In the Borderland of Art and Science: Musical Performance as a New Research Discipline at the Luleå University of Technology

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Introduction: Academia and Practice

The academic landscape is an ever-changing one; borders between research disciplines are constantly being crossed, blurred or redefined. Some of these changes can be attributed to the extensive interaction with society in general characteristic of today's universities. There is, for instance, an expansive tendency of incorporating professional areas previously regarded as non-academic into university curricula and to challenge traditional concepts of science by establishing new research disciplines based on such professions. One such area, now for many decades firmly anchored in academia, is that of engineering; another, more recently established, is that of health-related professions such as nursing and physiotherapy.

The inclusion of professional education programmes in the universities has stimulated a change also in postgraduate education and research. What is known as "practice-based research" or referred to by similar terms (including "practitioner research", "practice as research", "practice-led research" etc.) is linked to increasing opportunities for postgraduate studies based on "professional" programmes. However, practicebased research was, and is, associated not only with university doctoral programmes but also with research activity conducted within the profession itself. Two fundamental requirements for the term to be applicable is 1) that the researcher is in possession not only of traditional academic skills but also of professional competence in the relevant field; 2) that the result of the research is made available to members of the profession in question and that it can be applied in the exercise of this profession, or at least assimilated as part of the store of knowledge relevant to its practitioners.

Because of these requirements, practice-based research

falls very clearly in the category of "applied research", or perhaps rather "application-oriented research", as opposed to "basic research". In certain respects, it is also related to "action research" in that the research questions emanate from practical issues within the profession rather than from the detached curiosity of the outside researcher, and that the research is often conducted in practical situations, where the researcher not only observes events but actively takes part in them, usually with the aim of improving practices or conditions; such research, aimed at practical improvement, can also be termed "normative" (Routio 2004). In short, practice-based research, like action research, is conducted from an "insider" perspective, reducing the distance or even blurring the borderline between researcher (subject) and researched (object). In action research, however, the "practical" professional competence of the researcher is not an absolute requirement. Moreover, action research has a collaborative element, which is not necessarily present in practice-based research in general, although action-research-like "collaborative case studies" has been put forward as a possible methodological approach for practice-based artistic research (Hannula 2005, p. 88f). Thus, although having important characteristics in common, practice-based research and action research are not identical, and neither type of research can be seen as a subcategory of the other.

The ongoing process of "academization" of professional higher education also affects the artistic field. Traditionally, art schools and music conservatories have been sites of high-level professional training without any research component. The demands for an academic superstructure for such programmes, including a doctoral degree, have been accompanied by an increasing use of the term "artistic research". A certain ambiguity, however, surrounds this term, since "research" in artistic contexts is sometimes used without any academic reference, standing for quasi-scientific aspects of crea-

tive art, or, more concretely, the preparatory work of information-gathering preceding the actual creation of an artwork (the importance of distinguishing such work from "real" academic research in the discussion on artistic research is emphasized by Karlsson 2004, p. 128, and Svensson 2006, p. 73).

Artistic research, in its "academic" sense, can be regarded as a special case of practice-based research. It shares the requirement for professional skills in the researcher as well as the orientation towards practical application of the research results within the profession. But there are also characteristics particular to artistic research that are not shared by other forms of practicebased research. These include the use of artistic work as a method in the research, as well as the presentation of the research results not only in writing but also through the professional activity, in this case the artistic medium, itself. A further peculiarity of artistic research is the ambiguous attitude towards science/scholarship, in that some advocates of artistic research tend to define it as a "non-scientific" activity, fundamentally different from both humanistic scholarship and science (conversely, the idea of including artistic work into a research process may be hard for the scientific community to accept). In extreme cases, it is argued that the process of creating a work of in itself art constitutes the "research", with the work of art as its sole form of presentation (for an account of a controversy in Finland concerning a dissertation presented exclusively as a work of art, see Karlsson 2002, p. 69ff).

It is, however, also possible to locate artistic research within the scholarly/scientific community, as an area of research (in the sense of a set of related disciplines) comparable to, for instance, the humanities or the social sciences: sharing common characteristics and establishing relationships of different kinds with other areas, but also using methodologies and theoretical approaches constructed and adapted to fulfil its own needs and goals. The introduction of "musical performance" as a practice-based artistic research discipline at Luleå University of Technology is based on the latter view.

Particularly in Sweden, but also in Norway, the concept of artistic research exists parallel to that of "artistic development work," a term introduced in Sweden in the late 1970s in connection with a large-scale reform of higher education, one result of which was the incorporation of most institutions of higher artistic education into the universities. Artistic development work, to which special financial means were allotted by the Government, was conceived as a counterpart to the research forming part of the duties of the teaching staff in traditional university departments. This kind of develop-

ment work was, and is, conducted at departments and institutions of higher education in the fine arts in Sweden, including music schools and colleges of music.

