THE HEYTHROP JOURNAL

HeyJ 00 (2025), PP. 1–12

THE MATTHEW EFFECT AND ETHICS

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Abstract: The unequal distribution of goods seems to be a permanent phenomenon both nationally and globally. Although the historical details of the roots of inequality may vary slightly from country to country, one of the main causes is the so-called 'Matthew effect', which refers to the accumulation of advantages. The rich get richer, and the poor get poorer. In this paper, I argue that although the Matthew effect has a bad moral reputation, this effect is inherently neither bad nor good. I introduce four variants of the effect, which represent the most common usages of the term by researchers, and point out that they all have instances that are morally unproblematic. However, I also argue that, in many cases, there are convincing moral reasons to try to reduce the accumulation of advantages. The intuition that the Matthew effect is ethically problematic has good grounds in specific common cases. Therefore, I argue that the Matthew effect deserves its bad reputation.

I. INTRODUCTION

The richest one percent of people have more wealth than the bottom 95 percent of the population globally. Ultra-rich individuals wield exceptional power over economies, and at many top corporations around the world, the principal shareholder is a billionaire. Although almost eighty percent of people live in the Global South, these countries possess only a small portion of the world's wealth.[1] The numbers change every year, but not remarkably so. Thus, the unequal distribution of goods seems to be a permanent phenomenon worldwide. This inequality holds at the national level in most—if not all—countries. For instance, from April 2020 to March 2022 in the United Kingdom, the wealthiest one percent of households held ten percent of all household wealth, which was the same proportion held by the least wealthy fifty percent of households put together.[2] In Finland, a country famed for its equality, the wealthiest ten percent of people held 52 percent of all net wealth in 2023.[3]

These numbers can be attributed to a variety of factors. Although the historical details of the roots of extreme inequality may vary slightly from country to country, the main causes are similar everywhere. One of those causes is the so-called 'Matthew effect', which refers to the accumulation of advantages: the rich get richer, and the powerful become even more powerful. Furthermore, the rich are more likely to become powerful, and the powerful are more likely to

[1]Oxfam, 'Multilateralism in an Era of Global Oligarchy: How Extreme Inequality Undermines International Cooperation', Oxfam Media Briefing (23 September 2024).

[2]Office for National Statistics, 'Household total wealth in Great Britain: April 2020 to March 2022', Statistical Bulletin (24 January 2025), https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/totalwealthingreatbritain/april2020tomarch2022(accessed 15 April 2025).

[3]Statistics Finland, https://stat.fi/en (accessed 15 April 2025).

become rich. Of course, wealth and power are not the only goods that tend to accumulate. The Matthew effect can also be seen, for instance, in career development, as a person who already has a good job can more easily ascend to an even better position.

The name 'Matthew effect' comes from the Gospel of St Matthew (25:29), which states: 'For to everyone who has, more will be given, and he will have more than enough'.[4] In economics, the term 'Matthew effect' was first used in the 1940s by James Duesenberry.[5] The term was made popular in the 1960s by sociologist Robert K. Merton, who noticed that better-known scientists tend to get more credit than less-well-known scientists for the same achievements.[6]

In this paper, I evaluate the Matthew effect from an ethical point of view. This effect has a bad moral reputation, but I ask whether this infamy is justified. I argue that, in itself, the Matthew effect is neither bad nor good. This effect, also known as the 'Matthew principle', is morally neutral as such. However, I also argue that, in many cases, there are convincing moral reasons to try to reduce the accumulation of advantages. The intuition that the Matthew effect is ethically problematic has good grounds in specific cases that are relatively common. This result is hardly surprising. I identify the most common and most serious moral problems with the effect.

I proceed as follows. First, I briefly review what has been said about the ethical status of the Matthew effect. I then introduce the effect's four variants, which correspond to how the term is most commonly used, and point out that they all have instances that are morally unproblematic. Finally, I explain why the Matthew effect has a bad reputation—and why it deserves that reputation.

II. A BAD REPUTATION

In the Bible, what was later called the Matthew effect was originally portrayed in a positive light. It was considered good that morally talented people become even more talented and grow spiritually.[7] Similarly, people sometimes talk about the 'virtuous cycle', which refers to a process in which a person, team, company, or university manages to succeed, and then the achieved success starts to replicate itself. Success breeds success. This cycle is not always considered unfair. On the contrary, growing inequality is sometimes considered functional and socially beneficial. From this perspective, the Matthew effect can be seen as a useful and welcome phenomenon. However, in general, the Matthew effect has a bad reputation and is usually seen as a social mechanism that facilitates the expansion of unfairness and injustice. Sayings such as 'the rich get richer', 'the poor get poorer', and 'vicious cycle' all have pejorative meanings and negative connotations. They suggest that many of us think something is morally wrong when advantages accumulate, and initially small differences grow over time. The common understanding of the Matthew effect is thus negative and critical.

