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# Yaroslav Kouzminov, Maria Yudkevich ACADEMIC FREEDOM

AND UNIVERSITY STANDARDS FOR TEACHING AND RESEARCH

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In areas of creative activity where the evaluation of efforts and results requires major expenditures, the intrinsic motivation of agents is an important factor of efficiency, whereas stringent monitoring fails to counteract opportunistic behavior. University professors are a case in point. The lack of comprehensive control and detailed regulation of professorial work that traditionally characterizes the university milieu creates an atmosphere of academic freedom that is propitious to intrinsic motivation.

Academic freedom lies at the basis of the convention regulating the behavior of university administration and professors. It gives rise to an equilibrium state in which professors engage in both teaching and research, yet this equilibrium is not evolutionary stable in itself: as a rule, it is maintained by academic standards. New conditions of financing that are imposed on both the professoriate and the university administration lead to the destruction of this equilibrium and the emergence of new behavioral patterns at universities. Their characteristics depend both on external conditions (on the education market as a whole) and on internal ones (the university's policy and the university academic environment).

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#### 1. Introduction

#### GENERAL IDEA AND MOTIVATION

The chronic underfinancing of Russian higher education has led to a number of negative processes that are taking place at universities today. University teachers get low salaries, which obliges them to look for other work such as tutoring, preparing high-school students for entrance exams, etc. As a result, they are too overworked to engage in research or to assimilate new results that keep appearing in their fields. Their work boils down to the simple transmission of knowledge. In this way, reducing investments in human resources leads to a catastrophic deterioration of the quality of general higher education. People who come to work at higher educational establishments today have new aims, values, and expectations. The new generation of university teachers devotes less time to teaching and participates less in shaping and fostering the university milieu. This has transformed the foundations of university culture. In an attempt to compensate for poor faculty motivation, higher educational establishments are trying to introduce a rigid control system. However, this system is rejected by a university academic community that is used to other types of administration-faculty relations. This has only aggravated the situation.

The deformation of the traditional system of relations and the transformation of the customary routine of university life is taking place in other countries, too. Similar processes can be observed in traditionally well-to-do countries in which the rapid expansion of the higher education market, the great demand for teachers, and high salaries have given way to a falling demand for academic labor and a growing competition for financing. The principles of public financing and of the regulation of the higher education market have been reconsidered at the national level in many countries, including the US, Germany, and New Zealand. This has led universities to try to improve the efficiency of education on their own. They strive to change the system of control and accountability by making the work of teachers more transparent and quantifiable and to reorganize the system of incentives and rewards.

The increasing emphasis on measurable results makes teachers devote less time to teaching and focus on research, which is much easier to evaluate (using number of publications, citation count, etc.) not only within the university but also beyond its boundaries. Although research undoubtedly raises the reputation of both the individual scholar and the university as a whole, it can have a negative impact on the quality of teaching.

Although these two processes (the increasingly transmissive nature of teaching in some systems and the transition from teaching to research in others) may

seem to be completely different, we believe that they have the same nature. Both of them stem from the destruction of the convention governing the relations between university teachers and administrators.

The present work aims to study the role of academic freedom in university life and to show how these models work, why the academic convention is being destroyed, and how this can occur.

#### **OUTLINE**

This paper is structured as follows. First, we discuss the specific nature of the work of the university teacher/scholar and the need for special mechanisms for assuring its effectiveness. In particular, we introduce the notion of *academic reward* and describe the factors that influence it. Then we analyze academic freedom as a parameter of the university academic environment and describe the convention regulating the relations between the professoriate and the administration. We single out the factors that can lead to its violation. In the following section, we describe a dynamic model of faculty behavior and examine two possible development scenarios: *academic ratchet* and *teaching ratchet*. We analyze the factors influencing the choice of one of these scenarios. The next section is devoted to the discussion of empiric data that provides evidence on the development and current state of the Russian model as well as the ensuing consequences. We summarize the results of our study in the final section.

