

THOUGHTS ABOUT THE QUALITY OF SOCIAL SCIENCES IN ESTONIA

Jüri Allik

University of Tartu

Abstract. In this essay the quality of social sciences in Estonia is evaluated. An external (Swedish) evaluation, and the participants themselves have a tendency to stress a high, internationally competitive level of Estonian humanities and social sciences, primarily by referring to outstanding scholars who are well-known by their Western colleagues and who can communicate with their visitors. At the same time, all bibliometric indicators show that Estonian science in general and the social sciences in particular are far behind the rest of the world. There are fewer than 50 scientists for all areas of the humanities and social sciences, from philosophy to sociology, who publish in international peer-reviewed journals. If the number of publications by Estonian social scientists continues to increase at the same rate as it has been during the last 15 years, it will take more than a century to equal Finland in the number publications normalized by the number of inhabitants in this country. The state of Estonian social sciences can be explained by the fact that many academics suffer from “functional illiteracy” caused by deprivation of scientific forms of communication during critical periods in their academic lives which has made them unable to communicate the results of their scholarly work to colleagues through publications in international journals. Some directions in which Estonian social sciences could move are suggested.

1. Introduction

My goal in this essay¹, is to answer the rather painful and sensitive question, “How good are the social sciences in Estonia?” All who are involved, including myself, want to hear a positive reply, and they are not well prepared for the

¹ I would like to thank Wolfgang Drechsler for his continuous support and more specific comments concerning a previous version of this manuscript without which the completion of this essay was simply unthinkable. I also thank Merry Bullock for careful reading of the manuscript and extremely valuable suggestions.

alternative. I am fully aware that messengers bearing bad news are usually killed, literally or otherwise. Nevertheless, understanding the real situation, even if it is discouraging, is too important to be neglected. Liberation from comforting but futile illusions is still the best known therapy. Science in general and the social sciences in particular are of key importance to the Estonian future. There are not so many natural assets available in this country except the brains of those living here and their ability to absorb old and create new knowledge. Therefore, the quality of higher education in Estonia is not simply important but absolutely vital for our future development. However, high quality in education is impossible without high-quality research and scholarship. Consequently, an evaluation of the quality of social sciences in Estonia also predicts its intellectual prospects for the future.

Like private forms of consciousness, science requires self-reflection for effective functioning. But not all motivation for evaluation of Estonian science came from internal needs of cognition. After the collapse of Communism, there was a tendency to equate the failure of the political system with its science. Even worse, science was perceived as an active collaborator with the repressive system, which in part was true. The general public felt that science had turned away from meeting urgent societal needs. Politicians who grasped the favorable political situation tried to make profit by passing legislation limiting academic freedom. For example, it was proposed that all science money be controlled by ministerial departments according to the “needs of society”.² Public opinion was extremely suspicious of everything that came from the previous corrupted system. In many cases these were well-founded suspicions, especially about the humanities and social sciences. Although “bomb makers” and doctors diagnosing dissidents as schizophrenics were also subject to accusations, it was primarily the ideologists and propagandists who fell under public fire.

There were two major groups who were keen to find the humanities and social sciences in a more miserable condition than they actually were. The first consisted of natural scientists. Physicists, chemists and biologists can be only partly blamed for their negative attitude. It was a revenge for the insults they suffered during the Soviet period when many social scientists were appointed to leading positions for their political loyalty, not for their scholarly achievements, and who voluntarily or by the call of duty taught to their less enlightened colleagues an ideologically correct understanding of the universe and of human society. Another reason for the hostility of the natural scientists was that the ‘big money’ for physics and

² Technically, this was called *riigitellimus* or “state order”. This concept, called the Alajõe-Vahtre doctrine (Allik 1994), was formulated by the member of Estonian Parliament (*Riigikogu*) Sulev Alajõe. According to this concept, “science made by state universities must correspond to the state order of government” and the role of the Estonian Science Foundation was only to refine this state order which, by definition, meets the needs of the society in the best possible manner. This concept evoked a vigorous response from scientists (e.g. Parmasto 1993), leading to public apologies from Alajõe (1993).

chemistry came directly from Moscow with no real competition with social sciences. Independence meant limited resources which need to be divided between all science fields on a competitive basis. It was clear from the very beginning that a small country with a population of 1.5 million cannot afford five different institutes of physics.

The other group interested in discrediting the humanities and social sciences consisted of individuals who can be called “fighters for justice”. This group demanded a purge of all those who had actively collaborated with the occupying power. This obviously included those who had a high position in the hierarchy of the Communist Party and who were personally involved in the persecution of active dissidents. However, it also included administrators who hindered the academic promotion of those who were presumably not loyal enough. The “fighters for justice” group was not homogeneous. In addition to high-principled people, it contained many opportunists and even losers. For example, the most outspoken against the acceptance of Soviet academic degrees, doctors and candidates of science, were those self-proclaimed patriotic-minded literati who themselves were too dumb or too lazy, or usually both, to complete their own studies.

2. How good are Estonian social sciences?

In 1989, I wrote an article that attracted a certain amount of attention and was translated into Russian and also published in the leading Finnish daily, *Helsingin Sanomat* (Allik 1990). This was probably one of the first articles in which scientometric data were used to evaluate Soviet science. Many people suspected that Soviet science was ineffective but there were no hard data. Using database of the *Institute for Scientific Information* (ISI) in Philadelphia, I found that 5.5% of all indexed scientific publications in the world were produced by scientists working in the former Soviet Union. At the same time, only 1.7% of all citations in all publications were of works published by Soviet scientists. This rate was about 10 times less than, for example, citations of Dutch scientists. Comparing the number of scientists in the Netherlands (approximately 25 thousand) and the Soviet Union (about 1.5 million), it was easy to find that one Dutch scientist equals 63 Soviet scientists in terms of quality publications. In other words, one Dutchman alone was able to do the work of a small research institute in Moscow. There was only one scientometric indicator for which the former Soviet Union exceeded all other countries by far. This was the index of *mania grandiosa*, which is the ratio between the proportion scientists of a given country cite their own studies to the proportion scientists of all other countries cite these studies. On the basis of this depressing statistics, it was almost inevitable that even if Estonian science was somewhat better than that of the entire Soviet Empire, it was probably still not satisfactory and was most likely catastrophically weak. The existence of

outstanding and highly cited scientists like the semiotician Juri Lotman³ and the chemist-physicist Endel Lippmaa only obscured the real picture, creating an illusory appearance of the advancement of Estonian science.

Immediately after becoming independent, the Estonian Academy of Sciences applied to the Royal Swedish Academy of Sciences and the Swedish Research Council to carry out an evaluation of Estonian science. The review of research in Estonia within the humanities and social sciences was completed in 1993 (Review 1993). By itself, it was rather unique that during a short period of time, the entire scientific activity of one country was scrupulously evaluated by some another country (Saari 1993) – perhaps only comparable to the evaluation of East German science by the (formerly West) German *Wissenschaftsrat* in 1990/91. Although the Swedish evaluation was generally reliable, its quality was very much dependent on the particular evaluated field. It was much easier to give specific evaluations, for example, in chemistry than in ethnology or folklore.⁴ Altogether, the Swedish evaluation was rather benevolent. Probably because it was impossible to go into depth in the humanities and social sciences, the assessment was even more charitable than that of the natural and exact sciences, where incompetence could be more easily exposed. On the basis of this international evaluation, it became customary to consider the level of Estonian social sciences if not excellent, then at least exemplary. For example, the Estonian philosopher Eero Loone (1994:1051) wrote: “On average, our social sciences (and also the humanities) are on a high level in international comparison. Their general disparaging is obviously caused by political ambitions or ignorance of those who depreciate them. By the way, this was confirmed by the Swedish evaluation of Estonian science”. This attitude is understandable: the group of people engaged in the difficult task of integrating Estonian social science into the international scientific community were not helped by persistent negative criticism from inside or outside. At least a minimum amount of esteem is required not only to go forward but even to maintain a minimal level of scholarly work.