[4]Christian Standard Bible. Cf. the Gospel of St Luke, 19:26.

[5]Dilruba Mahbuba and Ronald Rousseau, 'The Matthew Effect and a Relation with Concept Symbols and Defaults', *Annals of Library and Information Studies* 58, no. 4 (2011): 335–345, esp. 336.

[6]Robert K. Merton, 'The Matthew Effect in Science', *Science* 159, no. 3810 (1968): 56–63, https://doi.org/10.1126/science.159.3810.56.

[7]Matjaž Perc, 'The Matthew Effect in Empirical Data', *Interface* 11, no. 98 (2014): 1–15, https://doi.org/10.1098/rsif.2014.0378.

The same holds for the research literature. Although few publications have analysed the Matthew effect from an ethical perspective, the claim that this effect generates injustice is frequently repeated. For instance, Merton pointed out that it is unfair for some famous scientists to get disproportional credit for their skills and work.[8] Many authors have argued that the same is true in other contexts. Matthew S. Bothner and colleagues write that it is 'well understood that the Matthew Effect is central among the dynamics that generate social and economic inequality'.[9] As examples of sectors in which these dynamics are evident, they mention education, career attainment, and household income.[10] In their paper on cumulative accumulation, Thomas DiPrete and Gregory Eirich point out that the Matthew effect is 'an explanation of growing inequality' and that it 'makes it difficult for an individual or a group that is behind at a point in time in educational development, income, or other measures to catch up'.[11]

Scholars have frequently considered methods for halting the Matthew effect or minimising its influence. This suggests that the effect is considered problematic; people try to prevent something only if it is undesirable. In his book, *The Matthew Effect*, Daniel Rigney lists many possible ways to reduce the force of the Matthew effect.[12] The measures he mentions include regulating competition: 'Competitive systems, such as commercial markets or athletic leagues, may either promote or undermine Matthew effects, depending on how the competition is structured and regulated'.[13] The other countervailing processes Rigney discusses are egalitarian social movements, government efforts to counteract the Matthew effect, and altruistic individuals deciding to act in ways that redistribute benefits to the less advantaged.[14] Regarding reading and writing skills, Virginia Berninger asks which 'combination of interventions' could overcome the Matthew effect.[15] Martin McMahon argues that tax systems should address the problem raised by 'the Matthew Effect in the distribution of incomes'.[16]

[8]Merton, 'The Matthew Effect in Science'.

[9]Matthew S. Bothner et al., 'When Do Matthew Effects Occur?', *Journal of Mathematical Sociology* 34, no. 2 (2010): 80–114, esp. 82, https://doi.org/10.1080/00222500903310960.

[10]See also Herbert Walberg and Shiow-Ling Tsai, 'Matthew Effects in Education', *American Educational Research Journal* 20, no. 3 (1983): 359–373, https://psycnet.apa.org/doi/10.2307/1162605.

[11]Thomas A. DiPrete and Gregory M. Eirich, 'Cumulative Advantage as a Mechanism for Inequality: A Review of Theoretical and Empirical Developments', *Annual Review of Sociology* 32 (2006): 271–297, esp. 272, https://doi.org/10.1146/annurev.soc.32.061604.123127.

[12]Daniel Rigney, *The Matthew Effect: How Advantage Begets Further Advantage* (New York: Columbia University Press, 2010).

[13]Rigney, *The Matthew Effect*, 100.

[14]Rigney, *The Matthew Effect*, 100-103.

[15]Virginia W. Berninger, 'Overcoming the Matthew Effect', *Issues in Education* 5, no. 1 (1999): 45–53, esp. 52. https://doi.org/10.1016/S1080-9724(99)00020-8. See also Janwillem Bast and Pieter Reitsma, 'Matthew Effects in Reading: A Comparison of Latent Growth Curve Models and Simplex Models with Structured Means', *Multivariate Behavioral Research* 32, no. 2 (1997): 135–167, https://doi.org/10.1207/s15327906mbr3202_3.

[16]Martin J. McMahon Jr., 'The Matthew Effect and Federal Taxation', *Boston College Law Review* 45, no. 5 (2004): 993–1128, esp. 993.

