Counteraction as a Crucial Factor of Learning, Education and Development: Opposition to Help

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Abstract: Development of individuals, social groups and societies has been considered under the influence of two opposite and interrelated types of social interactions: (a) support of, and (b) counteraction and inhibition of learning, instruction, education and development. Reasons for the counteraction, and types of its interrelations with help in different areas of human activities have been described. Negative and positive effects both of help and counteraction have been analyzed. A conceptual system of various zones of development through different social interactions in education is presented. It is shown that complex of cognitive and motivational factors, related to the counteraction, can lead to both regression and progress in development with unpredictable results.

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1. Introduction

The fundamental problems of hierarchy, interaction and developing effects of two basic types of social interactions, i.e., cooperation and fight have been the subject of recent discussions among psychologists. [1]

Can one consider cooperation as a special case of competition or, by contrary, competition as a special case of cooperation? (VALSINER 1989) What is dominating in human development: a principle of solidarity or a principle of struggle for existence? (ASMOLOV 1996) What types of cultural tools do people invent to extend and develop other peoples' worlds, and, by contrary, diminish and destruct them? (BENSON 2001) [2]

In this paper I describe an approach to this problem, concerning such part of culture as learning. The paper deals with interrelations between help and counteraction to acquiring experience, education and development. I consider

such inhibition and counteraction to learning and development, which is realized by some educators, teachers, and other learners, involved in the education. (Here I do not consider learners' unwillingness to learn and their own counteraction to education.) [3]

I am going to prove the following statements:

· Development of individuals, social groups and societies is under influence of two opposite and interrelated types of social interactions: (a) stimulation of learning, education and development; (b) counteraction and inhibition of them. It means that learning and development, related to others' counteraction, are not separated and applicable to exclusive cases, but a fundamental psychological and educational phenomenon. The counteraction and inhibition of learning and development are as just as necessary and inevitable as the institution which promotes learning and stimulates education.

· Future development of civilization and emergence of new domains and activities will result not only in development of aims and means of education for them, but also in development of new aims and new means of counteraction to this education. Respectively, future of humans is determined not only by achievements in learning and instruction, stimulating cognitive and personal development, but also through achievements in counteraction to the learning, instruction and development.

· The help and support tends to change the direction of development in a predictable way, a way desired by a helping party. The counteraction strongly tends to change the direction of development in an unpredictable way. Complex of cognitive and motivational factors, related to the counteraction, can lead to both regression and progress in development with unpredictably high results. [4]

2. Reasons of Counteraction to Learning

Counteraction and inhibition of learning and development can be seen as just as necessary and inevitable as help which promotes learning and stimulates education. In Kurt LEWIN's terms (HECKHAUSEN 1986), one can describe it as necessity of balance between reward and punishment to control behavior, to contain it within some boundaries and steer it in in desirable ways (i.e., necessity of boundary-work). [5]

In more generalized terms of the theory of control, both positive and negative feedback are necessary to control any system in an effective way. (Terms "positive feedback" and "negative feedback" are used in mathematical sense, increase and decrease in a value of a parameter, relative to the previous value). Control without negative feedback is impossible. Negative feedback decreases deviations that emerge in the system. Total domination of negative (i.e., inhibiting) feedback leads to collapse ("freezing") of the system, because all parameters fall to zero. By contrast, positive feedback increases the deviations, untwisting them. Total domination of positive (i.e., mutually stimulating and

mutually untwisting) feedback leads not to "freezing", but to "fire and explosion", that is to rapid self-destruction of a system through chain reactions which increase in intensity until the system is completely annihilated. An impressive example of this process is a nuclear explosion, in which nothing can stop the rapid occurrence of a number of chain reactions, leading to the end of an object's existence on a molecular level. Thus, both positive and negative feedback (i.e., stimulation and inhibition) are necessary to control any system and keep it functioning. [6]

