The Question of Ethical Responsibility in the Fictional Narrative "The Fatal Eggs" by Mikhail Bulgakov

Josef Dohnal, *Masaryk University in Brno, University of Ss. Cyril and Methodius in Trnava*
josef-dohnal@volny.cz

Andrea Grominová, *University of Ss. Cyril and Methodius in Trnava*
andrea.grominova@ucm.sk

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ABSTRACT
The question of responsibility regarding the application of scientific research findings extends not only to the scientist who makes a discovery and realizes its potential for practical application but also to those involved in implementing the discovery in practice. Bulgakov's prose "The Fatal Eggs" underscores these two lines of responsibility associated with ethical considerations. The researcher carefully evaluates potential risks, intends to adhere to precautionary principles, and first seeks to understand the exact mechanisms behind the remarkable results of their accidental discovery. However, the discovery is alienated from them when it falls into the hands of an implementer. This implementer, driven by haste, ideological simplicity, and impatience, fails to consider the principles of experimental work. The discovery, applied inadequately, hastily, and unprofessionally, is thus disqualified and irretrievably lost. Bulgakov's fictional narrative, with its dystopian atmosphere, serves as a poignant warning against unethical practices that can devalue a potentially significant invention, transforming it into an instrument of destruction rather than an asset.

Keywords: M. Bulgakov, "The Fatal Eggs", fictional narrative, biological experiment, scientific discovery, risks of invention, ethical responsibility, dystopia.

Man has always dreamed of ideal conditions for his life. Fantasies of ideal lands where everything mankind needs for a comfortable life is available without work can be found in the legends of many nations. Such fantasies became more concrete and realistic in the modern period when scientific and technological progress began to translate many of these fantastic ideas into concrete machines and devices. These advancements, on the one hand, made dreams come true, but on the other hand, stripped human work of its creative aspect and mechanized it. The evolving possibilities of technical devices then led not only to optimistic predictions of what would be possible thanks to advances in technology but also to cautionary predictions of changes that could lead to dangers that man would face in future periods when technology took over too many of his functions and man became dependent on it, or when he was unable to prevent potential negative consequences for life on earth.

In Russian artistic literature, considerations on how technology will influence human life began to appear no later than the first half of the 19th century [for example, in the utopian prose of V. F. Odoevsky "The year 4338: The Petersburg's letters" (4338-й год: Петербургские письма)], and significantly intensified at the turn of the 19th and 20th centuries: it suffices to recall Brusov's works "Revolt of the machines" and "Republic of the Southern Cross"

(“Бунт машин” and “Республика Южного Креста”). Already in these short stories one can find an emphasis not only on technological issues (which was connected, among other things, with the fascination with modern technology found in the works of the Futurists), but also on the possible ambivalent consequences of technological progress on society and potentially on the individual, i.e. on social and ideological issues similar to those in 19th century Russian literature: “[…] ideological modelling has been, from the very beginning, the leading method of modelling reality in Russian and, later, Soviet SF.” (Nudelman, 1989, p. 39).

So it‘s not surprising that in connection with the advancing technical progress, deeper and more specialized considerations began to emerge regarding to what extent technology can “govern” itself, how much responsibility lies with humans not only for the development of technical possibilities but also for their impact on the lives of individuals and the entire society. From a purely technical matter, it increasingly became a philosophical and ethical question, namely, not just what is within the possibilities of science itself searching for ever new possibilities of technology, but who is responsible for the practical use of scientific achievements. The growing awareness of the fact that science and modern technologies based on its results may not only bring good, but also destruction (as shown by the war conflicts of the early 20th century, especially World War I) raises the question of how far negative consequences and possible misuse can be foreseen and how far they can be prevented where they arise, i.e. in scientific research itself. Ethical issues related to the responsibility for anticipating and weighing the value of scientific discovery, as well as the choice of how a scientist or a scientific team will act in an ambiguous situation, are thus increasingly reflected in the view of the scientist and their work as a key element of technological progress. It is enough to recall the considerations that appeared as early as the 1930s in Paul Frei’s publication “Free science and technology: A contemporary knowledge and life doctrine for everyone” (“Wissenschaft und Technik. Eine zeitgemäβe Wisens- und Lebenslehre für jedermann”), in which he not only relates technology to biological and social issues but also suggests that both of these areas should match the performance of technology: “Because technology is permeated with considerations of value, we must similarly strive for perfection in both the biological and social spheres” (Frei, 1932, p. 46)[128]. About 100 years later, however, Julian Nida-Rümelin similarly observes that the problem of assessing the value of technological progress encounters a criterion divergence, where demands for good placed by utilitarian views on the one hand and views based on anthropological criteria on the other hand may not overlap (Nida-Rümelin, 1996a, p. 8). From this divergence arises the necessity of choice, which someone must make. Nida-Rümelin is thus in line with Frei’s demand for a high level of biological and social sciences, which logically follows from his conviction that the benefits of technology should be subjected to comprehensive value assessment, which should precede the actual use of the possibilities presented by progress in the field of technical sciences. It is the judgment that must be made by humans, or those who represent the interests of people/humanity: “The decision about its (technology’s – J.D. & A.G.) utilization depends solely on people themselves, not least on the leaders they recognize.” (Nida-Rümelin, 1996a, p. 45)[129] However, it is again unclear which person should make the decision – Frei does not