This moral criticism of the Matthew effect reveals that the phenomenon is not always considered inevitable or viewed as a natural law or mechanism. Its origin lies with humans, and it is obviously a social creation, although a similar phenomenon can be found in nature and even biology. Notably, explaining a state of affairs *solely* by referring to the Matthew effect provides only a statistical explanation for the observation that disadvantaged people or groups tend to become more disadvantaged over time. We can tell a person who is old and poor that she is probably poor because people with her background and starting point *tend to be* poor when they are old. However, a deeper explanation would include social actors and their interactions, and explain *why* rich people tend to get richer, *why* a highly educated person may find a better job than an uneducated person, and so on.[17] An interesting explanation would identify the people responsible for rising inequality and for the actions or omissions that cause the Matthew effect. Consider a simple illustration of the accumulation of wealth through the mechanism of compound interest:

> When an initial sum of money is placed into an account in which the interest is reinvested, the accumulation of new wealth depends upon the size of the existing principal. If the interest rate is 5% and is compounded yearly, then a $1,000 account produces a $50 accumulation, whereas a $100,000 account produces $5,000. If the interest rate is constant, the numerical difference between the two unequal starting amounts grows exponentially over time, from $99,000 at the start to $126,000 after five years, to $161,000 after 10 years, and so forth. The yearly increments to these amounts also grow exponentially. However, the ratio of the fortunes remains constant (at 100:1) regardless of how long the process continues.[18]

Who is responsible for the Matthew effect in this case? It is both the people who placed their money into accounts *and* the actors who decided that the interest rate does *not* depend on the size of the principal. (There is not, for example, 10% interest on $10,000, but only 1% interest on $100,000.) Of course, the decision-makers may have had an excellent reason to determine that the interest rate does not depend on the size of the principal. However, be that as it may, they *are* responsible for the decision, and thus for the Matthew effect that follows.[19] (Usually, one will in fact get higher interest on one's investment, the more one invests.)

The Matthew effect describes how good things accumulate among certain groups or people. However, cumulative processes can also run in the opposite direction so that bad things accumulate. An example is health. Obviously, individuals who begin adulthood in good health do *not* generally become healthier and healthier over time, with well-being peaking at the end of life. Those with an early advantage are likely to have better health than people who enter adulthood with poor health, but the trajectory of the healthy person is not defined by monotonic improvement over the course of life.[20] Conversely, people in poor health *do* tend to have even poorer health in the long run. These kinds of accumulation processes can

[17] Miia Bask and Mikael Bask, 'Cumulative (Dis)Advantage and the Matthew Effect in Life-Course Analysis, *PLoS ONE* 10, no. 11 (2015): 1–14, esp. 12, https://doi.org/10.1371/journal.pone.0142447.

[18] DiPrete and Gregory M. Eirich, 'Cumulative Advantage as a Mechanism for Inequality', 272.

[19] Notice that one of the things that increases the force of the Matthew effect is that in most countries, taxation on income from bank interest is lower than taxation on income from work.

[20] Linda K. George and Kenneth F. Ferraro (eds), *Handbook of Aging and the Social Sciences*, 8th edn (San Diego, CA: Academic Press/Elsevier, 2015), 5.

certainly be morally criticised, but such criticism does not concern the Matthew effect, which always includes the accumulation of distributive goods that are generally seen as desirable or at least neutral.

III. FOUR VARIANTS OF THE MATTHEW EFFECT

The Matthew effect has a bad reputation. When a distribution process is strictly governed by the Matthew effect, a person's or group's previous success is the *resource* that partly explains the further advantages. Consider two examples in which this is *not* the case. (1) A runner in a race moves at a constant speed and is quicker than the other runners. Her total distance from the others continues to increase, but only because of her original speed and the duration of the competition. She does not benefit from a good start or an advantageous position in the race.[21] (2) A group of people decide to play the lottery this week and next week with their own coupons. To everyone's surprise, a member of the group wins the jackpot in the first week. However, an even bigger surprise follows. The second week comes, and the same person wins the jackpot again. Now, we can safely say that a rich person grew even richer, but this process is obviously not an example of the Matthew effect. The person's second win did not have anything to do with her first win.