The necessity of negative feedback means, in particular, that the appearance of new domains and activities will result not only in the development of aims and means of education for them, but also in the counteraction to these aims and means. Even appropriate or well control of development includes not only support, but also inhibition of undesirable ways of the development. [7]

The other side of necessity of others' help for learners is that it creates opportunity to manipulate with the help and counteraction to achieve various aims, from good to evil. Various aims and means of help and counteraction to learning can be found in all societies. Both help and counteraction to learning have been provided by different human groups (i.e., racial, national, class, gender, age groups, etc.) in different historical periods and subject areas. The counteraction to learning can be an effective means of racism, chauvinism, sexism, the struggle against disagreeable scientific approaches, etc., and, in the end, a means, use of which leads to destruction and death of people. [8]

Let us consider some general social reasons of justified and unjustified counteraction to learning.

a. Every society considers some experiences as dangerous and naturally tries to prevent the individuals from acquiring them on both a formal and informal level. A society prevents transference of experiences related to criminality (e.g., further teaching of young criminals by adult criminals), socially censured habits (e.g., smoking, drinking alcohol, drug addiction) and breaches of norms of giving and acquiring knowledge and practice in some areas (e.g., in the area of sexual relations), etc.

b. Emergence of new activities, which do not have well-formulated rules and standards yet, requires that the society controls them in different ways, including counteraction and putting limitations on education for these activities. The society tries to find optimal relations between positive and negative feedback loops, between stimulation and counteraction to these new activities. It is a way, by which the society tries to adjust the activities to itself, and adjust itself to the activities. However, in many other cases counteraction to learning and development cannot be grounded by socially desired aims only.

c. Significant reasons for premeditated counteraction to learning, instruction and development are dishonest competition and rivalry between individuals, social groups, societies, etc. A blow to the abilities to learn and acquire competence in new activities and domains is the most effective to make a competitor feel

inadequate to the technological and social world. It seems that currently in Russia scale and variety of such counteractions to people's aspiration to learn and acquire experience in new domains are increasing at a rate, which is comparable to the rate of increasing opportunities for education. (Naturally, this counteraction and inhibition of learning and development is one of many types of social counteractions, made by individuals and social groups at all levels because of accelerated differentiation of the society into groups with opposite interests, and increasing interpersonal and intergroup competition in Russia.) I have found cases of premeditated counteraction and inhibition of others' learning and development as well as cases of teaching things, which are disadvantageous for a learner, but advantageous for "a teacher", in many different age, social and professional groups. Some of the examples are described in Appendix. [9]

I have phrased the area of the premeditated counteraction to others' learning, and teaching them things, which are disadvantageous for the learners, "*pedagogy of counteraction*" (PODDIAKOV 1997). The term is constructed as an opposition to a wellknown term "pedagogy of cooperation", used by many educators (SELEVKO 1998; ZIMNYA 1999). It can be explained in the following terms: the counteraction to learning is opposite to honest help and cooperation in the course of learning, if one considers their main aims and means. Yet one should note that both effective help and effective counteraction require from counteracting persons high-level mastery and even competence in the area or knowledge about laws and methods of learning and development, and high social competence, in which the help or the counteraction is being realized. It resonates with the statement that care can be both positive and negative, and empathy can be a source of both compassion and cruelty, malicious joy, etc. (BENSON 2001). [10]

3. Help and Counteraction in Masters' Activities as a Framework for Learning

To understand relations of help and counteraction in the process of learning and education, it is necessary to understand relations between help and counteraction in the activity, which is realized by its masters and experts in the appropriate domain (e.g., to understand relations of help and counteraction in instruction of future soldiers, it is necessary to understand relations between help and counteraction in activities of professional soldiers. Aims and methods of education are determined by aims and methods of masters' activities in appropriate domains. Masters' activities are the framework for learning. [11]