[128] „Da die Technik überall von Wertgedanken durchdrungen ist, muβ auch auf biologischem und gesellschaflichem Gebiete in ähnlicher Weise nach Höchstleistungen gestrebt werden.“

[129] „Die Entscheidung über ihren (der Technik – J. D. & A. G.) Gebrauch liegt ausschlieβlich bei den Menschen selbst, nicht zuletzt bei ihren anerkannten Führern.“

coincidentally mention leading personalities only as "not the last". Julian Nida-Rümelin, in search of decision-making sources, turns attention to the scientific environment, where discoveries (not only of a technical nature) are made, stating that over time "science has claimed autonomy and thus accelerated the orientation exclusively towards the ethos of epistemic rationality" (Nida-Rümelin, 1996b, p. 788)[130]. Although he sees science more as hypothetical thinking or a hypothetical process[131], under certain circumstances, scientists themselves may be responsible for taking into account questions of the practical use of their discoveries in their theoretical considerations:

> "The spectrum of scientific ethical attitudes ranges from complete absolution of responsibility through external political and societal control to further individualized responsibility, which is attributed to the scientifically active individual for the consequences, including the technical and economic applications of their research results" (Nida-Rümelin, 1996b, p. 787)[132].

According to him, the need to utilize tools for assessing the consequences of technology (Technikfolgeabschätzung) applies to scientific research itself, and when using it, one should consider a wide range of scenarios, by which Nida-Rümelin means the impact of technology on various areas of human activity, even partial ones: "Individual scenarios are characterized not only by economic, sociological, and technological data but also by corresponding value orientations of the relevant reference group" (Nida-Rümelin, 1996b, p. 792)[133].

Considerations of ethics in scientific research thus, even after a century, focus on the human factor, on its ability not only to arrive at a discovery but to contemplate scenarios of its practical application, to consider as responsibly as possible the possible consequences that may arise during the application of (not only) technical discoveries. The category of responsibility and the tools of anticipation and risk assessment included in it gain importance. Hans Jonas dedicates special attention to this question, stating that when considering this aspect of anticipating the consequences of human activity in the use of scientific discoveries, which is something (so far) non-existent,

> "the role of experienced malum must be assumed by the malum represented, and this representation does not occur by itself, but it must be deliberately created; thus, the anticipatory creation of this representation becomes the first, so to speak, introductory obligation [...] of ethics." (Jonas, 1997, p. 58)[134]

Scientific progress and the technological capabilities of humanity have risen throughout

[130] „Die Wissenschaft für sich Autonomie beanspruchte und damit die ausschließliche Orientierung auf ein Ethos epistemischer Rationalität vorantrieb."

[131] Wissenschaft ist ein im wesentlichen hypothetisches Verfahren, […]" (Nida-Rümelin 1996b, p. 782).

[132] „Das Spektrum der wissenschafsethischen Positionen reicht von einer vollständigen Verantwortungsentlastung durch externe politisch-gesellschaftliche Steuerung bis zu einer weigehenden individualisierten Verantwortung, die der wissenschaftlich tätigen Person für die Folgen, und das heiβt auch für die technischen und wirtschaftlichen Anwendungen ihrer Foschungsergebnisse zugewiesen wird […]."

