

ESTONIAN ACADEMY OF SCIENCES

Speech
of the President of the Academy
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delivered at the inauguration ceremony on
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MISSION OF THE ACADEMY

Placement of science and scientist in the society starts from the Constitution. The obligations and rights of a public law based person, such as the Academy, have been laid down in laws. Those having direct relevance to the Academy have been determined by the Academy Act, and by other legal acts.

Today 67 years ago the first legal act concerning the Estonian Academy of Sciences was signed. However it is common knowledge that the society as a whole, functions by drawing, to no lesser degree, on value estimates and traditions. As it is, the name of the assembly uniting us – the word *The Academy*, as a concept of spiritual life – comes from the wellspring of the heyday of European culture, from the distant past of almost twenty-four centuries back.

The living creatures are united by birth, individual existence, and extinction. They are united by the continuity of generations, the emergence of species, their transformation and ultimate withering away. They strive towards knowledge, the desire and capability to investigate the nature and the society, the past and the present, to prognosticate the future, the will and ability to transmit the knowledge obtained from generation to generation as an experience, over tens, hundreds and thousands years – with all that lacking, there would be no *Homo sapiens*, there would not exist any, even the most primitive society. It is something much more than the question of the competitiveness of the economy. However, inherently belonging in this juncture is the acknowledgement that the speed of the loss of richness of species presently surpasses by thousand times the respective average indicator in the recent 400 million years.

This statement is not a triviality, but a fundamental frame of reference, in order to view the mission of the Academy to stand up, consistently, for the advancement of science in Estonia, by attributing to those words – *advancement of science* – the widest possible meaning.

CHALLENGE OF THE PRESENT DAY

For the present day of the Estonian science, of utmost importance is its capacity to be attractive to the next generation. In the widest sense – to be able to attract people of a creative spirit, dedicated to the advancement of society in any of its domains. And in a generalised way – the pass of Estonia to the knowledge- and skill-based society can be warranted only by fulfilment of that condition. Existing in a globally open society is always a challenge to the individual in his choices, however ever greater challenge to the states and regions as a whole, in the first place to their political leadership. The choice of the student will be ever more determined by the question about the quality of education, the choice of the scientist will be determined, in the first place by the opportunity to realise him- or herself as a scientist. Multifaceted though the respective prerequisites are, for Estonia one of the facets has long ago shifted to the forefront – providing adequate infrastructure to science and research, to the university education and to the education generally. There is no way to circumvent this focal issue. Neither the Government nor the Parliament should overlook it. It is so because the word “science” is, in this connection tantamount to the concept “the future of Estonia”.

Science serves the most general and the most far-reaching interests of the society. A decade ago, the term “innovation” was added thereto, conceived first as scientific-technological innovation, in the first place, and having significantly widened by now in its meaning. The Academy views as misleading, time-wasting and often comical-foolish that continuous contrasting of fundamental and applied research, which we now and again witness in respective disputes here in Estonia. Often, and rather from the mouth or pen of those, who look like knowing little about either of them and, *alas*, seemingly not desirous of learning anything.

Rhetoric with the goal “beat the scientists into plough shares” is, in view of the future of Estonia as incompetent and deleterious as the belief, that obtaining the degree of PhD and publication of half a dozen pieces of writing, which none beside the author has taken the trouble to read and will not do so, gives him the right to demand that the state of Estonia should guarantee to the owners of that degree for the forthcoming decades the bread and something else to bite into. Both are permeated by the belief that the perpetual motion is still possible. Namely, the perpetual motion of the second kind – i.e. the one that not only spins but produces energy as well.

THE ACADEMY IN THE EUROPEAN RESEARCH AREA

Estonia belongs to the European Union: that novel fact of fundamental significance is as essential to our research and development as to Estonia as a whole.