Let us imagine all master and expert activities in a rectangular coordinate system. Let us designate levels of help to other people during the activities on x-coordinate axis, and levels of counteraction to other people on y-coordinate axis. (The help and the counteraction must be placed on different axes, because there are not one-to-one relations between a level of help to one individual and a level of counteraction to another one). Let us place continuum "theoretical grounding and reflection of the activity—practical execution" on z-coordinate axis. See Figure 1.
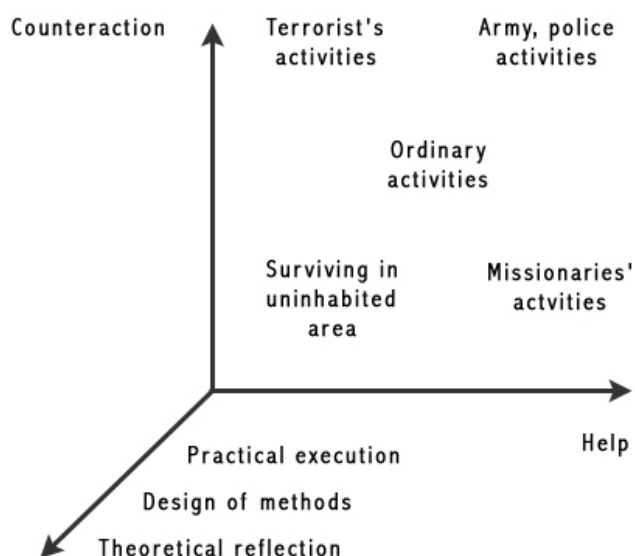
Figure 1: Different human activities in dimensions "help / counteraction / practical execution—theoretical grounding and reflection of the activity" [12]

Now let us consider some activities that define some important areas in this system of coordinates. Some of the activities are extreme. I have chosen them to mark continuum between more ordinary activities. [13]

Minimum levels of help, counteraction and theoretical reflection describe, for example, activity of an individual, who has gotten into uninhabited and dangerous area and his or her main goal is to look after his or her physical survival. Special training is necessary to prepare these people for such situations. [14]

The maximum level of help and the minimum level of counteraction describe activity of some missionaries, doctors, etc. At the level of theoretically declared aims, values of help lead to ad infinitum, and the value of counteraction leads to zero. At levels of practical execution values of help become finite and definite, and values of counteraction become more than zero (because it is impossible to imagine an interaction, which does not infringe anybody's interests in any way). [15]

The minimum level of help and the maximum level of counteraction describe activity of maniacs, terrorists, etc. At the level of theoretically declared aims (if they are formulated) values of counteraction can lead to ad infinitum, and the value of help to anybody leads to zero. At levels of practical execution values of counteraction become finite and definite, and values of help become more than zero. It can be some premeditated help of members of terrorist group to each other, and some unpremeditated help to the third party (because it is impossible to imagine an interaction, which promoted nobody's interests). [16]

The maximum levels of help to one group of people and counteraction to other people describe the activities of army, police, bodyguards, etc. They must save an individual (or a group of people, or a country) by counteracting other people which can even lead to killing. In these areas teaching and learning contain the most expressed help and counteraction. The counteraction can be related to damage to physical existence of participants of the education. Some training exercises are very dangerous and lead to traumas and, from time to time, to death of the learners, teachers and people, playing roles of the victims being saved. In some extreme cases learning inevitably leads to death of the learner. For example, well-taught kamikaze will die, but the learner, who has not learned well, can survive. [17]

The most horrific example of activity, aimed to damage the physical and mental health and life of people, is torture (BENSON 2001). It requires pitiless empathy and high competence in medicine, anatomy, physiology, technical equipment, etc. The existence of institutions where one systemically learns to torture others in different societies means that these societies conduct teaching and training in this area. (A dark and grotesque description of passing final exams at a school of torturers is given by Arkady and Boris STRUGATSKY [1989] in their anti-Utopian novel *It Is Difficult to Be a God*.) [18]

