

Goćkowski, Janusz

Norms of the Ethos of Science and the Ecological Realities of Scientific Work

Organon 31, 272-285

2002

Artykuł umieszczony jest w kolekcji cyfrowej Bazhum, gromadzącej zawartość polskich czasopism humanistycznych i społecznych tworzonej przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego.

Artykuł został zdigitalizowany i opracowany do udostępnienia w internecie ze środków specjalnych MNiSW dzięki Wydziałowi Historycznemu Uniwersytetu Warszawskiego.

Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.



Janusz Goćkowski (Poland)

NORMS OF THE ETHOS OF SCIENCE AND THE ECOLOGICAL REALITIES OF SCIENTIFIC WORK

Let us imagine that institutions guaranteeing work conditions to the scientists and ensuring a feeling of safety, making scientific exchange easier and propagating scientific achievements, securing a proper social status for the scientists thanks to their own intellectual, financial and political possibilities – that these institutions hold a conservative attitude towards the scientific standards, that their stance towards degenerating scientific programmes is negative, that they decline financing those kinds of programmes and publications of research results, and treat followers of those programmes with lack of authority and make their lives harder on every step. The result is easy to predict. Scientists who need financial security and emotional stability (...) will start changing their 'decisions', abandoning the degenerating programmes.

Paul K. Feyerabend, *Critics of the Scientific Mind*

System is a value only on the outside, as a vital phenomenon, as a link in the cultural run; inside, within limits of its own meaning, it possesses a purely cognitive character.

(...) for this theoretical, ideal character to be vested in the system at present, the system must be pondered upon, with regard to the whole of its plenty and meaning.

Thus the mental function becomes theoretical in itself, closer and closer to the ideal.

However, it transfers its own productivity into the realm of pure theory and – in principal in a new form – realizes its artistic pursuit. The system develops of its own accord, its evolution is the very creative activity of thought realizing its meaning, but the activity of not a practical, but of a purely cognitive character.

However the activity of thought is not expressed only in the creation of experience, nor simply in the construction of perfection on the ground of experience, but it comes about already, in a certain way, at the level of perfection itself, it represents its spontaneous expansion.

Perfection is not only a symptom of the productivity of thinking, not only a tool of the vital thought, but a source of new creative processes. In this, first of all, consists its significance. (...) It is not the veracity, nor exactness of the system that proves its perfection, for these are the features every system possesses, but it is its plenty, its expansion on the furthest possible realm of experience, as well as its most thorough exploration.

Florian Znaniecki, *Humanism and cognition*

1. The Style of Using Freedom

Scientific activity (the composition and critics of works) is a style of using the freedom of accepting the word and passing it on: for the sake of perfecting the views and illustrations outlined by the constant and uncompromising aspiration after the truth of a certain kind. The usage of this freedom is restricted by following rules, set intersubjectively and interpreted subjectively in every day's work: 1) the scientist must follow the professional dignity (ethical postulate); 2) the professional activity must be skilful (praxeological postulate). The interpretations of the two rules change with time. They also differ in certain circles of substantial competence in the same present.

The understanding of the freedom of accepting the word shows the scientists' attitude towards the differentiation of authoritative players in the game

for scientific truth – it acquaints with making use of the knowledge of respected scientific authorities. What evolves from the understanding of the freedom of accepting the word, are ideas and beliefs regarding the function of scientific knowledge and the point of performing research finishing with the announcement of its results. In both cases the point is in providing the standpoint on the scientist's four job responsibilities: 1) combining criticism and conceptualism, i. e. portraying ways towards new solutions through the analysis and interpretation disclosing incoherence and groundlessness in the opinions of players taking part in the game for scientific truth; 2) combining objectivism and rationalism, e. g. taking into consideration various *relations* whilst opting for the standpoint which is most profitable for the game's progress, and inquiring all statements, proofs and motives in a way proving that the test of logical analysis is understood and considered as an essential ingredient of the evaluation proceedings of all scientific opinions; 3) combining the *disobedience in thinking* with the care of preserving the *sovereignty of thinking*, e. g. providing evidence for the resistance to the temptation of *radar orientation* and pressure inclining to becoming a *flexible referent and spectator* serving a company or a party; 4) combining the care for the functioning of many competing *scientific research programmes*, minding the polyphony in scientific discussions.