³ Juri Lotman, who is probably the most famous scientist who has ever worked in Estonia after World War II, is the first who comes to mind when the humanities of Estonia are mentioned. Besides being one of the most original thinkers of this century, Lotman is a good example of the agreement between general scholarly reputation and bibliometric indicators. According to AHCI, he was among the most cited authors in the period between 1976–1983, being cited 1,070 times (Garfield 1986). Later years have only shown an increase of his citations, and in 1991 alone his works were cited 195 times (Allik 1992b).

⁴ The reaction of many humanitarians is indicative in this regard. Many people complained that the Swedes came here and upon their leaving just said that, to their surprise, they had met rather civilized and knowledgeable people. It was a disappointment that the visitors were not inclined to say anything derogative about one's colleagues nor very positive about those who lamented. Many complaints were about taking into account only English publications, disregarding everything written in Estonian. Unfortunately, the main message of the Swedish evaluation seemed to have escaped notice: the humanities and social sciences in Estonia were not entirely ideologically corrupted, and were not hopelessly different from their Western counterparts.

The political scientist and philosopher Andrus Park (1992) was probably the first who shattered the feeling of complacency after the Swedish evaluation. He reminded the scientific community that there was a simpler way of valuating the Estonian social sciences than this arduous form of evaluation. He proposed comparing the publication rate of Estonian social scientists in international journals covered by the *Social Sciences Citation Index* with publication rates in other countries. It is fair to compare Estonia with other countries whose language is as obscure as Estonian. Finland is the best candidate for this kind of study. Indeed, comparing publication data from 1988 to 1991, Park found that the number of publications authored by social scientists working in Estonia was at least 10 times lower than in Finland, even when the difference in population were taken into account.

Several other attempts to assess Estonian social sciences by means of bibliometric indicators confirmed these rather gloomy results. For example, during the six years 1985-1990, the University of Tartu scientists were authors or co-authors of 38 articles (including book reviews, short notes and letters) in journals indexed by SSCI and *Art and Humanities Citation Index* (AHCI). Thus, only about 6 such articles per year were authored by researchers affiliated with the University of Tartu (Allik 1992b). The real number for the social sciences is even more modest because two or three of these articles every year were published not by social scientists but by pharmacologists and psychiatrists who regularly send their articles to interdisciplinary journals covered by SSCI. These two figures, the total and average publication rates, are really Lilliputian, especially compared with the number of articles published by other Tartu scientists in journals covered by the *Science Citation Index* (SCI). Natural and exact scientists published 468 articles between 1985-1990, or an average of 78 publications per year. Dividing the total number of publications in all three citation indices, SCI, SSCI and AHCI, by the number of teaching and research personnel at the University of Tartu results in the finding that on average, a Tartu scientist published 0.07 articles every year. In other words, only one of 14 university academic staff members published at least one article in refereed journals every year.⁵ The significance of this figure becomes apparent if one realizes that, for example, in 1985 671 members of all Departments of Psychology in Great Britain, which is comparable in size with the University of Tartu, published 967 articles indexed by SSCI (Rushton, 1989). Although psychology is not among the most prolific scientific areas in terms of publications, an average British psychologist published

⁵ After publishing these simple calculations, I was accused of irresponsibility and an attempt to discredit Estonian science by academician Harald Keres and docent Heino Tõrnpuu (*Postimees*, May 11, 1992). In particular, as a proof of the sufficiently high level of Estonian science, Keres referred to those scientists (Enn Tõugu, Rein Müllerson, Mart Saarna and Igor Gräzin) who were able to find permanent jobs in Sweden, Great Britain, Finland or the United States.

1.4 articles per year which is 20 times more than a scientist working at the University of Tartu.⁶

It is interesting that approximately the same level of effectiveness was later ascertained by Niit (1996) who compared the publications of Estonian and Finnish psychologists in SSCI and found that Estonian psychologists publish about 20 times less in refereed journals than their Finnish colleagues, although the population of Estonia is only 3 times smaller. It is important to mention that Finnish psychologists report that it is not easy to pass the threshold of international publishing. Niemi (1987) speculates, obviously with a certain amount of self-irony, that the reluctance to publish in international journals is not the direct result of poor language skills, but probably related to the tradition of isolation of Finnish mainstream culture from international contexts. It is also worth remembering that psychology is the most productive of all fields of Estonian social and behavioral sciences, producing about one-third of all publications in international scientific periodicals. For other fields in the humanities and social sciences the productivity is almost certainly at least 10–20 times lower than in Finland.⁷

3. How to estimate excellence?

The previous section demonstrated the incongruity of opinion about the quality of the social sciences in Estonia. The Swedish evaluation and the participants themselves stress a high internationally competitive level of Estonian humanities and social sciences. One of the main arguments for this is the existence of outstanding scholars who are well-known by their Western colleagues and who would at least in principle be able to find a job at some decent university outside Estonia itself. At the same time, all bibliometric indicators show that Estonian science in general and the social sciences in particular are years behind the rest of the world. Even the most advanced field of Estonian social sciences, psychology, is at least 7 times less effective than it is in Finland. How to explain the discrepancy between these two evaluations? One possibility is that the subjective evaluation overestimates the visibility and salience of the leaders in the field. It is a well-known psychological phenomenon that salient examples of something lead

⁶ One argument against using bibliometric indicators is the bias of ISI databases. However, Colman, Grant and Henderson (1993) compared Rushton's data about publishing in SSCI journals with the number of publications in the journals of the British Psychological Society and found good agreement between them.

⁷ There is a reason to believe that these estimates are not very far from truth. For example, Hungary, which is probably the most advanced of the former Communist bloc countries, was far behind the world average three years after the collapse of Communism. Papers published by Hungarian scientists were only 60% of the world average. Articles authored by Bulgarian and Romanian scientists were cited only 30% relative to the world average (Anderson 1992).

to an overestimation of this something. For example, when people judge the frequency of some type of events, they do not rely on the actual frequency, but on how easy it is to retrieve relevant examples of this event from memory. In other words, frequency is estimated on the basis of how available the best exemplars of this particular category are (Tversky and Kahneman 1973). Although the availability heuristic was formulated for frequency judgments, the same mechanism appears to work in judgments of importance and quality. Indeed, achievements of the Estonian humanities and social sciences are primarily estimated on the basis of the best examples. A few remarkable scholars are enough to create a reputation for the country in which they are working. However, the existence of one or two geniuses is not the best indicator of potency and capacity of a field of science in general. Indeed, there is always a small group of actively publishing scientists that account for a substantial proportion of all published papers. Alfred Lotka demonstrated already in 1926 that the distribution of scientific authorship follows an inverse square rule: the number of scientists who authors n papers will be $1/n^2$ of those who author just one paper (Garfield 1980). In the period of 1989–1993, the most prolific author was Andrus Park who published 12 articles in journals indexed by SSCI and AHCI (Haab 1994). According to Lotka's formula, one should expect that there were 144 authors who published just one paper during the same five year period. In fact, this number was only 34. In total, there were only 49 scientists who published in indexed journals at all. Thus, the group of people publishing in international journals is incredibly small: fewer than 50 scientists for all areas of the humanities and social sciences from philosophy to sociology.