[133] „Die einzelnen Szenarien sind daher nicht nur durch ökonomische, soziologische und technologische Daten charakterisiert, sondern auch durch die jeweils korrespondierenden Wertorientirungen der jeweiligen Referenzgruppe."

[134] „Musí roli zakouženého malum převzít malum představované, a tato představa se nedostaví sama sebou, nýbrž je nutné ji záměrně vytvářet; předjímající vytváření této představy se tedy stává první, takříkajíc úvodní povinností […] etiky."

the entire 20th century to such a level that not only the transformation of the world surrounding humanity but also potential changes to humanity itself again and more acutely raise ethical questions that society must address. It is therefore not surprising that efforts to answer questions raised from the level of ethics and, more recently, its specialized discipline of bioethics, lead to the creation of projections of future development. Their subject becomes not only potential good (bonum) but precisely the malum mentioned by Jonas, that is, the preventive estimation of the negative consequences of human interventions into the natural order. When forecasting possible scenarios of undesirable future developments, art, especially literary and cinematic works, play a significant role, with dystopian tendencies in the science-fiction genre taking the lead:

> "Based upon the use of scientific and technological knowledge, be it in biotechnology or technologies of artificial intelligence, posthuman worlds have also been constructed in the Framework of speculative fiction and science fiction". (Tomašovičová and Suwara, 2023, p. 13)

What ethics has been considering theoretically for a century has long had its place in that part of science fiction literature that has considered and thematized the ambiguities and possible malum of scientific and technological progress. Such modeling of potential disaster scenarios is also represented in works of Russian or Soviet science fiction.

Around the same time that Frei contemplates ethics during technological development, in the newly formed "state of workers and peasants," which emerged as post-revolutionary Russia, a significant social experiment begins based on the theoretical foundations of Marxism laid in the mid-19th century. Soviet authorities outline several bold plans, primarily the electrification plan (GOELRO) and subsequent extensive industrialization plans, aimed at "catching up with and overtaking" more developed countries. To fulfill these ambitious projects, the population is mobilized to create a new type of person: homo sovieticus – an ideology devoted to building socialism, who consciously, and thus voluntarily (!), dedicates all their efforts to industrialization, about which they have no doubt, but rather support it until their destruction [e.g., in Nikolai Ostrovsky's novel "How steel was tempered" ("Как закалялась сталь" – 1934)]. Technology thus becomes to a large extent both a condition and a tool for "building socialism," and within this colossal social experiment, humans are maneuvered into the role of a technical means because their merits in implementing development plans are not measured by the quality of their life (the goal is to catch up with and overtake capitalism) but are focused on achieving (technocratic, predominantly production and construction) goals, not primarily on improving the quality of life of the "Soviet people." One of the first post-revolutionary works to warn of the threat of mechanizing humans is Yevgeny Zamyatin's anti-utopian novel "We" ("Мы" – 1920),[135] which expresses concerns about excessive technologicalization of society in a general form. As Zamyatin has convincingly shown, the tendency to measure achievements primarily in material terms led to dehumanizing tendencies in his fictional novel, where even people from the intellectual sphere became just replaceable "cogs", tools that were manipulated in the name of "higher goals". The cruel and sad history of the Soviet gulags illustrates where this ideologically conditioned mobilization and mechanization of humans led those who were not entirely "conscious" (i.e., did not completely submit to the ideological doctrine).

[135] The process of the formation of the „Soviet man" and its reflection in literature is mapped in detail in the monograph by Michaela Pešková (Pešková, 2012).