In the style we have to deal with the conjunction of the model of thinking and the model of acting characteristic of the sort of invention and creativity. The style manifests itself in creating values special for their form and function. This sort of invention and activity determines also an important element of the social work division system – the important in the cultural life social practice. Those models may be referred to as rules and matrixes at the same time: 1) rules, because they determine requirements regarding the appropriate/suitable invention and activity, giving at the same time the recognition in what is not appropriate nor suitable; 2) matrixes because they provide frames for the diversity of (existing and potential) techniques of solving cognitive problems, and those frames provide help for the recognition in what may be added to the supplies of the treasure house of techniques, and what comes outside the frames' confines – whose presence would violate the identity of style. Known as technique is the syndrome of directives and instruments, which scientists use to devise and realize tasks assigned by a *problematical situation*. Within the confines of populations following the style of practice characteristic of the *scientific perspective of the world* may function and in fact do function: various (in some ways complementary, and in other – competing against each other) techniques showing a differentiation in the interpretation of the canon of style, as well as in grasping the standards and functions of creations considered as consistent with this canon.

Scientists are qualified actors in their theatre of cultural life. They play the parts of: 1) creators of cognitive values; 2) judges of cognitive values; 3) experts teaching the skills of creating and judging cognitive values. The scientist's theatrical art, which are the techniques he uses to act out his part, are demarcated by four variables: 1) the tradition of scientific work in a certain circle of substantial competence; 2) cognitive problems (new and diffi-

cult ones) that form *challenges* for cunning and resourcefulness; 3) the equipment in information and tools required in the *course of the goal-orientated proceeding*, leading towards the creation of new cognitive values which are passed on/rendered accessible for the cognitively interested audience-discussants; 4) the actors' intersubjective beliefs and attitude regarding the matter of stately/unworthy cognitive pursuits and activities.

The scientist's usage of the freedom of accepting and passing on the word is conditioned in three ways: 1) by his own beliefs and attitudes towards science as a form of knowledge and cognition and his own cunning and inflexibility in following the path to objective truth; 2) by the scientific views of the environment of his colleagues, especially the views of persons from the circle of substantial competence, to which he belongs; 3) by the cognitive situation in the sphere of his scientific work, e. g. what is accessible to him as ideas and problems, tools and materials, data and possibilities of communicating with people who have/may have similar cognitive interests and pursuits.

Scientific work is a job (for almost everyone in the population of doing it in our present) and a calling (for a definite minority of the population). The professionalization of the scientist's social role makes him a professional doubly dependent on the character of institutions functioning where he carries out his job, playing the roles of a creator, a judge and an expert.

First of all: he uses the freedom of accepting and passing on the word within frames of the institution of academic life. In the first row are institutions in which the job of a scientist is carried out constantly. There are also the ones in which the scientist appears on conferences, symposia, *summer schools* or *winter schools*; carries out the duties of someone invited to cooperate; he arranges the promotion of his pupils, etc. Those institutions we describe as working *intra muros*. They are means for the scientist's socialisation and education as an actor in the theatre of academic life, e. g. centres conforming him mentally and behaviourally. The content and degree of this conformity distinguishes some *pupils* of the institution from others. A definite majority becomes *well-behaved*. A definite minority becomes *cats, following their own paths*. The fact that the *great science*, which is also the *mass science*, includes numerous hosts of *mass men* and that from their ranks the majority of the elite of authority and culture in the theatre of academic life is recruited, complicates the life of *separated men*, who last in the state of the *sovereignty of thoughts* and display *disobedience in thinking*, and also want and can use the *owl-mirror* to watch and picture their world. *Mass democracy*, *mass culture* and a *mass man* are components of the social reality of the theatre of academic life. Thus it is not surprising that what may be called scientific social critics, is not seen well by the establishment of institutions working *intra muros*.

What conforms the scientists mentally and behaviourally as persons entering the permanent personnel or being contract cooperatives of the institution? Firstly: the company's internal organization along with the rules and norms regarding the behaviour of the personnel and cooperatives as persons respecting the company's internal order. Secondly: models of individual and collective work as well as models of interpersonal relations within the company's

substantial personnel along with models of mutual relations of colleagues (equal in rank and status), supervisors and subordinates, experts and pupils, administrators of means for research and publications and executors of research tasks and candidates wanting to publish their work. Thirdly: the doctrine and strategy of the institution's boss, demarcating the tactics and technique in the games for the company's prestige and wealth, the elite's influences in the circles of politics, business and media.