Being an Academy of a member state, our goal is not only to follow the respective debates. We are to directly participate in giving shape to the R&D policy of the EU. That policy is designed, as we can bear witness just now, while giving shape to the seventh framework programme, to a significant degree through the assemblies, the common denominator whereof is “non-governmental organisations”. The European Commission has, notwithstanding its much played down bureaucracy achieved the organisation of work, where the formation of important science policy decisions though demanding the consensus of the Parliament, the Commission and the Council, involves, in their preparation, in-depth exchange of opinions with a wide variety of “beneficiaries” – among them, by far not in the background, also the academic community through its various representatives. Included in the dialogue are even the scientists “as individuals in their own right”. Hence the Academy considers, as its vital task the presentation of main standpoints of the innovation policy of the European Union in Estonia. Those amount to a strongly felt persuasion that Europe does not have an alternative to the knowledge based society and that the technological innovation is carried out through high level and innovative research. Furthermore – identification and analysis of potentially harmful sides of the technological success is in its turn, and first and foremost, a research work.

The European Research Area as a concrete research and, even more than that, development policy, towards which the European Union is moving (hence we, too) erases at an increasing pace the borderlines between the research and development of nation states – niches to the mediocrities are vanishing. The root cause should be clear also to us, in particular to us: this is the answer of the European Union to the global challenge. This is doubtless the question about competitiveness of economy, but more essential is the ensuing question about the sustainability of the European spiritual and material culture.

European Research Area is a process and not an administrative decision: yesterday it was not there, today it is. This begins by and large in the regions – the Academy wishes to make its constructive contribution to take the steps necessary for uniformity of the research areas of Estonia and Nordic countries. For Estonia it is essential to find those Estonian research and development programmes, which we wish to open to the member states. And not only to them – the EU research policy is in an ascendant line active in its relations with the research of the rest of the world.

DESIGNING ESTONIA'S FUTURE – THE ACADEMY'S PLACE

Naturally the Academy will participate at elaboration of development plans, essential for Estonia. Estonia has started compilation of the following State Development Programme – a significant document of high degree of detail. Congruent with that must be a second document, “The knowledge based Estonia 2”. It would be advisable for Parliament to start the analysis regarding the extent the goals it worded in the text of “The knowledge based Estonia 1” have been met. The Academy is ready to participate in such analysis, and also to organise it, when commissioned to do so by the Parliament, as an independent expert. The analysis of the Lisbon process, placed wherein in the sovereign first place has been the capability of the European Union, in the first place, and emphatically, of the governments of the member states, to comprehend the central place of research and development in safeguarding the future of Europe, is the point of departure also to our Academy.

THE ACADEMY AND THE ESTONIAN INNOVATION POLICY

The Academy, following with immense attention the formation of Estonian innovation policy and actively participating therein through its membership, finds that in connection with rapid growth of the said sector and the import of the problem range for the future of Estonia, there has emerged an indispensable need to thoroughly overhaul it. It may be that the centre of gravity of the problem today is, as a matter of fact, not only and not to such a degree in the formation of the innovation policy, but rather in its implementation. There is no room here to delve into details, not even to enumerate them in a rough outline. Suffice it to mention that the structure hauling along the whole application sector on the legal basis of private law also hauls along half a dozen of areas, including tourism. Innovation has long since become a concept of so central a meaning in planning the social economic development of the states that the sector implementing the respective political decisions must have a very clear organisational identity. It is here where one should start, in the first place, and the pre-eminence of meaningful competence must become the goal, like it is in the sector implementing the science policy. Rooted must become the understanding that for buying the “competence”, high proficiency is called for. Here the Academy can surely offer its help.

The Academy acclaims the launching of the measures, which are spearheaded to the enhancement of awareness about the essence of innovation and about its necessity. The Academy and hopes that the activities to be designed for different target groups will bear the expected fruit.

Concerning the formation of trends of Estonian innovation policy, the Academy considers it especially important that this process should be in essential compliance with the respective priorities of the European Union, in the first place with those expressed in the Framework Programme. Ignoring that would be a gross strategic error. Should something happen (pro: fail to happen) due to incompetence we are prone to use the euphemism “shortage of administrative capability”. But this is by far too mild an expression – its excessive use seems to have made it equal to the expression “excuse me please, it happened by mischance”.

