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**THE MOSCOW ORPHANAGE
AS A TOTALITARIAN EDUCATION PROJECT
IN THE 18TH CENTURY¹**

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Abstract. The article is devoted to the study of the role and significance of the Moscow Orphanage in solving the problem of illegitimate children in the 19th century. The Moscow Orphanage is predominantly viewed in modern research as a form of humanistic initiative to save children abandoned by the society. But the evidence from the archival documents of the 19th century allows us to evaluate this social project in a different way. The author of this article presented an attempt to answer three research questions. First, whether buying the infants from the population and their placement in a closed institution for two decades can be attributed to the growing number of illegitimate children in Moscow, and whether this practice of buying and selling encourages an increase in this category of children? Second, whether the complete isolation of the orphanage and a lack of relevant examples for children to assess family values and understand what a family is, can be attributed to salvation of the children through ‘alleviating the burden’ for their parents, or whether we have an authoritarian project to form ‘people of the new breed’? Third, whether death of peers, constantly surrounding every child, lack of any real education, and constant hard physical labour help to the development of children’s moral ideas and faith in their own strength and abilities? Based on the study’s results and conclusions, the author concludes that the orphanage was established to implement the personal ambitions of its creator,

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which were far from benevolent, allowing us to view the Moscow Orphanage as a very odious totalitarian project.

Keywords: history of Moscow education, education project, Moscow Orphanage, ideas of totalitarianism in education

Научная статья

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МОСКОВСКИЙ ВОСПИТАТЕЛЬНЫЙ ДОМ КАК ТОТАЛИТАРНЫЙ ОБРАЗОВАТЕЛЬНЫЙ ПРОЕКТ XVIII ВЕКА

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Аннотация. Статья посвящена исследованию роли и значения Московского воспитательного дома в решении проблемы незаконнорожденных детей в XIX веке. Московский воспитательный дом в современных исследованиях преимущественно рассматривается как некая гуманистическая инициатива по спасению брошенных обществом детей. Однако свидетельства архивных документов XIX века дают возможность иначе оценить данный социальный проект. Автором статьи осуществлена попытка ответить на три исследовательских вопроса. Во-первых, можно ли объяснить покупку у населения младенцев и помещение их на два десятилетия в закрытое учреждение только ростом числа незаконнорожденных детей в Москве и не стимулирует ли подобная практика купли-продажи увеличение численности такой категории детей? Во-вторых, может ли объясняться полная закрытость воспитательного дома и отсутствие у детей перед глазами примеров семейных ценностей и понимание того, что такое семья, спасением детей через «облегчение бремени» их родителям или перед нами авторитарный проект по формированию «новой породы людей»? В-третьих, могут ли постоянно окружающая каждого ребенка смерть своих сверстников, отсутствие какого-либо серьезного образования, постоянный тяжелый физический труд способствовать развитию у детей нравственных представлений и веры в свои силы и возможности? Результаты и выводы, полученные в исследовании, дают основание рассматривать воспитательный дом как средство реализации далеко не гуманных личных амбиций его создателя и позволяют представить Московский воспитательный дом как весьма одиозный тоталитарный проект.

Ключевые слова: история московского образования, образовательный проект, Московский воспитательный дом, идеи тоталитарности в образовании

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Introduction

A number of scientific and journalistic works are dedicated to the educational, social, and medical aspects of the Moscow Orphanage (Sheremetevsky, 1836; Miller, 1893; Bobrovnikov, 2004). The main idea, being in the majority of the publications, comes down to the thesis that the Moscow Orphanage is a noble undertaking of a noble patron, Ivan I. Betskoy, aimed to humanise the Moscow society and, eventually, the entire Russian society. Given the 19th century archival materials and evidences about the conditions in the Moscow Orphanage, the attitude of the Orphanage's guardians towards the children, the very highest incidence of mortality, reaching up to 90 % of the children, and lack of prospects for the survivors, the humanitarian endeavours of the author of the orphanage's project and achievement of any positive pedagogical result are called into question.