In the grand plans of the post-revolutionary Soviet state, technology and technology played a crucial role. Logically, this made it necessary to involve scientists in the "building of a new and better society", but they were in a difficult position. As a specific social stratum that was to be involved in the progressively more centralized management of a state subordinated to the ideological doctrine of the Bolsheviks, scientists became part of the "working intelligentsia" and as such had a clear task – to make science a productive force. The result of scientific research was thus measured primarily by its utility for a practice subordinated to the ruling ideological doctrine. Not all scientists who stayed in Russia were fully identified with Bolshevik ideology, not all were reconciled to their subordinate social status, and far from all accepted the emphasis on straightforward utilitarian evaluation of the results of their work. Such a situation seems to require its representation in literature. After all, Russian literature has in its genetic structure a strong connection with modelling social reality and capturing the neuralgic moments of social upheavals as well as the place and actions of the individual within them. The visionary character of the Russian political elite of the 1920s, the movement away from the chaos of civil war towards the order of a new prosperous state, and the desire to create a new society and a new man, directly encouraged a view of the future in which the bold goals that some of Russia's cultural elite sincerely believed in could be realized. As R. Nudelman states, Russian science fiction "[…] represents a confrontation between chaos and organization. Its collective plot moves from such confrontation, through the victory of chaos, to the establishment (sometimes only adumbrated) of the new organization, […]" (Nudelman, 1989, p. 42) With its focus on science and technology, a certain departure from modelling the real world to depicting something that is (so far) only artistic fiction, the possibility of at least partially avoiding the consequences of overwhelming ideologically conditioned criticism, if perhaps the fictional world did not meet exactly the required normative requirements for optimism and faith in socialism, but at the same time the possibility of allegorically expressing oneself to the present, the field of science fiction became very suitable.

In 1925, the satirical anti-utopian novellas "The Fatal Eggs" ("Роковые яйца") and "The Dog's Heart" ("Собачье сердце") by Mikhail Bulgakov were first published[136]. In both works, Bulgakov deals with the vision of a groundbreaking scientific discovery being put into practice – and both texts can be seen as a direct critique of the contemporary reality. Both stories can be seen as the result of Bulgakov's gradual establishment in the Russian capital, where he moved in 1921. In Moscow, he becomes familiar with its literary milieu as well as with the social and political background of life in the metropolis that governs the whole of Russia. The need to express his growing doubts about the clarity and unquestionability of the political course and the position of the intellectual within it leads him to produce critical prose that he thematizes in the genre of science fiction what he perceives as questionable or even dangerous. A closer look at that period of Russian literature shows that Bulgakov was not alone in being interested in the subject of science and scientific experiments: "[…] Beliaev and Bulgakov were by no means the only authorsusing biomedical experiments in their fiction. Indeed, during the 1920s scores of writers […] have done the same." (Krementsov, N. L., 2014, p. 6) After all, already in the 19th century many Russian writers were careful observers of what was happening in science and reflected it in their works[137].

[136] The fact that both works were inspired by the work of H. G. Wells mentions Rydel, Ch. (1978). Bulgakov and H. G. Wells. In Russian Literature Triquaerterly 15, pp. 293-311.

[137] See, for example, the chapter Реализм и научная эпистемология 19 века in the collection of essays

Both of these texts by Bulgakov are multi-layered and cannot be interpreted in a simple way. This fact is pointed out, for example, by Haber, who on the one hand points out that the writer "[…] employed the fantasy typical of the Serapions but transplanted it from some imagined 'other' world to everyday Soviet life." (Haber, 1992, p. 509), but at the same time states that it is possible to find "[…] the myriad of referents associated with its main characters and its central images which operate simultaneously on several planes – the scientific, religion-metaphysical and political an each level contains multiple meanings, not always easily reconcilable." (Haber, 1992, p. 497)

In the following analysis, we focus on the story "The Fatal Eggs" – our aim is to examine how this work views the role of humans in the process of applying a scientific discovery to real "production" conditions, i.e., the connection between the science that makes the discovery and the necessary technology in the process of utilizing the discovery in practice, with both of these poles represented by the people who secure them. The reason for our choice is that while the novella "The Dog's Heart" works with a limited range of individuals involved in the experiment, does not focus on the theme of dissonance in the activities of the actors involved in the process of transferring scientific discovery to its use in practice, largely overlooking the role of external actors partly hidden behind anonymous institutions and its ending anticipates reversibility, with the correction of the unsuccessful experiment. "The Fatal Eggs" allows for no human correction – thus, it represents a more acute warning, additionally involving a wider range of responsible individuals and instances.