THE ACADEMY AND ESTONIA

The key to conceive the relation between the Academy and society is the understanding, that the Academy itself is part of the Estonian society. Naturally the Academy has a concrete place in analysis of those problems, which are essential to Estonia as a whole. We sincerely expect that our attention will be drawn to the problems, which we may have overlooked, but where the Academy could be of help.

We have been concerned, are concerned and will be concerned with energetics related problem range. We have been concerned, but could be more concerned with the whole of that complicated complex, embracing both the health of the environment and that of the population. The Academy cannot leave outside its sphere of interest either the information society relating topics or by far the essential points of danger, especially those the identification whereof is essentially a quantitative research, leading to qualitative conclusions. We cannot, like some politicians deem it possible to allow to themselves, ignore the AIDS related developments. Our minimal obligation is to discover and took to cognisance of the points of danger, the related risks – to point them out with a finger. Our goal, however would be the initiation of respective research work where it is necessary, so that the decision making process as a whole would base ever more on the analysis of facts. Moreover, our obligation is to contribute to having the solutions offered – the realistic ones thereat.

THE ACADEMY AND THE ESTONIAN SCIENCE ORGANISATION

The organisational basis of Estonian science organisation, as it has been set up after regained independence, is adequate in its main lines and could, perhaps, serve even as an example to some countries nearby and afar. Seemingly, however, somewhere in the recent past we have come to a standstill. Perhaps the most important to be pointed out here is the prevailing primitive summing up of the peer review pieces of writing. This stage was expedient and progressive ten years ago – when the previous “gained-earlier” based financing paradigm had to be superseded. Today we do not lack the opportunities and knowledge to do better.

One must acknowledge that there is a difference between one type of science and another type of science, that there are sciences where a monograph research or a successfully realised intellectual property is much more valuable than scores of peer review printed units in a magazine of the near zero level impact factor. Whereas it is necessary to achieve, that in the directions, where research is a direct part of the world science – those being natural and engineering sciences – the essential component of value estimates should be specific quality indicators, such as where the research works have been published and whether anybody has read them in the way, that he or she has found it necessary (inevitable) to point that fact out in his research works. In other words, whether the created intellectual achievement or even property, has just stayed somebody's private files, or whether somebody else has picked it up and put to use. Which means that Estonian science has attained the level where the quality oriented indicators in value estimates (here – in valuation estimates) should possess a rather clearer weight.

Emphasising the need of meaningful progress, the Academy holds that it is due time also to appreciate several organisational steps. Among them:

a) The Academy will start consultations with the aim to bring the Estonian Science Foundation under the “legal umbrella” of the Academy – i.e. to transform the private law based foundation into a part of the public law based Academy. That step presupposes wide scope groundwork, extensive, multilevel consultations and of necessity essential changes in the Academy Act. Changes in the legal acts must provide for assurance, both to scientific community and lawmaker that the moves contemplated are to the benefit of development of science. It is specifically the scientific community that must be assured with persuasion – and that can be made primarily by the text of the legislative steps – that moving ESF “under umbrella” of the Academy does not mean that “General Assembly will now start handing out the grants”.

It would be inopportune to lay down fixed deadlines, but our goal is to obtain, within half a year the assurance of whether or not that plan will gain sufficient support. Given the availability of requisite preconditions, it is realistic to finalise the preparatory works (including the plans of legislative changes) within 2005.

b) The Academy will start consultations with the Government of the Republic (in the first place with Ministry of Education and Research) in the matter of bringing under the umbrella of the Academy that portion of Foundation Archimedes, the function whereof is support of the European Union research and development programmes in Estonia. The Academy would also propose to bring under its umbrella the system of evaluation of science, prescribed by law.

The goal of the Academy would not be, in this connection to “take over” the function of servicing the framework programmes of Foundation Archimedes, but to set up a structure, which would to a significant extent cover the Estonian research and development interaction with the European Union structures, to the extent and especially “in the depth”, which is not immediately the obligation of the Government of the Republic. The current lower part of Foundation Archimedes, having already won the trust of the scientific community would constitute one half of it. But there is a need for a second part, too – which we would call here the proactive analytical-synthesising dimension. The Government needs it, the scientific community needs it, and that is needed by entrepreneurship, oriented to innovation.

