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**CONSEQUENCES OF HUMAN OVERPOPULATION
AND STRATEGIES OF ITS PREVENTION**

The sense of threat resulting from the human overpopulation of our globe is not a new phenomenon. As early as in ancient times, philosophers raised concerns over the excessive number of people that could disturb the stability of society. Plato warned that too large population would lead to poverty and war¹. This opinion was shared by Aristotle, who wrote in *Politics* about the need to restrict procreation for the purpose of avoiding the impoverishment of citizens and common poverty, which could even lead to crime². Nevertheless, ideas presented by ancient philosophers were not put into practice in the policy of any state at that time³.

In this paper, we will try to look at the current demographic situation of the world, paying attention mainly to the potential results of human overpopulation and to various strategies of preventing this phenomenon, particularly in most densely populated countries. There will also be references to the Polish context of the still ongoing population transformation.

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¹ Plato writes: „And they and their children will feast (...) in happy converse with one another. And they will take care that their families do not exceed their means; having an eye to poverty or war”. Plato, *The Republic*, translated by Benjamin Jowett, Book II, <http://www.gutenberg.org/files/1497/1497-h/1497-h.htm> (access: 09.07.2018).

² „One would have thought that it was even more necessary to limit population than property; and that the limit should be fixed by calculating the chances of mortality in the children, and of sterility in married persons. The neglect of this subject, which in existing states is so common, is a never-failing cause of poverty among the citizens; and poverty is the parent of revolution and crime”. Aristotle, *Politics*, translated by Benjamin Jowett, Book II, Part VI, Batoche Books, Kitchener 1999, p. 32.

³ Cf. K. Pluta, *Historia teorii przeludnienia*, „Służba życiu” 1(2004), pp. 6-9.

1. Size of human population

The information made public by the UN that the size of the world's population had reached seven billion on 31 October 2011 sparked another discussion about the potential overpopulation of our planet. In its strict sense, human overpopulation is „(...) the state in which the number of people exceeds the capacity of the environment, i.e., it disturbs the biocenotic balance to such an extent that it begins to impede the further growth of population”⁴. In brief, overpopulation occurs when the number of people is so big that the natural environment is not able to keep the population alive. Is there really a threat of such a situation? In order to answer this question, we should first go back to the times of Thomas Malthus.

In 1798, the then-famous economist from Cambridge announced to the world that uncontrolled procreation will cause the number of population to grow in a geometrical (exponential) way, whereas the production of food increases only in an arithmetic (linear) manner. If these two tendencies are left uncontrolled, human overpopulation will become a fact, and so will the apparition of mass starvation, epidemics and wars. Thus, „moral continence”, e.g. marrying later in life, the sexual abstinence of indigenous spouses, the low level of wages and salaries, the suspension of support for the lower social strata were supposed to be the best solution to the „demographic bomb”⁵.

Much time has already passed since the proclamation of Malthus' theses has grown several times and continues to grow. Malthus did not predict that the industrial revolution would result in an increase of production and would satisfy the food needs of the growing number of people. It seems that he failed to consider an important issue: namely, that human overpopulation does not depend only on the size of population itself, but on the scope of population of the planet, i.e., on the scope of food production⁶.

According to current demographic data, the number of population will exceed 9 billion persons by 2050⁷. Five new people are born in the world approximately every second, and two die during that time. Changes in the size of the entire human population are caused by many factors. Ewa Frątczak lists four such factors: (1) fertility, (2) mortality, (3) migrations, (4) the process of formation and breakdown of families⁸. At first glance, the factor of the bigger number of children being born would be the most convincing. However, reality

⁴ Sz. Szczęch, *Przyrost nienaturalny*, „Znak” 692(2013), no. 1, p. 11.

⁵ Cf. B. Mepham, *Bioetyka*, Warszawa 2008, pp. 90-91; Sz. Szczęch, *Przyrost nienaturalny*, art. cit., pp. 11-12; K. Pluta, *Historia teorii przeludnienia*, art. cit., p. 7.