### 2. Atmosphere of Academic Freedom

## SPECIFIC NATURE OF RESEARCH ACTIVITY AND ACADEMIC REWARD

We understand *academic activity* as research and teaching conducted in an academic milieu in accordance with its accepted standards. Academic activity is marked above all by its creative nature. In every discipline, academic activity involves creativity. In addition, it is marked by a broad framework that gives university teachers the freedom of choosing the direction and content of their work and by mild forms of control. Ideally, this control is exercised by the professional community in an informal way. In addition to its creative nature, academic work has a number of other positive features — both external features that are visible to people outside of the academic community and internal ones that can be seen only by university teachers and scholars themselves. The external features include sufficient material compensation that permits a fairly

high level of consumption. Another external feature is the high social status. It means that people outside the academic community view university workers as having skills that are highly valued in society, i.e., as experts in certain fields. This is a singular aspect of the social status of academics in contrast to managers or military officers, say.

The totality of internal positive non-monetary factors may be called the *academic reward*. These factors are felt by their benefactors themselves and are virtually unseen outside the academic community. As salaries in the university milieu are considerably lower than in business, these internal non-monetary factors are often decisive for people who choose to pursue university careers (some of these factors have already been discussed in publications — e.g., Meyer and Evans (2003)). The most important among them are the following.

A *first* key aspect of academic reward is the internal satisfaction that one gets from academic work. This is a fundamental feature of all creative activity. At the same time, academic labor has its own specifics. On the one hand, a professor's work, which has a considerable creative dimension, constantly enriches his personality by confronting him with new and interesting situations and problems. On the other, the fruits of his labor are not alienated: a professor never gets the impression that he is working for someone else and that he irrevocably gives up the fruits of his labor.<sup>2</sup> The lack of alienation explains why there are so few incentives for opportunism in a "healthy" academic milieu.

A second aspect is broad academic recognition. It is connected to the existence of disciples and followers and the sense of one's own importance and usefulness. The recognition of colleagues working in the same field is even more important; we cite and discuss their papers, write joint publications, participate in joint projects, and meet at conferences. Their recognition is often even more significant than the recognition of our university colleagues who work in a different field (Leslie (2002)).

A *third* aspect is unrestrained decision making. One of the characteristics of academic work is the virtual absence of pressure: more than anywhere else, an individual gets the opportunity to make conscious choices as to the subject of his research, the content of his lectures, and the division of time and effort between the different aspects of university work.<sup>3</sup> Such freedom is undoubtedly limited

<sup>&</sup>lt;sup>1</sup> For a further discussion of academic reward, see Kouzminov (2004).

<sup>&</sup>lt;sup>2</sup> For a discussion of the importance of non-alienation, see Kouzminov et al. (1989).

<sup>&</sup>lt;sup>3</sup> This constitutes the fundamental difference between the activities of academic workers and those of managers and consultants, say. Although the latter engage in creative activity, they do not work for themselves. Consultants work for someone else's business, and therefore moments of opportunistic alienation may arise. In addition, their activities are very stringently regulated by external commissions and by the necessity of deriving the maximum profit.

by a certain social pressure – in communities of humanities scholars, say – yet such pressure is very indirect.

Academic reward is higher in a strong academic environment. It is attractive to work on a strong research team for two basic reasons: on the one hand, your reputation as a researcher grows, and, on the other, your work becomes more productive. Although the expansion of long-distance communications reduces the importance of this factor, it still remains fairly significant.<sup>4</sup>

We should note that, even though academic reward stems from the specific nature of academic activity itself, external factors such as social status are based on the attitude of society at large. While the decline in external social status as such does not have an impact on the academic reward of university workers, it is capable of provoking an unfavorable selection that would lead people with the poorest subjective opinions of the university to stay there. For this reason, the relation between material and academic reward must be adequate, for the loss of one of these elements cannot be entirely compensated by the other without prejudice to the university.

## WHAT IS THE DIFFERENCE BETWEEN A UNIVERSITY AND A FIRM?

Academic activity takes place in the university milieu. How suitable is the analogy between a company that produces benefits with the help of human and material resources and a university whose products are educational services and research and whose main resources are teachers, researchers, and physical infrastructure (libraries, laboratories, information collections, etc.).

A university viewed as a firm has several specific features.