In using the freedom of accepting and passing on the word (it is the matter of loyalty and cunning at the same time), one should mention the functioning of the *extra muros* institutions (from outside the academic life). These are banks and foundations financing the scientific activity, industrial and commercial companies creating or selling products necessary for this activity. These are also media creating social images of science, printing houses publishing scientific literature, specialized government, church and council institutions using the scientists' expertise services or making decisions regarding the work conditions of the *intra muros* institutions. It seems also right to mention the political parties, social and cultural organizations, lobbying groups that have influence on the decisions regarding the conditions of carrying out the job of a scientist. This state provides indispensable as follows:

Firstly: the efforts to be every day loyal to the scientist's work duties. It requires effective social control upon the acting of persons from the institution's substantial personnel; especially upon the acting of the ones leading the institution's academic life – the behaviour of the company's *mental aristocracy*. A significant meaning should be ascribed to the character of critics regarding the acting in the theatres of everyday lives. Most important here is the critics relating scientific work, that is the performance of the creator and the judge of cognitive values, as well as the parts of the expert and the pupil, and the creator's and the judge's abilities.

Secondly: the institution's managerial staff's (especially boss's) efforts to act submissively and reliably when it comes to caring for satisfying the needs of science and scientists: needs for means to execute scientific work; the needs to notice and reward well-done scientific work; the needs of climate favouring the execution of work; the needs of organization and logistics making the work easier. Those efforts, considering the popular susceptibility of the institution's managerial staff (especially the boss) of the sphere of science to autonomize/alienate towards the needs of scientific work and of scientists, are actions of high justification and are thus indicated. This autonomization/alienation is expressed among others in securing personal affairs as well as in identifying with circles of the rich and the ruling, combined with the insufficient identification with the hosts of actors in the theatre of academic life in their institutions. A supplement to those efforts should be showing responsibility for the choice of persons to whom one gives the entitlements of decision-making managers within the confines of the institution. This responsibility is not taken away from the scientists by anyone. Thus they cannot explain that the company's board was elected outside their will and consciousness. If the board members are referred to as *they*, it could also be said that *we* ourselves allow this condition. In the environment of the

personnel of the institution's substantial sphere, the *civic spirit* is lacking – and so is the acceptance of ideas *ius resistendi*. Yet many decision-making managers deserve the students' critique – following the example of the Swedish Saint Brygida – and resistance – which Saint Thomas Aquinas wrote about. Where the politicians do not care for the needs of scientific cognition, for the status and functions of scientific knowledge in the global cultural life, for the conditions of the scientists' life and work, we speak of the state of social pathology. If what we mentioned is followed by the lack of intention and ability to fight for satisfying those needs on the side of the ones who govern the science-sphere institutions, we can speak of second degree pathology. A third degree social pathology is a condition, in which crowds of the substantial personnel do not show invention nor activity in the game for what science should have as a form of social practice and for what scientists – as creators of values of most importance in the modern countries' civilization equipment – deserve.

Thirdly: the efforts to use in the institutions from the sphere of science an appropriate *employment politics*. One being a conjunction of: a rule of accepting for the job of a scientist people having intellectual and moral dispositions for being competent specialists, who certify through their work that they have a *scientific character*; a rule of resigning from people who do not possess those dispositions, who do not have a *scientific character*; a rule of manifesting special care for people standing out because of their dispositions – for people providing a personification for the *scientific character*.

Fourthly: efforts to sufficiently educate the institution's substantial personnel from the sphere of science. An expert in his specialty (a dendrologist or surgeon, a specialist in cybernetics or an ethnologist, a philologist or a herpetologist) should have well-thought-out views regarding: science as a form of viewing and portraying reality; scientific work as a job and a calling; the role of a scientist as a creator and judge of the scientific-type cognitive values and a tutor of future creators and judges of those values; the function of science in the society and its facilitation by the society; the *social technology* used in the theatre of academic life and towards the theatre of academic life. Thus it is indispensable to pass on to a scientist a solid quantum of knowledge in the field of history and sociology of science, philosophy and methodology of science, psychology of scientific output and sociotechnology of creating conditions for scientific work. Scientific education is indispensable in its own right, and it becomes particularly useful where the scientists' wrong attitudes towards science evolve from the processes of the *degradation of values* taking place in those persons' environment, as well as from the lack of sufficient recognition in the curiosities of science as a type of *intentional cooperation* and a *world perspective*.