All Ivan I. Betskoy's pedagogical activities from 1763 to 1783 and random people of Russian nationality and foreign citizenship he found on ads to work in the orphanage (*Moskovskiye Vedomosti*, 1764, Feb. 17, Feb. 27), can hardly be explained by the «complexity of time», «the need to save children», saving their lives during frequent epidemics, and other theses that are present in many contemporary works (Albitsky, Baranov, & Sher, 2011; (Albitsky, 2006, 66; Artamonov, 2002, pp. 31–37).

This poses a variety of issues that must be addressed. First, whether buying the infants from the population and their placement in a closed institution for two decades can be attributed to the growing number of illegitimate children in Moscow, and whether this practice of buying and selling encourages an increase in this category of children? Second, whether the complete isolation of the orphanage and a lack of relevant examples for children to assess family values and understand what a family is, can be attributed to salvation of the children through 'alleviating the burden' for their parents, or whether we have an authoritarian project to form 'people of the new breed'? Third, whether death of peers, constantly surrounding every child, lack of any real education, and constant hard physical labour help to the development of children's moral ideas and faith in their own strength and abilities?

The primary goals of this study were to find answers to these issues. The chronological framework is linked to the period of 1764 when the Moscow Orphanage was founded and 1797 when, by decree of Emperor Paul I of Russia, the Moscow Orphanage was transferred from Ivan I. Betskoy's sole jurisdiction to the Office of the Institutions of Empress Maria.

Research methods

The issues raised in this study cannot be discussed without referring to a range of sources, which have been grouped as follows:

- periodical press, primarily «Moskovskiye Vedomosti» in 1763–1767, which featured advertisements about the Moscow Orphanage purchasing infants from the population and hiring Russian subjects and foreigners to work in the orphanage;
- analytical studies of notable Russian and international 19th-century scientists — sociologists, physicians, lawyers, and educators;
- archive sources exposing many aspects of the Moscow Orphanage's functioning, preserved in 19th-century publications, while most 18th-century documents have not remained to the present day.

Thus, the primary study approach was a theoretical and methodological examination of concepts on taking care for illegitimate children in the Moscow Orphanage given in domestic and foreign literature. The analysis results were synthesised and summarised, and key trends and conclusions on the underlying study problem were reached as a result.

Research results

The results of the research presented will be aimed primarily at illustrating the thesis stated in the article's theme and addressing the issues raised above, characterizing the early period of the Moscow Orphanage and the views on the upbringing of its founder, Ivan I. Betskoy.

The Board of Guardians of the Moscow Orphanage, on the proposal of its Main Guardian, Ivan I. Betskoy, decided to accept for money only illegitimate infants under the age of two, who could not yet speak and could not remember their earlier life, on the basis of possible homesickness of children, longing for freedom and, in some cases, verse for family members, and the prevention of taking children from orphanage to family (Krasuski, 1878, p. 40). However, children of serfs were not admitted to the orphanage if the persons who handed over the infant had given notice of this (Materials, 1868, vol. 2, p. 35). The materials of the orphanage noted: «Bystanders, men and women, may bring infants to the Orphanage, where the infants must be received immediately, without asking the person bringing them who they are, and whose infant they have brought..., and for any infant brought they will be paid two rubles for labour» (Manifesto, 1830, Vol. 16, p. 354), «for the brought infants, the promised two rubles must be paid, and for the sick, thin and others, only a small number [i.e. substantially less (notes by A.R.)]» (Materials, 1868, vol. 2, p. 45). The amount on offer can be evaluated today by comparing it to the cost of specific commodities. A pood (Russian measure of weight = 16.38 kg) of flour, for example, cost 17–20 kopecks in the 1760 s. And you could buy a cow for two rubles.