It is evident that with the setting up of the European Science Council the Framework Programme of EU will be inherently complemented and the addition will directly hook up to the yield of the main activity of the Academy. On the other hand – there is one more facet to be added to the Framework Programme – the security related research. This will be also performed in the conditions of free competition covering all member states. The Academy has no information available that anyone in Estonia should have tackled that specific aspect of conceptual enlargement of the EU Framework Programme.

The Academy wishes to be the proactive intruder in those questions crucial to science, which are “so crucial”, that it looks like they are no one's concern in these quarters, including deplorably on the level of the administration, specifically. Take for instance GEANT – a pivotal concept in the European Union, whereas in this country it is the hobby of enthusiasts. This is so notwithstanding the fact that without such infra-structural resource, Estonia has had to forgo from several important directions in the development of research and technology, as of today, and will have to forgo from even more, as the time progresses.

For several years already, the Academy has not been the “umbrella” of the Academic Library. The more so the Academy will emphasise the need to create an all-Estonian blanket system warranting electronic availability of science and engineering periodicals (not limited therewith). Elements of such system are already in operation, however apparently many domains are covered with temporal, inherently hectic solutions, – available today, gone tomorrow, to reappear soon and so on.

“The Academy and the publication effort” is an important word combination, if only for reason that it accounts for an outlay of a significant portion of funds allocated to us from the state budget. What goal are we after with that money? How should it be earmarked to serve with maximum efficiency the main target – promotion of science in Estonia? What is the feedback between the matter printed for that money and development of research? What way is currently the best in order the research efforts made in Estonia and about Estonia would spread most effectively in the world and in Estonia itself? And what would produce the longest aftermath (aftertaste)? What place in that is held by an “original article”, what place for instance by a monograph describing the Estonian nature, by a university textbook of regular use, taking both the knowledge and the terminology describing them to the widest readership? What should we make of *on-line only*, *digital-only* revolution? More properly – how should we join in with that? Those and similar questions merit the attention of the Academy, in close exchange of thoughts with the universities, at that.

THE ACADEMY AND UNIVERSITIES

Restoration of independence and the following organisational rearrangements have cardinally changed the relations between the Academy and universities. The Academy as a research organisation is no competitor to research institutions in distribution of lean purse of the research money. In view of the fact that the Academicians are mainly the researchers working at universities and having worked there, the Academy may be justifiably reckoned to be an extraction of the *crème de la crème* of the mature generation of the university science. That *crème de la crème* have, in their turn set out in their path of researcher starting from the rung of senior laboratory assistant, instructor, lecturer or the like, in the lower end of the academic hierarchy. The Academy “does not worry” about its relations with the universities also for the reason that our deepest motives overlap – to stand up for the future of the research in Estonia. The Academy has done, is doing and will do its best in order to drive home the need for and attribute value to research based education.

Nevertheless, the Academy as organisation assuredly has opportunities gone unused, to tighten the relations with the daily routine of the university life. Exactly the same also pertains to other research institutions. Several colleagues from various Divisions have actually expressed the opinion that Divisions of the Academy should “in an organised manner and *in situ*” review the teaching and research effort, respecting their profile in Estonian universities, its base, perspectives and problems. That would be distant from “evaluation” of which we all have meanwhile become somewhat tired of and surely would help the Academy as a whole to better discern the actual life, giving birth to new generation of researchers.

The prism, through which the Academy looks at Estonian science, training in research and their organisation is not identical with that used in universities and in every concrete university. The plurality of angles of view against the background of essential coincidence of the problem range under consideration will assuredly just enrich the opportunities to jointly promote Estonian science and development, in furtherance of the innovation.