The first specific feature is the internal contradiction between the university's two basic functions — teaching and research (see, for example, Yudkevich (2004)). The implementation of one of them can hurt the implementation of the other. The professional activity of an academic is normally said to consist of three aspects (see, for example, Boyes et al. (1984) and Katz (1973)): teaching, research,

and administrative work in the department. What is the optimum distribution of efforts? The necessity of making an individual choice that has an impact on the general milieu is a potential source of conflict in this case. The balance between research and teaching is the subject of heated debate today. On the one hand, research promotes intellectual growth and the acquisition of knowledge that can be used during the teaching process. At the same time, a teacher who engages in research has less time to prepare for class and work with students. Thus these two activities may come into conflict, as many studies have confirmed. For example, Eble and McKeachie (1985) indicate that 54% of university faculty who participated in their survey spoke about this conflict. Locke (2004) surveys the main arguments in academic publications for and against the hypothesis of the mutual benefit of research and teaching. At the same time, university faculty in different countries have different preferences as to the relation of teaching and research (Table 1).

**Table 1.** Preferences for Research and Teaching

| With regard to your own preferences, in what area do your principal interests lie? (%) |                    |                       |                       |                    |  |
|--|--------------------|-----------------------|-----------------------|--------------------|--|
|  | Mainly in Teaching | Closer<br>to Teaching | Closer<br>to Research | Mainly in Research |  |
| Australia (1420)   | 13                 | 35                    | 43                    | 9                  |  |
| England (1946)   | 12                 | 32                    | 40                    | 15                 |  |
| Brazil (989)   | 20                 | 45                    | 36                    | 3                  |  |
| Germany (2801)   | 8                  | 27                    | 47                    | 19                 |  |
| Holland (1,364)  | 7                  | 18                    | 46                    | 30                 |  |
| Hong Kong (471)  | 11                 | 35                    | 46                    | 8                  |  |
| Israel (502)   | 11                 | 27                    | 48                    | 14                 |  |
| Korea (903)  | 5                  | 40                    | 50                    | 6                  |  |
| Mexico (1,027)   | 22                 | 43                    | 31                    | 4                  |  |
| Russia (438)   | 18                 | 50                    | 29                    | 2                  |  |
| USA (3,529)  | 27                 | 26                    | 30                    | 7                  |  |
| Chili (1,071)  | 18                 | 49                    | 28                    | 5                  |  |
| Sweden (1,122)   | 12                 | 21                    | 44                    | 23                 |  |
| Japan (1,889)  | 4                  | 24                    | 55                    | 17                 |  |

Source: Boyer et al. (1994).

<sup>&</sup>lt;sup>4</sup> Analyzing the impact of belonging to a strong university on the productivity of scholars, Kim et al. (2006) comes to the conclusion that this impact is a lot lower in recent years than in the seventies. However, this article mostly treats prestigious universities ranking among the top 25 American universities. The scholars working at these universities are not faced by the problem of raising their reputations. At the same time, the lack of reputational capital is a hindrance to inter-university communication for many scholars.

A second feature is the difficulty of evaluating teaching and research activities and the difficulty of monitoring, which explains the importance of individual motivation. People often stay in academia because they are attracted by academic reward. Monitoring the performance of university faculty requires considerable expenditures, and thus it is important for universities to attract workers that do not have to be stringently controlled. Moreover, hidden information can play an important role. The teacher grasps the situation and the steps that must be taken better than the administration (more effort is needed in certain cases and less in others). For this reason, inner motivation is a lot more effective than external motivation, which is more expensive and less effective and leads to unfavorable selection. More stringent control creates external incentives yet harms inner motivation (see, for example, Kreps (1997); Baker, Jensen, and Murphy (1988), and Benabou and Tirole (2003)).

The difficulty of evaluation gives rise to a peculiar incompleteness of formal contracts between the administration and professors that makes it impossible to for the former to stipulate how much the latter need to invest in their own human resources (Yudkevich (2005)). This contract incompleteness also implies that the client cannot evaluate the work performed by the contractor. For this reason, the factor of reputation plays an important role in assuring the effectiveness of their relations. Reputation creates the preconditions for academic freedom (i.e., for professors to choose the direction and content of their own research).