Each infant brought in was assigned a number that related to the number in the admission book, indicating that the infant had been admitted to the orphanage. All children were compelled to wear unique lead stamps with personal numbers

engraved on them, and especially underweight or sick children who were taken to the countryside were also given a bone stamp with a number so that if one was lost, the second remained and the child could be identified (Materials, 1868, p. 45). These personal numbers accompanied the children throughout their orphanage stay (Materials, 1868, vol. 2, pp. 35–36). Individual tags were initially worn around the neck and attached to the cot on which they slept, but they gradually appeared on a lead cross provided to the admitted ones. According to the Board of Guardians' archival journals, by the Board of Guardians' decision, all personal items worn by infants, including silver, crystal, and amber body crosses, were sold (Krasuski, 1878, pp. 41–42; Materials, 1868, pp. 45–46). They were replaced by identical lead crosses. Since 1790, they were additionally embossed with the child's personal number.

The Moscow Orphanage did not disdain reselling foreign goods brought to Russia by foreigners who joined the orphanage: female beads, dolls, artificial flowers, fans, scarves, snuffboxes, etc. (Moskovskiye Vedomosti, 1764a, May 18, Dec. 12). It should be noted that this type of 'activities' was really legalized, because the orphanage, which had its own jurisdiction, could engage into any contracts it wished, set up its own workshops and factories, and get a quarter of its income, including drinking establishments and gambling houses (I-ov, 1890, p. 494).

The most crucial question, the solution of which expresses the essence of every education project, is the attitude toward the child, and especially toward the most important human value of all: life. Foreign scholars of orphanage history and practise are unambiguous in their assessments and conclusions. For example, L-R. Villerme, J. E. Wappäus, A. K. Öttingen believed, that deprivation of maternal care and contact with dear ones had a deadly effect on the child's body. (Villerme, 1850; Wappäus, 1859, p. 213; Öttingen, 1874, pp. 330–331). And, based on extensive sociological research, they determined the average infant mortality rate in a family in Europe, including Russia, to be 18,85 % (Wappäus, 1859, p. 213). However, it averaged 78,5 % at the Moscow Orphanage (Table 1). In order to extend the capacity of the Moscow Orphanage, a branch in Saint Petersburg was established in 1767, which similarly had a high children mortality rate of more than 80 %. The situation was exacerbated further by excessive 'overcrowding' of children, particularly during epidemics. Such figures imply that the Orphanage was not established to handle the issue of saving the lives and health of children. As a result, the inscription on the pediment of the Moscow Orphanage cannot be taken seriously: «And we shall dwell in thee.» The association, strengthened by the fact that each child has a plate with a personal number, is with the Buchenwald concentration camp, with the Latin inscription «Suum cuique» (Each to his/her own) above the door.

When addressing the high mortality rate of children in the Moscow Orphanage, it is also crucial to remember that individuals who brought frail or sick infants were frequently refused admission, and if infants were allowed, it was only to be seen whether the infant survived the first few days. A child was only given

Table 1 / Таблица 1

Details on the mortality of children in the Moscow Orphanage (Krasuski, 1878, p. 70)

*Сведения о смертности детей в Московском воспитательном доме
(Красуский, 1878, с. 70)*

Details on the mortality of children in the Moscow Orphanage			
year	taken into the orphanage	children died in the orphanage	mortality rate
1764	523	424	81,07
1765	793	597	75,28
1766	742	494	66,58
1767	1,089	1,073	98,53
...
total from 1764 to 1856	367,788	288,554	78,46 %

a personal number if he or she survived those days (Krasuski, 1878, p. 41). As a result, frail and unwell children were frequently excluded from official death records, and the true mortality rate was higher than that indicated.

Catherine II was apparently informed of the high rate of children mortality in the orphanage at a certain point, and the Board of Guardians was instructed to take prompt action to remedy the problem. In this background, the Board of Guardians of the Orphanage agreed in May 1768 to transfer sick and malnourished infants to villages (I-ov, 1890, p. 498). The mortality rate in the orphanage had been cut in half by the following year. However, as contemporaries figuratively put it, «death followed the children into the village» (Ya-v, 1892, vol. 7, p. 277).