4. The inspiring influence of freedom

Estonian science was already emancipated a few years before the restoration of political independence. There are many reasons to believe that there was no censorship for domestic or foreign scientific publications since 1988. Since that time, scientists no longer had to fear that their manuscripts would be returned by the postal service with the stamp "no permission", nor was it necessary to wait several months for formal permission from the Ministry of Education to send an article to a foreign scholarly journal (Allik 1992). Thus, it is not very far from the truth to say that Estonian social scientists during the last 8 years had no other obstacle to the publication in international scholarly journals except their own indolence, part of which was inherited from the previous system. One might expect a dramatic increase in publication after the end of the stagnation of the Brezhnev era, motivated by the start of Gorbachov's perestroika in 1985, the Estonian Declaration of Sovereignty in 1988, and the restoration of independence after the failed August coup in Moscow in 1991 (cf. Park 1994). In reality, however, the number of publications by Estonian social scientists in international

journals has changed very slowly. In Figure 1, the number of articles in the SSCI source index authored or co-authored by Estonian scientists from 1981 to 1995 are shown.⁸

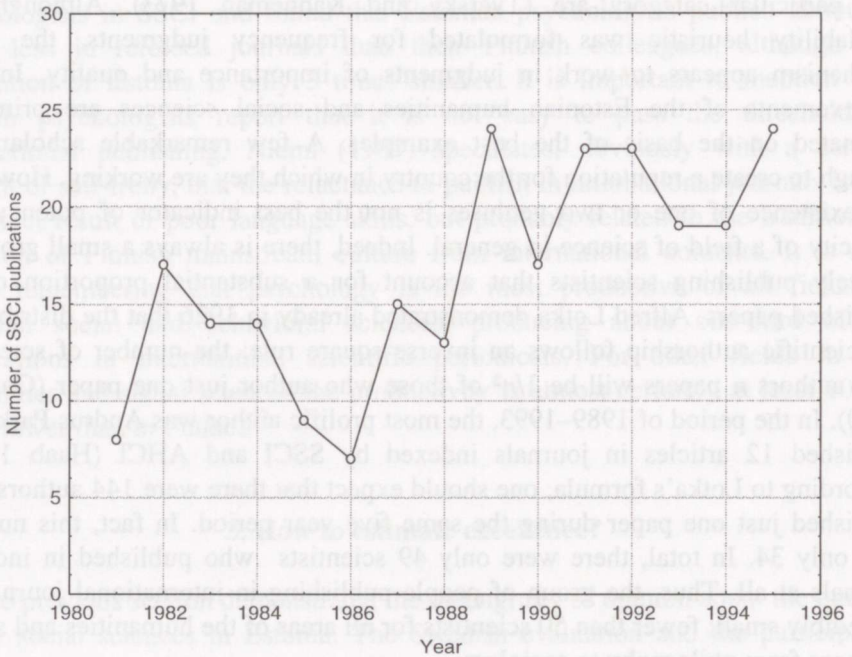


Figure 1.

Speaking in formal terms, the correlation between the year of publication and the number of articles is not so bad. The Pearson product-moment correlation between year of publication and number of published articles is $r = .71$, which is of course statistically significant. This correlation was obviously produced by the jump in the publication rate in 1989. Unfortunately, there is no firm proof that the increase was produced by more prolific output by Estonian social scientists rather than by an increase in the journals indexed by SSCI at about the same time. Even if the highly significant correlation reflects a real increase in productivity, it does not offer cause for celebration. The coefficient of the best regression being less than 1.0 makes the correlation no more than illusory. If the number of publications increases at the same rate as it has during the last 15 years, it would take more than a hundred years to equal Finland in the number of social science publications as normal for the number of inhabitants in this country. The approximately 400 articles published by Finnish social scientists every year in journals indexed by

⁸ This figure is composed on the basis of data presented in Niit (1996, Table 5) and the search made by Toomas Niit in the SSCI electronic database (October 15, 1996).

SSCI is a good antidote to the wishful thinking that Estonian social sciences are in a good and healthy condition (cf. Niit 1996:85).

5. Why are Estonian social sciences so clumsy?

It is only too easy to blame the former Soviet Union for the maladies of the current situation in Estonian social sciences. The Empire of Soviet Science was designed over several years as an organic part of a Byzantine totalitarian system. Although its declared objective was to demonstrate the superiority of Soviet Science, which directly emanated from the historical supremacy of socialism over decadent capitalism, its function in reality was to maximize control over individual activity and to create a feudalistic cast system in which only the upper echelon enjoyed privileges such as an automobile with a chauffeur, special medical care, a specialized shopping system and foreign travel at the expense of the state. Although the more recent constraints imposed by Soviet science were not as cruel as the repression during the Stalin era, the ideological grip on almost every aspect of scholarly activity was never eased. As formulated by Solso (1991), by imposing the “party line” on scientific workers, politically-minded leaders effectively restricted the scope of topics investigated, the methodology used, the context in which conclusions were discussed, and the places of publication. The opposition between “us” and “them”, between Soviet and bourgeois scholarship, was the dominant theme in Soviet science. The classic works of Marx, Engels and Lenin contained the ultimate wisdom, and the business of Soviet scholars was to find the best possible quotation regardless of whether the classics ever addressed the subject at hand. Even at the beginning of the eighties, two of the most cited psychologists in Soviet psychology journals were Karl Marx and Vladimir I. Lenin (cf. Allik 1992:8). While Western liberals and literati fell in love with Marxism of their own free will, Soviet scientists were bullied into it, and after that, many of them fell in love anyway. This love expressed itself in particular in an affection for general speculative arguments. Indeed, there was no urgent need for observation or empirical examination because the ultimate truth about forms of human society in its past, present and unavoidable future was already discovered. This fondness for general speculative argumentation made the Soviet social sciences almost impotent in their ability to see reality and describe and discover new empirical facts or regularities. This inability was protected by a deeply-rooted conviction of the theoretical superiority of Soviet science over the blind and slavish fact-collecting typical of Western science (Allik 1992a:9). And even after becoming independent, a few symptoms of this intoxication have remained: the belief that it is possible to possess the ultimate truth about human nature and society is very slow to disappear.

Although Estonian humanities and social sciences were able to keep up some resistance to ideological pressure, a lack of self-control over the planning and

execution of scholarly work produced a syndrome of learned helplessness. When people live in an environment in which they have no control over the outcomes of their actions, they become helpless and do not expect to have control (Seligman 1975). A psychological portrait of learned helplessness is characterized by loss of interest, withdrawal from normal activities, lack of tolerance of frustration, inability to show personal responsibility for something outside oneself, and profoundly negative feelings towards oneself and life in general. It is difficult to escape the impression that many of these attributes can be applied to the description of Estonian humanities and social sciences as well. As Solso (1991:319) wrote: "Because Soviet scientists for the past half-century or more did not have free access to international travel that allows ideas and methods to be tested in a cosmopolitan environment, they did not grow intellectually at a rate consistent with the rest of the world". From the sixties, Soviet scientists started to attend international conferences, although it was not always those who were originally invited by the organizers. To send an article abroad for publication in a scholarly journal was a complicated endeavor. At first, it was necessary to get the KGB approval that there were no state secrets involved (every Soviet institution, including universities, had a special "fourth" department that was directly subordinated to the KGB) and the testimony that the paper did not contain anything new, to say nothing about the formal consent of at least three different university officials. All these approvals were a necessary first step to apply for permission from the Ministry of Higher education, which usually took several months. Even these few facts show that scientific communication was seriously restrained during the Soviet period, and it will take some time to relearn this essential part of scholarly activity. There are many social scientists in Estonia who have good ideas and who are doing interesting research, but they seem to be incapable of communicating their results to their colleagues through publication in international journals.