⁶ Cf. Sz. Szczęch, *Przyrost nienaturalny*, art. cit., p. 11.

⁷ The changing number of the world's population can be traced on a running basis (at every second) at: <http://www.census.gov/popclock/> (access: 02.07.2018).

⁸ Cf. E. Frątczak, *Sytuacja demograficzna Polski okresu transformacji. Zmiany w podstawowych procesach demograficznych 1989-2006*, in: *Przedłużanie życia jako problem moralny*, ed. B. Chyrowicz, Lublin 2008, pp. 77-78.

turns out to be different. The main factor of the increasing human population on our planet is the prolonging period of human life and the decreasing human mortality rate⁹.

2. Ageing population and decreasing fertility rate

The phenomenon of ageing population involves numerous circumstances. To put it most generally, we can say that it involves the prolongation of human life, the decrease of the population growth rate, the increase of prosperity and the improvement of life quality. Larger access to health care, the increasing level of social security, better social and living conditions, the promotion of general and health knowledge, the activity of organizations supporting the activity of old-age persons on the domestic and international level are the main factors that decrease the mortality rate on the one hand and lead to the prolongation of the average length of human life on the other hand¹⁰.

According to the UN's estimates, over 580 million people aged more than 60 years lived in the world in 2002, most of them living in highly developed countries¹¹. Forecasts show that 33% of Italian and Japanese population, 25% of U.S. population and 22% of Germans will exceed the age of 60 years in 2025. It is estimated that the number of people aged more than 65 years in the world will reach almost 1.5 billion. The demographic trend of ageing of the population of a given country or region will become the most visible in the oldest continent of the world – Europe and in Japan¹².

According to demographic forecasts conducted in Poland and publicly disclosed in the Forecasting Committee Memorial „Poland 2000 Plus”, the number of persons of retirement age will increase from 5.9 million in 2005 to 9.6 million in 2030¹³. This means that this social group will increase by 62%. Therefore, the Committee proposes that the following actions be undertaken: (1) the completion of works connected with the pension reform securing the basis of existence, (2) the enlargement of the possibility of additional social insurances (outside the main pension system), (3) the systemic encouragement of the prolongation of the period of professional activity of old-age persons¹⁴. Moreover, the Memorial indicates a series of other actions addressed to old-age

⁹ Cf. B. Mephram, *Bioetyka*, op. cit., p. 79.

¹⁰ Cf. S. Steuden, *Psychologia starzenia się i starości*, Warszawa 2012, p. 15.

¹¹ Cf. *ibid.*, pp. 15-16.

¹² Cf. K. Pluta, *Współczesne trendy demograficzne*, „Służba Życiu” 1(2004), pp. 13-15. For more detailed data see: J. Z. Holzer, *Demografia*, Warszawa 2003, pp. 304-305.

¹³ Forecasts regarding the number of population and the ageing of society in Poland can be found in: Główny Urząd Statystyczny, *Prognoza ludności na lata 2008-2035*, Warszawa 2009, pp. 189-190.

¹⁴ Cf. M. Kleiber, *Memoriał Komitetu Prognoz „Polska 2000 Plus” przy Prezydium PAN dla najwyższych władz Rzeczypospolitej Polskiej w sprawie programu działań na rzecz poprawy sytuacji ludzi w starszym wieku*, <http://www.prognozy.pan.pl/index.php/memoriay/36-memoriay-w-sprawie/64-starzenie-si-spoeczestwa-2008> (access: 02.07.2018).

persons: health protection, care, education, broader access to culture, the improvement of housing conditions, the liquidation of technical barriers, the support of research aimed at limiting the phenomenon of infirmity and diseases of old-age persons¹⁵.

The phenomenon of ageing of societies and the entire human population is not the only issue of demographic changes occurring in the world. In the context of the demographic transformation, an important issue is the transition from the traditional system (the high birth rate and the high mortality rate among infants) to the model with the low birth rate and the reduced mortality rate. In Europe and in Japan, this process is regarded as accomplished. In developing countries, it can still be observed¹⁶.