Examples of *real* Matthew effects come in four different forms. To understand these forms, two distinctions must be made. First, it is useful to distinguish between absolute Matthew effects and relative Matthew effects.[22] Suppose that the distributive good is 'power'. This involves the absolute Matthew effect, according to which the powerful get more powerful, while the powerless get more powerless. In a zero-sum game, this is likely to happen. However, if the powerful get more powerful, while the powerless get more powerful at a slower rate, the process embodies a relative Matthew effect. When the total quantity of resources is fixed, so that one group of people can get more resources only if some other group gets less than before, relative Matthew effects are impossible. Indeed, they are frequently impossible, although John Rawls and his followers have supported the so-called Pareto argument for inequality, which claims that justice may require that the rich get richer, as this can be a way to improve the position of disadvantaged people.[23] The relative Matthew effect allows the gap between the advantaged and the disadvantaged to grow rapidly and intensely.

Second, it is important to distinguish between Matthew effects that concern the accumulation of one distributive good and those that concern an interplay of goods. Let us call the first 'monopoly Matthew effects' and the second 'dominance Matthew effects'. The monopoly Matthew effect is at issue when the rich get richer, the powerful become more powerful, and so on. In the context of

[21] DiPrete and Gregory M. Eirich, 'Cumulative Advantage as a Mechanism for Inequality', 273.

[22] Rigney, *The Matthew Effect*, 8.

[23] John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971), 60. See also Gerald A. Cohen, 'The Pareto Argument for Inequality', *Social Philosophy and Policy* 12, no. 1 (1995): 160–185, https://doi.org/10.1017/S026505250000460X. Cohen argues that Rawls's theory of justice is an argument for inequality. However, Cohen (161) also points out that the 'difference principle is (at least) logically compatible with an equal distribution of goods, for it says that inequality is justified if (and only if) it renders the worst off better off than they would otherwise be: the principle itself does not say when, if ever, that condition on the justifiability of inequality is satisfied, as a matter of social fact'. The idea that inequalities help the poor is an empirical assumption that can easily be contested.

monopoly Matthew effects, a particular distributive good is a resource that helps those who possess it get more of that same good. However, when having a certain distributive good helps make it significantly easier to get some *other* distributive good, the issue concerns the dominance Matthew effect. If having a lot of money is the key to gaining an education, political power, and access to high-quality health services, among many other goods, then money is the dominant good that dominates the distribution of other goods.[24] Of course, the dominant good in a particular society at a given time need not be money. It could also be one's religious status (as in a theocracy), or talents (as in a meritocracy), for instance.

Using these two distinctions, we can formulate four variants of the Matthew effect. These four variants correspond to the most common meanings of this term in the literature.[25]

1. *The Absolute Monopoly Matthew Effect*. The rich get richer, while the poor get poorer.
2. *The Absolute Dominance Matthew Effect*. The rich get more powerful, educated, and connected, while the poor get less powerful, educated, and connected.
3. *The Relative Monopoly Matthew Effect*. The rich get richer, while the poor get richer at a slower rate.[26]
4. *The Relative Dominance Matthew Effect*. The rich get more powerful, educated, and connected, while the poor get more powerful, educated, and connected at a slower rate.

Although the Matthew effect is infamous, all variants can be—and often are—morally unproblematic. This is hardly surprising. Merton already pointed out that the Matthew effect may have destructive as well as constructive results.[27] This is especially easy to see in contexts involving a relatively small number of people. Let us consider some examples.

1. *The Absolute Monopoly Matthew Effect*. Suppose a person likes climbing. In comparison to her friends, who do not practise this hobby and do not want to, she is a very good climber. As the years go by, the gap between her climbing talents and her friends' climbing talents grows and grows, mainly because of her previous climbing experience, which is used as a resource in the process of improving. Additionally, her friends who do not climb get older and would thus be even worse off should they try to climb. Formally, this is an instance of the absolute monopoly Matthew effect, even though the distributive good in the example (climbing talent) is not scarce.[28] In principle, they could all develop their climbing skills if they wanted. But they do not want this. From an ethical point of view, the situation is unproblematic. There is nothing unfair about the accumulation of the distributive good. The advantaged party's gain is not won at the expense of her friends.[29]

2. *The Absolute Dominance Matthew Effect*. Consider the following example. Anna is clearly the most educated person in a family that has six members. Because of her advanced education, Anna gets work opportunities from various upmarket places and, every now and

[24]Michael Walzer, *Spheres of Justice: A Defence of Pluralism & Equality* (New York: Basil Blackwell, 1983), 12.

[25]This impression is not based on any statistical data. By reading the articles on the topic, one can see that these four different meanings are the most common.

[26]Rigney, *The Matthew Effect*, 12.

[27]Rigney, *The Matthew Effect*, 16, 97.

[28]Many examples of the Matthew effect concern the distribution of goods that are not scarce. Reading skills is a typical example.

