

Anna Lewicka-Strzalecka  
Polish Academy of Sciences  
Institute of Philosophy and Sociology  
e-mail: [alewicka@ifispan.waw.pl](mailto:alewicka@ifispan.waw.pl)

## Awareness of conflict of interest as an academic standard of ethics<sup>\*</sup>

---

### Abstract

The paper shows that conflicts of interest in science undermine its ethos. Some examples of this phenomenon have been analysed from the point of view of its destructive consequences. The need to counter them has also been identified in our country and some legal regulations and self-regulation are gradually being introduced. However, they are not always respected in practice. In the last part of the paper, a model of management of risk of bias in scientific research has been outlined. The main thesis says that an awareness of conflict of interest embracing both knowledge of the general issues and relevant assessment of the personal risk of lack of objectivism should be an ethical minimum of every scientific worker.

**Keywords:** conflict of interest, funding effect, ethical standard, ethos of science

**JEL Classification:** I23

---

### 1. Introduction

Conflicts of interest have always been present in science, but its progressive commercialization and accompanying process of transforming knowledge into a value that is supposed to bring profits significantly increased their number, range

---

<sup>\*</sup> The article is an updated version of the paper published in Polish in the *Annales. Ethics in Economic Life*, 20(1), 7–16.

and power of influence. More and more research is financed by industry, which directs funds for such issues which bring earning, and is interested in specific, meaning beneficial, research results. This leads to the question of the ethos of science along with its basic values of selflessness and objectivity.

Conflict of interest in science may be a source of tendentiousness and ultimately lead to serious distortions of research results. It strikes at the internal cohesion and integrity of science because when we conduct scientific research or use their results, we are still basing on the testimony of others, that is, we should have trust in it (Grabski, 2009). Science is not a question of faith, but the average person has to be based on faith in the results of scientific research because he or she is unable to control them. Distorted or even false results of such research undermine the faith-dignity of science and weaken the trust which society has for it, and thus may provide to weaken the support for it. Although it is not possible to completely eliminate the conflict of interest from science, as well as from other areas of human action, attempts are made to limit its negative effects.

The article focuses on presenting the essence of conflict of interest in science, showing some examples of this phenomenon along with its destructive consequences, and outlining the model of managing the risk of bias in scientific research. The main aim of the work is to present arguments in favour of the postulate that awareness of conflict of interest, consisting of the general knowledge covering this issue and an accurate assessment of one's location in the face of the threat of lack of objectivity, should be the ethical minimum of every researcher.

## **2. Conflict of interest in science**

The concept of conflicts of interest is broad and includes various types of conflicts, therefore to avoid misunderstandings, it should be noted that situations in which two or more separate entities strive to achieve the same goal are beyond the scope of our considerations. So it's not about the situation in which, for example, two companies that produce similar products want to acquire the same client or two scientific units apply for the same research grant. These types of conflicts are an immanent feature of the market game and in certain circumstances may favour economic order. There are conflicts that are particularly destructive to this order, and also to the social order, and these are the subject of our attention. It is a situation in which one entity is for some reason induced to act in incompatible directions. A conflict of interest occurs when a person (or organization) is obliged to double loyalty, in other words—when his or her interest (his or her own or the interest of the entity to which he or she has obligations) is not, or cannot be reconciled with interest of another entity, who should also be loyal (Lewicka-Strzałecka, 2012). This dual loyalty, or conflict of interest in science, manifests itself in a situation in which “financial considerations, or other personal benefits, may disrupt or give the impression that they disrupt the professional judgment of a given person in the approach to scientific research” (Krimsky, 2006, p. 197).

An example of such a conflict of interests is the situation of a Professor X, who gets to review the doctoral dissertation written by his cousin's son. On the one hand, as a reliable judge, he or she should follow the norm of independence, that is, try to present an objective opinion. On the other hand, a strong social norm, present (not only) in our culture, requires him to act for his relative, that is, to make a positive review, and above all—with a positive conclusion. If a relative has written a good dissertation—which can happen—then Professor X will act in harmony with both duties. However, if the relative's paper does not meet the required standards, then evaluating it positively he or she misappropriates scientific values, otherwise, he or she exposes himself or herself to family reluctance. This example shows that being in a conflict of interest does not have to, but can lead to disloyalty.