Population forecasts, which were usually received with anxiety concerning the possibility of overpopulation of the world, providently ignored one important fact that, in spite of the growing number of people, „(...) the global population growth is slowing down and even if it reaches 10 milliard, it is most likely to stop at this level”¹⁷. The industrial revolution acted like a depopulation bomb with delayed ignition. The lowest fertility rate in the 18th-century Europe occurred in Denmark, amounting to 4 (the number of born children per one woman of childbearing age). After World War I, the fertility rate fell below 3¹⁸. Today it is much below 2 in a majority of European countries, which means that it remains on the level that cannot suffice for a simple replacement of generations¹⁹.

Contrary to popular opinions, it is not in Asia that most children are born. The demographic explosion has the quickest pace in Africa, currently amounting to 2.5% in the Sub-Saharan part (in Europe and Central Asia, its total rate is around 0.45%). According to the data of the World Bank, the population growth rate is 2.3 in India, 2.1 in Bangladesh, 2.0 in Vietnam, 3.3 in Egypt, 2.5 in Saudi Arabia, 1.7 in Iran and 1.6 in China. In European countries, the fertility rate is even lower. For example, it amounts to 1.5 in Germany, 1.4 in Italy and 1.3 in Poland²⁰. What are, then, correlations between the number of children per woman in highly developed countries and the number of children per woman in Third World countries?

At least two types of correlations seem to exist: (1) the more children per woman in a given country, the higher the mortality rate, (2) the higher the per capita GNP rate, the smaller number of children per woman. These correlations

¹⁵ Cf. *ibid.*

¹⁶ Cf. K. Pluta, *Ludność świata – stan obecny*, „Służba Życiu” 1(2004), pp. 11-12.

¹⁷ Sz. Szczęch, *Przyrost nienaturalny*, art. cit., p. 12.

¹⁸ Cf. *ibid.*, pp. 12-13.

¹⁹ Cf. J. Z. Holzer, *Demografia*, op. cit., p. 254; E. Frątczak, *Sytuacja demograficzna Polski okresu transformacji*, art. cit., p. 86; F. Fukuyama, *Koniec człowieka. Konsekwencje rewolucji biotechnologicznej*, Kraków 2008, p. 90.

²⁰ Cf. *Fertility rate, total (births per woman)*, <http://data.worldbank.org/indicator/SP.DYN.TF.RT.IN> (access: 02.07.2018).

originate from a number of reasons. In poorly developed countries, the death of one child is compensated for by the birth of another (the psychological reason). Moreover, children have to work on an equal par with adults (e.g., in Sub-Saharan Africa), so the bigger number of children in the house, the more money earned and the higher the chance to survive for the entire family (economic reasons). On the other hand, in highly developed countries, we can notice the unwillingness to share income with a larger number of children, because that would mean a decrease of the material standard of living (psychological and egoistic reasons). As children do not work in wealthier countries, the responsibility for covering all expenses in the household rests with parents; the latter, realizing that they cannot provide adequate living conditions to a larger number of children, do not decide to have a larger number of offspring for economic or moral reasons²¹.

There are certainly more arguments for the regulation of the population of children both in highly developed countries and in poorly developed countries (e.g., religious and cultural factors). Nevertheless, the prevailing tendencies indicate that the fertility rate still has a decreasing tendency on a global scale. Does that mean that Earth is endangered with depopulation rather than overpopulation?

3. Consequences of human overpopulation

3.1. Repugnant Conclusion

Even though Malthus's predictions have been postponed, it is impossible to rule out completely arguments submitted by his contemporary supporters – Neo-Malthusians, who predict that humanity may be brought to the limits of the possibility of survival in the near future. Food resources are only one of the limitations. Also, the decreasing quantities of natural resources and the growing environmental pollution may cause a global catastrophe²².