The style of using the freedom of accepting and passing on the word is influenced by cultural factors in the theatre of academic life and factors from outside the theatre. The theatrical factors are as follows: 1) legal regulations regarding research workers and scientific work; 2) forms of organization of scientific work and the logistic procedure of this work; 3) social relations in the environments of people carrying out the job of a research worker; 4) the

traditions of playing the game for scientific truth.

The traditions' character has an important meaning for scientists researching the theatre's realities and for sociotechnicians occupied with creating those realities. The substantial personnel's mentality and morality in institutions from the sphere of science is, to a large degree, formed by those traditions. People carrying out the job of a research worker are thus divided into: 1) those who take part in the continuation of traditions from the *line of constructive system thinking* (they choose *homophony*, what means that they act for the sake of only their own – only correct doctrine, that they want to perfect in the constant fight with the followers of different views and positions); 2) those who take part in the continuation of traditions from the *line of investigating problem thinking* (they choose *polyphony*, what means that they consider a variety of *viewing angles*, *cognitive perspectives* and *relations* in the course of their investigations and enquiries in order to discover and recognize cognitive issues generating new ideas and conceptions leading to new theories).

In the theatre of academic life we deal with following constant conflicts:

Firstly: a war on the front of job honesty. The sides in it are: ones who want and can responsibly and reliably use the freedom of accepting and passing on the word, and those who want and can use this freedom to achieve goals different to the obedience to the four job responsibilities of a scientist.

Secondly: a war on the front of the job's order. The sides in it are: ones who accept as normal things that are consistent with the rules of the game for scientific truth, and those who think that things are admissible (even normal) when they are not consistent with the mentioned rules. The first opt for: the apprentice choosing the master; the participants in a discussion being equal in the chances to present theses providing success and in the risk of meeting a contestation of their theses; the institution's formal structure favouring the creation of casual agreements – a casual cooperation of specialists from various discipline guilds, various faculties and departments sharing similar cognitive interests; the scholar being a participant of a circle of substantial competence chosen by himself, working in the given or a different institution, but its identification being an effect of the epistemological option, not the employment (even permanent) in the company (even in a prestigious or long time honourable one). The second opt for: the apprentice–master relation being substituted by following relations: appointed instructor – subordinated student or principal – subordinate or patron – client; the rank and not the right of the person expressing his opinion being important, meaning that there is no equality in the discussion's participants' chances for success and risk of the contestation of their theses; the formal structure being a materialization of the idea of *the departmentalization of science* and the discipline being more important than the scientific theory; the scholar being understood and treated as someone ascribed to a certain guild and the substantial personnel of a certain company, not as someone who has chosen the presence in a certain circle of substantial competence.

Thirdly: a war on the front of understanding the game for scientific truth. The sides in it are: ones who choose, as an example of scientific work, the

science of *researchers–theoreticians* and actions within frames of competing *scientific research programmes*, and those who choose, as this example, the science of *scholars* along with the study of *paradigms* and *scientific revolutions* as the most perfect option. In this war: some choose *reflectors* (myriad of concepts–projects of views and illustrations regarding the same reality), *polyphony* (equality of statute and voice between different positions and views presented on discussions), the total freedom of using the *alternative thinking* (analyses and interpretations from outside the pool of accepted ways of approaching the investigated issues and examined objects), whereas others choose: *a bucket* (one scheme of collecting and processing data), *homophony* (one dominating point of view and way of explanation), expressing (conditionally) agreement for *alternative thinking* in exceptional situations and watching the constant and common usage of *non–alternative thinking* (compatible with the accepted doctrines and schemes in research, performances and explanations of reality).

2. Ecological Realities of Scientific Work

Scholars have a mind, education regarding also the character of science, a free will and an ability to distinguish right from wrong. They are also multiply conditioned by the sociocultural, sociopolitical and socioeconomical variables. A judgement of their speech and deeds, as well as an estimation of the motives of their behaviour, requires from a sociologist of science and a sociologist of morality (experts competent in the issue of the *ethos of science and the ecological realities of scientific work*) objectivity in diagnosing the condition of things and a just formulation of verdicts regarding the degree and range of the conformity/unconformity of the *status quo* with the normative model deduced from the eidos of the *scientific perspective of the world*.