Why is academic freedom so precious? An atmosphere of academic freedom creates comfortable conditions for creative individuals. If a person has high intrinsic motivation, a framework of stringent control can have an adverse effect. Although the absolute majority of studies show that research productivity closely depends on the technical working conditions (availability of computers, access to databases, etc.), less tangible factors can have a decisive influence on faculty behavior: the subjective ideas of professors themselves about the relative importance of research and teaching in their work and their (once again, subjective) evaluations of the departmental reward structure (Fox (1992)).<sup>5</sup>

How do people understand academic freedom? Generally speaking, it is seen as the possibility and guarantee of safety in the "search for truth" (Lankford (1994)). In his survey of the opinions of American professors, Keith (1996) concludes that they understand academic freedom as the possibility of choosing their methods of teaching and their domain of research and of the free discussion of ideas with colleagues and students. At the same time, the respondents noted that academic

freedom entails a certain degree of responsibility and of accepting institutional goals and values.

The contract between the professor and the university exists in the context of the professional academic community. This milieu has an impact on the behavior of both contractual parties. For example, a comparison between the results of different members of the community makes it possible to make certain conclusions on the relative efficiency of their work. The professional milieu also assures a certain monitoring. The stronger the professional community, (a) the better its monitoring possibilities, (b) the stronger the incentives for such control<sup>6</sup>, and (c) the smaller the need for it.

#### ACADEMIC FREEDOM AS A CONVENTION

Behavior in academia is regulated by a set of conventions. In the ideal case (which is the dream of university administrators), there emerges an *academic convention* that regulates the behavior of professors and administrators in repeated types of interactions that can be described by the prisoner's dilemma. The interaction at a fixed point of time can be described as follows (Figure 1):

|           |   | Administration      |                  |
|-----------|---|---------------------|------------------|
|           |   | Academic<br>Freedom | Tight<br>Control |
| Professor | Adherence to<br>Academic<br>Standards   | $A_p, A_a$          | $C_p, B_a$       |
|           | Deviation from<br>Academic<br>Standards | $B_p, C_a$          | $D_p,D_a$        |

$$B_i > A_i > D_i > C_i$$
,  $i = a, p$ 

**Figure 1.** Shaping a Climate of Interaction Between University Administration and Professors

<sup>&</sup>lt;sup>5</sup> We should also note that the administration and professoriate often have different notions about the importance of research for the university and about the impact of its results on compensation and career growth (Tang and Chamberlain (1997)).

<sup>&</sup>lt;sup>6</sup> In a group of scholars with different levels, more productive scholars often feel compelled to invest in maintaining and monitoring work standards in order to be able to communicate their characteristics to external agents (see, for example, Panova, Yudkevich (2006)).

The adherence to this convention allows the parties to reach cooperative equilibrium that increases their payoff  $(A_p, A_a)$  by reducing transactional expenditures linked to contract implementation and increasing the efficiency of interaction. As a result, the *professor* adheres to academic standards cultivated by the university: he strives to be a good teacher and engages in research, while the *university* creates the conditions for the growth of academic reward by assuring a minimum material compensation, the freedom of choice in one's activities, a mild control, the possibility of developing and making investments in one's own human resources, and the selection of a strong research team.

Why does this convention continue to exist? Besides the iterated nature of interactions, two other factors contribute. First of all, these is mutual monitoring between scholars, who understand perfectly well how good any given scholar is. Thus, although the opportunism of a scholar may not be apparent to the administration, it is perfectly obvious to his colleagues. His reputation falls, and, as a result, the possibilities of professional cooperation decrease, the payoff from it falls, and the academic reward diminishes. All of this reduces the attractiveness of opportunism for scholars. Secondly, it is unprofitable for universities to implement a stringent control system, for it is expensive and ineffective. Thus they are interested in preserving inner motivation. If a university does not create attractive conditions for professors, it will lose out to other universities. Professors are attracted by universities that have stronger teams and better technical and information infrastructure and that will allow them to pursue what they want to do most. This will also lead to a decline in the quality of graduate programs, for incoming graduate students will be weaker, too.

## ACADEMIC FREEDOM AND BEHAVIORAL STANDARDS

We therefore see that, as a fundamental element of the convention governing the behavior of the main university players, academic freedom is based on the standards of academic behavior that presuppose the censure of the opportunism of colleagues, a certain level of teaching, etc. Thus these standards comprise two aspects: regulation of productive behavior (maintaining teaching and research at a certain level and working with students) and social behavior (participating in sanctions against violators and cooperating with colleagues). In the ideal case, professors go by these standards in their behavior, take them into account, and try (and are obliged) to follow them. These standards are adopted by those who join already existing research teams and are transmitted from research advisers to graduate students. They are considered to be the norm, and their violation causes discomfort to both parties.