According to some forecasts, a large number of population (around 1 billion) will move to cities in the next few years, which will increase the number of „mega-cities”. These migrations will contribute to the deepening of crisis on the labour market, to the insufficient number of flats, water and food resources, which in turn will lead to the aggravation of „social diseases”: corruption, crime, prostitution, alcoholism, the abuse of drugs, armed conflicts between ethnic groups and other pathologies²³. Referring to Derek Parfit's opinion, we can say that the increase of human population may result in a worse situation for all people (the lower level of satisfaction, the lower quality of life, the smaller participation of each person in common resources)²⁴.

²¹ Cf. Sz. Szczęch, *Przyrost nienaturalny*, art. cit., pp. 13-14.

²² Cf. B. Mepham, *Bioetyka*, op. cit., p. 92.

²³ Cf. W. Wosińska, *Oblicza globalizacji*, Sopot 2008, pp. 192-193.

²⁴ Cf. D. Parfit, *Racje i osoby [Reasons and Persons]*, translated into Polish by W. M. Hensel, M. Warchała, Warszawa 2012, p. 436, 440.

If the number of population grows, we can temporarily have both good and bad consequences. The former include national economy activities (although an increase of population may not be beneficial for economy, a low growth rate may be better than the lack of it) or non-economic activities (e.g., bigger families are usually happier, many people want to have more children). Negative consequences would be generated by a steady decrease of participation in access to resources per person²⁵.

The aforementioned philosopher Parfit carries out a thought experiment in which he considers the occurrence of consequences created in some part of the world by two different population growth rates²⁶. Thus, we can suppose that areas where the population growth rate would be higher would be more densely populated, so everyone would be in a worse situation. In order to avoid unnecessary complications, let us make two assumptions: (1) inequality between people would be impossible, i.e., nobody could be in a worse situation than others, (2) every human life would be worth living²⁷. Taking these assumptions into account, we can imagine two options (see Fig. 1): (1) A – living people enjoy an averagely pleasant standard of living, (2) B – living people experience a lower standard of living than people living in A. This happens because there are twice as many people living in B than in A. Nevertheless, the life of people from B is more worth living as compared to the life of people with A, even though the standard of living of people from A is higher (a lower level of pollution, higher income, etc.). Parfit reaches this conclusion by referring to the hedonistic version of the *Impersonal Total Principle*, which he defines as follows: „If other things are equal, the best outcome is the one in which people’s lives go, on average, best – the biggest total net happiness upon deduction of unhappiness”²⁸. According to this principle, life in B would be better than life in A, because there would be more happiness in B. In other words, in spite of differences in the quality of life, the total sum of happiness is bigger in B, because there are twice as more people in B, which means that they have more happiness than people living in A²⁹.

²⁵ Cf. *ibid.*, pp. 436-437.

²⁶ Cf. D. Parfit, *Overpopulation and the quality of life*, in: *Applied Ethics*, ed. P. Singer, Oxford 1986, p. 145.

²⁷ Cf. *ibid.*, p. 146.

²⁸ D. Parfit, *Racje i osoby* [*Reasons and Persons*], *op. cit.*, pp. 442-443.

²⁹ Cf. *ibid.*, p. 443.

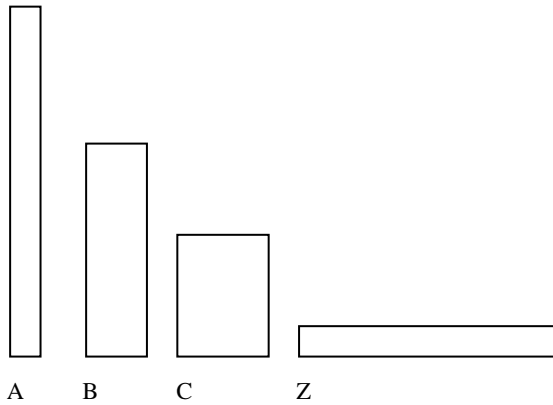


Figure 1. Source: D. Parfit, *Overpopulation and the quality of life*, in: *Applied Ethics*, ed. P. Singer, Oxford 1986, p. 148. The width of every rectangle indicates the number of living people, whereas height stands for the quality of their life.

