

MUSIC-MAKING IN THE 20TH CENTURY: ON THE WAY INTO A VIRTUAL RECORDING STUDIO AT THE INTERNET

by Niels Knolle (p. 3)

If you understand a little about music, then you understand nothing about music, Hanns Eisler is said to have observed once in a conversation with Hans Bunge. And, one might add, if you understand a little about how to make vocal and instrumental music, you will hardly be able to appreciate the effect which music can produce in a public space. It is not simply that we can listen to music anywhere with the aid of mass media such as CD, radio, television or internet (technology serving as a medium for the distribution of musical culture). Nor that new music technologies offer young people a fascinating opportunity to produce music almost without preconditions to create music based on their own ideas and needs and to a professional standard (technology serving as a medium for cultural socialisation of individuals). The effect and function of music, even if its performance in a concert seems to be completely devoid of any use of "technology", are implicitly preconditioned by technology i.e. by the influence of procedures of production, distribution and reproduction of music on the musical understanding. This understanding is initiated among musicians as well as listeners in their relationship with music and is realised in expectations of aural aesthetics, the content of the interpretation and artistic authenticity, but also in the moulding of their own listening behaviour.

Viewed in this way, the cultural history of humankind and in this case also that of people's relationship with music is always equally a history of the technical media necessary to produce it. This is particularly important for the relationship between music-making and the development of music technology in the 20th Century. In the following paragraphs these technologically influenced developmental patterns of music-making from live music-making at the very beginning of the twentieth century up to interactive music-making in the virtual recording studio of the internet in the year 2000 are described with the help of typical manifestations and discussed in their effects on the musical self-awareness of music-making.

MAKING UNEQUALS EQUAL: OLYMPICS 2000 AND THE COMPARISON OF HOSPITALS

by Stefan Felder, Horst Schmitt (p. 27)

German health legislation demands a comparison of hospitals. Since hospitals are heterogeneous with respect to both inputs and outputs, a flexible method is needed to ensure the adequacy of comparisons. The current gold standard is the so-called Data Envelopment Analysis (DEA) which – based on activity analysis – allows to calculate the relative efficiency of arbitrary decision-making units. In this paper we illustrate this method using the medal ranking of the nations participating in the 2000 Sydney Olympics. We derive an alternative ranking based on the assumption that nations can choose the relative weight they put on the three outputs, gold, silver and bronze medals, as well as on the two inputs population and GNP per capita.

In a second step we apply DEA on inpatient data in Saxony-Anhalt. We show that significant differences in the relative efficiency of hospitals prevail. The comparison accounts for specialisation of individual hospitals by using diagnostic information. Differences in the efficiency of hospitals may be due to differences in case severity, but may also be caused by slack both in hospital organisation and of input use. Employing regression techniques, we show that there are differences in (in-)efficiency depending on the level of care the hospital is expected to deliver. Hospitals providing regular care, as well as hospitals specialising for instance in psychiatry or pulmonology are significantly more efficient than university clinics and/or teaching hospitals.

Benchmarking is not only a topic in health care but also in education. For instance, allocation of funds for universities increasingly depends on outcome measures such as the number of students and publication figures. DEA can be applied successfully to the comparison of universities, faculties, individual teachers and researchers. Like the evaluation of a nation's outcome at the Olympics, the provision of inpatient care employing DEA to evaluate research and teaching outcomes, provides the fairest possible comparison. A prerequisite of this method is that the people involved agree on the definition of relevant input and output variables and the availability of data.

MITOCHONDRIAL DYSFUNCTION IN MYOPATHIES AND NEURODEGENERATIVE DISEASES

by *Kirstin Winkler, Claus-Werner Wallesch (p.15)*

In the last years mitochondrial defects have been implicated in a wide variety of different neurological diseases. The first mitochondrial diseases to be described were the mitochondrial myopathies or encephalopathies (CPEO, KSS, MERRF, MELAS). Common reasons for the abnormal oxidative phosphorylation are deletions or tRNA point mutations of the independent mitochondrial DNA. Meanwhile, it has been established that mitochondria are concerned in the pathogenesis of neurodegenerative diseases like M. Parkinson or Motoneuron disease. Alterations of the mitochondrial function have been identified also in cancer and aging. Mitochondria play a central role in the regulation of programmed cell death (apoptosis).

LAW, VIRTUE AND DEMOCRACY

by *Georg Lohmann (p. 21)*

Starting with remarks on the recent financial scandals of the CDU and other parties, this article discusses the relation between virtue and law within the context of the modern constitutional state. The idea that a "virtuous ruler" is of central importance for an adequate conception of politics is insufficient and misleading. The theory that a purely institutional state is adequate is equally rejected as unfounded. Instead, we need a conception of "reflective democracy". Politics and administration must be controlled through the formal procedures of law and politics on the one hand, and through a critical public on the other hand. The real problem of politics and law are to be found in the attitude of the "democratic free rider" who demands fair and equal legal treatment while making exceptions for himself.

HENNING VON TRESCKOW AND THE MILITARY RESISTANCE DURING THE TIME OF NATIONAL SOCIALISM

by *Karl Otmar von Aretin, (p. 35)*

On January, 10th, 1901 Henning von Tresckow, one of the most important figures in the military resistance against Hitler, was born in Magdeburg. 100 years later the town of his birth has honoured him with a monument. On the occasion of the unveiling of the monument the historian Karl Otmar Freiherr von Aretin, Henning von Tresckow's son-in-law, paid tribute to the sacrifice of the major general Henning von Tresckow, who like no other, embodies the moral weight of the conscientious rebellion against Hitler.

In his speech he recalled the motives and deeds of this exceptional man and his resistance movement.

THE DEUTSCHES MUSEUM – ON ITS WAY INTO THE 21ST CENTURY

by *Wolf Peter Fehlhammer (p. 45)*

As perhaps the largest science museum in the world, the Deutsches Museum attracts 1.4 million visitors annually to its ca. 50 exhibitions, many of which offer a "hands-on" interactive experience. In order to fulfill its 'extended' educational mission the museum acts according to the five general lines:

1. Public understanding of science and technology determines the role these cultural achievements play in society and thus how well we are generally able to adapt to future needs. It is our responsibility to actively support such understanding.
2. Communicating science and technology is becoming increasingly expensive. A culture of sponsorship to speak of does not yet exist in Germany, however. It is our intention to encourage and support the development of such a culture.
3. Our world is a 'Leonardo-World', i.e. is highly engineered. Widespread enthusiasm for what engineering makes possible in our lives must be given renewed impetus. It is our concern to serve the "knowledge society" by fostering such enthusiasm.
4. Understanding and acceptance are only possible through dialogue. The museum must therefore serve as a forum for questions and answers, which also uses art for the interpretation of difficult subjects.
5. Science and technology are global disciplines, thriving on the challenges they face throughout the world and how they are assessed within the international arena. There can thus be no limit to the issues we address in the age of Postmodernism.

Following the establishment of the "Flugwerft Oberschleißheim" aviation museum near Munich, and a further branch in Bonn on 'research in Germany since 1945', the museum plans to relocate its transportation exhibits by 2003 into the new "Deutsches Museum Verkehrszentrum". Thereby free space will be available in the original building for a Centre of New Technology which among others feature a laboratory that provides visitors with a first-hand look at molecular structures in the nanometer range. Artificial man-made technologies – contained within a virtual sphere on information and communication in the "knowledge society" – forms an interesting contrast to the planned centre for geological and environmental sciences, and to the complex natural systems of the Earth.