It is clear that aims and methods of teaching a missionary in contrast to teaching a policeman, a torturer, and a terrorist like kamikaze are very different from each other from view of relation between help and counteraction in the education. These teaching arts and technologies reveal, develop, inhibit and cut off different abilities of learners. (Moreover, these arts and technologies require, develop and inhibit different abilities of teachers. Teaching develops some abilities of a teacher and can inhibit other ones. This subject should be further discussed. [19]

4. Types of Counteraction to Learning, Education and Development

Based on analysis of different situations of counteraction to learning, education and development, the following rough classification of their types can be presented (PODDIAKOV 2000). There are two main types of the counteractions, that is unpremeditated and premeditated counteractions. [20]

Unpremeditated counteractions contain the following kinds:

a. Unpremeditated counteractions to learning and development, caused by pedagogical mistakes of educators, teachers, parents, etc., who try to teach as well as possible, but do not achieve it because of lack of competence.
b. Unpremeditated counteraction as a side-effect, but inevitable result of any education. Absolutely perfect educational systems, which have only merits without demerits, are impossible. [21]

TSUKERMAN (1998) emphasizes that a teacher, while helping to develop and support the student, involuntarily also shuts out other possible ways of the

student's development. This is because some abilities are in opposite and contradictory relations with one another and because of natural limitations of an individual's resources. DOTSENKO (1997) thinks that any education reveals the educator's "selective unpacking" of definite resources of the human psyche and "a cutting off" everything which the educator does not deem to be necessary and appropriate. The other side to any educational process is that it contains built-in limitations on the development and growth of personality. [22]

Premeditated counteractions contain the following kinds:

a. Premeditated counteractions as a means of effective education and development.
   Specially organized difficulties are considered as a tool to provide high results of education. (The metaphor "hard exercises provide wins in battles" is used). Thus, counteraction can be a tool for development.
   This most correct type of premeditated counteraction can be found in any, even very humanistic, educational system. A teacher sets a definite level of complexity (i.e., a level of "resistance of the material" to be learned), with which a student must cope (HASAN 1996). This counteraction is entirely subordinated to the higher aim of helping and supporting the person exposed to the educational system, and it can be weakened or changed if the main aim is not being achieved.
b. Premeditated counteractions to learning and education as a means to stop development, unfolding in undesirable ways, and/or do damage (e.g., to a competitor, an enemy, etc.). [23]

5. Negative and Positive Results of Counteraction

Negative results of counteraction to learning, education and development are evident, and many of them are described below. It should be emphasized, however, that effects of counteraction on development are ambivalent. Of course, counteraction can decrease the efficiency of the learner's activity because this is the main goal. But it can have a positive influence on development too. TIKHOMIROV (1984) has analyzed the increase of creative activity because of conflict. LEFEBVRE (2000) has shown that some strategies of behavior are much more effective under the condition of counteraction, than they are without it. YAROSHEVSKY (1995) has formulated a concept of an opponent circle of a scientist [opponentny krug uchenogo] (Russian). He has shown that various types of conflicts of a scientist with his or her opponents can be important sources for his or her effective and creative scientific activity. Cognitive and interpersonal conflicts can have positive effects on learning, education and development (HASAN 1996, PERRRET-CLERMONT 1986, SIDORENKOV 1998). [24]

To consider positive and negative results of counteraction in more details, let us include concepts of different zones of development into the discussion. In classical Vygotskian approach zone of proximal development (ZPD) was defined as things, which a child cannot learn by himself or herself, but can learn with the

help and support of an adult, who is more experienced (VYGOTSKY 1996). The ZPD concept reveals a great importance of such social activity of adults who help promote the development of children. [25]

This concept, formulated by VYGOTSKY several decades ago, is still useful today. Modern researchers formulate their own concepts, sufficiently developing the original ZPD. VALSINER has formulated a theory involving the mutually related functioning of three "zones". It is zone of free movement (ZFM), which specifies the structure of the environment functionally available to the developing child at a given time, and zone of promoted action (ZPA), that is a set of activities, objects and areas that constitute the child's environment, within which the child's actions are facilitated and encouraged by other people, but non-compliance with the social suggestions has no repercussions. VALSINER has shown that ZFM, ZPA, and ZPD are parts of the whole complex to describe process of child development (VALSINER & HILL 1989). [26]