Referring to such method of reasoning, we can say that, since the life of people in B is better than that of people in A, the life of people in C would be better than the life of people in B, which means that the life of people in Z would be the best. In this way, we approach the *Repugnant Conclusion*, which states that „for any possible population of at least ten billion people, all with a very high quality of life, there must be some much larger imaginable population whose existence, if other things are equal, would be better, even though its members have lives that are barely worth living”³⁰.

We can imagine a huge population of Z, where people’s life would slightly exceed the level of life not worth living. Even though people living in Z do not experience anything wrong, they experience little happiness and good. Their life is devoid of suffering but everything they have is poor music and potatoes. Although, because of a huge number of people in Z, the experience of happiness is small, the total sum of happiness is the biggest, anyway (as compared to C or B or A), which means that life in Z is barely worth living, but still worth living³¹.

Parfit’s analyses can be successfully correlated with contemporary trends of demographic changes occurring around the world. The situation of people living in A would probably refer to highly developed countries, whereas the situation of people living in Z would refer to a majority of Third World countries. Although the recalled deliberations are merely a thought experiment, the question how many people should live in the world does not seem pointless in the context of prolonging human life.

³⁰ Ibid., p. 444.

³¹ Cf. D. Parfit, *Overpopulation and the quality of life*, art. cit., p. 148.

3.2 Global poverty

The *Repugnant Conclusion* by Parfit carries a pessimistic vision of life barely worth living. We can imagine a huge population of people living on a very low level that we could rightfully call the poverty level. What stands for „poverty”? It is said that poverty means hunger and malnutrition, lack of shelter, diseases, illiteracy, unemployment, high infant mortality, low life expectancy, fear of the future, helplessness or lack of freedom³². Almost half of the world's population lives in poverty, and one sixth of people live in conditions that are called „mass poverty”, „absolute poverty”, the „irreducible core of poverty”, „the poverty that kills”³³. The consequences of this phenomenon are very complex and difficult to measure³⁴. We can observe them on the individual level and, in a broader context, on the level of particular states. In the individual perspective, the most significant consequences include malnutrition and the lack of access to health care and education, which occur commonly in Third World countries. In wealthy countries, where basic needs are satisfied even on the level of the poorest social strata, attention is focused mainly on social exclusion, i.e., the impossibility of participation in the life of the local community³⁵.

According to Katarzyna Czaplicka, the reasons for which poverty arises and lasts involve mainly economic and non-economic factors. The former are related to the lack of access to goods and services that are regarded as common in a given society. On the other hand, non-economic factors refer to differentiation on the level of wealth of the natural environment³⁶. States differ in respect of possibilities of generating income as a result of climate, terrain, the quality of soil, natural resources (including water), population density, etc. Particular countries have never managed the „equal field”³⁷.

There are many signs that the problem of poverty is based not only on unequal access to natural environment resources or on economic factors. The problem of poverty refers to a more fundamental issue. We can call it „natalistic mentality”. This is another point of our analyses.

³² Cf. P. Singer, *Practical Ethics*, Cambridge 1993, p. 220, 230; K. Czaplicka, *Globalne ubóstwo. Perspektywa społeczno-ekonomiczna*, „Dialogi o rozwoju” 1(2007), p. 6.

³³ Cf. T. Kwarciniński, *Granice moralnej odpowiedzialności za problem światowego ubóstwa*, „Annales. Etyka w życiu gospodarczym” 9(2006), no. 1, p. 233.

³⁴ An overview of various concepts of poverty and methods of its measurement is presented by Amartya Sen in: *Poverty and Famines. An Essay on Entitlement and Deprivation*, Oxford 1982, pp. 9-38.

³⁵ Cf. K. Czaplicka, *Globalne ubóstwo. Perspektywa społeczno-ekonomiczna*, art. cit., pp. 13-14.