The humanities and social sciences suffered much more than the natural sciences from the deprivation of scientific sources of information. Subscriptions to most international journals and new Western books in these areas were stopped. Even old books were likely to be sent to special library reserves because of the mere mention of a person who was regarded as a political enemy or who had casually made critical remarks about the Soviet Union. Many of selectively translated Western scholarly books had a special label "for scientific libraries", which restricted their distribution and availability. Two or three time-consuming pilgrimages every year to the Lenin Library in Moscow were an inevitable part of the scientific life of anyone who wanted to keep abreast of knowledge in their own field. Reading scientific literature, like writing, is a habit that needs to be exercised. There is probably even a "critical period" in one's professional career which is essential for the development of these habits. I have the impression that many academics in this country suffer from a sort of functional illiteracy caused

by the deprivation of scientific sources of information during this critical period of their scholarly life.

6. Is there any hope for Estonian social sciences?

There has been a small but noticeable improvement in the productivity of Estonian social sciences during the last few years. A closer look, however, reveals that this increase was primarily achieved by a relatively unsophisticated way of doing science. There is an increasing number of studies that can be called “ethnographic”. A characteristic feature of this approach is to collect and describe rare things and curiosities that can be found in Estonian culture and society. Everything which is deviant enough from some average level – consumption of alcohol, suicide rate, literacy etc. –, will do! Another popular way of increasing productivity is “colonialism”. Estonia still has a very cheap but sufficiently qualified work force which attracts costly research projects to carry out some part of them in Estonia. The country’s small size makes it particularly appealing for populational and pan-national studies. The magical word combination “society in transition” makes Estonia fascinating to everyone who is interested in the aftermath of the totalitarian regime. Finally, a non-Indo-European language and a not completely Westernized culture make Estonia appealing for cross-cultural studies. There is no doubt that Estonian social sciences benefitted from being included in large comparative studies of mating preferences (Buss et al. 1990) or values (Schwartz 1994). There is no reason to believe that the number of Western scholars who do not mind using their own small questionnaire on the Estonian population will decrease in the near future. It is therefore likely that there will be plenty of Estonian social scientists who are willing to do raw data collection in return for co-authorship. There is nothing condemnable in this practice, except for obvious cases of corruption and incompetence. Many foundations are happy to give money for projects containing the magical words “transition”, “free market”, “civil society”, and “democratization”, especially if these projects are meant as a form of co-operation to support scientific research in East European and former Soviet republics. It seems, however, to be the rule that the majority of the support to the East returns to the West in the form of scientific tourism by Western academics and other perks (cf. Tucker 1995). Another problem with such research is the incompetence with which many Western academics apply their abstract models and explanatory schemes to ethnographically “fresh material”. Typically they have only limited knowledge of the local situation, and their understanding primarily reflects archetypal stereotypes about Communism and Russians with whom all other people and nationalities are confused (Allik and Realo 1996). A good example of this kind of stereotyping is a recent study by Keltikangas-Järvinen and Terav (1996) in which Estonia is classified as an extremely

collectivistic country solely because it belonged to the communist bloc and had a “collectivistic educational system”.

It is certainly not my intention to convey the impression that other, more creative forms of scholarly work in Estonian social sciences (and humanities) are unknown or impossible. Just the opposite; I am convinced that Estonia possesses many unique features in its language, culture and society that can be important if not quintessential for solving many fundamental problems. For example, some peculiarities of the Estonian language shed light on the long-disputed problem of linguistic relativity. Disregarding the dubiously formulated influence of language on thinking, specific features of Estonian may be helpful in demonstrating, for example, that a listener’s native language may affect general auditory perception. Because Estonian is a language in which contrastive duration (quantity) is employed in signaling phonological oppositions (Estonian phonology uses a ternary system of quantity oppositions, called short, long, and overlong), native Estonians are more sensitive to durational differences than speakers of a stress language like English (Fox and Lehiste 1989). In contrast, English-speaking listeners are more sensitive to amplitude cues (Lehiste and Fox 1992). Even Estonian folk songs and funeral laments may be helpful in solving certain fundamental problems. It is known, for example, that phonetical oppositions are neutralized in classical opera and choir-singing (intervowel differences are diminished). The musicologist Jaan Ross (1989, 1992, also Ross and Lehiste 1994) has shown that this is not a unique property of the European musical tradition, but a universal accommodation of speech to the requirements of singing. There is no doubt that in addition to the obscure language itself, there are many other phenomena which may play a key role in solving really important problems, provided that Estonian scientists have the courage to tackle these problems.

The main question faced by the Estonian humanities and social sciences today, as it was a hundred years ago, is whether to remain provincial or whether to attempt to become truly international.⁹ All symptoms indicate that the peaceful parochial atmosphere in the Estonian humanities and social sciences has not yet started to change. Academic reforms have not been deep enough, and they have been slow, mainly due to resistance and rigidity in the academic community itself. Nevertheless, several important changes have already taken place, which make a return to old habits and practices very difficult, if not impossible. Talks about restoring the “real” doctoral degree, beyond an ordinary Ph.D., have almost disappeared. Although the recent elections of university professors at the University of Tartu were very far from ideal, beside personal relations and belonging to an “old boys” network, academic merits and scholarly achievements were also considered. Indeed, several candidates who were not able to produce any literary work, not even to the extent that is necessary to write a book review,

⁹ It is interesting that even during the most glorious times of the university, complaints about low publication standards at Tartu (Dorpat) were not rare (cf. Drechsler & Kattel, 1997).

were not elected, which unfortunately does not mean that many others with equivalent academic credentials were not re-elected as full professors. One lasting effect on the Estonian social sciences was the recent ability of Tartu to attract internationally recognized scholars, younger ones like Wolfgang Drechsler and older ones like Rein Taagepera, whose continuous calls for excellence, both in research and university education, have influenced the entire intellectual atmosphere in Estonia. The mechanism of funding scientific research through the Estonian Science Foundation is another success story. The basic idea that research money is distributed on a competitive basis and that decisions are made by an elected commission of working scientists, not administrators, has shifted the whole intellectual horizon of the Estonian social sciences. The sole fact that grant proposals have to be in Estonian and English, so that they can be and are reviewed by foreign experts, is of enormous value. Last but not least, the establishment of *Trames*, an international journal of the humanities and social sciences, which continues the traditions of *Acta et Commentationes Universitatis Tartuensis (Dorpatensis) B* which was founded in 1893, is another hopeful sign for a brighter future.

7. Future outline

This essay is perhaps not the best place to formulate specific recommendations for further academic reforms. Many of these are as obviously necessary as they are difficult to accomplish. For example, after the next two or three years, many talented young Estonian scholars will receive their Ph.D. degrees from the best universities in the world, and they will be ready, at least in principle, to return to Estonia. So far, literally nothing has been done to make this return not only less probable but possible at all. In many areas, anyone who has grown up outside of the local cottage industry is perceived as an intruder, without the smallest chance of winning the competition for election to some academic position. In addition, nobody is likely to be sufficiently masochistic to be satisfied with the Estonian salaries of junior academic positions. I will avoid specific suggestions concerning how to prevent the almost inevitable brain drain and will limit myself to two general comments, which hint at the direction the Estonian social sciences could move. My first comment is to look at our history. True believers of linear progress certainly will shudder when asked to first look backward before mindlessly moving ahead. It is not a coincidence that many parts of the history of the social sciences at the University of Tartu (formerly called Dorpat), have been misrepresented by both Baltic German and the Soviet Estonian historians (cf. Drechsler and Kattel 1997). An excellent series of studies by Drechsler and his associates (Drechsler 1994, 1997, Drechsler and Kattel 1994, 1997) has begun to reveal a different picture which shows that in the history of the University of Dorpat, many areas of the social sciences at the University of Dorpat were closer

to the most advanced frontiers of late 19th century science than compared to the acclaimed Dorpat medical and natural sciences. It is also interesting that the founder of modern psychiatry, Emil Kraepelin, confessed that his experimental psychological work at Tartu appealed to him much more than the not especially satisfying clinical work. He wrote:

In the course of the years at Dorpat, beside my clinical training I was able to hold quite a number of independent lectures about criminal psychology, forensic psychiatry, about the conscience and its disorders and experimental psychology. There were never lack of students for these lectures. I considered psychological discussions, based on Wundt's model, to be specially important and I made the students make reports on individual problems (Kraepelin 1987:42).