The condition of things (in our country and in the world – in Europe and in America and in other societies of the pluralistic mass democracy) brings to mind the treatise of St. Augustine (still providing example for people performing analyses and declaring diagnoses regarding the disparity hiatus between the *proprio sense* and real science). The number and dissemination of scholars who want and can be unconditionally faithful to the commandments of the ethos of science in comparison with the number and concentration of scholars who want and can adjust their activity in the institutions from the sphere of science to the arguments and ambitions other than the argument and principia of the ethos of science, allow saying: the first form a community resembling the *civitas Dei*; whereas the second are a crowd resembling something like the *civitas terrena*.

The actual condition in the theatre of academic life requires actions well–thought–out and decisive, long lasting and referring to the whole of things. A result of those actions should be a *great renewal (instauratio magna)*: 1) of the mentality and morality of the theatre’s actors; 2) of the politics regarding the sphere of science. Evidence for the *great renewal* of the actors’ mentality and morality would provide: 1) the conformability of their acting with the four job responsibilities of a scientist; 2) the actors’ self–government in their institutions and associations bringing organizational forms highly adequate to

carrying out of those responsibilities; 3) the actors' solidarity in executing, from the subjects of the politics of science, everything that is needed, that is deserved, the lack of what gives a question mark to the official declarations regarding the country's civilisation identity. Whereas if it comes to the *great renewal* of the politics of science, evidence for such changes would provide: 1) controlling with the help of law regulations the issues from the sphere of science on the basis of appropriate recognition in the range of the science of science and with the acknowledgement that *communis opinio doctorum* is in the matter the voice of the circle of experts who can state that they are competent on the issue of the role of a scholar and the praxeology of scientific cognition, and can also quote the formula *nothing about us without us*; 2) devoting means for the theatre of academic life's needs confirming the appreciation of the theatre actor's work as bringing values being the highest civilisation equipment of the *societies of knowledge*; 3) using by the *political class* (especially by the *elite of power*) in the decision processes in various fields of cultural life the expert services of people combining the substantial competence of scholars with the ability of performing the activities of an expert.

Actors in the theatre of academic life lack wisdom and bravery when it comes to their common good. Many are with the idea of corporate solidarity manifesting itself in clever and resourceful *intentional cooperation* unfamiliar. Scholars cannot unanimously fight for their common interests – the interests of corporations practicing the *scientific perspective of the world*. They also do not want to unanimously fight for the rights of science whose creators and teachers they are: as people of a corporation and as citizens of the country. Scholars (including persons who deserve being accepted to the *mental aristocracy* of the actors in the theatre of academic life) show disturbing tendencies: 1) they opt for an office in legislation or executive (national or self-governmental) or for an office on the higher rungs of the *table of ranks* in the national structure of administrative authority or in the circles of the well-settled in the councils in institutions from the sphere of business or the sphere of media; 2) by taking those places they identify themselves, quickly and eagerly, with the new circle of presence and they *eradicate* from the environment of academic workers; 3) within frames of the institutions from the sphere of science, often and easy, they combine rewarding people *well thinking, people with no swindles*, people having a *radar orientation*, ones accepting as a normal condition the spread of the *patron – client* arrangement with punishing (aversion towards, impeding and even harming) people displaying criticism to what poses a specific bureaucratic – and paradigmatic at the same time – order, which means those who want and can use *alternative thinking* and who speak loudly about what is officially protected and complemented: *how should it fascinate, when it does not*. The Queen of Hearts' mentality is a mentality of many from the patriciate of actors from the theatre of academic life. Insufficient is however the number of people who want and can behave like Alice. Thus often are situations in which it is not enough to say (Gałkiewicz in *Ferdynand*) *it does not fascinate* and it is necessary to say (Alice from Carroll's story) *you are just an ordinary deck of cards, nothing more*.

There are two processes that *annihilate* the identity of the game for scien-

tific truth: 1) giving to the theatre of academic life (thanks to pedagogical techniques in the style of *Ferdydurke*'s professor Pimko) actors *well-thinking* and *well-mannered – obedient in thinking*, not attaching importance to the *sovereignty of thoughts*; 2) giving to this theatre actors brought up for samurais of their daimyō – persons fixed on the game for state of ownership and field of their team's influence, with no attaching importance to perfecting the game for scientific truth. Both those processes are elements of reality of the world of scholars in our present. They pose, for persons interested in the conformity of the character of the theatre of academic life with the eidos of the *scientific perspective of the world*, a social problem – a *challenge* requiring a lot of cunning and resourcefulness from the ones ready for an *answer*.