A person (or organization) may be in a situation of conflict of interest due to external circumstances or as a result of their own actions. This first option applies to Professor "X", to whom external institutions sent the work for review, while if the scientific unit accepts financial support from a company whose impact on the natural environment is to assess, it puts itself in a situation of conflict of interest at its own request. The interest may be financial or non-financial. If the researcher is to evaluate the effectiveness of the drug produced by the company in which he or she owns stock, then his interest is of a financial nature. However, the interest of Professor X to write a review of a relative's dissertation is to maintain positive relationships with the family and is not of a financial nature.

### 3. Funding effect

Financial conflict of interest in science is easier to identify, due to the measurability of the financial interest, has become the subject of numerous analyzes. Most of these point to the differences between the research results financed by private and public funds, in which the former generally interact with the interests of the sponsor (Bekelman, Li & Gross, 2003). This phenomenon is referred to as the funding bias (*funding effect*) and is accompanied by the hypothesis of biased conducted research (Krimsky, 2006). Funding bias has shown to be probable, among others, in research into the impact of smoking on human cognitive abilities (Turner & Spilich, 1997, pp. 1423–1426), the impact of passive smoking on health (Barnes & Bero, 1998, pp. 1566–1570) and the impact of plastic packaging made with bisphenol A (BPA) on stored food (vom Saal, Nagel, Timms & Welshons, 2005).

Research on conflicts of interest in science allows to identifying numerous examples of the potential effects of this phenomenon, which turned out to be destructive on an individual and social level. These examples come from areas such as the tobacco industry, product safety, environmental protection, toxic fumes, efficacy and side effects of drugs, climate change, economics and finances. Although it is impossible to prove a cause-and-effect relationship between the personal benefit of researchers or the interest of the enterprise sponsoring a given

study and its result, the funding bias is more and more confirmed in the statistical sense. There is no certainty, but there is a high probability that the one who pays has a decisive influence on the research results. This universal mechanism is illustrated by the two following examples of scientific papers with far-reaching consequences.

The first example comes from the area of medicine, where a conflict of interest has been noticed long ago. Published in 1966, the bestseller *Feminine Forever* helped convince many doctors and millions of their patients that estrogen postmenopausal therapy is not only helpful but indispensable for women to function normally. The author of this book, the American gynaecologist, Dr. Robert A. Wilson (1966) maintained that menopause is not a natural condition but a disease that must be combated with hormone replacement therapy, and he has significantly contributed to the popularization of this thesis among American women. However, long-term studies on this therapy published in the *Journal of the American Medical Association* in 2002 showed that its negative sides, in particular, the risks associated with cancer, outweigh the benefits. After many years, as a result of the journalistic investigation, it also turned out that Wilson's book and its broad promotion were financed by the pharmaceutical company Wyeth, the drug producer (Writing Group for the WHI Investigators, 2002).

The second example comes from the area of academic economics, which is the field of science in which the risk of conflicts of interest began to be noticed relatively recently. It concerns Iceland, which at the beginning of this century is considered a peaceful, prosperous and democratic country, well-developed economically, enjoying a low level of corruption. When voices of concern about the excessive debt of privatized banks began to penetrate the public, the Icelandic Chamber of Commerce and international corporations commissioned a report on the financial system of Iceland. The main author of this study was Frederic Mishkin, a professor at Columbia Business School. The report showed that the banks are competently managed, financial supervision is working well and Iceland is a great place to invest. At the end of 2008, there was a nationwide crash, the three largest banks collapsed because they borrowed \$ 120 billion—more than 10 times the Iceland's GDP. It turned out that an apologetic study on the subject of the financial system, aimed at stopping the voices of public anxiety and lulling its vigilance, was not reliable. Preparing it, Mishkin based on official data provided by the Chamber of Commerce, that is, the institution whose appropriateness of functioning was to be verified. A controlled institution was paying a considerable fee (\$124,000) for its own control. This fact was not disclosed in the report's publication.

Conflict of interest in the field of medical science has been recognized much earlier and better than in economics, and although it may still be a source of irregularities, awareness of its possible consequences, both among researchers and the public leads to counteracting them through legal regulations and self-regulation. However, representative involvement in the area of academic economy as a conflict of interest was not noticed for a long time. It is supposed that this entanglement was one of the reasons that economists did not foresee the financial crisis of

2008. Analysis of the activity of nineteen prominent economists affiliated with prestigious universities showed that almost everyone was in various ways connected with financial institutions (Carrick-Hagenbarth & Epstein, 2012). However, they did not disclose these connections when, as experts, they participated in the debate on the shape of reforms of the financial system and significantly influenced the decisions about its deregulation, and the power of this influence was supported by the high authority of their academic positions.