ASMOLOV (1996) has formulated a concept of zones of variable development, in which how a child develops while having different contacts with children from other social and age groups. Also he describes *zones of inhibited and hampered development*, in which gifted children cannot develop their abilities, because of negative influences of mass education. A similar concept of *zone of negative development* is used by DIAZ and HERNANDEZ (1998) to analyze the concepts involved in teaching students belonging to national minorities. [27]

These concepts of zones of development describe either *positive effects of help or negative effects of counteraction*. I think, however, that it is necessary to broaden a system of the concepts, related to development in different social interactions, by formulating such concepts that describe: (a) possible positive effects of the counteraction, and (b) some negative effects of the help.

a. To reflect on possible positive effects of others' counteraction on a learner's development in spite of the counteraction, the *zone of proximal development during the counteraction* can be defined as things, which a person cannot learn by himself or herself, but can learn and develop in the course of counteraction with the other persons (PODDIAKOV, 1999, 2000). Reasons are high motivation of fight; creativity aimed to overcome barriers, set up by the counteracting persons; aim-directed learning new information and strategies from them in spite of counteraction.

b. To reflect possible negative effects of honest help, *zone of negative development while the help* can be defined as things, which a person could learn and develop, but did not learn and develop because of the help of other people. Reasons are not only honest help of not very competent teachers, but also the fact that even good help, which opens new ways of development, can shut and cut-off some other ways. Overcoming this contradictory and ambivalent essence of help seems impossible. (Ibid.) [28]

This system of concepts, formulated by VALSINER, ASMOLOV, DIAZ, HERNANDEZ, and PODDIAKOV, provides the possibility to describe and discuss *variety of zones of development and multi-dimensionality of its results under conditions of various social interactions*, including help and counteraction. [29]

Developmental trajectories in the process of help and counteraction tend to change direction of development in different ways (PODDIAKOV 1997, 1999). Help and support tend to change the direction of development in a predictable way, a way desired by a helping party (i.e., an educator, a teacher, etc.). The counteraction strongly tends to change the direction of development in an unpredictable way. Let us consider it in detail. [30]

Help and support provided in effective education change the course of development in a way desirable to the educator. Otherwise aims of education will not be reached (if the main aim is not the stimulation of spontaneity and self-development). Counteraction to learning and development tries to keep the activity of a counteracting subject in a definite channel too, but the aim of the subject is to break through this channel. Instability, dynamics and variety of arising situations lead to the fact that this break can happen in any area and can develop in an unpredictable way. [31]

Very important parts of creative thinking are divergent abilities, i.e., abilities to consider an object from different views, review many different hidden features of it, generate many various decisions, etc. (GUILFORD 1967). Situations of counteraction, rivalry and struggle lead to potentially endless variety, complexity and simplification of new situations and decisions because the aim of each side is to find ways to deceive its competitor (LEFEBVRE 2000; LOTMAN 1992). In supportive education, this tendency to variety is presented to a lesser extent if at all. (It can be introduced, however, especially by an educator). [32]

One should note, however, that supportive education, which causes real development, will inevitably bring about positive and negative effects of spontaneity and unpredictability of this development because of things inherent in the development itself. But usually it will be in less measure and in a less critical form than through counteraction, which can lead to both regression and progress in development with unpredictably high results. Thus, help and counteraction in education can be considered two interrelated types of interaction which change the direction of development in different ways. [33]

6. Counteraction and Help: Hierarchy and Types of Interrelations

Thus, one can see that interrelations between help and counteraction to education are complex and multidimensional. It is a paradox, but even education, that is "light", "enlightening" activity, falls under metaphor of interaction of Yin and Yang. (Yin and Yang are universal dark and light origins in ancient Chinese philosophy. They always exist in the combination. The symbol is .) [34]