[29]Rigney (*The Matthew Effect*, 12) argues that 'Matthew effects […] raise numerous ethical questions, though they seem to raise fewer such questions when one party's gain is not won at the expense of others'.

then, she accepts them. As the years go by, Anna becomes more and more educated and experienced, and it is easier than ever for her to get good jobs. Her parents and siblings are happy because of Anna's success. They do not envy her. They work at their successful family company, all holding good positions, and everyone's self-rated happiness (and income) is very high. The competition is fierce in the job market and after working for years at their own company, it would be even more difficult to get hired by some elegant firm. However, they are fine with this. This is an example of the absolute dominance Matthew effect. Again, from an ethical point of view, everything is fine.[30] Anna's success—an instance of the Matthew effect—does not harm anyone, and it is completely acceptable for highly educated people to succeed in the job market.

3. *The Relative Monopoly Matthew Effect*. Suppose that three sisters receive a considerable amount of money as an inheritance. The shares are equal. The youngest sister keeps her money in a special bank account with a very good interest rate. The other two put some money in a similar account, but they also decide to use some of their new wealth to buy goods such as fast cars, expensive paintings, luxurious vacations, and fancy apartments. As a result, the youngest sister is soon a bit richer than her sisters. After a few years, she is clearly the richest of the three, although the other two are also getting richer, despite their lifestyles. This is an example of the relative monopoly Matthew effect, although the sisters' shares were initially equal. The youngest sister's superior wealth is attributable to her earlier success in getting richer than her sisters. However, it is hard to see how things could be considered unfair here (that is, if we do not oppose massive inheritances as such, or if we do not consider the situations of other people). They all used their money in the way they preferred, and each was free to do whatever she wanted.

4. *The Relative Dominance Matthew Effect*. Consider the following case. A researcher in a department of religious studies at some university manages to find useful collaborators at an early stage of her career. Her colleagues are similarly relatively good at networking, but not as good as her. As a consequence, she gets more invitations to conferences than her colleagues, and more chances to publish in edited volumes, handbooks, and journals that concern her research topics. All researchers in the department are granted equal resources to travel and invite visitors, but because of her networking, she travels, publishes, and receives visitors more than others. Because of all this, her networks grow and grow, and much more rapidly than her colleagues' networks. This is an example of the relative dominance Matthew effect. From the point of view of justice, the case seems unproblematic. It is acceptable to use one's networks, particularly when the circumstances are such that others have an equal chance of creating their own networks.[31]

These examples suggest that, ethically speaking, the Matthew effect can be rather innocent.[32] Identifying some process as an instance of the Matthew effect does not in itself tell us whether the process is ethically problematic. However, the Matthew effect is often based on decisions, actions, or omissions that are clearly unjust or otherwise ethically questionable. The fact that the Matthew effect has a bad reputation is easy to explain, and the critical attitude towards the

[30]Everything is not fine, however, when children work in their family's restaurant just because the idea sounds good to the parents who own the business (even if the children are paid well).

[31]Perc, 'The Matthew Effect in Empirical Data', 2.

[32]When two people work and then marry, this improves the economic situation of both, for they have now two incomes but not double expenses. This creates inequality compared to those who do not marry or live with a partner. Arguably, however, this is unproblematic from the moral point of view.

effect can be justified in various ways—despite the fact that, undoubtedly, Matthew effects are often unintended.

IV. ETHICAL PROBLEMS WITH THE MATTHEW EFFECT

In some cases, it is difficult to say whether an instance of the Matthew effect is ethically acceptable or problematic. Merton's seminal observation regarding the accumulation of scientific merits belongs to these cases. It may seem rather obvious that something is wrong when 'the Matthew effect consists in the accruing of greater increments of recognition for particular scientific contributions to scientists of considerable repute and the withholding of such recognition from scientists who have not yet made their mark'.[33] In this context, the Matthew effect seems to conflict with meritocracy in science. However, the issue is not so clear-cut.[34] Michael Strevens has famously argued that it is acceptable for famous scientists to get more credit for the same achievements than their less famous colleagues.[35] In his view, the Matthew effect does not violate the fair distribution of credit, as there is a relationship between reputation and reliability, and the Matthew effect ensures that the overall contribution to society is maximised. Another way to defend the view that the unequal distribution of credit in science is acceptable is to argue that famous scientists' contributions gain more visibility—and therefore have a greater impact—than their colleagues' achievements, and that impact is a fair criterion for the distribution of credit. Perhaps the achievements of scientists of considerable repute and the achievements of less well-known scientists are *not* relevantly similar, after all. This issue is unresolved, however.[36]

How can we justify the common intuition that, in a good many cases, the Matthew effect *is* unfair or otherwise morally problematic? Let us consider what are probably the four most important arguments in favour of minimising the influence of the Matthew effect.