#### 4. Legal and environmental regulations and their implementation in practice

Problems regarding conflicts of interest in science have begun to be noticed in our country. Certain situations are regulated by law, for example, the Act on Degrees and the Academic Title amended in 2014 states that a reviewer of a doctoral dissertation cannot be a person employed in the facility where the procedure is taking place.<sup>1</sup> Another example of such a regulation is the prohibition of professional dependence introduced in 2011 between related academic employees.<sup>2</sup> Its purpose is to counteract favouritism of family members based on non-substantive considerations, hindering the implementation of academic careers from outside people and, consequently, hampering the development of science. However, it turns out that in some cases, scientific institutions have trouble interpreting and enforcing this ban; sometimes they manage to get around it.

At the same time, many situations are beyond the reach of rigid legislation. Their solutions can be sought in the so-called soft law, that is, the collection of good practices, ethical codes, and internal regulations. *The Ethics Code of a Researcher* adopted by the General Assembly of the Polish Academy of Science on lists independence (from external influence on conducting research, both on commissioning studies or expert opinions, as well as from influences from political, ideological or business pressure groups) as one of the universal ethical values in scientific work. Avoiding conflict of interest has been recognized as one of the good practices in this document, it is recommended to reveal potential conflicts of interest by authors of published works (3.3.9), and the refusal to review a work or give opinion on a project in a situation of conflict of interest (3.4.2), without

---

<sup>1</sup> The Act of 14 March 2003 regarding academic degrees and academic title and about degrees and title in the field of art claims: "At least two reviewers are appointed in the doctoral conducts from among persons employed in a higher education institution or an organizational unit other than the one whose employee is a person applying for the award of a doctoral degree and other than members of the board of an organizational unit conducting a procedure."

<sup>2</sup> Art. 118.7 of the Act of 27 July 2005 the law on higher education proclaim: "Between the academic teacher and those employed in the same university, his spouse, relatives or family members up to and including the second degree and a person remaining in the relationship of adoption, person's care or guardianship cannot arise the relation of direct subordination. This does not apply to persons who perform the functions of single-person university institution, for whom the act provides vocation through elections."

specifying what the conflict may involve. In other regulations, the conflict of interest situation is presented in more detail. In the document *Best Practices in Review Procedures* published in 2011 by the Ministry of Science and Higher Education, it is stated that conflicts of interest may occur due to various links between the author of a work, project or other types of document and a reviewer. They can be of a family, social and professional nature, especially in the context of cooperation, business dependency, the ability to decide on matters that are important to the reviewer, they can be both positive and negative ties. Conflict of interest is also caused by the situation of close links, especially financial links between the contracting entity and the reviewer. In the case of reviewing the activities of scientific units, the reviewer should neither be carrying out a contract of employment or other long-term cooperation with the reviewer or be associated with it earlier. In a more categorical form, such a code is included in the *Code of Ethics of the Polish Accreditation Committee* prohibiting undertaking activities evaluating a given university for a member (expert) of PAC, if he or she (or a close relative) is or was employed or with whom he or she is connected by any civil law agreements unless the period of 5 years has elapsed. He or she is also not allowed to take such actions towards a university whose headquarters, branch, or a non-local teaching centre is located in the same place where the headquarters of the university employing a member (expert) of PAC or a close person is located.

In practice, the standards of expert independence are not always perceived. During the inspection of the Supreme Audit Office at the Ministry of Science and Higher Education, it was stated, that 21 teams (75%) of the Science Council included persons who are employees of scientific units assessed by a given team (including one-person teams). The situation in which the evaluators are assessed could adversely affect the course of parameterization work and the objectivity of the assessment. It turns out that the independence of experts is not guaranteed by declarations of impartiality and no conflict of interests signed by members of the opinion-making and advisory teams joining the evaluation of applications for funding for science (Supreme Audit Office, 2011).

An example of the lack of awareness of the essence of the conflict of interests in managing the organization of scientific competitions is a request to prepare a review of the grant application addressed to the researcher who applied for funds in the same competition (Jaskułowski, 2013). The organizers tried to dispel the ethical doubts indicated by the potential reviewer, stating that a conflict of interest occurs when there are business relationships between the reviewer, the applicant, and the project manager (e.g. the same workplace, business subordination) or the reviewer is participating in the implementation of the project for which a review is requested. They did not notice that the reviewer assessing his competitors has an interest in lowering the value of their research intentions, which may affect the lack of objectivity of his assessment. Proposing a man to influence the positioning of other people applying for funds from a limited pool of money, for which he or she also tries to apply, means that he or she may be, indirectly, but nevertheless, a judge in his or her own case. Resisting this temptation can lead to a reduction in his or her own chances in this competition.