### 3. Development Scenarios R and T

## DESTRUCTION OF ACADEMIC CONVENTION

The academic convention described above lies at the foundation of the effective functioning of universities. Yet it exists only so long as both parties adhere to its conditions. If one of the parties decides for one reason or another that the other systematically violates these conditions, the convention gradually begins to disintegrate, and its standards become eroded. This process resembles a land-slide and is virtually irreversible in many cases.

Why does the convention disintegrate? Let us single out what we believe to be the two most important factors.

## NEW RELATIONS: RECONSIDERING THE PRINCIPLES OF FINANCING

A recent trend in many countries has been to reconsider the principles of regulating higher education markets and to change the rules and conditions of state participation and the volume of its financing. The new management paradigm calls for the creation of free market mechanisms for distributing public subsidies between higher educational establishments. This naturally makes universities pay greater attention to measurable results and to take the interests of end users (students and their families, employers) more into account.

Universities lose their independence insofar as they become dependent on external measurable parameters and have to search for ways of cutting costs and organize a more stringent management and control system. In other words, an administration that is subject to external control must in turn reconsider its own principles of monitoring its teaching staff. The first result is that professors are required to devote more attention to teaching, even though external financing often depends on a university's research performance. In this context, academic freedom becomes something of a luxury that only the best faculty members (i.e., those that bring money to the university) can afford.

#### **CUTBACKS IN FINANCING**

The new financial relations developing on the higher education markets in many countries have led to sharp cutbacks in financing for many universities. This is the case in Britain, for example. In the 1960s, the academic market expanded

in Britain, and many undergraduate students went on to graduate school. Then a downturn began: layoffs, falling salaries, increasing workloads, and difficulties finding jobs for graduates. This led to instability, reduction of relative incomes, falling prestige of the profession, and widespread deception among those who came to this milieu during the boom.

This problem exists to an even greater degree in Russia. When a job does not provide for a minimum material level that allows a person to live normally, all non-material factors recede into the background. For this reason, a decent level of material compensation is necessary for assuring the normal functioning of the university academic milieu (in contrast to the creative work of singers, lawyers, and artists). If such compensation is lacking, or if the workload for assuring it is too great, there is a negative impact on incentives, which are very hard to restore after they are destroyed.

#### POSSIBLE DEVELOPMENT SCENARIOS

What impact does the destruction of the academic convention have? It can produce different effects. We will single out two scenarios and show that these seemingly different phenomena found in different markets are based on the same logic.

#### Scenario R: Academic Ratchet

Reward systems are becoming increasingly dependent on measurable results. Within a university, it is easier to measure a professor's teaching activities than his research. Outside of a university, it is easier to measure research (for example, using the number of publications or citation counts). As a result, professors have begun to take increasing interest in research. This is furthered by the fact that investments in teaching are more specific and less visible outside a university (in sharp contrast to publications).

In addition, even if an administration places emphasis on teaching in its policy of rewards, it must nevertheless assure the department's long-term success in research, for this will allow it to attract grants and other sources of financing, the best students, and the best professors. Finally, if we consider "average" universities (which tend to emphasize teaching in evaluating professors, in contrast to top universities), its faculty members (especially young ones) are often interested in moving to more prestigious establishments. The latter tend to focus on research when hiring new faculty.

**Table 2.** Comparison of Teaching Ratchet and Academic Ratchet

|  | Academic Ratchet               | Teaching Ratchet             |
|--|--------------------------------|------------------------------|
| Financing Criteria                         | Research                       | Teaching                     |
| Expert Community                           | Dense and Independent          | No Independent<br>Indicators |
| Mobility Between<br>Universities           | Yes                            | No                           |
| Foundations of Incentive and Career Policy | Individual Research<br>Results | Teaching and Administration  |

Note this scenario will be implemented only if the following conditions are met (cf. Table 2):

- 1. Professors can move between universities (i.e., there is a market of professorial services).
- 2. Research is the principal criterion for career growth and migration to the best universities.
- 3. There is an expert community that provides independent evaluations of research activity.