1. First, the initial advantage that provides the starting point for accumulating advantages is often clearly unjust. We could say that, in the name of justice, people should have equal opportunities. However, they rarely do, and this is why the whole process of accumulation is unjust. However, the concept of the 'equality of opportunity' is complicated and unclear,[37] to say the least, and the point here can be made without referring to that concept. Perhaps we can speak simply of bad (or good) luck.

Consider an example mentioned by Gideon Elford. This example suggests that people's choices are generally made in the context of preexisting inequality.

[33]Merton, 'The Matthew Effect in Science', 58.

[34]Rigney, *The Matthew Effect*, 16; Matthew S. Bothner et al., 'Organizing Contests for Status: The Matthew Effect vs. the Mark Effect', *Management Science* 57, no. 3 (2011): 439–457, https://doi.org/10.1287/mnsc.1100.1281.

[35]Michael Strevens, 'The Role of the Matthew Effect in Science', *Studies in History and Philosophy of Science* 37, no. 2 (2006): 159–170, https://doi.org/10.1016/j.shpsa.2005.07.009.

[36]Selcuk Acar, 'Matthew, Pygmalion, and Founder Effects', in *Encyclopedia of Creativity*, 2nd Edition, ed. Mark Runco and Steven Pritzker (London: Academic Press, 2011), 71–85, esp. 78.

[37]Sven Ove Hansson, 'Welfare, Justice, and Pareto Efficiency', *Ethical Theory and Moral Practice* 7, no. 4 (2004): 361-380, http://doi.org/10.1007/s10677-004-2217-0.

> Suppose we have two young people – Sydney and Miriam – who face a choice between going to university to acquire new skills or working a low paying job. The outcome of that choice will affect their prospects for success in applications for high paying jobs in the future, and the earnings from those jobs will far exceed what they are able to earn in a low paying job, even when they take up that low paid work immediately. Sydney enjoys the good […] luck of having been born into a rich family, which can help pay for her university fees and are not themselves suffering from any financial hardship. Miriam, on the other hand, is from a poor family, which does not have the means to help her financially through university and struggles to pay domestic bills. Suppose Sydney opts to go to university, Miriam chooses to take a low paying job, and as a result Sydney enjoys far better prospects in the competition for higher paying jobs. Although the differences in advantage between Sydney and Miriam were partly the result of their respective choices […], those choices were made in the context of considerably different circumstances, which themselves represent unfair […] luck differences between the two. […] To add to the complexity, choices may not only be influenced in the sense that they are taken in the context of a certain range of options, which may differ, unfairly, for different persons, but persons' choices are themselves informed by different dispositions, inclinations, and knowledge bases which themselves depend partly on […] factors such as a person's social circumstances […].[38]

When Sydney gets rich, and then richer and richer, the Matthew effect is at play. The fact that her choices impact her success does not negate the comparative unfairness of the situation. The two women's starting points were uneven. Miriam could have made even better choices than Sydney did, but the circumstances prevented those choices from being available. If we assume that social justice requires everyone to have access to education, then the circumstances were unjust. The preexisting inequality had a strong influence on what happened.

2. Second, the initial differences that may justify treating people differently in the initial stage are often so small and insignificant that they do not justify the gross inequalities that follow from the accumulation process. Suppose Henry and Jack are paid on the basis of how hard they work. They work almost equally hard, but Henry is slightly more effective. The employer decides that Henry will get almost all the payment available, while Jack will get some coins. This decision is unfair—not because Henry received more than Jack, but because Henry got disproportionately more than Jack.

Such a disproportionate advantage is a typical feature of Matthew effects.[39] Consider an example. Two postdoc researchers, Helen and Andrei, are applying for a grant. Only one grant is available. Their merits are more or less equal. They both have some publications, teaching experience, and so on. However, Andrei has lectured for six hours more than Helen. Therefore, the committee decides to give the grant to Andrei, as the number of teaching hours is the only relevant difference they can find. After two years, another grant becomes available. This time, Andrei's record is clearly better than Helen's, as he has been free to do research, while Helen has been working a part-time job to fund her research. Andrei gets the grant again. The same episode happens a couple of times, and after eight or so years, Andrei has received a good amount of money, while Helen has received nothing.