It is also indicative that Kraepelin himself expected to receive the Nobel prize (which he never did) not for establishing that mental disease runs a regular course, like quaternary or tertian fever, but for his studies on the work fatigue curve (Roback 1961). In short, the truth that Estonian social sciences are built on a more solid foundation is gradually starting to emerge. Although modern science often mimics an amnesic patient who has difficulties remembering anything but what was written in a few last issues of a leading journal in the field, it cannot function, and actually never does, outside some academic tradition. The Estonian social sciences can only benefit from the recognition and absorption of this remarkable academic tradition, which in the past was perhaps less provincial and more European than at any other time.

The second comment concerns how to avoid the mindless Westernization of the Estonian Social sciences. Just as it is meaningless to strictly imitate North American academic teaching models, so it is almost suicidal to be absorbed by the endless flow, or rather flooding, of international publications. Jaan Valsiner has already warned that the "world level", represented by internationally domineering American scientific journals, is just a social norm that does not coincide with the development of theoretical and fundamental ideas (Valsiner 1992:2197). This is not a call to avoid American or European scientific journals or prestigious publishing houses like Academic Press or Wiley. To publish an article in one of these mainstream scientific journals or a book with a mainstream press is certainly a veritable sign of functional literacy. But if someone strives for more than just getting accepted by a CC journal, it is perhaps useful to remember the moral that James Watson, the Nobel Prize winner and discoverer of the structure of DNA, deduced from his first meeting with aristocracy: "I would not be invited back if I acted like everyone else" (Watson 1968:90). Therefore; it may be productive to remember that our traditions and experience may provide a fresh look at many scholarly problems, not because we are better but because some of our prejudices and biases are different from those that are common in other places of the world. It is not totally excluded that the mainstream of social thought is only approaching ideas which are rather common and self-understandable for us. It should be

to an overestimation of this something. For example, when people judge the frequency of some type of events, they do not rely on the actual frequency, but on how easy it is to retrieve relevant examples of this event from memory. In other words, frequency is estimated on the basis of how available the best exemplars of this particular category are (Tversky and Kahneman 1973). Although the availability heuristic was formulated for frequency judgments, the same mechanism appears to work in judgments of importance and quality. Indeed, achievements of the Estonian humanities and social sciences are primarily estimated on the basis of the best examples. A few remarkable scholars are enough to create a reputation for the country in which they are working. However, the existence of one or two geniuses is not the best indicator of potency and capacity of a field of science in general. Indeed, there is always a small group of actively publishing scientists that account for a substantial proportion of all published papers. Alfred Lotka demonstrated already in 1926 that the distribution of scientific authorship follows an inverse square rule: the number of scientists who authors n papers will be $1/n^2$ of those who author just one paper (Garfield 1980). In the period of 1989–1993, the most prolific author was Andrus Park who published 12 articles in journals indexed by SSCI and AHCI (Haab 1994). According to Lotka's formula, one should expect that there were 144 authors who published just one paper during the same five year period. In fact, this number was only 34. In total, there were only 49 scientists who published in indexed journals at all. Thus, the group of people publishing in international journals is incredibly small: fewer than 50 scientists for all areas of the humanities and social sciences from philosophy to sociology.

4. The inspiring influence of freedom

Estonian science was already emancipated a few years before the restoration of political independence. There are many reasons to believe that there was no censorship for domestic or foreign scientific publications since 1988. Since that time, scientists no longer had to fear that their manuscripts would be returned by the postal service with the stamp "no permission", nor was it necessary to wait several months for formal permission from the Ministry of Education to send an article to a foreign scholarly journal (Allik 1992). Thus, it is not very far from the truth to say that Estonian social scientists during the last 8 years had no other obstacle to the publication in international scholarly journals except their own indolence, part of which was inherited from the previous system. One might expect a dramatic increase in publication after the end of the stagnation of the Brezhnev era, motivated by the start of Gorbachov's perestroika in 1985, the Estonian Declaration of Sovereignty in 1988, and the restoration of independence after the failed August coup in Moscow in 1991 (cf. Park 1994). In reality, however, the number of publications by Estonian social scientists in international

journals has changed very slowly. In Figure 1, the number of articles in the SSCI source index authored or co-authored by Estonian scientists from 1981 to 1995 are shown.⁸

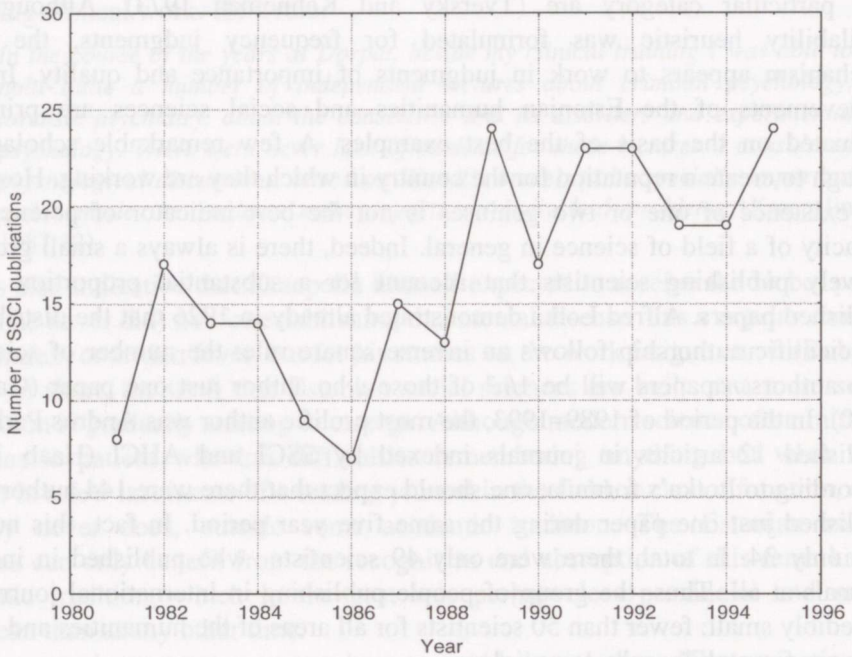


Figure 1.

Speaking in formal terms, the correlation between the year of publication and the number of articles is not so bad. The Pearson product-moment correlation between year of publication and number of published articles is $r = .71$, which is of course statistically significant. This correlation was obviously produced by the jump in the publication rate in 1989. Unfortunately, there is no firm proof that the increase was produced by more prolific output by Estonian social scientists rather than by an increase in the journals indexed by SSCI at about the same time. Even if the highly significant correlation reflects a real increase in productivity, it does not offer cause for celebration. The coefficient of the best regression being less than 1.0 makes the correlation no more than illusory. If the number of publications increases at the same rate as it has during the last 15 years, it would take more than a hundred years to equal Finland in the number of social science publications as normal for the number of inhabitants in this country. The approximately 400 articles published by Finnish social scientists every year in journals indexed by

⁸ This figure is composed on the basis of data presented in Niit (1996, Table 5) and the search made by Toomas Niit in the SSCI electronic database (October 15, 1996).