#### **Scenario T: Teaching Ratchet**

There is an alternative scenario, however. It arises in cases when low financing aggravates counter-incentives for research. According to this scenario, professors use academic freedom to make money by teaching on the side. For the purposes of such teaching, people use a university's reputation or brand to find work tutoring, preparing high-school students for entrance examinations, and teaching at other less prestigious educational establishments. This leads to an unfavorable selection as a result of which self-motivated individuals do not want to work at universities. The people who apply for university jobs are willing to work under stringent control or intend to fulfill the academic contract only formally. The incentives for research, which is difficult to evaluate in the absence of an expert community, diminish considerably. The external or non-academic measurement of the quality of academic activity becomes a serious problem. The academic community becomes deformed and loses its normal members. The academic milieu does not have any internal mechanisms of "self-restriction": it can only reject elements that do not conform to academic standards. If these standards become eroded, the struggle between different academic models leads to the proliferation of degenerate elements rather than positive selection.

<sup>&</sup>lt;sup>7</sup> The compensation should be comparable to what people from the reference group get (the same problem exists for civil servants).

Such a process is irreversible. This model is typical of many transition countries (see, for example, Slantcheva (2003) on Bulgaria, Kwiek (2003) on Poland, and Yudkevich (2005) on Russia). The necessary conditions for the implementation of this scenario are shown in Table 2.

#### Model

#### General Idea

In our discussion of alternate scenarios, we saw that the following factors are important in the selection process:

- 1. The surrounding academic environment (the presence of a strong research team encourages individuals to engage in research);
- 2. The long-term and indeterminate nature of most incentives: the results are unpredictable and not felt immediately (hence the importance of education and evolution);
- 3. The influence of the university's hiring policy (which is based on academic reality) on faculty incentives.

The aforementioned processes of the modification of academic conventions are evolutionary. The situation is changing slowly over time, and people are gradually mastering the necessary strategies and correcting (albeit fairly slowly) the trajectory of their behavior and their career principles and objectives. Let us take the original academic convention to be the interactive balance between members of the professional community and the university.

#### Description of Interaction

Let us consider interaction within the community of professors/agents. Let the agents performing role 1 devote the share x(t) of their working time to re-

|             |                         | Professor 2 |                 |
|-------------|-------------------------|-------------|-----------------|
|             |                         | R y(t)      | $T \\ 1 - y(t)$ |
| Professor 1 | R <i>x</i> ( <i>t</i> ) | a, a        | -c,-c           |
|             | $T \\ 1 - x(t)$         | -c,-c       | b, b            |

**Figure 2.** Interaction in the Academic Community

search at time t and 1 - x(t) to teaching, and the agents performing role 2 devote the shares y(t) and 1 - y(t), respectively. Then the players will get the following payoffs (Figure 2).

Here  $a_i$ ,  $b_i$ ,  $c_i > 0$ , i = 1, 2. Coordination is indeed important, for research needs a dense expert community. Teaching also needs an academic milieu. An agent gets a sizeable payoff only if other agents are able to evaluate what he has done. In contrast, if a line of behavior is implemented by only a few individuals, it is supplanted completely: it is very difficult to do research in a "void."

#### **Equilibrium**

$$\begin{split} U_R^1(x(t)) &= a_1 y(t) - c_1 (1 - y(t)) \\ U_T^1(x(t)) &= -c_1 y(t) + b_1 (1 - y(t)) \\ \overline{U}^1(x(t)) &= x(t) U_R^1(x(t)) + (1 - x(t)) U_T^1(x(t)) \\ &= (a_1 + b_1 + 2c_1) x(t) y(t) - (b_1 + c_1) x(t) + b_1 \\ U_R^1(x(t)) - \overline{U}^1(x(t)) &= (1 - x(t)) ((a_1 + b_1 + 2c_1) y(t) - (b_1 + c_1)) \end{split}$$