By analysing Bulgakov´s text, we would like to continue what Eric Laursen has already partly dealt with by tracing the contradictory interaction between the main character, Professor Persikov, and the representatives of power. Among other things, E. Laursen concludes that "Persikov believes that he can indulge in pure science divorced from the interests of those in power and yet repeatedly turn to them for support and protection. After the revolution, cold and hunger seep into his laboratory, killing both." (Laursen, 1989, p. 66)

While we are not able to avoid the relationship between Professor Persikov and other protagonists who in one way or another represent various power groups, with a significant role attributed to the media, the primary focus will be on the criteria that are fundamental from the perspective of ethics theory, i.e., human intervention in the natural order, ethics of scientific work, and ethical questions of practical utilization of scientific discovery. We also address the criterion of foreseeing possible new positive value (bonum) and potential negative consequences (malum), prevention/mitigation of risk, and the question of the responsibility of the scientist as the author of the discovery, as well as the responsibility of those who make decisions about transferring the discovery into practical use, and those who implement the discovery into the realization phase.[138] More or less outside our focus are specific literary-historical and formal criteria.

The plot of Bulgakov's novella, set in the near future (specifically in the year 1928), is relatively straightforward: Professor Persikov has discovered the extremely stimulating effect

Осповат, К. А., Вдовин, А. В. (2020). *Русский реализм XIX века. Общество, знание, повествование.* Москва: НЛО.

[138] Konrad Ott distinguishes various types of responsibility: „Man unterscheidet zwischen der Verantwortung der Folgen normaler Nutzung, Verantwortung der Nebenfolgen normaler Nutzung, Verantwortung der Folgen von Unfällen und technischem Versagen und der Verantwortung von Miβbräuchen (Ott, 1996, pp. 673–674).

of an unknown red ray on living organisms. Together with his assistant (доцент = assistant professor) Ivanov, who has created a device emitting the ray, they successfully eliminate the overgrown frogs that inundated the institute after being irradiated by the ray, and thus they thoroughly prepare for the experimental verification of this phenomenon in practice.

However, the unexpected discovery coincides with a severe epidemic of chicken plague, which decimates poultry farms throughout the Soviet Union and disrupts egg production. Society thus finds itself on the brink of a major problem – a shortage of eggs and poultry meat, commodities essential for the population's nutrition, turning what is primarily a veterinary problem into a political one.

The first to reveal the potential connection between the two phenomena, where a scientific discovery could offset the negative impact of chicken plague, is the journalist Bronskij. He poses a manipulative question to professor Persikov, which irritates the professor:

> "- Is it true that this will cause a revolution in animal production worldwide?
>
> What kind of question is that," Persikov snapped, "and anyway, I won't allow you to write any nonsense. From your expression, I can see you're concocting some sort of disgrace!"[139] (Bulgakov, 1989, p. 59)[140]

Even in this dialogue, one can discern the foundation of the future plot: while the journalist, lacking expertise, sees only one possible aspect of the discovery, exaggeratedly and one-sidedly, the scientist immediately senses distortion, even suspecting the journalist of mischief he intends to commit. And indeed, that's what happens: Before the two scientists can proceed with a comprehensive experiment, the discovery is publicized in the media – both print newspapers and their light versions sensationalize the information about the discovery in a bombastic manner, with the factual content and structure of the information determined not by the discoverers but by the media's uninformed representatives. This creates a one-sided impression of something miraculous, promising and even guaranteeing prosperity, yet seemingly within reach on one hand, and a crisis requiring immediate resolution on the other. Essentially, there's only one step left – to connect both phenomena and regard the first as a solution to the second. And precisely this step is taken by another protagonist of the story – Alexander Semyonovich Rokk. He is a character evidently identified with the revolutionaries both in appearance – "A leather double-breasted coat, green trousers, leg wraps on his feet, and a huge old Mauser pistol in a yellow holster at his side"[141] (81) – and in "class" origin: the revolution transformed an insignificant provincial musician into its man: "the great year of 1917, which changed the careers of many people, brought Alexander Semyonovich onto new paths. [...] when he replaced the flute with a deadly Mauser"[142] (92), which soon (understandably incompetently, but with a communist card in his pocket) earned

[139] - Правда ли, что это вызовет мировой переворот в животноводстве?

- Что это за газетный вопрос, - завыл Персиков, - и вообще, я не даю вам разрешения писать чепуху. Я вижу по вашему лицу, что вы пишете какую-то мерзость!