Ecological realities of scientific work, having influence on the scholars' faithfulness towards the regulations of the ethos of science (its essence being the four job responsibilities of a scientist) could be divided as follows: 1) the realities of the order of scientific research and investigations; 2) the scholars' environmental realities; 3) the realities of the world surrounding the sphere of science.

2.1 Realities of the Order of Scientific Research and Investigations

Scholars carry out their job (and some of them are trying to be up also to the requirements of their calling) in the world of the *Great Science*. It is a world whose main and outstanding feature is an avalanche-like increase of following components of the theatre of academic life: 1) research workers; 2) doctorates; 3) scientific publications; 4) scientific magazines; 5) places of scientific activity; 6) systems of logistics and communication as well as banks of scientific information; 7) scientific societies; 8) scientific conferences and symposia; 9) persons given the title of a professor.

The Great Science is a fact in industrial-computer societies as well as those having their culture *based on science*. Nonetheless what should be stated is their variety as regards the facilitation possibilities and intentions of the elite of decision makers-managers – the diversity of the advancement level in the process of transforming the (former) *Small Science* into the (new) *Great Science*.

The world of the *Great Science* is a space of constant multiplication of disciplines and subdisciplines. In the edifice of science there appears more and more competence. The changes, taking place in the discipline structure of science, confirm that: 1) the increase of knowledge forces a progressing limitation of the field of the scholar's substantial competence (a sociologist is replaced by a sociologist of knowledge or a sociologist of morality; a psychologist is replaced by a clinic psychologist or a psychologist of creative thinking); 2) various connections between the up to now *remote* fields of scientific invention and activity strengthen the unity of science (the idea of the Medieval people appearing anew as a rule of the actors from the theatre of academic life's practice order); 3) the incorporation and adaptive transformation to the order of the *scientific perspective of the world* of the new systems of knowledge and abilities change the borders between science and non-science, cementing at the same time the separate and specific character

of science as a form of viewing and portraying reality; 4) the reinterpretations and revisions of the view regarding similarities and differences of scientific knowledge combine with the new ideas and conceptions regarding the character of science as a *world perspective* and *intentional cooperation*; 5) scholars need contact with scientific reflection regarding the continuity and change of identity of the social and cultural order in the theatre of academic life.

New competences are in the world of the *Great Science* something often and ordinary. Their creations and stabilizations are processes disclosing as follows: 1) the game for promotion and emancipation of new problems and scientific research topics; 2) the game for promotion and emancipation of the elite of the new guild – the patriciate controlling their own people, own things, own money, having their possibilities and authorizations legalized in the edifice of the science experts guilds in the order of the *departmentalization of science*.

An ordinary element of the reality of the *Great Science*, being an important element of its persistence, are great research programmes, realized by large (organized hierarchically and functionally) collectives of scholars. It is like that not only in the sphere of laboratory–experimental explorations. Scholars, participating in grand research undertakings divide into decision makers and executors of the plans of cognitive activities – the boss and the personnel, resembling a modern company, not a former university. The choice of epistemological and methodological options, as well as the choice of problems and research objects and the formulation of the subject of research and investigations is considerably impeded in the world of great exploration collectives. One may not so much choose, as declare access to one of the great research programmes, i. e. enlist into one of the great companies from the sphere of science. Small universities, living with tradition, full of freedom making following the four job responsibilities of a scientist easier, which enclose the numerous enough *critical mass* of scholars holding proper values of intellect and character, are nowadays islands–asylums, as opposed to the continent of *leviathans* of the scientific industry. Facilitations of the actors from the theatre of academic life's practice do not have to (and even should not) strengthen the continent conquered by the rivalling *leviathans*. The one form of organizing scientific research and investigations is better than the others, which allows the scholar a greater than elsewhere freedom: 1) in self-determination through the choice of the range of interests and cognitive pursuits as well as the style of planning and realizing cognitive activities and the style of composing cognitive values and drawing arguments in explaining the rights of the assertions of those values; 2) in using *alternative thinking* in face of all cognitive issues, as well as in devising and presenting the *reflectors* varying from what has already been *sprinkled with sugar* and *settled* in the given field of substantial competence; 3) in finding oneself in the theatre of academic life through the choice of a circle of substantial competence regardless of the *guild departmentalization* in the edifice of scientific knowledge; 4) in selecting adepts/masters as well as in finding colleagues–partners for common scientific work.