SSCI is a good antidote to the wishful thinking that Estonian social sciences are in a good and healthy condition (cf. Niit 1996:85).

5. Why are Estonian social sciences so clumsy?

It is only too easy to blame the former Soviet Union for the maladies of the current situation in Estonian social sciences. The Empire of Soviet Science was designed over several years as an organic part of a Byzantine totalitarian system. Although its declared objective was to demonstrate the superiority of Soviet Science, which directly emanated from the historical supremacy of socialism over decadent capitalism, its function in reality was to maximize control over individual activity and to create a feudalistic cast system in which only the upper echelon enjoyed privileges such as an automobile with a chauffeur, special medical care, a specialized shopping system and foreign travel at the expense of the state. Although the more recent constraints imposed by Soviet science were not as cruel as the repression during the Stalin era, the ideological grip on almost every aspect of scholarly activity was never eased. As formulated by Solso (1991), by imposing the "party line" on scientific workers, politically-minded leaders effectively restricted the scope of topics investigated, the methodology used, the context in which conclusions were discussed, and the places of publication. The opposition between "us" and "them", between Soviet and bourgeois scholarship, was the dominant theme in Soviet science. The classic works of Marx, Engels and Lenin contained the ultimate wisdom, and the business of Soviet scholars was to find the best possible quotation regardless of whether the classics ever addressed the subject at hand. Even at the beginning of the eighties, two of the most cited psychologists in Soviet psychology journals were Karl Marx and Vladimir I. Lenin (cf. Allik 1992:8). While Western liberals and literati fell in love with Marxism of their own free will, Soviet scientists were bullied into it, and after that, many of them fell in love anyway. This love expressed itself in particular in an affection for general speculative arguments. Indeed, there was no urgent need for observation or empirical examination because the ultimate truth about forms of human society in its past, present and unavoidable future was already discovered. This fondness for general speculative argumentation made the Soviet social sciences almost impotent in their ability to see reality and describe and discover new empirical facts or regularities. This inability was protected by a deeply-rooted conviction of the theoretical superiority of Soviet science over the blind and slavish fact-collecting typical of Western science (Allik 1992a:9). And even after becoming independent, a few symptoms of this intoxication have remained: the belief that it is possible to possess the ultimate truth about human nature and society is very slow to disappear

Although Estonian humanities and social sciences were able to keep up some resistance to ideological pressure, a lack of self-control over the planning and

execution of scholarly work produced a syndrome of learned helplessness. When people live in an environment in which they have no control over the outcomes of their actions, they become helpless and do not expect to have control (Seligman 1975). A psychological portrait of learned helplessness is characterized by loss of interest, withdrawal from normal activities, lack of tolerance of frustration, inability to show personal responsibility for something outside oneself, and profoundly negative feelings towards oneself and life in general. It is difficult to escape the impression that many of these attributes can be applied to the description of Estonian humanities and social sciences as well. As Solso (1991:319) wrote: "Because Soviet scientists for the past half-century or more did not have free access to international travel that allows ideas and methods to be tested in a cosmopolitan environment, they did not grow intellectually at a rate consistent with the rest of the world". From the sixties, Soviet scientists started to attend international conferences, although it was not always those who were originally invited by the organizers. To send an article abroad for publication in a scholarly journal was a complicated endeavor. At first, it was necessary to get the KGB approval that there were no state secrets involved (every Soviet institution, including universities, had a special "fourth" department that was directly subordinated to the KGB) and the testimony that the paper did not contain anything new, to say nothing about the formal consent of at least three different university officials. All these approvals were a necessary first step to apply for permission from the Ministry of Higher education, which usually took several months. Even these few facts show that scientific communication was seriously restrained during the Soviet period, and it will take some time to relearn this essential part of scholarly activity. There are many social scientists in Estonia who have good ideas and who are doing interesting research, but they seem to be incapable of communicating their results to their colleagues through publication in international journals.

The humanities and social sciences suffered much more than the natural sciences from the deprivation of scientific sources of information. Subscriptions to most international journals and new Western books in these areas were stopped. Even old books were likely to be sent to special library reserves because of the mere mention of a person who was regarded as a political enemy or who had casually made critical remarks about the Soviet Union. Many of selectively translated Western scholarly books had a special label "for scientific libraries", which restricted their distribution and availability. Two or three time-consuming pilgrimages every year to the Lenin Library in Moscow were an inevitable part of the scientific life of anyone who wanted to keep abreast of knowledge in their own field. Reading scientific literature, like writing, is a habit that needs to be exercised. There is probably even a "critical period" in one's professional career which is essential for the development of these habits. I have the impression that many academics in this country suffer from a sort of functional illiteracy caused

by the deprivation of scientific sources of information during this critical period of their scholarly life.

6. Is there any hope for Estonian social sciences?

There has been a small but noticeable improvement in the productivity of Estonian social sciences during the last few years. A closer look, however, reveals that this increase was primarily achieved by a relatively unsophisticated way of doing science. There is an increasing number of studies that can be called “ethnographic”. A characteristic feature of this approach is to collect and describe rare things and curiosities that can be found in Estonian culture and society. Everything which is deviant enough from some average level – consumption of alcohol, suicide rate, literacy etc. –, will do! Another popular way of increasing productivity is “colonialism”. Estonia still has a very cheap but sufficiently qualified work force which attracts costly research projects to carry out some part of them in Estonia. The country’s small size makes it particularly appealing for populational and pan-national studies. The magical word combination “society in transition” makes Estonia fascinating to everyone who is interested in the aftermath of the totalitarian regime. Finally, a non-Indo-European language and a not completely Westernized culture make Estonia appealing for cross-cultural studies. There is no doubt that Estonian social sciences benefitted from being included in large comparative studies of mating preferences (Buss et al. 1990) or values (Schwartz 1994). There is no reason to believe that the number of Western scholars who do not mind using their own small questionnaire on the Estonian population will decrease in the near future. It is therefore likely that there will be plenty of Estonian social scientists who are willing to do raw data collection in return for co-authorship. There is nothing condemnable in this practice, except for obvious cases of corruption and incompetence. Many foundations are happy to give money for projects containing the magical words “transition”, “free market”, “civil society”, and “democratization”, especially if these projects are meant as a form of co-operation to support scientific research in East European and former Soviet republics. It seems, however, to be the rule that the majority of the support to the East returns to the West in the form of scientific tourism by Western academics and other perks (cf. Tucker 1995). Another problem with such research is the incompetence with which many Western academics apply their abstract models and explanatory schemes to ethnographically “fresh material”. Typically they have only limited knowledge of the local situation, and their understanding primarily reflects archetypal stereotypes about Communism and Russians with whom all other people and nationalities are confused (Allik and Realo 1996). A good example of this kind of stereotyping is a recent study by Keltikangas-Järvinen and Terav (1996) in which Estonia is classified as an extremely

collectivistic country solely because it belonged to the communist bloc and had a “collectivistic educational system”.

