, competition law has not managed to address the problems associated with the increasing power of the small oligopoly of global music companies (recording companies and publishers), and their ability to both hinder and support increased diversity, according to current business strategies.

Lauantai, 29. maaliskuuta 2008 – Saturday, March 29, 2008

Klo 9:00–10:00 Pinni LS B1100

Dr. Jenny Doctor

Musicology, University of York, Great Britain

Mediation as Modernism – through Music & Media

The period from the early 1920s to end of World War II covers twenty-five years that for Western society encompassed a breathtaking kaleidoscope of technological, cultural, social and ethical changes. It was a period in which ever-evolving notions of twentieth-century modernism challenged the tenets of tradition – while, at the same time, courting and utilizing those traditions as a means of cultivating an anchoring sense of continuity.

Modernism may be seen in a broader cultural context, a technological context that defined the period: 'Modernism was an art of a rapidly transforming world of industrial development, mechanisation, urbanisation, secularisation and mass forms of social interaction.'¹ In Britain, the key to modernism may be founded within this notion of mediation 'responding to the machine age'; thus modernism in music may be analysed in terms of social and cultural responses to contemporary

¹ Peter Childs, *Modernism* (London: Routledge, 2000), 21, 19.

mediations – transformed music sensibilities analysed in terms of semiotics and reception within the modernized world.

Although British art music of this period is not generally discussed nowadays in terms circumscribed by ‘modernism’, in fact in Britain, as elsewhere in Europe, modernism may serve as a fulcrum for understanding developments in British music composition. Taking conclusions developed in recent work ever further, this keynote address will examine the case of Sir Henry Wood’s Promenade Concerts – well established in the interwar years as a platform for new music – as a showcase for the evolution of ‘British modernism’.

Did mediation through new media between the wars offer British composers and performing artists a means of modern cultural expression, different from what we now identify as mainstream European ‘modernism’, perhaps, but in its way distinctive, imaginative and – in this reassessed guise – ‘legitimate’?