In the world of the *Great Science* we also have to deal with pragmati-

sation and instrumentalisation of cognitive values by the decision makers–planners as well as by the sponsors–clients, for whom the scholars (employed as substantial personnel in the institutions from the sphere of science) carry out duties bringing expected/required cognitive values. The pragmatism and instrumentalisation of cognitive values consists in what follows: 1) the preferences (declared and real) in subsidizing research disclosing not only placing as first the *technical function of science*, but also disclosing calculation characteristic for players using the *tactical horizon* (popular in the circles of decision makers–managers of political parties, administrative hierarchy, the parliament, military headquarters, companies from the sphere of business), that is a way of thinking about a scientific discovery as about a technological or organizational innovation; 2) people having the mentality of a technocrat being chosen eagerly and often for managers–controllers of team research and investigations; 3) research, focused on discoveries evolving into new theories and theoretical models, being understood and treated as actions having reason only then, when one may at the beginning predict the desired effect – the way from the cognitive values of the scientific type to the cognitive values of the engineer type; 4) science, as a form of viewing and portraying, being changed by the allocation of the subsidies into explorative activity and publications, and by the contents of contracts between managers and explorers into the *servant of technology*, what makes the researchers' interests and cognitive pursuits dependant from the *horizons of expectancies* of politicians, financiers, military men; 5) the presence of philosophical reflection in the course of cognitive activity and scientific reflection in considerations upon the status, axiology and function of science not happening often and not being treated as a shortcoming of scientific work.

2.2 Realities of The Environment of Scholars

The appearance of a *mass–man* in the theatre of academic life is the most important anthropological fact in the period of creating and developing the *Great Science*. The *mass–man* multiplies in the environment of actors in the theatre of academic life. His presence in this theatre becomes ordinary. We meet him, more and more often, in the elites of groups and circles in the world of the scholars. He acts there: more and more self–confident and convinced that he is, by all means, on the right place.

What corresponds with the *mass–man* is the departmentalization of the environment of actors in the theatre of academic life. Firstly: The imagination of a research worker condemned to staying within frames of issues and concepts of a certain discipline/subdiscipline, is reduced by matters evolving from the contemplations upon affairs regardless of their formal position on the map of guild sovereignty fields. Such reduced imagination satisfies the *mass–man* who wants to be in the sphere of science an ambitious and promoted specialist; someone, whose competences are confirmed by colleagues from his guild and also appreciated by colleagues from other guilds – whose official knowledge, corroborated on the basis of formal criteria, cannot be subject to reflection or doubt, for such man is who he is, on the basis of his diploma, guild and institutional localization. On the very basis it is known that he has

the right to be occupied by such and no other issues, and also that he should communicate and cooperate with those and no other specialists in his search and investigations. On occasion he may join other specialists in search and investigations. Then however he should remember who he is and what constantly obligates him. The *mass-man* likes to argue, but he wants to move within certain guild frames, use *non-alternative* thinking, without directing his problem-posing and conceptual intelligence towards issues of unspecific disciplinary status. Secondly: the assignment of actors from the theatre of academic life to certain disciplinary/subdisciplinary guilds makes it for the *mass-man* easier to reach his goals. And what he cares for is power, money, publicity, praise and distinctions. The *departmentalization* combines with the formal specification of the guild elites' domination – their control over people, things and money. They often are not the *mental aristocracy* of the guilds. That however does not disturb the *mass-man*. Important to him is that the elites decide about the guild's institutional equipment, that is the game field and the stakes are determined, and he himself has the possibility to join the team of his elite and become at the same time a decision maker, or to take part in the game for becoming a decision maker-administrator within frames of the guild. The elites are however divided into competing groups in the game for controlling what presents the guild's institutional equipment. Nonetheless, for the *mass-man* it is worth accepting. He can play for a place in the elite of the guild and later on play for a controlled/co-controlled field in the area encompassed by the guild. That the elite consists mainly of clever and resourceful players for power and wealth, and not of outstanding authors of praise in the game for truth and development conditions for the ones playing for truth, is not, for a *mass-man*, a climate in which he himself would have personal features highly useful for a skilful move on the way to: 1) a very good settle among people from his society; 2) achieving a high rank (professional distinctions and competences of power within frames of the formal organization from the sphere of science); 3) getting a permanent place in the patriciate circle being an oligarchy of the environment of the theatres of academic life.