## 5. Conflict of interest management: The three A model

An important role in limiting the negative effects of conflicts of interest is played by self-regulation referring to higher values on the one hand and disciplinary sanctions on the other. Self-regulation is particularly well developed in the sphere of economics because now every major company that cares about success has a policy of managing conflicts of interest. In many cases, it involves making employee requirements more restrictive than the law and enforcing them in a specific way. The management of conflicts of interest is based on three pillars: awareness, avoidance, avowal. This type of management—the three A model, can also be used in science.

Its first pillar, or awareness-raising, consists of providing employees with the ability to identify a conflict of interest in the specific conditions of the organization's functioning and determining the risks associated with it. The risk is associated not only with the actual damage that a conflict of interest may cause but also with potential losses caused by straining the image. In science, this image strain turns into a suspicion of bias that can destroy social faith in the results of scientific research. An important postulate is not only to avoid bias, but also to not be suspected of bias. Building this pillar is extremely difficult in the scientific community because, as noted by the eminent expert and investigator of conflicts of interest, Sheldon Krinsky, "a typical scientist does not acknowledge that any personal financial interest related to the subject of his research could affect his approach to research" (2006, p. 198). Researchers are usually convinced of their impartiality and treat all suspicions about its lack as unfounded.

Another pillar is the avoidance of certain activities, for example, some organizations prohibit their employees from trading with their parent company, competitive activities, and many others. Some scientific institutions do not allow researchers to participate in projects the results of which could cause them financial gain. Avoiding a conflict of interest may also manifest itself in preventing some risky connections, such as selecting reviewers. It may involve self-selection, that is, potential judges themselves declare their impartiality. In the situation of a large number of texts, papers that need to be reviewed, computer methods of analyzing potential connections are used, for example, the similarity of Internet addresses or affiliations is being studied. Another way is to set up a group of co-authors so that the text does not go to a review to someone who has worked with the author in the past. In order to determine the level of conflict of interests, the analysis of connections on social forums is used, and so profiles of scientists in which they reveal their connections with other researchers are examined.

The third pillar of the conflict of interest management model is avowal. This is postulated when the prohibition of avoidance is unfavourable, or difficult to implement. Avowal greatly limits potential abuses because knowing that a person's connections are known to the public stops them from acting in their favour at the expense of the public interest. The disclosure should be made by the person affected by the conflict. In some organizations, it is routine and is treated as an

employee's obligation, and the degree of threat of conflict of interest is assessed by persons at subsequent levels of the service hierarchy. In the case of people holding top positions in the company, this degree should be evaluated by ethics managers.

The avowal may be internal or external. The first consists of informing superiors, or possibly colleagues in the organization, about the conflict of interests. However, in certain situations this proves to be insufficient and external disclosure, i.e. to inform about the conflict of interest of public opinion, is advisable. Such disclosure from the authorities of the University of Toronto medical department has been demanded by students concerned about the scope of indoctrination-controlled by pharmaceutical companies. Currently, before the lecture, each lecturer must make a statement about potential conflicts of interest in which he or she found himself or herself, such as shares, fees, consultations, membership in supervisory boards. Previously, this statement was known only to the university authorities, currently all students participating in the lectures have the right to know them, in order to assess to what extent their content could have been influenced by the lecturer's involvement (Wiens & Cota, 2009, pp. 152–153).

The policy of external disclosure is used more and more by scientific magazines, especially biomedical journals. It has become the accepted practice that the author submitting an article to *The Lancet*, for example, discloses the sources of funding of his research, companies in which he has financial interest, and sponsors of his travels to conferences. Similar requirements are made by some Polish magazines, especially the medical ones.<sup>3</sup>

## 6. Conclusion

The above examples and many others lead to the conclusion that conflicts of interest undermine the selflessness of science, which is one of the pillars of its ethos, determining its identity. The selflessness of science, according to Robert Merton (1982), consists of the fact that, regardless of the motivations of individuals, scientific activity is subordinated to seeking the truth, not to one or other particular goals. Scientists seek reliable knowledge for themselves, personal or social benefits cannot be the driving force behind such searches. Selflessness is not a feature of scholars, but a norm forced institutionally through the requirement of an inter-subjective control of results. All claims must be subject to substantive acceptance criteria, so they cannot be particularistic considerations—personal or social benefits. Conflicts of interests in science contribute to the erosion of the institutional norm of selflessness, on which people base their trust in this component of social order.