[140] All further references to the respective Bulgakov's work are indicated in the text by the page number in parentheses after the quotation.

[141] Кожаная двубортная куртка, зеленые штаны, на ногах обмотки и штиблеты, а на боку огромный старой конструкции пистолет маузер в желтой кобуре.

[142] Великий 1917 год, переломивший карьеру многих людей, и Александра Семеновича повел по новым путям. […] сменив флейту на губительный маузер.

"merit" by deciding how to build an irrigation system in Turkestan. It was he who came up with the "obvious" solution to the problem at hand using the newly discovered effect of the "miraculous" ray.

Within the compositional scheme, Rokk's moment of inspiration marks a divergence in the plotline: while the line of scientific investigation of the ray, conducted by Professor Persikov and Associate Professor Ivanov at the institute, continues, it is paralleled by the line of hasty practical application of the ray, overseen by Rokk and his assistants and situated in a rural environment. The "authorial license" between the two plotlines places seemingly insignificant but, in our view, crucial depersonalized mediating forces, namely the state apparatus represented by two institutions: the Kremlin and the Lubyanka. Both institutions share decision-making roles – held by the Kremlin – and supervisory roles, which fall under the purview of the Lubyanka. The pivotal directive for the simultaneous unfolding of events in two locations comes from the decision-making state and party center in the Kremlin. It is evident from the development of the plot that already in the first phase, when it is about two opposing poles (the scientist versus the media), but especially in the second phase, when the role of the media is reduced, a trio of decisive actors crystallize: Persikov and his assistant, Rokk and his aides, and the essentially anonymous state and party power. However, the weakest position in both cases is held by the author of the invention, i.e. Professor Persikov. He is manipulated by the media and is only taken into account by the power centre when his cooperation is necessary. This weak position also defines his ability to influence events: Persikov's powers only apply in the closed space of his laboratory, if they can be discussed at all, because even there he is dependent on the power apparatus. Outside the laboratory, his possibilities of effectively influencing events are nil.

That's why Persikov complies with the Kremlin's decision, conveyed to him by letter and confirmed by phone, and does not object to Rokk being provided with two out of three devices emitting the red ray. Persikov's remarks in a telephone conversation with an anonymous Kremlin representative testify to his efforts to prevent (from his professional perspective) obvious hazard, which ultimately prove unsuccessful:

> "But nobody knows what it will do!! And anyway, I categorically protest.
> […]
> I can't agree to experiments with eggs... Until I try it myself...
> […] it was clear that the benevolent voice on the other end was talking to a small child. In the end, the brownish Persikov slammed down the receiver until it cracked, not into the handset, but into the wall, saying:
> I'm washing my hands."[143] (82)

It is characteristic that both following plotlines of Persikov and Rokk unfold independently, with only one moment of intersection when Rokk briefly realizes his lack of knowledge and contacts Professor Persikov to inquire whether the eggs delivered to him for the experiment can be colored. After an inadequate description, Persikov believes the eggs

[143] - Да ведь он черт знает что наделает!! Я, наконец, категорически протестую. […]
- Я не даю своей санкции на опыты с яйцами... Пока я сам не попробую их...
[…] было понятно, что голос в трубке, снисходительный, говорит с малым ребенком. Кончилось тем, что багровый Персиков с громом повесил трубку и мимо нее в стену сказал:
- Я умываю руки.

are merely contaminated. Therefore, Rokk proceeds with his risky experiment. So if Persikov is aware that his discovery causes a tremendous vitalization of organisms that are irradiated by the red beam, but it is not at all clear what exactly causes this exuberance, it is not even clear that it does not contain any potential risks. He therefore envisages possible risks as the laboratory investigation continues. Rokk takes a very different approach - he plans to use the beam on a large scale without any thought, using a material he is not sure of, and without giving the slightest thought to the possibility that the use of the beam could have any negative effects.