THE ACADEMY AND MEMBERS OF ACADEMY I

It is an inherent attribute to the world academies, be they set up through “Royal Charters”, presidential decrees, Parliament decisions or otherwise, to maintain what may be conventionally called “club activity”. The implication of that is however deeper than can possibly be inferred from this expression. Given our Academy, it needs to be thought about conditions, in which the Academy as an association of Members of Academy daily acts. One cannot deem as normal the situation when a Member of Academy arriving here lacks, for all practical purposes, the place in the headquarters of the Academy where to conveniently take a seat, talk with colleagues and guests. The protracted, however persistently progressing and thorough repairs in

the centuries-old Academy House at 6 Kohtu Street will provide at least some meagre opportunities for that, already this year. While not considering this, in a wide meaning the “Academy’s task”, but a forthright obligation of the Academy Board, there are the following steps contemplated:

a) The Academy House at 6 Kohtu St: after the repairs of the second floor, a spacious, cosily furnished room (rooms?) will be set up in the Academy House, where a selection of central science journals of general content will be ordered, including the popular science magazines, where there will be WiFi and also some computers of general use, where a Member of Academy can bring along guests, if he so wishes, to talk with them;

b) Perspective in Tartu: in the nearest proximity the house of the Institute of Technology of University of Tartu will be completed. There will be, on the first floor three studies for the Academy, and also the opportunity to use a smaller and a larger conference rooms. There are reasons to believe that this plan will realise by end of the first half of the year 2005.

THE ACADEMY AND MEMBERS OF ACADEMY II

A body of Members of Academy as we now are, our place in society and vitality for the society are determined, in many aspects by the position of our membership, Members of Academy, in this society. Not in the sense of the number of “incumbencies”, but measured through our summary contribution. The Academy as a whole must be more than the simple sum, thus found. The largest part of the sum itself is accounted by the science, in the first place by the science. Hence the obligation of the Academy as an organisation is to take care of the opportunities of its membership to creatively develop the science, to realise its scientific ideas, to nurture and bring up the next generation of the researchers. The Academy is the research organisation – not a research institution. The best way to provide for the conditions necessary for Members of Academy to successfully do science is so simple, however – to staunchly stand up for novelty and high level of research, to do everything in our power to have that primary principle loud and clear written in procedures of funding the science.

SPIRITUAL LIFE IN ESTONIA AND THE ACADEMY (ies)

Understandably the Estonian spiritual life is much more extensive than the slice thereof having consolidated under the umbrella of the Academy. The Academy is only one of the forms of its organisation for one part of carriers of that spirit. Knowingly in the world, in particular in Europe, the name of the Academy is also born by the associations, which bring together “fine arts” and their outstanding cultivators and fosterers. In a small country those two things could be united, but as my colleagues well know, this path is but scarcely open to our Academy - I dare say only theoretically. In practice it will not work, because even in case of the best propensity and predilection the respective “fine arts” part would not add up to the volume in the Academy, which would be adequate in the meaning of the goal. Yet take just a few examples. There have already appeared 50 volumes of “Estonian Story of Thought” – the documents of Estonian spiritual life from the past until today. For years already, in defiance of the hardship, there has appeared the unique magazine The Academy, to spread “spiritual life”. There are more; many more could be added. Hats off to them! Although the examples presented are not obligatorily in direct relation with the “The Academy of Fine Arts and Letters” as a possible organisational basis, it is sufficient to illustrate the first sentence of this section. I do not know how much the Academy can “finish off” here, in a direct sense, however minimally and for the start we can give our clear and resounding support to the idea of the emerging of such a “sister Academy”.

CONCLUSION

The Academy has no claims to the position of *arbiter elegantiarum* in the Estonian society of the 21st C. – either in a general plan or relating to science. Unsubstantiated claims will not attain such a position of arbitrator in a democratic society anyway.

The Academy consists of scientists and as such knows only too well, that the actual research and development takes place in universities and other research institutions – in the first place and predominantly by the generation perceptibly younger than membership of the Academy. This is at least how it should be. It is in the name of such a state of affairs that the

Academy wishes to act, in co-operation and dialogue with the society, its elected representative bodies and administration, with universities and other research institutions, with our learned societies.

Yet the Academy claims for many things – for the right to change, and develop. The above “theses” are part of the whole, the actual background whereof is wider than that narrowly related to the Academy. It is wider also than that related solely to Estonia. It is much wider.