³⁶ Cf. *ibid.*, p. 14.

³⁷ Cf. D. S. Landes, *Bogactwo i nędza narodów. Dlaczego jedni są tak bogaci, a inni tak ubodzy* [*The Wealth and Poverty of Nations: Why Some are So Rich and Some So Poor*], translated into Polish by H. Jankowska, Warszawa 2007, p. 23.

4. Solutions to the problem of human overpopulation in the world

4.1. Birth control

Analyses concerning the problem of human overpopulation cannot ignore the asymmetry of human population, i.e., the disproportionate distribution of people around the world. If human overpopulation occurs when the number of people exceeds the capacity of the environment, it is difficult to agree with the statement that the phenomenon of overpopulation endangers countries of contemporary Europe. Even huge international migrations have not created a serious danger for the oldest continent of the world so far. In the case of Europe, we should rather speak of demographic crisis³⁸. Things are different for such regions of the world as Sub-Saharan Africa, China, or India. The fear of the exhaustion of natural resources, environment pollution or the excessive population of the given territory may prove reasonable here. What remedies have been undertaken by the most densely populated countries of the world in order to avoid the problem of overpopulation?

In China, for over 30 years, families had to comply with the regulation that can be called „single-child policy”³⁹. Some time ago, this regulation was abolished. Nevertheless, estimated figures show that, as a result of population control, around 400 million fewer people were born in China⁴⁰. The family control policy was introduced in a very restrictive manner. Already from 1980 on, the authorities began to develop a computer system that was used for collecting data concerning the most intimate details of life of Chinese women. This system allowed the authorities to determine the number of pregnancies, children born, the stage of the woman’s menstrual cycle, her sexual partners and other details concerning her health and fertility. In addition, surveillance was supported by a system of special officers – informers⁴¹. If it turned out that a woman had become „illegally” pregnant or failed to report for compulsory quarterly examinations, a compulsory abortion was carried out towards her, and she was punished with sterilisation and a heavy fine⁴². There were cases that newborn children, mainly female ones, were thrown into a well or drowned in rivers⁴³. What have these actions brought about? Bogdan Góralczyk states that the birth control policy in China has had the following consequences: (1) the disturbance of the proportion between girls and boys in the population (currently around 108 boys per 100 girls are born in China), (2) the fast ageing of society (one third of the Chinese will exceed the age of 65 years around 2030), (3) hedonis-

³⁸ Cf. W. Wosińska, *Oblicza globalizacji*, op. cit., pp. 199-200.

³⁹ Cf. B. Mepham, *Bioetyka*, op. cit., p. 96.

⁴⁰ Cf. B. Góralczyk, *Kraina małych cesarzy*, „Znak” 692(2013), no. 1, p. 23.

⁴¹ Cf. T. Pisula, *Kto wspiera chiński totalitaryzm?*, „Służba Życiu” 1(2004), pp. 9-10.

⁴² Cf. *ibid.*

⁴³ Cf. B. Góralczyk, *Kraina małych cesarzy*, art. cit., p. 22.

tic attitudes (the generation of only children or „little emperors” is unable to work in a group)⁴⁴.

Similar restrictive practices have been applied in the second most densely populated country of the world: India. Women and men are subjected to voluntary or compulsory sterilisation (e.g., for eugenic reasons). Abortion practices are also frequent there. In some Indian provinces, the birth control policy is less restrictive but equally effective. A good example is the Indian province of Kerala, where women enjoy a high social status. In this part of India, it has been observed that a high level of education and independence among women has a strong impact on effective family planning and on a low level of illiteracy and the infant mortality rate. Both compulsory primary education and broadly available (often free) health care services play an important role in this process. This egalitarian approach to population control is a sort of alternative to different medical strategies used in other provinces of India or in China⁴⁵. However, is the restriction of the number of human population really the most effective way of overcoming the problem of overpopulation? Maybe there are other methods – less restrictive and more effective?