The *mass-man* prospers well in the realities of the *Great Science* if he can combine cleverness with ruthlessness, manoeuvring with consequence in proceeding towards the goal. Those realities are realities of a world of *mass democracy*. It is a world of *open recruitment*, in which *anyone can be anyone* and where people agree eagerly to be the substantial personnel in a company lead in a bureaucratic or technocratic way. Equality is more important to them than freedom, and they care about equal to others chances for promotion – until they join the team of the oligarchic elite. They do not protest against the *intra muros* ruling of the oligarchs, nor against the interference (into the matters related to the topics of scientific research and the ranking of cognitive issues) of spokesmen of the oligarchs' *extra muros* rights and interests. Where in charge are the oligarchs using the staff of bureaucrats or technocrats, the *mass-man* finds himself in a world legible to him. Thus it is known: it is the abilities in the game for adaptation (favourable stabilization) and in the game for expansion (promotion enabling control over people and things) that

counts.

Our present abounds in phenomena of social pathology. It is like that also in the theatre of academic life. The *mass-man* (an actor in this theatre) often and eagerly shows tolerance towards a substantial part of the cases of pathology. In many guilds, institutions and teams from the sphere of science we may notice facts of accepting or protecting perpetrators of acts being a practice of what is pathological.

2.3 Realities of the World Surrounding the Theatre of Academic Life

It is a world of *mass democracy* in its capitalistic version. What influences the mentality and behaviour of actors in the theatre of academic life, is: 1) the pressures and temptations of the market of orders and commissions, as well as changing fashions for cognitive values; 2) preferences of the ones having political or economical power, interested in setting research programmes in order to obtain desired results; 3) the imagination and persuasion of media (press, radio, television), conforming attitudes and standardizing views counting in the self-specification towards the social structure of the world; 4) institutions teaching and raising future citizens and scholars, satisfying *instrumental needs* and *integrative needs*, creating possibilities of using the *freedom of designing*, the *freedom of realizing*, the *freedom of consuming*; 5) widespread rewarding of unscrupulous ambition and egoism within frames of acceptance (and often affirmation) of the *social Darwinism*; 6) teaching, in various theatres of cultural lives, the *institutional orientation*, that is attaching more importance to the boss' opinions/evaluations than to the circle of authoritative colleagues from the circle of substantial competence in the given specialty, what favours the transformation of a specialist identifying himself with the experts into an officer identifying himself with the company.

3. What is Important Nowadays?

The world of the *Great Science* within frames of *mass democracy* and *mass culture*, in which a *mass-man* feels like a trout in a mountain stream, is a world of many substantial difficulties and few insignificant conveniences for the ones wanting to live in accordance with the precepts and requirements of the ethos of science, that is choosing a behaviour fulfilling the four job requirements of a scientist.

What is in this world important, if it comes to being in agreement with the ethos of science? First of all one should take care of his *cognitive personality*: 1) be a *separate man*; 2) preserve the *sovereignty of thought*; 3) display *insubordination in thinking*; 4) use *alternative thinking*; 5) in discussions opt for diminishing his *one-sidedness* and his *partiality*.

Because the realities favour demoralization, therefore it seems indispensable to teach the adepts of science as follows: 1) there are situations (the scholar, in his conscience, should notice when such a situation becomes a fact) requiring from a research worker to say *non possumus*, regardless of the explanations given by those, who persuade to embezzling the canon of the ethos of science; 2) one should want and be able to combine the *wool trade* with the efforts regarding the *freedom of wool trade*.

The *Great Science* is a sociocultural formation of crowds of research workers, of various specialties. Those people in most cases prefer a *bucket* (single, common scheme of collecting and transferring data into statements) to a *reflector* (own concept–project of a new way of viewing and portraying the world in a manner characteristic of the *scientific perspective of the world*). That is why adepts should be taught that they are going to work in an environment, in which the Tarde's law works too (*the majority imitates – the minority initiates novelties*) and in which the Ascha experiments are confirmed (the majority displays a susceptibility to cognitive conformism – the minority persists in cognitive independence).

In the game for scientific truth, truth is important, and so are the rules of behaviour towards colleagues having a different opinion in a matter considered in common. That is why adepts should be taught constant memory of the differences between the *praxeology of science* (the discussion leads to obtaining a common – more perfect point of view) and the *praxeology of fight* (the discussion leads to defeating the opponent and to the victory of the own point of view). They should also be taught that there is no *royal way to the truth*, but through a skilful comparison of various *relations*, one may obtain a view and illustration deserving the name of *cognitive perspective*, which is *objective hic et nunc*, although it may soon be changed–improved.