Practice-Based Research in Music in Sweden

Practice-based research in music traditionally has closer ties with its corresponding scholarly discipline than is the case in, for instance, the visual arts. This especially applies to the musicological subdiscipline of historical performance practice studies, in which scholars are also by necessity musicians, on the one hand working as historians with written source material and as archaeologists with artefacts (instruments), and on the other hand using their practical musicianship in evaluating their findings and also in demonstrating their results to the public. By including artistic practice as part of the methodology and of the result presentation, this research fulfils the requirements for artistic research outlined above.

It may therefore seem unsurprising that practice-based research in music in Sweden was first introduced at a department of musicology, as a variant of the doctoral programme. The pioneer of "artistic-creative" doctoral research was the department of musicology of Göteborg University (the term "artistic-creative" term is officially used by this department to distinguish this doctoral programme from the "ordinary" musicological one). The first three doctoral dissertations of this kind were presented in 1991. Although another nine followed in the 1990s and early 2000s, no similar doctoral programme has yet come into being at other musicology departments. Instead, new "artistic" doctoral programmes in music have been created outside the musicology departments, at university-based schools of music. In 2000, the School of Music of Göteborg University introduced a doctoral programme in musical performance (in Swedish musikalisk gestaltning; see the terminological discussion below). In the same year, an "artistic" doctoral programme in the fine arts, with music as one of the biases, was created at Lund University. In Göteborg, the supervision of doctoral students is conducted mostly by professors in musical disciplines of the former School of Music (now since 2005 the Academy of Music and Drama), such as organ, singing and music theory, who also hold doctorates in musicology (most of them of the "artistic-creative" kind), whereas at Lund University supervisors are taken from the department of musicology. The doctoral programme in musical performance at Luleå University of Technology was launched in 2004. Although thus several years later than Göteborg and Lund in starting a practice-based doctoral programme in music, Luleå was the first Swedish university to create a professorship specifically for the new research discipline. The professorship was made possible thanks to a donation from the Kempe Foundation, and the position, located at the Department of Music and Media, Piteå, was filled in April 2006. In the same year, yet another similar doctoral programme, named "musicology with artistic bias" was created at Örebro University, and at the Royal College of Music in Stockholm an artistic doctoral programme is being planned.

Musical Performance as Research

From the above survey, it is clear that practice-based research in music at Swedish universities goes under different names, which at least to some extent reflect different ideas about the nature of the discipline and its relationship with musicology and scholarship/science in general. Broadly speaking, Lund and Stockholm represent a "non-scientific" view of artistic research, whereas Göteborg, Luleå/Piteå and Örebro maintain a connection with traditional scholarship, or, rather, regard the discipline as a bridge between the worlds of art and science. This connection is formulated in the introductory sentences of the doctoral curriculum at Luleå/Piteå: "The postgraduate subject of musical performance emerges in the field of tension between art and science. The subject takes its point of departure not so much in that which separates artistic creative work from scientific/scholarly research, but rather in that which unites the two areas." This wording reflects a view of "musical performance" as a truly border-crossing discipline.

"Musical performance" can thus be defined as research into musical material and forms of expression using a combination of artistic and scholarly/scientific competences and methods. There is in principle no limitation as to genre, style or type of musical activity. The term "performance" should be given a wide interpretation, since the Swedish term musikalisk gestaltning covers not only performance in the strict sense but also composition; gestaltning refers to the artistic element in the study, the presence of which constitutes the crucial difference in relation to traditional musicology. Typically, the results yielded by research projects in musical performance - in particular, doctoral dissertations - are presented not only as written text but also in musical form: a musical score or edition, a CD, or a DVD, the format depending on the character of the project. Ideally, the text and the musical documentation are interdependent, the sounding document not being reduced to the function of a mere illustration to the written dissertation but instead constituting an integral and necessary part of it.

Admission requirements for the doctoral programme in musical performance include not only writing skills but also artistic competence on a high professional level. Methodologies used vary according to the nature of the area or problem studied, but the integration of artistic musical work into the research is essential to all doctoral projects of this kind. The results should contribute substantial new knowledge, of interest to both the scholarly and artistic communities, as well as an artistic product meeting high professional standards.