The orphanage's educational content and level of education should be reviewed. While it is true that a diverse education shapes a person's general culture, worldview, and value system, the more limited and monotonous the education, the less developed and cultured the individual is. An examination of the Moscow Orphanage's records reveals that providing children with a comprehensive education was not part of the orphanage's plans. Reading, writing, the elementary rules of maths, and the hearing of faith were all part of the curriculum. From the age of seven, the majority of the children's time was spent studying crafts and doing unpaid labour in the workshops and factories which belonged to the orphanage, including the members of the Board of Guardians (Krasuski, 1878, p. 11). After the Moscow Orphanage was entrusted to Empress Maria Feodorovna's Chancellery in 1797, the reforms began. In particular, the Empress wrote to the Board of Guardians: «To make the education of the children of the orphanage as useful to them and to the state as possible, I believe it is necessary to gradually reform it and to pay attention to the education of students in the sciences, extending it to a greater number of subjects than at present and improving them in the initial information, which they are now taught, so that they can acquire knowledge

in surgery, medicine, and pharmacy sciences over time» (Tarapugin, 1878, p. 15). The orphanage's education curriculum was gradually expanded, and by 1826, it was comparable to that of a gymnasium.

Controversial issues

The extent to which the Moscow Orphanage, and orphanages in general, contributed to reduce the number of illegitimate children is a controversial issue to consider. As previously stated, when infants were admitted to the orphanage, no information was required about the infant's birth conditions, who the parents were, or how the infant ended up with the individuals who brought him or her in, who preserved privacy. Officially, this policy was implemented by the organisers of the Moscow Orphanage to address the issue of illegitimate, or as they said «dishonourable» infants. The legal researcher and educational historian A. S. Okolsky's study of orphanages based on 19th-century archive material made an important addition to the study of this topic (Okolsky, 1889, pp. 393–423). After examining the experiences of foreign and Russian (Moscow and Saint Petersburg) orphanages, the author comes to the very categorical, yet reasonable conclusion that accepting and, in fact, purchasing infants from the population not only does not reduce the level of extramarital sex and the birth of illegitimate children, but also strongly encourages this negative trend (Okolsky, 1889, pp. 400–401). Furthermore, the author finds that orphanages, where children are often given to by well-off parents, contribute to a decline in marriages, an increase in cohabitation, and an increase in illegitimate children (Okolsky, 1889, p. 401). Simultaneously, around the end of the 18th century, a good notion evolved in certain European nations with a significant number of orphanages (France, Belgium, Austria) to substitute orphan care with monetary rewards for mothers who were unable to raise their children owing to extreme poverty or other reasons (Legouve, 1869, p. 264). However, this concept was developed neither in Europe nor Russia at the time. It wasn't until 1882 that the Russian Empire's government began to use this measure as an alternative to orphanages.

It is only natural that when the job of educating children in closed institutions is left to random individuals, primarily foreigners, for whom it is merely a means of income, they frequently demonstrate the worst human behaviours. Catherine II received information about irregularities in the Moscow Orphanage again in 1779, and an audit was conducted. Aside from food theft and the personal enrichment of a number of officers, it was found that children were forced to work hard in the house's workshops and the products they manufactured were sold for next to nothing (Veselova, 2004). The case of Karl Knipper, warder of the Saint Petersburg branch of the Moscow Orphanage and, at the same time, head of the «Free Russian Theatre» with its young actors and actresses, was the most striking reflection of the orphanage officers' severe moral decay: «The Board of Guardians broke the contract and removed all the pupils from him for the following reasons:

Knipper did not pay the due wages to the pupils, he fed and heated the building so badly that the pupils had to endure terrible cold and even, as was mentioned in the documents [Chancellery of the Board of Guardians of the Moscow Orphanage (Notes by A. R.)], Knipper traded in the pupils and accustomed them to live a debauched life» (Tarapygin, 1878, p. 7). Following the termination of the contract, all of the underage girls returned to the orphanage. Another painful irony develops in connection with Ivan I. Betskoy's directives: «Children over the age of two and four months should not be admitted to the orphanage in order not to give a bad example for the pupils' tender hearts» (Materials, 1868, vol. 2, p. 35). Such instructions made by Ivan I. Betskoy confirm the position that the Orphanage was not intended to be a serious education and moral development centre, as the organiser assumed that a three-year-old child might already have a negative influence on infants.