4.2. Counteracting of poverty

Referring to the „demographic trap” (a larger number of births leading to a larger number of deaths), contemporary Neo-Malthusians are inclined to adopt an attitude that considers it necessary to reduce the size of human population and narrow the scope of aid being given to inhabitants of Third World countries. Some time ago, one of the most extreme ideas about helping the poor was put forward by Garrett Hardin. This author refers to the metaphor of a „lifeboat”⁴⁶. Hardin suggests that all who escape from famine (inhabitants of poorly developed countries) try to get into a lifeboat that is the only method of survival. The lifeboat carrying passengers (inhabitants of highly developed countries) is equipped with a limited number of places. Assuming that all persons staying outside the boat have the same needs and that each of them can be called „our brother”, we could take all persons (100) staying in the water into our lifeboat and increase the number of passengers to 150. However, our boat has only 60 places, 50 of which are already occupied. Therefore, if we take all persons staying overboard to the boat, we will bring about a catastrophe and the boat will sink. What should passengers of the boat do, then? Hardin believes that passengers should leave empty places as a sort of safety space. If any passenger feels guilty of having been lucky to get into the lifeboat, he can give place to a drowning person, but he cannot force any other passengers to do the same⁴⁷.

⁴⁴ Cf. *ibid.*, pp. 24-25.

⁴⁵ Cf. B. Mepham, *Bioetyka*, op. cit., p. 96.

⁴⁶ G. Hardin, *Lifeboat Ethics: The Case Against Helping the Poor*, „Psychology Today” (1974), September, p. 39.

⁴⁷ Cf. *ibid.*

Looking at Hardin's assumptions, we can ask at least two questions: (1) Why cannot we let anyone into the lifeboat since it contains empty places (after all, if occupied, they will not sink the boat)? (2) If passengers of the lifeboat cannot take everyone on board, why are they not willing to throw „life-buoys” towards drowning persons⁴⁸? The conclusion speaks for itself: Hardin's utilitarian vision seems too egoistic. The bigger the number of person on board, the smaller the quality of their life.

Such concept of a „lifeboat” meets with objection from Peter Singer. He suggests that „if it is in our power to prevent something very bad from happening, without thereby sacrificing anything of comparable moral significance, we ought to do it”⁴⁹. In consideration of the above opinion and two assumptions: (1) absolute poverty is a bad thing, (2) it is within the power of the affluent to reduce absolute poverty, without sacrificing anything of comparable moral significance, Singer concludes that we should prevent „absolute poverty”⁵⁰.

As we can see, instead of narrowing responsibility for the problem of global poverty, the opinion of the Australian moral philosopher tends to broaden it⁵¹. Singer writes that if we have money to spend on luxuries, knowing that others are starving, we can also afford higher generosity to minimise poverty. Nevertheless, the reduction of poverty cannot be done in an arbitrary manner. In Singer's opinion, certain restrictions are necessary, i.e., effectiveness and counterproductivity of aid, and the maintenance of minimum partiality by those who provide it. According to the first restriction, we should not reduce poverty in the countries that do not want to decide on the effective control of the number of births (contraceptives, sterilisation) or do not want to make effective use of aid offered to them. According to the second restriction, the standard of aid should not be set too high because such action might discourage persons from giving any kind of help to the poor. The restriction concerning minimum partiality is based on providing help to our loved ones in the first place, but only when they are in the same situation as those who are experiencing „absolute poverty”⁵².

Helping those who are experiencing „absolute poverty” is certainly a generous act. However, Singer's opinion that aid should be provided only to the countries that approve the controlled restriction of the population growth can be regarded as very controversial. As we can see, Singer's suggestion does not differ much from solutions promoted in China and India. Is it possible to coun-

⁴⁸ Cf. M. Soniewicka, *Granice sprawiedliwości, sprawiedliwość ponad granicami*, Warszawa 2010, p. 117.