Deriving a similar formula for y(t), we get:

$$\frac{dx}{dt} = x(t)(1 - x(t))((a_1 + b_1 + 2c_1)y(t) - (b_1 + c_1))$$

$$\frac{dy}{dt} = y(t)(1 - y(t))((a_2 + b_2 + 2c_2)x(t) - (a_2 + c_2))$$

There are three points of equilibrium in this system:  $(x=0; y=0); (x=1; y=1); (x=x^*; y=y^*),$  where

$$a_2 + c_2$$

$$x^* = \frac{a_2 + c_2}{a_2 + b_2 + 2c_2}$$

$$y^* = \frac{b_1 + c_1}{a_1 + b_1 + 2c_1}$$

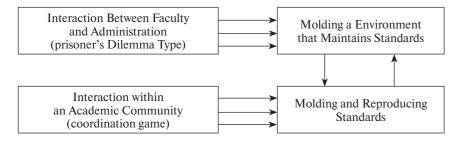
#### **Evolutionary Dynamics**

The last point of equilibrium  $(x = x^*; y = y^*)$  corresponds to a situation in which the members of the professorial community devote a certain (non-zero) amount of time to both teaching and research. This point of equilibrium corresponds to the above-described academic convention. However, this equilibrium is not evolutionary stable: in the event of a small departure from such a behavioral standard, the system shifts to one of the two evolutionary stable points of

equilibrium: either to (x=1;y=1) corresponding to scenario R or to (x=0;y=0) corresponding to scenario T.

What can maintain a system at the point of equilibrium that is the most advantageous for a university  $(x = x^*; y = y^*)$ ? Academic professional standards play an important role here. As we mentioned above, they arise from the iterated prisoner's dilemma between the university and professors. Thus two processes are at work here (Figure 3):

**Figure 3.** Molding an Academic Environment that Promotes the Maintenance and Reproduction of Academic Standards



### 4. Empirical Data

We believe that the second scenario (T) is being implemented on the Russian higher education market. An education monitoring survey confirms this. According to the results of the survey, about 80% of the faculty at higher educational establishments declare that they engage in research. However, 17.2% participate in collective research projects, 20.7% in research projects of the higher educational establishment or at the commission of the state ministries, and 14% in individual grant-funded research projects. Thus, the research activities of 66% of professors consist of writing articles and monographs in complete isolation from the university academic milieu. This leads to the conclusion, among others, that most of these publications are educational in nature and thus pertain, at least in part, to teaching.

The respondents who said that they engage in research singled out the following reasons for the low intensity of their research activities: low remuneration of research (47.6%), high academic load (35.9%), and lack of time (43.5%).

One of the principal factors hindering research is that most professors work on the side. 62.4% of respondents held a second job not linked to research. The absolute majority of these jobs were linked to teaching: 35.9% of respondents teach at other higher educational establishments, 12.2% teach courses for prospective applicants, and 22% help high-school students prepare for entrance examinations.

Thus many professors view their university positions as a means of acquiring status that helps them find other jobs, such as preparing high-school students for entrance examinations, tutoring, and working in less prestigious establishments on an hourly basis. The low salaries at the principal place of work in conjunction with heavy loads serve as counter-incentives for research. We are witnessing the emergence of teaching standards that assign a secondary role to research (already today, only 22% of students surveyed believe that research is an essential quality of a good professor).

### 5. Conclusions

We have shown that the different processes within the academic community that mold the behavioral standards and career paths of professors are due to the same causes: changes in the market conditions faced by universities. These different phenomena have the same nature.

The choice of the model of development of relations within a university depends on several factors. The most important among them are

- Academic culture: the academic standards that exist in the professorial community and their relative strength
- *Demand on the professional labor market* and the structure of this market (non-university labor market)
- *Inter-university market of professorial services*: presence/absence of professorial mobility and selection criteria
- Existence of an independent expert community capable of evaluating research activities

The destruction of the academic convention and the emergence of new equilibria is an evolutionary process. The restoration of the classic convention is possible only by restoring the conditions promoting inner motivation and assuring an acceptable level of wages for university faculty.

<sup>&</sup>lt;sup>8</sup> Statistics from Spring 2005. The study was conducted in six pilot regions, in each of which six higher educational establishments of different types were chosen (classic university, technical university, private liberal arts college, teacher's college, arts college, and regional subsidiary of a private college). As a result, over 1,600 professors were surveyed.