Conclusion

Thus, the Moscow Orphanage under the tutelage of Ivan I. Betskoy (1763–1783) represented the realisation of a fairly unpleasant and disputable author's idea, which aroused many legitimate problems even at the stage of its realisation. So, let's summarise the viewpoint expressed in the article.

It seems that the foundations of the Orphanage include: buying children from the population and encouraging the trade in illegitimate children through this; isolating children from society and their dearest for two decades; separate upbringing in early childhood without examples of family values in front of them; depriving them of their own names and issuing personal numbers; lack of education; being forced to work physically in factories and workshops owned by private individuals who profited from it; a hungry non-alternative childhood and very high incidence of mortality, cases of organized child prostitution; and other grounds were aimed at social and moral corruption of the society, and the project led by Ivan I. Betskoy had a pronounced totalitarian character. At the same time, there were various techniques to dealing with the aforementioned issues. For example, it was suggested at the end of the 18th century that the government offer an allowance to mothers who were unable to raise their children due to extreme poverty or other reasons. This act, which did not go into effect until 1882, was meant to gradually reduce the number of illegitimate children entrusted to the state, resulting in the closure of orphanages.

References

1. Sheremetevsky, P. V. (1836). *History of the foundation and opening of the Moscow Orphanage*. M.: Printing house of N. Stepanov. (In Russ.).
2. Miller, N. F. (1893). *Out of the past of the Moscow Orphanage. An overview of its activities during the first 30 years of Ivan I. Betskoy*. M.: Printing House of A. I. Mamontov. (In Russ.).

3. Bobrovnikov, V. G. (2004). Russia's orphanages (1764–1917). *KLIO*, 1(24), 114–118. (In Russ.).
4. *Moskovskiy Vedomosti. Additions* (1764). 17 and 27 February. (In Russ.).
5. Albitsky, V. Yu., Baranov, A. A., & Sher, S. A. (2011). *The Moscow Orphanage as the Russian Empire's centre for children's health care*. Moscow: The Union of Pediatricians of Russia. (In Russ.). URL: <http://www.spr-journal.ru/sc5/wa-data/public/site/files/Imperatorskiy.pdf>
6. Albitsky, V. Yu. (2006). 'Factory of angels'. *Meditsinskaya gazeta*, 66, 1 September. (In Russ.). URL: http://www.rusmedserv.com/medgazeta/2006g/66/article_3691.html
7. Artamonov, M. D. (2002). The Moscow Orphanage. *Moskovskiy zhurnal. The History of the Russian State*, 8, 31–37. (In Russ.).
8. *A brief historical essay on the Moscow Orphanage* (originated by V. Krasuski) (1878). M.: Printing house B. Ya. Berbey. (In Russ.).
9. *Materials for the History of the Moscow Orphanage* (Issue 2) (1968). M.: Printing house T. Ris. (In Russ.).
10. Manifesto for the establishment of the Moscow Orphanage. (1830). *Collection of Laws of the Russian Empire. First Collection. Vol. 16*. SPb.: Printing house of the Second Department of H. I. M. Own Chancery. (In Russ.).
11. *Moskovskiy Vedomosti. Additions* (1764a). 18 May, 10 December. (In Russ.).
12. I-ov, A. (1890). The orphanages in Russia. *Vestnik Evropy*, 6. (In Russ.).
13. Villerme, L-R. (1850). *Sur les cités ouvrières*. Paris.
14. Wappäus, J. E. (1859). *Allgemeine Bevölkerungsstatistik. Vol. 1*. Leipzig.
15. Öttingen, von A. K. (1874). *Die moralstatistik in ihrer bedeutung für eine christliche sociaethik*. Erlangen.
16. Ya-v, A. (1892) The Orphanage. *The Brockhaus and Efron Encyclopaedic Dictionary, VII*. SPb. (In Russ.).
17. *Materials for the history of the Saint Petersburg Orphanage* (originated by F. A. Tarapugin) (1878). Saint Petersburg: Printing house of R. Golike. (In Russ.).
18. Okolsky, A. S. (1889). The Orphanages. *The legal bulletin*, 1.3. (In Russ.).
19. Legouve, E. (1869). *Histoire morale des femmes*. Paris: Librairie Académique Didier.
20. Veselova, A. Yu. (2004). The Russian orphanage and the concept of upbringing by Ivan I. Betskoy. *Otechestvennyye zapiski*, 3(18). (In Russ.). URL: <http://strana-oz.ru/2004/3>