The actions of individuals in both plotlines and the characteristics of their behavior in approaching the experiment, which has the potential to "change the world," are summarized in the table below, with the fictional social/political environment in its current form cited as a significant factor.

the social environment and the current "objective" situation
revolutionary instability, a "building" spirit, ideological postulates, and party interests, a press-supported desire for bombastic "worldliness" – all intensified by the epidemic of avian flu (food supplies are threatened) and manipulative press campaigns.

the scientific line of researching the effects of the ray (proceeding with limited support from official institutions) ***the course of the experiment:*** - **responsible**, cautious, skeptical approach informed by the initial experience with the ray's effects on living organisms, - careful and expertly founded preparations for the experimental application of the discovery, - combined and thorough preventive measures aimed at preventing the experiment from getting out of control, - efforts to find know-how for efficient and safe utilization of the scientific discovery	behind-the-scenes, barely discernible, and **depersonalized decision-making** (Kremlin) and **oversight** (Lubyanka) ***the course of the experiment***: - without apparent responsibility for anything, - the Kremlin holds a hidden decisive position – granting/ revoking the possibility to conduct the experiment, - Lubyanka "assists" in overseeing the actors of the experiment, but not directly in overseeing the experiment itself, - neither institution appears publicly as a participant in the experiment, - thanks to the mobilization of the army, it assumes the role of rescuer.	**non-scientific, premature, and primitive instrumental use of the ray's effects discovery** (fully supported by official institutions) t***he course of the experimen***t: - irresponsible lay approach naively focused solely on potential bonum, - no consideration of risks – unilateral belief in the certainty of success, - utilitarian misuse of another's discovery "blessed" by the Kremlin, - Rokk, as the experiment's guarantor, is entirely incompetent, - hasty pressure for the experiment's rapid progress, - no preventive measures taken, - unrecognized egg substitution, Persikov's question misleadingly ("dirtily") posed incompetently, - laxity and inconsistency in monitoring the experiment's progress, - incompetent and slow measures taken after an obviously erroneous experiment outcome.

***the results*:** - experiment not carried out: scientists were killed by a mob seeking primitive revenge for the catastrophe caused by the irresponsible experiment conducted in the second plotline, - innocent victims of the mob included not only the scientists and their assistants but also the device generating the ray, - a potentially useful discovery is irretrievably lost.	***the results:*** - no responsibility accepted for the catastrophe, - no one blames either institution for anything, - the backstage power position of both institutions remains unchanged.	***the results:*** - catastrophe of nationwide proportions.

The entire history of the discovery and attempts to explore its practical use tragically concludes in Bulgakov's text: under hyperbolically dramatic circumstances, the discoverer of the ray and his assistants perish, with Rokk's caused catastrophe claiming the lives of his loved ones and many others who fall prey to monstrous reptiles. However, not only do people suffer, but the natural environment also suffers, exacerbating the social crisis and posing a catastrophe against which there is no defense, potentially exceeding the boundaries of one country and hypothetically leading to the annihilation of human civilization. Ultimately, nature averts the disaster with a miracle – a severe summer frost that destroys the reptiles.

In this context, Haber's suggestion that the Russian title of Bulgakov's short story could also be translated as Rokk's eggs is inspiring, using the analogy of Rokk's name with the Russian word for fate (рок) (Haber, 1992, p. 505). While Professor Persikov (from the Russian персик – peach) would be central to nature, belonging to its order, according to his name, the name Rokk would lead to the theme of fateful predestination, the cosmic order determining the course of things. Shifting the term by adding another "k" as Bulgakov uses it could be interpreted as a disrespect for the order or even as "defying the order". This would open up the possibility of extending the treatment of Rokk not only as a figure bearing the traits of Trotsky, but also as someone who, through his actions, disturbs the higher order of the world and must thus be excluded from that order, destroyed. The mysterious destruction of the monsters created by Rokk's action by a cruel frost that strikes completely out of expectation could thus be seen as an intervention of fate against that which disturbs it. This would then imply another semantic impetus in the treatment of the entire text: the Bolshevik social experiment – like any other experiment that disrupts the higher order – would thus be conceived as a disruption of the order that brings destruction and is a priori doomed to failure. In this sense, Bulgakov's allegorical analogy to the social engineering of the constituent Soviet state can transcend a specific spatial and temporal framework, warning against any irresponsible interference with a higher, humanly superior order, thus appealing to the ethical, or rather bioethical responsibility of the individual and society as a whole.