⁴⁹ P. Singer, *Practical Ethics*, op. cit., p. 229; P. Singer, *Famine, Affluence and Morality*, in: *Ethical Theory. An Anthology*, ed. R. Shafer-Landau, Oxford 2012, p. 467.

⁵⁰ Cf. P. Singer, *Practical Ethics*, op. cit., p. 231.

⁵¹ Cf. T. Kwarciniński, *Granice moralnej odpowiedzialności za problem światowego ubóstwa*, art. cit., p. 237.

⁵² Cf. P. Singer, *Practical Ethics*, op. cit., pp. 240-246.

teract poverty without using morally uncontroversial practices aimed at limiting procreation?

According to Hans Rosling, the solution to this problem seems too simple because it is based on reducing mortality. Fewer children are born where more of them survive, and more of them survive where a higher level of development exists. Thus, if we want to reduce population, we must ensure the possibility of development to the poorest. The economic growth of most poorly developed countries, as well as ensuring the economic independence and education of women and a higher awareness of family planning methods lead to a lower fertility rate, a higher survival rate and a higher standard of living. The aim of actions proposed by Rosling is to reduce the size of poverty rather than the size of population. The number of the poor is large not because there are many of them, but because poor people live in poverty (they need many hands to maintain their families). Briefly speaking, the size of population is a consequence of poverty rather than its reason⁵³.

Contemporary discussions about human overpopulation are usually based on two arguments: (1) too large population makes it impossible to feed all inhabitants of Earth, (2) an excessively large number of people will disturb the balance of our planet. These arguments do not seem to find confirmation in reality for at least two reasons: Firstly, the annual production of cereals on the level of 2.3 billion tons is sufficient to feed all inhabitants of our globe. With such amount of food, it is possible to feed an even larger population. According to calculations, 1.3 billion tons of food are discarded because of waste or high costs of storage and transport⁵⁴. Secondly, if an inhabitant of the West speaks of the danger of disturbance of the balance of our planet without considering the fact that the average American consumes 280 times more energy than the average inhabitant of Bangladesh, and the entire United States with its population of over 300 million people emit the same quantity of carbon dioxide as all inhabitants of India, Russia, Indonesia, Brazil, Pakistan, Bangladesh and Iran (2.2 billion of people), Szczęch is right to say that this specific case is a proof of hypocrisy⁵⁵. The opinion suggesting that we need justice and solidarity rather than balance, becomes adequate. Today we do not have too many people, but too many unbridled consumers. If we are to reduce population, this refers to the latter rather than the former⁵⁶.

Conclusion

The conducted analyses should not leave the slightest doubt about the fact that the argument stressing the global scale of the problem of human overpopu-

⁵³ I quote Rosling's view after: Sz. Szczęch, *Przyrost nienaturalny*, art. cit., p. 14.

⁵⁴ Cf. J. Gustavsson et al., *Global food losses and food waste. Extent, causes and prevention*, Rome 2011, pp. 4, 10-14.

⁵⁵ Cf. Sz. Szczęch, *Przyrost nienaturalny*, art. cit., p. 15.

⁵⁶ Cf. *ibid.*

lation is at least an overinterpretation. Opinions suggesting that an excessive number of population will make it impossible to feed all inhabitants of Earth and will disturb the balance of our planet turn out to be false. There are strategies that help avoid negative consequences resulting from the growing number of inhabitants of Earth, particularly in most densely populated areas. Actions aimed at reducing global poverty seem to be an effective and morally uncontroversial way of dealing with negative consequences of potential overpopulation.

Summary

The sense of threat resulting from the potential overpopulation of our globe is not a new phenomenon. As early as in ancient times, philosophers raised concerns over the excessive number of people that could disturb the stability of the state. Looking at the current demographic situation in the world, the author of the paper focuses on potential consequences of human overpopulation as well as various strategies of preventing the negative consequences of this phenomenon. The conducted analyses show that the reduction of poverty is a morally uncontroversial method of overcoming difficulties related to the growing number of inhabitants of our planet.

Key words: human overpopulation, population growth rate, poverty.

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