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# Preventive Medicine—The Most Prestigious Profession of the Near Future

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## ABSTRACT

The title of this scientific essay implicitly emphasizes the application goal. Hypothesis: the differences in most indicators of somatic, mental and social health are small (or non-existent) between countries with the formally largest number of weekly physical education lessons in primary schools and those with the smallest number (apart from countries where PE is marginalized). The empirical argumentation of the authors of the 'physiotherapist in every school' project, although sufficient at this stage, is merely a kind of encouragement for researchers and teams from around the world. The implications concern at least two elementary methodological issues. First, the most valuable knowledge about phenomena indicating the counter-effective PE paradigm in many respects can already be published in many natural languages, unavailable in the global scientific space. Second, the idea of replacing PE teachers in schools with preventive medicine experts requires systemic implementations that will most likely cause resistance from many interest groups. As humanity, we are probably at the peak of 'the turning point', not only in the sense described by Fritjof Capra (1982). Since the dynamics of depletion of natural resources is still one of the key indicators of identifying this peak, there is no visible turn in the direction that Capra so simply and accurately appealed for: 'we should invest more in people, our only wealth, which we have in abundance'. Anyone who identifies with the hypothesis on the supreme value criteria of the global civilization should rather not question the validity of preventive medicine as a subject of school education and INNOAGON as science and its mission. However, one may ask a basic question about the way or ways of investing these innovations in people. The answer is only seemingly trivial: effectively, healthily (this term includes 'safely'), in deeply humanized and attractive forms.

**Keywords:** Dispositional feasibility, Innoagon, Possibility of action, Praxeology, Situational actionability

## INTRODUCTION

The title of this scientific essay implicitly emphasizes the application goal. However, the cognitive layer is key – which is the standard that distinguishes scientific publications from other sources of valuable knowledge. In order not to cross the border between science and journalistic phraseology (especially political), credible argumentation is needed from putting forward bold premises and assumptions to empirical verification of the most important hypotheses. Courage and credibility are essential, especially in circumstances where problems reach the macro scale. Let these premises be two synthetic sentences: 1) lack of imagination and political will is not a sufficient

justification for tolerating the ineffective paradigm of physical education (PE) in 21st century schools; 2) verification of the key hypothesis should embarrass coordinators responsible for public health from the local to the macro scale.

Since the criticism is so radical, I assume that at this stage of verifying the hypothesis formulated below, the evidence-based argumentation of the authors of the project 'physiotherapist in every school' as the first step in replacing the physical education paradigm with the subject of preventive medicine in every type of school (Dobosz et al., 2024) is sufficient.

Hypothesis: the differences in most indicators of somatic, mental and social health are small (or non-existent) between countries with the formally largest number of weekly physical education lessons in primary schools and those with the smallest number (apart from countries where PE is marginalized).

The empirical argumentation of the authors of the 'physiotherapist in every school' project, although sufficient at this stage, is merely a kind of encouragement for researchers and teams from around the world. The implications concern at least two elementary methodological issues. First, the most valuable knowledge about phenomena indicating the counter-effective PE paradigm in many respects can already be published in many natural languages, unavailable in the global scientific space. Second, the idea of replacing PE teachers in schools with preventive medicine experts requires systemic implementations that will most likely cause resistance from many interest groups. When solving detailed tasks from these two areas, secondary research on review, original and case studies available to both enthusiasts of the idea of preventive medicine in school instead of PE and opponents may prove effective. This effectiveness is to be ensured by a complementary approach

## **PREMISES AND ASSUMPTIONS FOR SECONDARY RESEARCH**

The basic indicators of somatic health are: physical fitness, body composition and postural defects. Mental health: aggression, fear, tolerance, etc. of individuals. Establishing universal indicators of social health is not so simple and requires first formulating premises and assumptions that are so precise that it is difficult to question them from the point of view of scientific correctness criteria.

The basic methodological dilemma related to each of these dimensions of health is related to the question: is there a sufficient number of available scientific reports based on identical (recommended) methods and tools for measuring these phenomena. If the methods are similar but the tools are different, adopting uniform estimation criteria (e.g. the number of events per 100,000 students) will partially compensate for these shortcomings.

Before empirical evidence appears in detailed verifications of this hypothesis, the most general preliminary implication draws attention to the truth that the PE paradigm is a denial of the social mission of stimulating the somatic health of children and adolescents as part of compulsory schooling. The reasons are: faulty design, inappropriate content and the impossibility

of repeating the necessary physical efforts in daily and weekly cycles with alternating stimulus strength. The simplest justification draws attention to the common ease of obtaining a medical certificate from PE (regardless of the necessity of such an intervention) and the lack of an alternative – providing the student's body with the necessary exercise stimuli during this period as part of exercises supervised by a physiotherapist. Paradoxically, one of the indicators of social health may be the number of medical certificates from PE per 100,000 students.