I have designed the following classification of interrelations between help and counteraction to education and development (PODDIAKOV 2000). (The classification looks symmetrical like the symbol ☯.) [35]

The types, in which the main aim is help in education and development, contain the following 4 types:

a. The most widespread and humane variant is such interrelation, in which intentional help to education is a means of development, and this help reaches the desired result largely.

b. Though development is the main aim of education in most cases, and help is the main means, *results of the help are often contradictory and ambivalent. The help while developmental education can lead to inhibition and delay of development in some directions*. Possible reasons are not only pedagogical mistakes, but also some inevitable restrictions, related to choice of a certain system of education.

c. A means of education and development can be not only help, but also counteraction, as specially organized "resistance" of learning materials. It can provide high results of training. The counteraction can be an effective tool of development.

d. Counteraction to education, used as the means of development, can lead to interruption of the development in spite of all the educational efforts or, most probably, because of their excessiveness. (Educators "go too far", while in organization of educational difficulties, and "overload" their pupils). [36]

The types, in which the main aim is counteraction to education and development (e.g., because of safety, hostile and/or competitive relations, etc.), contain 4 types, as well as the types aimed to the help:

a. Efficient inhibition and counteraction performed by means of direct (evident, "frontal") prohibitions and restrictions on instruction and education. It can reach its purposes, that is stop the instruction and hamper the development.

b. "Frontal" inhibition of education and development can be inefficient, that is not to lead to the aim posed. *The counteraction has a strong trend to change direction of development in unpredictable way*. Reasons are unfolding uncontrolled conflicts. *The counteraction can lead to results, which are opposite to the desired aims. It can cause effects of development, in spite of the counteraction*.

c. Efficient counteraction to education and development can be realized by means (under protection) of the help demonstrated, but not real. It includes teaching with hidden evil intent, or, in other words, use of a method of "educational Trojan horse". A "teacher", ostensibly helping his or her rival to learn something, really teaches useless or disadvantageous things.

d. It is the previous case, but in an inefficient form, because of mistakes of the "teacher" and/or revealing of its real aims and plans by a student. So the

plans of the counteraction fail, and the student advances in his or her development. [37]

7. Prognosis

It seems reasonable to expect that researches and practical works in area of counteraction to learning will develop, at least, in two directions: (a) a realization of humanistic ideals; and (b) a realization of ideas of hostility and inevitability of antagonistic conflicts of different scales, and necessity to win supremacy by any means. Emergence of new activities and domains will lead to not only development of aims and means of learning and education, but also to emergence of new aims and means, counteracting to the learning and development. [38]

Development of teaching technologies will lead to opportunities to spread deliberately negative effects of teaching by giving these "Trojan horse" teaching technologies to potential competitors. [39]

Possible directions of development of artificial intellect can become design of systems, which are able: (a) to counteract to the other systems' learning; (b) to counteract to humans' learning; and (c) to learn in conditions of counteraction to their own learning. First of all, it concerns artificial intellectual systems for military purposes, high-competitive business, etc. Then these high-tech devices can also be turned into devices for people's every-day life. Computer wars between modern hackers and different institutions can be a source of hardware and software development. (I use the terms "intellect" and "learning" for artificial devices in the limited sense that includes not real creativity, but improving decision-making, based on modification of bases of data collected. Yet it can be effective too.) [40]

It is difficult if not impossible to predict ways of human development as a result of interactions between individuals, social groups of different levels and the intensive development of cultural tools (including computerized systems), which support and/or inhibit the learning and development. However, this unpredictability necessitates that we take into account the issues of help and counteraction to learning, education and development. [41]

