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Report on the Ph.D. dissertation

of **Maria Avxentevskaya**

How to discover things with words?
John Wilkins: from *inventio* to invention

(in the context of the Erasmus Mundus Joint Doctorate: 'Text and Event in Early Modern Europe – TEEME')

I.

This is a dissertation written in the context of TEEME, an inter-university European graduate school run jointly by the universities of Porto and Kent, the Charles University Prague and the Free University Berlin. Maria Avxentevskaya' dissertation rises to this international occasion already in its European dimensions: though focused on one English scientist, John Wilkins, who worked out his scientific agenda and theories in the context of the Royal Society, of which he was one of the founding figures, it casts its nets much wider and takes in by way of comparison and contrast, influence and dialogue, what was happening in the field on the Continent at more or less the same time, in Ramée's and Descartes' France, Galileo's Italy, Llull's Spain, Comenius' Bohemia, Hevelius' Poland or Kepler's Germany, to mention but a few. Moreover, the historical perspective indicated in the subtitle, "from *inventio* to invention", i.e. from texts representing scientific knowledge on the

basis of pre-given topologies to a scientific language turned into a tool to work with towards new insights responds intelligently to the conceptual dyad of our program, "Text and Event": the textual representations emerging from and sustaining the scientific revolution in Early Modern Europe are indeed more than statements; they are events in the sense of situation-changing practices closely related to experimental engagements with material reality or conceptually innovative, speculative or imaginative thought experiments.

II.

In this view, scientific language is not the other to the language of poetry, but actually shares with it the use of images and metaphors to model new perspectives on reality in tangibly concrete terms and the use of rhetoric to give greater persuasive force to its probabilistic truth claims. This involves a revision of the still current and all too simple notions of the Royal Society's program of purifying the language of science of *all* poetical and rhetorical figures. The fact that the 'metaphysical' poet Abraham Cowley was invited to preface the first edition of Sprat's official *History of the Royal Society* with an ode "To the Royal Society" (p. 142ff), which in Avxentyevskaya's close reading is shown to be in sympathy with Sprat's program of "plainness of language" as "a particular discursive style that was modulated by the values of evidentiality, approachableness, political and religious tolerance, as well as respect towards the 'matter of fact'" and in which "figurative language preserved its role in the performance of specific discursive operations, which Sprat displays himself, for instance, when comparing the new experimental philosophy with husbandry" (p. 141) is telling in this context and builds a bridge between the new science and poetry, for which Maria invokes, among others, Sidney's emphasis on *imitatio naturae* and *enargeia*, an energized and energizing performative style, or a new understanding of *copia* which has less to do with the compilations of *imitatio veterum* than with the ingenuity of "pointed brevity" (S. 154). From my perspective of a literary historian and critic this revision, which narrows the rift between Renaissance poetry and early modern science and questions traditional theories of 'dissociations of sensibility' à la T.S.Eliot in the seventeenth century is in itself a major achievement.

III.

What makes this revision possible at all, are certain insights of 20th century analytic philosophy and linguistics upon which Maria draws for her overarching argument of Early Modern scientific discourse taking a "performative turn". (This is not her term, but the one I am familiar with from twelve years of work in the FU research unit dedicated to "Kulturen des Performativen"). Crucial notions here are Russell's "knowledge-by-acquaintance" and Gilbert Ryle's "knowing *how*" (as opposed to "knowing *that*") and Austin's and Searle's "performance" and "performativity", all of them highlighting the 'actantional' dimensions of language use, "the knowing how to employ language for performing scientific discourse" called in this study "performative knowing" (see the subchapter "Thesis methodology", pp. 18-21). The discourse enacting such performative knowing remains close to the concrete material experience of scientific experiments and its tools, the hand that operates them, the senses that observe them and the brain that processes them in tentative dialectical *stasis* (p. 39 and 49). The *genius*, the *ingenium* of a scientist working this way resembles more that of the *engineer* inventing new tools, that archetypal figure on the new science – or that of the poet projecting his vision of the world in images, stories and myths – than that of a philosopher holding authoritative truth claims and proclaiming them in direct and abstract statements.

IV.

This dissertation studies, after two introductory chapters on its theory design, the main works of John Wilkins in their chronological sequence embedded in the author's intellectual biography, which in turn is embedded in the history of the Royal Society and of English and European science: his bestselling *Discovery of a World in the Moone* of 1638 (chap. 2), his contributions to the debate within the 'Invisible College' at Oxford about the reformation of scientific discourse (chap. 3), his *Mathematical Magick, or the Wonders that may be performed by Mechanical Geometry* of 1648 (chap. 4), the *Discourse Concerning the Beauty of Providence* of 1649 (chap. 5), and finally his work with the longest-lasting impact, the *Essay*

Towards a Real Character and a Philosophical Language of 1968 (chap. 6). The fields covered in these writings range widely from astronomy to mathematics and mechanical inventions, from theology to the linguistics of an ideal and universal language: the more admirable, therefore, the well-informed competence Maria demonstrates in all these fields – a range of competencies that certainly exceeds that of him who is writing here – and her firm hold on her central argument, which she never loses out sight of in her movements across these diverse fields. She consistently reads her texts, following Quentin Skinner's suggestion, as signs of events "to enable us in turn to identify what their authors were *doing* in writing them" (p. 30) and opens up ever new perspectives on the uses of dialectics and rhetoric, narration and dialogue, illustrations, diagrams and tabulations in Wilkins' and his contemporaries' performative science discourses. (Only in the last chapter has she been a bit too sparing in giving her reader concrete examples of Wilkins' methods employed in his work towards a universal language.)

V.

This is a dissertation written in English by a Russian native speaker. This, however, hardly ever shows. Rather, Maria manages to put across the most complex arguments in a readily accessible and well-nigh faultless English and in transparently conceptualized terms. Occasionally, her sentences may be a bit too long and convoluted and her style may be a bit lacking in the very quality she highlights so well in Wilkins' and her other early modern scientists' prose, a certain performative vigour and sensuous vividness; but these are the misgivings of a literary critic whose aesthetic criteria should not be taken too seriously in such a context.

It is, therefore, without any hesitation that I recommend Maria Avxentevskaya's dissertation both in its extremely valuable insights into the evolution of modern science discourse and in its textual design for the 'defense' and propose the mark 'distinction'.

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