The postulate of a group of Polish experts 'a physiotherapist in every school' is a temporary solution (Dobosz et al., 2024). The rational goal, from many points of view (including economic), is to replace the PE paradigm with the most important, indispensable subject in schools of all types – 'preventive medicine'.

## **BASIC ARGUMENT**

The competences of a preventive medicine expert should be connected with the expectation that not only social elites will have the knowledge and skills to overcome at least two counterproductive consequences of PE practice. Firstly, the standard of a 45–50-minute physical education lesson integrated into a 'grid' of other subjects separated by a short break is common in almost every type of school. This means that the school does not provide the child with the necessary stimuli that stimulate biological development as they grow up, associated with the need to extend physical effort during adolescence. Moreover, associated with the results of a permanent health assessment. The disclosed cases of fainting and even death not only during PE, but also in professional sports, are ad hoc evidence of the importance of such competence. This is one of the most important criteria for mature self-control of a citizen of the 'knowledge society'.

Secondly, manipulating exercise intensity is limited by physiological criteria and also requires respecting exercise safety standards. The easiest indicator of exercise intensity (or its abandonment) to control, but also of the current state of health and emotions, is heart rate (HR). Even a child can monitor this basic biological indicator today at almost any time during the 24-hour cycle. What good is it that technology has made this possible for anyone who has the right device – constantly being modified, including miniaturized. Interpreting the HR measurement result and taking sensible actions in given circumstances requires unique knowledge and experience. After all, the method of measuring HR by palpation is still available, but knowledge of the phenomena associated with this indicator still remains in the esoteric sphere.

While teaching physiotherapy students HR measurement methods (palpation and using technological possibilities), but also interpretation of measurement results in various circumstances of health related training, I have experienced several cases of revealed deviations from health standards during warm-up. People in whom we revealed these phenomena unanimously declared that they had been diagnosed with bradycardia. In one case, such

HR response to effort during warm-up concerned a student diagnosed with hyperthyroidism.

### **THE ATTRACTIVENESS OF CONVEYING SCIENTIFIC KNOWLEDGE IS LIMITED**

This issue permeates the areas of social media, business and political propaganda in various ways and with varying intensity. In the overall calculation, science loses, because where the good of an influential individual dominated by a toxic syndrome of power or an interest group with similar inclinations is at stake (Kalina, 2016a, 2016b), scientists and scientific knowledge are most often treated in an instrumental way. Knowledge, among others, on ways to unmask this category of phenomena and counteract their negative effects is provided by INNOAGON (Kalina and Kruszewski, 2023). This new applied science, promoted in AHFE publications (Kalina, 2023a, Kalina and Bagińska, 2023, Piepiora and Kalina, 2023, Waszkiewicz, 2023, Kruszewski et al., 2024, Piepiora, 2024), provides unique tools that can be used not only in the exploration of all dimensions of health, but also in survival from micro to macro scale. The AHFE project has this unique value of seriousness and authority that increases the probability that the idea of replacing the PE paradigm with preventive medicine in every type of school will not be reduced to an intellectual attraction. After all, it is about the quality of public health, peace and the chance of survival.

As humanity, we are probably at the peak of 'the turning point', not only in the sense described by Fritjof Capra (1982). Since the dynamics of depletion of natural resources is still one of the key indicators of identifying this peak, there is no visible turn in the direction that Capra so simply and accurately appealed for: 'we should invest more in people, our only wealth, which we have in abundance'.

### **CONNOTATIONS OF A SEPARATE PROFESSIONAL SPECIALTY 'PREVENTIVE MEDICINE' WITH THE HYPOTHESIS ON THE SUPREME VALUE CRITERIA OF THE GLOBAL CIVILIZATION**

The way of reasoning in which the central issues are health, a healthy way of life, healing, self-healing and healing is neither isolated nor was it initiated by Fritjof Capra. However, when Capra, almost half a century ago, concludes his considerations on the intellectual and moral responsibility of scientists, the issue of survival appears in a unique approach, not only because of the erudition of the message: 'This responsibility is a very important issue in many scientific disciplines today; this applies in particular to physics, where, thanks to quantum mechanics and the theory of relativity, two completely new directions of research have been opened up for physicists. They will lead us to Buddha or to the Bomb – and it is up to each of us which path we choose' (Capra, 1987, p. 126).