It is certainly not my intention to convey the impression that other, more creative forms of scholarly work in Estonian social sciences (and humanities) are unknown or impossible. Just the opposite; I am convinced that Estonia possesses many unique features in its language, culture and society that can be important if not quintessential for solving many fundamental problems. For example, some peculiarities of the Estonian language shed light on the long-disputed problem of linguistic relativity. Disregarding the dubiously formulated influence of language on thinking, specific features of Estonian may be helpful in demonstrating, for example, that a listener’s native language may affect general auditory perception. Because Estonian is a language in which contrastive duration (quantity) is employed in signaling phonological oppositions (Estonian phonology uses a ternary system of quantity oppositions, called short, long, and overlong), native Estonians are more sensitive to durational differences than speakers of a stress language like English (Fox and Lehiste 1989). In contrast, English-speaking listeners are more sensitive to amplitude cues (Lehiste and Fox 1992). Even Estonian folk songs and funeral laments may be helpful in solving certain fundamental problems. It is known, for example, that phonetical oppositions are neutralized in classical opera and choir-singing (intervowel differences are diminished). The musicologist Jaan Ross (1989, 1992, also Ross and Lehiste 1994) has shown that this is not a unique property of the European musical tradition, but a universal accommodation of speech to the requirements of singing. There is no doubt that in addition to the obscure language itself, there are many other phenomena which may play a key role in solving really important problems, provided that Estonian scientists have the courage to tackle these problems.

The main question faced by the Estonian humanities and social sciences today, as it was a hundred years ago, is whether to remain provincial or whether to attempt to become truly international.⁹ All symptoms indicate that the peaceful parochial atmosphere in the Estonian humanities and social sciences has not yet started to change. Academic reforms have not been deep enough, and they have been slow, mainly due to resistance and rigidity in the academic community itself. Nevertheless, several important changes have already taken place, which make a return to old habits and practices very difficult, if not impossible. Talks about restoring the “real” doctoral degree, beyond an ordinary Ph.D., have almost disappeared. Although the recent elections of university professors at the University of Tartu were very far from ideal, beside personal relations and belonging to an “old boys” network, academic merits and scholarly achievements were also considered. Indeed, several candidates who were not able to produce any literary work, not even to the extent that is necessary to write a book review,

⁹ It is interesting that even during the most glorious times of the university, complaints about low publication standards at Tartu (Dorpat) were not rare (cf. Drechsler & Kattel, 1997).

were not elected, which unfortunately does not mean that many others with equivalent academic credentials were not re-elected as full professors. One lasting effect on the Estonian social sciences was the recent ability of Tartu to attract internationally recognized scholars, younger ones like Wolfgang Drechsler and older ones like Rein Taagepera, whose continuous calls for excellence, both in research and university education, have influenced the entire intellectual atmosphere in Estonia. The mechanism of funding scientific research through the Estonian Science Foundation is another success story. The basic idea that research money is distributed on a competitive basis and that decisions are made by an elected commission of working scientists, not administrators, has shifted the whole intellectual horizon of the Estonian social sciences. The sole fact that grant proposals have to be in Estonian and English, so that they can be and are reviewed by foreign experts, is of enormous value. Last but not least, the establishment of *Trames*, an international journal of the humanities and social sciences, which continues the traditions of *Acta et Commentationes Universitatis Tartuensis (Dorpatensis) B* which was founded in 1893, is another hopeful sign for a brighter future.

7. Future outline

This essay is perhaps not the best place to formulate specific recommendations for further academic reforms. Many of these are as obviously necessary as they are difficult to accomplish. For example, after the next two or three years, many talented young Estonian scholars will receive their Ph.D. degrees from the best universities in the world, and they will be ready, at least in principle, to return to Estonia. So far, literally nothing has been done to make this return not only less probable but possible at all. In many areas, anyone who has grown up outside of the local cottage industry is perceived as an intruder, without the smallest chance of winning the competition for election to some academic position. In addition, nobody is likely to be sufficiently masochistic to be satisfied with the Estonian salaries of junior academic positions. I will avoid specific suggestions concerning how to prevent the almost inevitable brain drain and will limit myself to two general comments, which hint at the direction the Estonian social sciences could move. My first comment is to look at our history. True believers of linear progress certainly will shudder when asked to first look backward before mindlessly moving ahead. It is not a coincidence that many parts of the history of the social sciences at the University of Tartu (formerly called Dorpat), have been misrepresented by both Baltic German and the Soviet Estonian historians (cf. Drechsler and Kattel 1997). An excellent series of studies by Drechsler and his associates (Drechsler 1994, 1997, Drechsler and Kattel 1994, 1997) has begun to reveal a different picture which shows that in the history of the University of Dorpat, many areas of the social sciences at the University of Dorpat were closer

to the most advanced frontiers of late 19th century science than compared to the acclaimed Dorpat medical and natural sciences. It is also interesting that the founder of modern psychiatry, Emil Kraepelin, confessed that his experimental psychological work at Tartu appealed to him much more than the not especially satisfying clinical work. He wrote:

In the course of the years at Dorpat, beside my clinical training I was able to hold quite a number of independent lectures about criminal psychology, forensic psychiatry, about the conscience and its disorders and experimental psychology. There were never lack of students for these lectures. I considered psychological discussions, based on Wundt's model, to be specially important and I made the students make reports on individual problems (Kraepelin 1987:42).

It is also indicative that Kraepelin himself expected to receive the Nobel prize (which he never did) not for establishing that mental disease runs a regular course, like quaternary or tertian fever, but for his studies on the work fatigue curve (Roback 1961). In short, the truth that Estonian social sciences are built on a more solid foundation is gradually starting to emerge. Although modern science often mimics an amnesic patient who has difficulties remembering anything but what was written in a few last issues of a leading journal in the field, it cannot function, and actually never does, outside some academic tradition. The Estonian social sciences can only benefit from the recognition and absorption of this remarkable academic tradition, which in the past was perhaps less provincial and more European than at any other time.

The second comment concerns how to avoid the mindless Westernization of the Estonian Social sciences. Just as it is meaningless to strictly imitate North American academic teaching models, so it is almost suicidal to be absorbed by the endless flow, or rather flooding, of international publications. Jaan Valsiner has already warned that the "world level", represented by internationally domineering American scientific journals, is just a social norm that does not coincide with the development of theoretical and fundamental ideas (Valsiner 1992:2197). This is not a call to avoid American or European scientific journals or prestigious publishing houses like Academic Press or Wiley. To publish an article in one of these mainstream scientific journals or a book with a mainstream press is certainly a veritable sign of functional literacy. But if someone strives for more than just getting accepted by a CC journal, it is perhaps useful to remember the moral that James Watson, the Nobel Prize winner and discoverer of the structure of DNA, deduced from his first meeting with aristocracy: "I would not be invited back if I acted like everyone else" (Watson 1968:90). Therefore; it may be productive to remember that our traditions and experience may provide a fresh look at many scholarly problems, not because we are better but because some of our prejudices and biases are different from those that are common in other places of the world. It is not totally excluded that the mainstream of social thought is only approaching ideas which are rather common and self-understandable for us. It should be

remembered that many central ideas in the humanities and social sciences of the late 20th century originate from the past and deeper Eastern roots not from shallow layers of the stream of international publications. Perhaps Juri Lotman is, again, an excellent example of how the “Russian element gives considerable depth to European mind” (Drechsler 1995:111), although one must not forget that a considerable part of this “Russian element” itself originates in the West. One can perhaps say no better about Estonian humanities and social sciences than Wolfgang Drechsler (1995:111) has already said about Estonia in general:

In consequence, in the hastiness of the Westernization currently taking place in Estonia, much that is not so bad gets lost; much that is not so great becomes the rule. If one ignores the fact that Estonia is not a border country but rather one of overlapping and, in optimal case, fusing traditions, Estonia will lose considerably. Estonia becomes exciting when she is able—forgive, again, a cliché—to marry Russian depth and Scandinavian clarity. Estonia is perhaps the only place capable of such a feat.