Michail Bulgakov thus conceived his dystopian science fiction not only as horror, as N. Muránska[144] writes, but also as an allusion to the danger posed by accelerating science

[144] "He (Bulgakov – J.D. & A.G.) reached for horror as a psychological reflection of the times and filled it with social and societal content." [„Siahol (Bulgakov – J.D. & A.G.) po horore ako po psychologickom odraze doby a naplnil ho sociálnym a spoločenským obsahom."] (Muránska, 2003, p. 47).

and technology on one hand and dangerous, precipitous lay pressure to utilize scientific discoveries on the other, even if sometimes justified by current needs. Although the text does not mention ethics, let alone bioethics, it is evident that this is precisely the direction in which Bulgakov orients the text. Viewing the entire text of the novel "The Fatal Eggs" from this perspective, its fundamental theses can be summarized in the following points:

1) Knowledge should not be hindered – it is the logical continuation of humanity's quest to delve into the mysteries of the world in which its existence is anchored.

2) The utilization of scientific knowledge in practice is justified only when there is approved know-how confirming their positive (bonum) effects and eliminating negative (malum) effects.

3) Responsibility for the application of scientific knowledge in practice is complex and is borne by all involved parties, both physical (e.g., scientists, experimenters, ...) and legal entities (government organizations, companies, etc.).

4) Media also bears a significant share of responsibility, contributing to the social atmosphere by sensationalizing and promoting unjustified, exaggerated expectations.

5) The application of knowledge (actions leading to the transformation of the present into the future) must always be prevented whenever it could potentially lead to negative consequences for human existence – these effects must be thoroughly examined and preempted from all anticipated risks.

6) Whether it concerns humanity as a whole or its parts (or even representatives of its parts – politicians, military leaders, dictators, etc.), no one has the right to let their selfish (individualistic, mercantile, ideological, or other) interests prevail – humanity as a whole must always be considered.

7) It is necessary to proceed ethically responsibly in formulating and testing risks associated with the application of scientific discovery – if there is a lack of estimation of short-term and long-term risks and their verification, or their elimination method, then a dangerous situation looms, constituting unethical behavior.

8) The use of scientific discoveries cannot be entrusted to unqualified individuals, even if their proclaimed intentions are noble – agile incompetence contradicts ethical principles.

9) Risk assessment must also include monitoring the so-called side effects of scientific discovery – these effects cannot be fully predicted and may manifest during or even after the use of the discovery: this means that ethical behavior is continuous, never-ending.

10) The key to ethical behavior is thus the principle of ethical responsibility of all parties participating in scientific work and in the utilization of scientific results towards humanity as a whole.

The tragic tone of Bulgakov's text has to be interpreted primarily in the context of the post-revolutionary situation in the Soviet Union as a sharp reckoning by the writer with the irresponsible (from his perspective) social experiment initiated by the new rulers of Russia without proper estimation of the risks associated with it. Elements such as the red color of the ray, the role of the Kremlin as the center of Bolshevik government, and the Lubyanka as the main headquarters of the Cheka, along with the emphasis on mobilizing the population through massive propaganda and highlighting the destructive role of enthusiastic naïve "ignoramuses" like Rokk, suffice to illustrate this point. In the specific historical context of the 1920s, Bulgakov's message is clear: responsibility for the proclaimed comprehensive

social progress should be coupled with caution. However, the "Soviet power" fails to adequately consider this, allowing the "active fool" to seize control, potentially causing a tragedy of unforeseeable proportions.

Equally justifiably, however, the same text can be read from the perspective of the 21st century as a timeless warning against neglecting the principles of ethical responsibility for all those involved in human progress. Although the main emphasis is placed on human victims, Bulgakov also mentions the destruction of the animal and partly plant kingdoms caused by irresponsible experimentation. We consider the warning that Bulgakov sends to society as a whole to be extremely important: science or scientific representatives alone are not the only ones (bio)ethical responsible, the same, if not greater, degree of responsibility must also be placed on the media sphere and its representatives (whose power has multiplied many times over the last century), on those individuals and entities who concentrate power tools in their hands and therefore decide and control, and naturally also on specific individuals and legal entities who operate directly in practice. Such an interpretation of Bulgakov's text, using the conceptual apparatus of bioethics, is considered possible. It demonstrates not only the writer's ability to embed timeless ideas into a dystopian satire on the hurried Soviet social experiment but also that ethics and its principles were formulated long before the 21st century.

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