### **Bibliography**

- 1 Baker G., Jensen M., Murphy K. Compensation and Incentives: Practice vs. Theory. *Journal of Finance*. 1988. Vol. XLIII (3). P. 593–616.
- 2 Benabou R.J-M., Tirole J. Intrinsic and Extrinsic Motivation. *Review of Economic Studies*. 2003. Vol. 70 (3). P. 489–520.
- 3 Boyes W., Happel S.K., Kogan T.D. Publish or Perish: Fact or Fiction. *Journal of Economic Education*. 1984. Vol. 15. P. 136–141.
- 4 Boyer W., Altbach P., Whitelaw M. The Academic Profession: An International Perspective. Princeton, N.J.: Carnegie Foundation for Advancement of Teaching, 1994.
- 5 Eble K., McKeachie W. Improving Undergraduate Education Through Faculty Development. San Francisco: Jossey-Bass, 1985.
- 6 Fox M.F. Research, Teaching, and Publication Productivity: Mutuality Versus Competition in Academia. *Sociology of Education*. 1992. Vol. 65 (4). P. 293–305.
- 7 Henkel M. Academic Values and the University as Corporate Enterprise. *Higher Education Quarterly*. 1999. Vol. 51. No. 2. P. 134–143.
- 8 Katz D. Faculty Salaries, Promotions and Productivity at Large University. *American Economic Review*, 1973, Vol. 63, P. 469–477.
- 9 Keith K.M. Faculty Attidudes Toward Academic Freedom: Tenure, Teaching and Research (Doctoral Dissertation, University of Southern California, 1996). Dissertation Abstracts International, 58-01A, AAG9720245.
- 10 Kim E.N., Morse A., Zingales L. Are Elite Universities Loosing Their Competitive Edge. NBER Working Paper. No. 12245, 2006.
- 11 Kreps D. Intrinsic Motivation and Extrinsic Incentives. *AEA Papers and Poceedings*, 1997. Vol. 87. No. 2. P. 359–364.
- 12 Kouzminov Y. Education in Russia. What can be done? *Education Issues*. 2004 (in Russian).
- 13 Kouzminov Y., Nabiullina E., Radaev V., Subbotina T. Alienation of Work: history and current trends. Moscow: Economica, 1989 (in Russian).
- 14 Kwiek M. Academe in Transition: Transformations in the Polish Academic Profession. 2003.
- 15 Lankford E.L. Freedom and Outrage in Art Education. *Journal of Aesthetic Education*. 1994. No. 28 (4). P. 54–62.

- 16 Leslie D.W. Resolving the Dispute: Teaching is Academe's Core Value. *The Journal of Higher Education*. No. 73. P. 49–73.
- 17 Locke W. Integrating Research and Teaching Strategies: Implications for Institutional Management and Leadership in the United Kingdom. *Higher Education Management and Policy*. 2004. Vol. 16 (3). P. 101–120.
- 18 Market undermines academic standards (http://www.nteu.org.au/news/2001/2001/973). January 2001.
- 19 Marks D. Academic Standards as Public Goods and Varieties of Free-Rider Behavior. *Education Economics*, 2002. Vol. 10. No. 2.
- 20 Meyer L., Evans I. Motivating the Professoriate: Why Sticks and Carrots are Only for Donkeys. *Higher Education Management and Policy*. 2003. Vol. 15 (3). P. 151–167.
- 21 Panova A., Yudkevich M. Monitoring and Teaching Standards, 2006, *forth-coming* (in Russian).
- 22 Slantcheva S. The Bulgarian Academic Profession in Transition. 2003.
- 23 Tang T.L.-P., Chamberlain M. Attitudes Toward Research and Teaching. *Journal of Higher Education*. 1997. Vol. 68 (2). P. 212–227.
- 24 Yudkevich M. Signal Policy and University Objectives. *Education Issues*. 2004.
- 25 Yudkevich M. Professor-University Relationship: Incentives for Investment in Joint Future. 2005 (Mimeo).

### Препринт WP10/2007/01 Серия WP10

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Yaroslav Kouzminov, Maria Yudkevich

## Academic Freedom and University Standards for Teaching and Research

(на английском языке)

Зав. редакцией оперативного выпуска *А.В. Заиченко* Технический редактор *О.А. Быстрова* 

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