The convergence of intentions of outstanding minds concerned about the health and survival of humanity does not translate into rational investment in people. This obvious conclusion does not burden the scientists and

philosophers recommending such postulates. It burdens most coordinators of public affairs – individuals and teams with real influence on matters from the local level to global effects. On the other hand, scientists (philosophers) themselves are able to build intellectual barriers to the message that is intended to strengthen this investment (in quotation marks or not).

For example, Pierre Teilhard de Chardin (1881–1955) in his vision of the world formulates the assumptions of ‘spiritual activation’ – implicitly as a condition for survival and development. This activation – in his opinion – is necessary to balance and use the physical power of humanity, to increase the will to act, the will to search, the will to create. In conclusion, he states that man – for life in the common sense and for a higher life – most needs the ‘religion of evolution’ (Teilhard de Chardin, 1987, p. 432) Although the word ‘religion’ will be interpreted by many as a metaphor, for opponents it is a pretext to ignore such a possibility of investing in people.

If in the year 2224 the hypothesis on the supreme value criteria of the global civilization is positively verified, it will mean that de Chardin’s dream of spiritual activation has come true, that the efforts of Aurobindo Ghose, Bateson, Capra, Ferguson, Harman, Jung, Leonard, Robertson, Roszak, Rudniański, Satin, Whitehead and others have not been wasted.

The main hypothesis is: survival of humans and nature in a non-degenerate form and responsibility for coming generations (Piepiora and Kalina, 2023). The answer to the elementary question about the leading entity or entities that would have a ‘complete possibility of action’, that this would happen, leads directly to the experts of ‘preventive medicine’. Justifications for such a vision of the society of the future are provided by INNOAGON – in fact, experts of this new applied science, after all (sticking to reism) there is no such thing as science, but there are specific people with competences attributed, in this case, to the name INNOAGON (Kalina and Kruszewski, 2023). There is also no such thing as ‘preventive medicine’ etc.

## **BETWEEN THE LANGUAGES OF ‘PREVENTIVE MEDICINE’ AND INNOAGON FROM THE PERSPECTIVE OF SENSIBLE APPLICATIONS**

This convenient habit of communicating in mental shortcuts such as ‘science’, i.e. talking about things that do not exist in reality, makes it easier to convey valuable knowledge without using too many words. However, there is a necessary condition not to burden the message with possible deformations – to define key terms that are ambiguous in everyday language.

The above-quoted term ‘complete possibility of action’ to the language of praxeology. This forgotten science of efficient achievement of the goals of all action (mental and physical) provides the basic terms for innovative agonology (INNOAGON).

This precise language of praxeology (proper methodology – see for example: Nowaczyk and Żołnowski, 1974, Kotarbiński, 1982, Ajdukiewicz, 1985, Kalina, 2023b, Kalina and Kruszewski 2023), on which INNOAGON is based, has the advantage that it clearly facilitates the formulation of goals, tasks, methods, means and tools for the use of ‘preventive medicine’. There are also some limitations. But, somehow coupled with INNOAGON not only

in the semantic sense, it also provides intellectual (based on universal human ethics) ways of counteracting forces that are in opposition to the hypothesis on the supreme value criteria of the global civilization.

Since the 'complete possibility of action' is a property of an entity that meets two conditions, 'dispositional feasibility' and 'situational actionability', the conclusion is obvious: in numerous areas of human activity, achieving a goal is impossible without the stage of appropriate preparation (preparation for a given circumstance). It is this stage of preparation from the perspective of caring for all dimensions of health and survival that is connected with the methodological category of 'dispositional feasibility'. Even the common assessment of social reality from this perspective shows that this is an area of competence of 'preventive medicine' in an innovative approach – perhaps primarily as a subject of universal teaching in every type of school (Dobosz et al., 2024).

The mentioned terms 'complete possibility of action', 'dispositional feasibility', 'situational actionability' are subordinate to the concept of 'possibility of action', and this gives rise to methodological consequences at the interface with numerous applications (including practice). Since 'possibility of action' is the strength, intellectual or manipulative prowess, knowledge (skill) and willingness sufficient to perform a given action (Pszczolowski, 1978), one must take into account the ambiguity of the word 'strength' and the other words used in the definiens of this definition.

## CONCLUSION

Anyone who identifies with the hypothesis on the supreme value criteria of the global civilization and does not necessarily connect its universal acceptance with the effect of the religion of evolution should rather not question the validity of preventive medicine as a subject of school education and INNOAGON as science and its mission. However, one may ask a basic question about the way or ways of investing these innovations in people. The answer is only seemingly trivial: effectively, healthily (this term includes 'safely'), in deeply humanized and attractive forms.

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