Acknowledgment

Appendix: Examples of Counteraction to Learning and Development

Myths, tales, proverbs. Many situations of help and counteraction to others' learning are presented in such cultural forms of keeping and transferring of social experience as myths, fairy tales, proverbs, etc. They describe aims, means and results of counteraction to learning and the use of such situations to do damage to t one' learning. A classical example is the myth about Prometheus. Zeus prevented men from learning how to use fire. He cruelly punished Prometheus, who gave fire to men and taught them to use it. Many tales contain situations in which a master, magician, god prevents his underling from learning the secrets of his trade. Often, the characters teach each other to do things which are dangerous or disadvantageous to them, for example in the tale of Brer Rabbit when he teaches Brer Fox how the actually deceased appear as opposed to what one must do when pretending to be deceased when he sees his friends before his funeral. He must shout: "Ogo-go!" (according to the Russian translation of Harris' tales). Similar topics can be found throughout literature and in films as well.

Russian language has many proverbs not only about the necessity of learning (e.g., "Learning is light, and ignorance is darkness"), but also about the necessity of counteraction to education and about the potential danger of cognition, learning and teaching in some situations (e.g., "to teach on one's misfortune", "to teach something bad", etc.).

Now let us address to some real situations.

Interpersonal relations between children. A kindergarten teacher shared with me what she observed when the children in her kindergarten played a particular game. The preschoolers deliberately taught the younger children strategies to win, which involved using other children and cheating them to get ahead, i.e. winning strategies. What the younger children did not realize was that they themselves were also victims of these strategies. (In other words, this teaching was a kind of "instructional Trojan horse".) The teaching was accompanied by the elder children's hidden smiles and exchange of glances among each other. It confirms that they understood what they did. The following year, the "ex-victims of the instruction", who were now the older ones, taught the same Trojan teaching strategy to the novices, and this situation repeated itself for several years.

Interpersonal relations of young adult learners. AGEEV (1983) conducted the following provocative experiment. Being a university teacher, he organized competitive relations between two groups among his students. He declared that all students belonging to the group that shows the best results during a certain marking period, would get good marks for his course without the final examination. By contrast to them, all the students of the other group would take the examination. It showed that the competitive relations caused the students to act against the winning group. The students tried to inhibit successful performances of the competitors, and gave negative recommendations and advice, concerning the competitors, to the teacher, etc.

A colleague of mine told me that some students of her university attended lectures in another university too. Their friends from the first university asked them to give information about the lectures, but they refused in implicit or explicit way. Grotesque aspect of this situation is that the students studied pedagogy and educational psychology, and next year their professional duty was teaching and stimulation of development. It means that teachers (including future teachers) consider advantageous to hide information on new methods of education from each other. They, so to say, develop BACON's well-known "knowledge is power" and turn it into "hiding is (crucial for) power". (The formulation of hiding as power is suggested by Jaan VALSINER in the course of discussion of this paper.)

Interpersonal relations in every-day life. A friend of mine told me that she had hidden instructions for use of a new telephone from her husband, so that she could be the sole user of the new telephone. It is one of many examples of interpersonal secrecy in every-day life. Often this secrecy achieved by use of special cultural tools, preventing learning undesirable information. The examples are countless: screens, curtains, blinds, dark and mirrored windows, screensavers, passwords in computer programs, etc.

Foreign relations. A foreign firm offered free teaching for specialists of the Moscow Physical Energetic Institute in exchange for the use of computer programs for nuclear reactors. There was a limit put on the whole transaction however, in which a lawyer of the Institute showed that the firm would have the right, after teaching the specialists, to stop any international deal of the Institute in which the programs were used because of intellectual property rights. The Head of the Institute thinks that the teaching had to become a means of counteraction to development of the competitor (KONOVALOVA & KONOVALOV 1998).

Russian TV channels informed that the United States applied some punitive sanctions against Russian universities, which are suspected of teaching nuclear technologies in countries with dangerous regimes. These Russian universities did not agree with it, and one of them dismissed an American teacher, who taught students in the university. It was done in a very demonstrative way by showing this procedure on TV.

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