This situation seems unfair, although there is no 'formal' mistake on the part of the committee at any stage. At every allocation meeting, they were guided by the appropriate distributive

[38]Gideon Elford, 'Equality of Opportunity', *Stanford Encyclopedia of Philosophy* (3 August 2023), https://plato.stanford.edu/entries/equal-opportunity/.

[39]Rigney, *The Matthew Effect*, 77.

criteria. The problem is that Andrei's advantage is disproportional to his relative merits in the beginning. The committee should probably have taken into account the candidates' history—that is, the fact that in the second round, Andrei's merits were stronger than Helen's merits mainly because of the committee's previous decision. The committee could have given Helen a chance and *then* compared their merits.

These kinds of situations are rather common, for instance, at universities.[40] When two small departments are equally good, but some minor difference between them can be found, the 'better' department may start to get more funding and other resources so that, after a decade or so, the result is one small department and one very large department. The members of the large department are then eager to emphasise that they *deserve* the huge resources they have, although, in fact, the original lottery was the decisive factor, not the members' exceptional talents. Assuming minor differences do not justify a grossly unequal allocation of resources, the situation is morally unjustified.[41]

3. Third, the accumulation of advantages often leads to a situation in which goods are distributed according to the wrong criteria. This is why dominance Matthew effects are often unfair. Michael Walzer argues in his book, *Spheres of Justice*, that 'we should focus on the reduction of dominance – not, or not primarily, on the break-up or the constraint of monopoly'.[42] His point is that it does not matter much if someone is, say, filthy rich, given that having 'monopoly' of money does not affect the distribution of other goods. However, it often happens that some goods (*e.g*., money, political power, or religious status) determine how other goods are distributed, although those other goods *should* be distributed based on other criteria.[43] For instance, access to health services should depend not on a person's wealth (or political power, or other position) but on her need for those services.[44]

There is frequently more than one dominant good that determines the distribution of other goods, which results in those goods being distributed unjustly, or according to morally irrelevant criteria. These dominant goods demonstrate a strong link. Consider Rigney's example:

> Of course, we can never really separate economics from politics; the two are so closely intertwined that we often observe economic advantage being converted into political advantage, and vice versa. Possessing wealth may permit political actors to invest money in accumulating political power and influence through strategic campaign contributions, expensive media campaigns, and the like. In turn, political power may enable actors to promote or prevent

[40]Thijs Bol et al., 'The Matthew Effect in Science Funding', *PNAS* 115, no. 9 (2018): 4887–4890, https://doi.org/10.1073/pnas.1719557115.

[41]This situation is also common in athletics: 'many children who start playing in elite or travel leagues are the oldest and most mature in their age group, with both qualities being physical and mental advantages. They then have professional coaching, more practice time, and ongoing competition against better players. This experience helps them improve significantly more each year compared to their peers. These advantages continue to accrue over time. Their eventual skill level greatly surpasses those of their youth league counterparts, even as those skills may have been comparable when both sets of players began in the sport.' Summary of the argument in Malcolm Gladwell, *Outliers: The Story of Success* (2008) by Study.com, 'Matthew Effect | Definition & Application' (accessed 15 April 2025), https://study.com/learn/lesson/matthew-effect-definition-application.html.

[42]Walzer, *Spheres of Justice*, 17.

[43]Walzer, *Spheres of Justice*, 13.

[44]David Miller, *Principles of Social Justice* (Cambridge: Harvard University Press, 1999), 25-26. In general, access to health services should not depend on wealth, but perhaps buying insurance that enables one to consult with more doctors is morally unproblematic.

> legislation affecting their financial interests. In this way, economic advantage can lead to further political advantage, and political advantage to further economic advantage, in an endless loop.[45]

The problem is not that possessing some goods has an outsized influence on procuring other goods. As argued above, it is completely fine if, for instance, a highly educated person is offered more working opportunities from reputable companies than her uneducated fellow citizens. It is not unjust to distribute jobs on the basis of people's education, experience, and competence.[46] However, if we accept: (1) the empirical claim that the Matthew effect and the accumulation of advantages often lead to a situation in which the possession of some goods dominates the possession of a wide range of other goods; and (2) the normative claim that, in a just society, goods are distributed only on the basis of certain appropriate criteria that vary depending on the good, then we have a further reason to minimise the impact of Matthew effects.