Список источников

1. Шереметевский, П. В. (1836). *История основания и открытия Императорского Московского воспитательного дома*. М.: тип. Н. Степанова.
2. Миллер, Н. Ф. (1893). *Из прошлого Московского воспитательного дома. Очерк деятельности его за первое 30-летие в период управления И. И. Бецкого*. М.: Типография А. И. Мамонтова.
3. Бобровников, В. Г. (2004). Воспитательные дома России (1764–1917 гг.). *КЛИО*, 1(24), 114–118.
4. *Московские ведомости. Прибавления* (1764). 17 и 27 февраля.
5. Альбицкий, В. Ю., Баранов, А. А., Шер, С. А. (2011). *Императорский Московский воспитательный дом как центр охраны здоровья детей в Российской империи*. Москва: Союз педиатров России. URL: <http://www.spr-journal.ru/sc5/wa-data/public/site/files/Imperatorskiy.pdf>
6. Альбицкий, В. Ю. (2006). «Фабрика ангелов». *Медицинская газета*, 66, 1 сентября. URL: http://www.rusmedserv.com/medgazeta/2006g/66/article_3691.html

7. Артамонов, М. Д. (2002). Московский Воспитательный дом. *Московский журнал. История Государства Российского*. 8, 31–37.
8. *Краткий исторический очерк Императорского Московского воспитательного дома* (сост. В. Красуский) (1878). М.: Тип. Б. Я. Бэрбей.
9. *Материалы для истории Московского воспитательного дома* (вып. 2) (1868). М.: Тип. Т. Рис.
10. Манифест об учреждении в Москве Воспитательного дома. (1830). *Полное собрание законов Российской империи. Собрание первое. Т. 16*. СПб.: Тип. 2-го Отделения Собств. Е.И.В. канцелярии.
11. *Московские ведомости. Прибавления* (1764а). 18 мая, 10 декабря.
12. И-ов, А. (1890). Воспитательные дома в России. *Вестник Европы*, 6.
13. Villerme, L-R. (1850). *Sur les cités ouvrières*. Paris.
14. Wappäus, J. E. (1859). *Allgemeine Bevölkerungsstatistik. Vol. 1*. Leipzig.
15. Öttingen, von A. K. (1874). *Die moralstatistik in ihrer bedeutung für eine christliche sociaethik*. Erlangen.
16. Я-в, А. (1892) Воспитательный дом. *Энциклопедический словарь Брокгауза и Ефрона, VII*. СПб.
17. *Материалы для истории Санкт-Петербургского Воспитательного дома* (сост. Ф. А. Тарапыгин) (1878). СПб.: тип. Р. Голике.
18. Окольский, А. С. (1889). Воспитательные дома. *Юридический вестник*, 1.3.
19. Legouve, E. (1869). *Histoire morale des femmes*. Paris: Librairie Académique Didier.
20. Веселова, А. Ю. (2004). Воспитательный дом в России и концепция воспитания И. И. Бецкого. *Отечественные записки*, 3(18). URL: <http://strana-oz.ru/2004/3>

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