8. Coda

Concern about the quality of the Estonian sciences is not just the private matter of those who are directly involved. Because the future of Estonia is primarily dependent on its intellectual resources, the quality of education that must be provided to its people is one of the most strategic issues. As noted earlier, high-quality university education is simply impossible without high-quality science. In addition to this indispensable role, the social sciences have a capacity to influence the development of the whole society, because of their ability to describe and understand social processes. This means that nobody, from an ordinary citizen worried about children’s education to politicians, can be indifferent to the quality of social science research done in Estonia. My own evaluation was and still is rather pessimistic. Readers will forgive me for ending with a joke that perhaps characterizes better than anything else my attitude towards Estonian social sciences: “They are pretty good but not totally hopeless!”

Address:

Jüri Allik

Department of Psychology

University of Tartu

Tiigi 78, Tartu EE2400

Estonia

E-mail: jyri@psych.ut.ee

References

- Alajõe, Sulev (1993) "Vabanduseks ja selgituseks". *Postimees*, 22 April.
- Allik, Jüri (1990) "Miten vapauttaa Viron tiede?" *Helsingin Sanomat*, D2, 3 August.
- Allik, Jüri (1992a) "Psychology in Estonia". *News from EFPPA*, 6 (3), 7–10.
- Allik, Jüri (1992b) "Kui hea on Tartu Ülikooli teadus?" *Postimees*, 16 April, 4.
- Allik, Jüri (1992c) "Eesti teadus ja muu maailm". *Sirp*, nr. 16, 17 April.
- Allik, Jüri (1994) "Alajõe-Vahtra teaduspoliitilisest doktriinist". *Postimees*, 1 July.
- Allik, Jüri and Anu Realo (1996) "On the relationship between personality and totalitarian regimes: A critique of Western stereotypes". *Journal of Baltic Studies*, 27, 331–335.
- Anderson, C. (1992) "Hungarian science confronts its past". *Nature*, 355, 669–670.
- Buss, David M., Max Abbot, Alois Angleitner et al. (1990) "International preferences in selecting mates". *Journal of Cross-Cultural Psychology*, 21, 5–47.
- Colman, Andrew M., Sonya P., Grant and Emma Henderson (1993) "Performance of British university psychology departments as measured by number of publications in BPS journals". *Current Psychology: Research and Reviews*, 11, 360–368.
- Drechsler, Wolfgang (1994) "Adolf Wagneri riigisotsialism ning kriitilise ratsionalismi, post-modernismi ja ajaloo lõpu väljakutsed". *Akadeemia*, 11, 2337–2356.
- Drechsler, Wolfgang (1995) "Estonia in transition". *World Affairs*, 157, 111–117.
- Drechsler, Wolfgang (1997) "State socialism and and political philosophy". In *Essays in social security and taxation. Gustav von Schmoller and Adolf Wagner reconsidered*. J. Backhaus, ed., Marburg: Metropolis.
- Drechsler, Wolfgang and Rainer Kattel (1994) "Nicolai Hartmann". *Akadeemia*, 8, 1579–1592.
- Drechsler, Wolfgang and Rainer Kattel (1997) "Karl Bücher in Dorpat". *University of Tartu Working papers in Public Administration and Government*, No. 97–07.
- Fox, Robert Allen and Ilse Lehiste (1989) "Discrimination of duration ratios in bisyllabic tokens by English and Estonian listeners". *Journal of Phonetics*, 17, 167–174.
- Garfield, Eugene (1980) "Bradford's law and related statistical patterns". *Current Contents*, 19, 5–12.
- Garfield, Eugene (1986) "The 250 most-cited in the Arts and Humanities Citation Index 1976–1983". *Current Contents*, 49, 4–13.
- Haab, Mare (1994) "Avaldatud ja viidatud: Eesti sotsiaal- ja humanitaarteadused 1989–1993, hinnatuna rahvusvahelise mõõdupuuga". *Rahva Hääl*, 2 February, 10.
- Keltikangas-Järvinen, Liisa and Tuuli Terav (1996) "Social decision-making strategies in individualist and collectivist cultures: A comparison of Finnish and Estonian adolescents". *Journal of Cross-Cultural Psychology*, 27, 714–732.
- Kraepelin, Emil (1987) *Memoirs*. Berlin: Springer-Verlag.
- Lehiste, Ilse and Robert Allen Fox (1992) "Perception of prominence by Estonian and English listeners". *Language and Speech*, 35, 419–434.
- Loone, Eero (1994) "Eesti sotsiaalteaduste arengustrateegia". *Akadeemia*, 6 (5), 1050–1064.
- Martinson, Helle (1995) *The reform of R & D system in Estonia*. Tallinn: Estonian Science Foundation.
- Niemi, Pekka (1987) "Evaluation of psychological research: the Finnish experience". *International Journal of Psychology*, 22, 387–392.
- Niit, Toomas (1996) "Estonian psychology 1976–1996: has anybody noticed?" In *Identity, freedom, values and memory*. T. Niit, A. Baltin, eds., Tallinn: Union of Estonian Psychologists.
- Park, Andrus (1992) "Eesti sotsiaalteadus Lääne ideeturul". *Sirp*, 10, 6 March, 12.
- Park, Andrus (1994) "Turning-points of post-communist transition: lessons from the case of Estonia". *Government and Opposition*, 29, 403–413.
- Parmasto, Erast (1993) "(Teadus)poliitiline harakiri". *Postimees*, nr. 88, 17 April.
- Review (1993) *Review of research in Estonia within humanities and social sciences*. Stockholm: The Swedish Council for Research in the Humanities and Social Sciences & The Swedish Royal Academy of Letters, History and Antiquities.

- Roback, A. A. (1961) *History of psychology and psychiatry*. London: Vision.
- Ross, Jaan (1989) "A study of timing in an Estonian runic song". *Journal of the Acoustical Society of America*, 86, 1671–1677.
- Ross, Jaan (1992) "Formant frequencies in Estonian folk singing". *Journal of the Acoustical Society of America*, 91, 3532–3539.
- Ross, Jaan and Ilse Lehist (1994) "Lost prosodic oppositions: A study of contrastive duration in Estonian funeral laments". *Language and Speech*, 37, 407–424.
- Rushton, J. Philippe (1989) "A ten-year scientometric revisit of British psychology departments". *The Psychologist: Bulletin of the British Psychological Society*, 2, 64–68.
- Saari, Peeter (1993) "Eesti teaduse rahvusvahelisel ekspertiisist". *Eesti Teaduste Akadeemia Toimetised. Füüsika ja matemaatika*, 3, 272–277.
- Schwartz, Shalom H. (1994) "Beyond individualism/collectivism: New cultural dimensions of values". In *Individualism and collectivism: Theory, method, and applications*. U. Kim, H. C. Triandis, Ç. Kagitçibasi, S.-C. Choi and G. Yoon, eds., Thousand Oaks, CA: Sage, 85–119.
- Seligman, Martin E. P. (1975) *Helplessness: On depression, development, and death*. San Francisco: Freeman.
- Solso, Robert L. (1991) "The Institute of Psychology, USSR: a 20-year retrospective". *Psychological Science*, 2, 312–320.
- Tucker, Aviezer (1995) "Corruption and greed: Western academic aid to Eastern Europe". *Telos*, 102, 149–158.
- Tversky, Amos and Daniel Kahneman (1973) "Availability: a heuristic for judging frequency and probability". *Cognitive Psychology*, 5, 207–232.
- Valsiner, Jaan (1992) "Peeter Tulviste jätkuv ekspeditsioon ehk Eesti psühholoogia kolme maailma vahel". *Akadeemia*, 4 (10), 2195–2199.
- Watson, James D. *The double helix. A personal account of the discovery of the structure of DNA*. New York: Mentor.