---

<sup>3</sup> In the case of medical journals, they result from the principles developed by the International Committee of Medical Journal Editors accepted by major periodicals.

## References

- Barnes, D. E., & Bero, L. A. (1998). Why review articles on the health effects of passive smoking reach different conclusions. *Journal of American Medical Association*, 279(19), 1566–1570.
- Bekelman, J. E., Li, Y., & Gross, C. P. (2003). Scope and impact of financial conflicts of interest in biomedical research: A systematic review. *Journal of American Medical Association*, 289(4), 454–465.
- Best Practices in Review Procedures [Dobre praktyki w procedurach recenzyjnych w nauce]. <http://www.nauka.gov.pl/publikacje-ministerstwo/archiwum,1.html>
- Carrick-Hagenbarth, J., & Epstein, G. A. (2012). Dangerous interconnectedness: Economists' conflicts of interest, ideology and financial crisis. *Cambridge Journal of Economics*, 36(1), 43–63.
- Grabski, M. W. (2009). Uczciwość i wiarygodność nauki. *Praktyka. Nauka*, 2, 37–59.
- Jaskulowski, K. (2013). The judge in his own case? Letter from prof. K. Jaskulowski about reviews of National Program for the Development of Humanities. <http://obywatele.nauki.pl/2013/11/list-prof-jaskulowskiego/>
- Krimsky, S. (2006). *Nauka skorumpowana?* (B. Biały, Trans.). Warszawa: Państwowy Instytut Wydawniczy [original title: *Science in the private interest: Has the lure of profits corrupted biomedical research?*]
- Lewicka-Strzałecka, A. (2012). Konflikt interesów. In W. Gasparski (Ed.), *Biznes, etyka, odpowiedzialność* (pp. 249–288). Warszawa: Wydawnictwo Naukowe PWN.
- Lewicka-Strzałecka, A. (2017). Świadomość konfliktu interesów jako akademicki standard etyczny. *Annales. Ethics in Economic Life*, 20(1), 7–16.
- Merton, R. K. (1982). *Teoria socjologiczna i struktura społeczna* (J. Żurawski & E. Morawska, Trans.). Warszawa: Państwowe Wydawnictwo Naukowe.
- The Polish Academy of Science. (2012, December 13). *The Ethics code of a researcher, Annex to Act No. 10 of the General Assembly of the Polish Academy of Science*. [https://instytucja.pan.pl/images/2013/Komisja\\_Etyki/Kodeks\\_etyki\\_pracownika\\_naukowego\\_.pdf](https://instytucja.pan.pl/images/2013/Komisja_Etyki/Kodeks_etyki_pracownika_naukowego_.pdf)
- vom Saal, F. S., Nagel, S. C., Timms, B. G., & Welshons, W. V. (2005). Implications for human health of the extensive Bisphenol. A Literature showing adverse effects at low doses: A response to attempts to mislead the public. *Toxicology*, 212(2–3), 244–252.
- Supreme Audit Office. (2011). *Information on the results of the audit "Wykorzystanie środków publicznych na naukę"*. KNO-4101-08-00/2011, No. 162/2012/P/11/ 070/KNO. <https://www.nik.gov.pl/plik/id,4361,vp,6190.pdf>
- Turner, C., & Spilich, G. J. (1997). Research into smoking or nicotine and human cognitive performance: Does the source of funding make a difference? *Addiction*, 92(11), 1423–1426.
- Wiens, C., & Cota, A. (2009). Lecturer conflicts of interest in medical school education: Raising the bar in BC. *BC Medical Journal*, 51(4), 162–163. <http://www.bcmj.org/mds-be/lecturer-conflicts-interest-medical-school-education-raising-bar-bc>
- Wilson R. A. (1966). *Feminine forever*. New York: M. Evans & Co.

Writing Group for the WHI Investigators (2002). Risks and benefits of estrogen plus progestin in healthy postmenopausal women: principal results from the Women's Health Initiative randomized controlled trial. *Journal of American Medical Association*, 288(3), 321–333.

<http://www.pka.edu.pl/>