The Research Environment at Luleå University of Technology

Research conducted at Luleå University of Technology is mainly applied research, and there is a strong tradition of cooperation with industrial enterprises and the outside world in general – an "entrepreneurial approach" is one of the strategic keywords of the university. It was founded in 1971 and was granted full university status in 1997. The School of Music (the name was changed in 2006 to the Department of Music and Media, since several media study programmes have been added to the curriculum in recent years) was founded in 1977, its roots dating back to the 1950s, when music education began at the Framnäs Popular College (folkhögskola) at Piteå. The Department of Music and Media is part of the Faculty of Humanities and Social Sciences, which also includes linguistics, economics, political science, history, and other disciplines. The fine arts are represented not only by the Department of Music and Media but also by the Theatre Academy at the Department of Languages and Culture, where a programme for the education of actors is conducted in collaboration with the Regional Theatre of Norrbotten. The purely scholarly study of the fine arts, represented by disciplines such as musicology and art history, is not, however, represented here. Since postgraduate studies in musicology are not available at any Swedish university north of Uppsala, Luleå University offers the only doctoral programme in music in northern Sweden (Norrland).

Being a part of a university of technology has in several ways contributed to shaping the profile of the School of Music. This is also true of the research, especially since there seems to be, in spite of obvious differences, a special affinity between artistic and technical research. Artistic research may often take on an experimental character, and it belongs by its very nature to the realm of applied research. Artistic research projects moreover show a tendency to involve collaboration with researchers in technological disciplines, a trait which is patent in ongoing doctoral projects (see below) and also forms the basis of a planned research programme on a larger scale. A key role is played by audio engineering, which

exists as an academic research discipline in Sweden exclusively at the Department of Music and Media; the links of this discipline to musical artistic activity are too obvious to require exemplification. The research environment will benefit substantially from the erection of the "Studio Acusticum", due to be inaugurated in late 2007. This building, situated in the immediate vicinity of the Department, is a combination of a flexible multipurpose concert hall and a laboratory of research in musical sound and acoustics.

International networks are important factors in the further development of research and education in musical performance at the Department of Music and Media. Together with other northern institutions for higher music education - especially the colleges of music at Tromsø, Norway, and Oulu, Finland - the Department currently participates in several international research and development projects within the frame of the EU Interreg programme. On a European level, the Department is a member of MIDAS (Music Institutions of Doctoral Arts Studies), a network of universities and schools of music offering artistic doctoral programmes in music. MIDAS annually arranges conferences and workshops for doctoral students, in addition to collaborating on joint projects, including the yearbook Musical Practice as Research, the first volume of which is due to be published in 2007.

Ongoing Doctoral Projects at the Department of Music and Media

At present (January 2007) there are three ongoing doctoral dissertation projects in musical performance, two of which began only in January 2007. Taken together, they show the wide scope of musical performance as a research discipline, while at the same time demonstrating the importance of the special research environment offered by the university.

Åsa Unander-Scharin's *Organic Mechanics: Choreographical Studies on Human Movement and Perception in an Artistic Process using New Technology* (working title) was begun in 2004 and is thus the first artistic doctoral project at Luleå university. It can be described as a borderline case, testing the subject's disciplinary limits, in the sense that music, although present in the project, is not the focus of the research. Åsa Unander-Scharin is a choreographer, and one of the main ideas of her project is to "translate" the dancer's movements so that they can be performed by robots. The dissertation work furthermore includes several interactive projects using advanced visual technology and forming part of exhibi-

tions rather than live performances. The written part of the dissertation will consist of several articles discussing aesthetic, communicative, and other theoretical aspects of the enterprise, focusing on the relationship of humans and machines.

Fredrik Högberg's Internet-Based Opera as Art Form: Development and Reflections (working title) is a doctoral project in musical composition. It involves the creation of the world's first opera specifically designed for the medium of the World Wide Web. A border-crossing project, the opera will make extensive use of the special means of expression and the unique flexibility offered by the Internet. It is intended to serve as a model for creating new operas as well as new versions of traditional operas. Interactivity will be an important aspect of the project. The written part of the dissertation will deal with philosophical perspectives of identity and transformation connected with the confrontation of traditional art forms with new technologies.

Lena Weman-Ericsson's *The Interpretive Paradox of Notated Free Improvisation and Embellishment: A Study of Johann Sebastian Bach's Flute Sonatas* (working title) belongs within the realm of historical performance practice studies. Her research is directed towards the "deconstruction" of the music as presented in the score and will explore, in writing and practical performance, the improvisational dimension inherent in the music, retracing compositional processes and presenting alternative realizations not only of the musical score but also of the basic harmonic-melodic structure. The study aims at providing tools for the development of an analytical basis for interpretive decisions by the performer, drawing upon methods of musical analysis developed by the Bach pupil Johann Philipp Kirnberger (1773).

Conclusion

One of the strategic goals of Luleå University of Technology for the period 2007–2011 is to establish a "border-crossing culture for creativity and innovative thinking". The growth of musical performance as a new research discipline, challenging the traditional separation of art and science, will contribute to the fulfilment of this goal, while at the same time building on the rich tradition of artistic development work and higher education in music at Campus Piteå.

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