4. Finally, it is important to keep in mind that the Matthew effect concerns the unequal distribution of resources. Whether or not we think that such allocation is unjust and unfair, it is advisable to remember that the social *consequences* of remarkably unequal distributions are often undesirable. The list of adverse impacts is long. An unequal distribution decreases trust in social institutions and knowledge-promoting actors, disrupts feelings of safety and security, increases crime, dissolves social cohesion, discourages education, risks economic growth, causes housing problems, decreases people's sense of belonging and civic participation, has adverse health effects, and increases the consumption of alcohol and narcotics, to mention only a few of the undesirable effects.[47] While the topic is far too complex to be discussed at length here, hardly anyone interested in advancing general societal welfare would suggest that we should increase inequality. Reasonable incentives aside, everyone knows that from the point of view of people's wellbeing, an equal distribution of resources is clearly preferable to an unequal distribution.

Assuming these four arguments represent the main reasons for softening the impact of the Matthew effect, we can now ask, what are the morally relevant differences between acceptable and morally problematic cases of the accumulation of advantages? The following reply is hardly comprehensive, but it seems that the Matthew effect can (but need not) be morally unproblematic only if:

1. the choices that lead to the disadvantages are not results of clearly unfair circumstances;
2. the accumulation is not caused by an allocator who fails to consider the history of the process;
3. the accumulation does not lead to the dominance of a wide range of goods; and
4. the accumulation does not contribute to major social inequalities.

Since these conditions are rarely all fulfilled, the Matthew effect tends to be morally problematic, at least if the substantive assumptions concerning justice and morality made above are accepted. Of course, to say that in certain circumstances the effect is 'morally problematic'

[45] Rigney, *The Matthew Effect*, 53.

[46] Education and investments in people and human capital are 'associated with health, longevity, civic participation, self-rated happiness, and other adult outcomes' (Walberg and Tsai, 'Matthew Effects in Education', 359). One acceptable form of dominance is when education dominates the distribution of other goods.

[47] Kathryn M. Neckerman and Florencia Torche, 'Inequality: Causes and Consequences', *Annual Review of Sociology* 33 (2007): 335–357, https://doi.org/10.1146/annurev.soc.33.040406.131755; Adrian Killewald, Fabian T. Pfeffer, and Jared N. Schachner, 'Wealth Inequality and Accumulation', *Annual Review of Sociology* 43 (2017): 379–404, https://doi.org/10.1146/annurev-soc-060116-053331.

does not imply that when a decision-maker faces such circumstances, they must always avoid advancing the effect. There may sometimes be overriding moral reasons that justify decisions whose outcome in practice is that the rich get richer, and so on. For instance, decision-makers may have overriding moral reasons to decide that the interest rate does not depend on the size of the principal (which means that the rich get richer). If this is so, then there are cases in which advancing the Matthew effect is morally justified, all things considered, even if the cases may belong to those that are indeed morally problematic and unfair. These kinds of decisions must be made on a case-by-case basis.

V. CONCLUDING REMARKS

I have argued that although the Matthew effect has a bad moral reputation, this effect is neither inherently bad nor good. The Matthew effect is morally neutral as such. The effect's four variants, which represent how the term is most commonly used, can all be embodied in instances that are morally unproblematic. However, I have argued that in many cases, there are convincing moral reasons to try to reduce the accumulation of advantages. The intuition that the Matthew effect is ethically problematic has good grounds in specific cases that are relatively common. Thus, I have argued that the Matthew effect deserves its bad reputation. How seriously should decision-makers take the ethical problems with the Matthew effect? The answer should be evaluated on a case-by-case basis.

I have pointed out that Matthew effects are often unintended. No doubt, there are cases in which it is possible to recognise that a person or group intentionally puts the Matthew effect 'in place' and then enjoys the advantages that seem to follow 'naturally' from this mechanism.[48] However, this description does not apply to all cases. To adopt the view that when a group of people benefit from some social mechanism, they must always have intentionally planned it, is to support what Karl Popper famously called the 'conspiracy theory of society'.[49] Although many actors are involved in instances of Matthew effects, and some are certainly aware of the consequences that will follow from their decisions, this does not necessarily show that someone is intentionally 'using' the effect to reap benefits. Social institutions and regulations always have multiple consequences, and not all are explicitly intended. Some of these consequences are unpredictable and surprise even the people who cause them. Accepting that the Matthew effect is often ethically problematic does not imply that we should automatically accuse beneficiaries of carrying out a conspiracy.

ACKNOWLEDGEMENTS

I would like to thank Hemmo Laiho, Helena Siipi, and Oskari Sivula for helpful discussions. Open access publishing facilitated by Turun yliopisto, as part of the Wiley - FinELib agreement. No conflicts of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

[48]Rigney, *The Matthew Effect*, 15.

[49]Karl Popper, *The Open Society and Its Enemies* (London: Routledge, 1945).