

Leszek Zasztowt (Warsaw, Poland) – Jarosław Włodarczyk (Warsaw & Lublin, Poland) – Magdalena Jabłońska (Lublin, Poland)

A CLOSER LOOK AT THE POPULARIZATION OF SCIENCE
IN POLAND DURING THE STALINIST PERIOD.
THE MAGAZINE *PROBLEMY*, 1945–1956

*People think, speak and do,
what is not allowed to do
to speak and to think.*
Hugo Steinhaus¹

Argument

The monthly magazine *Problemy* [*Problems*] became the most successful Polish popular science magazine of the post World War II years. Its fate was a miniature reflection of the transformation of Polish scientific publishing in this period. In spite of the efforts of the editorial board and its renowned authors, politics left a distinct and explicit stamp on the character of the journal, with the political pressure intensifying every year. What was clearly visible on a national scale², was transposed on the level of editorial board activity into the incessant pressure of so-called political factors, and a permanent war with censorship. The board's policy was focused on constant efforts to avoid the recommendations and demands from above – largely against the censor's wishes – and to find its own way of being open to the world and focused on the latest scientific achievements. In this way *Problemy* was a specific microcosm of the Polish popularization of scientific knowledge, in which the macrocosm of the general situation of science in Poland was reflected³. For these reasons *Problemy* is an excellent source to investigate in detail all the issues concerning the dissemination of science at that time.

A portrait of the magazine

Problemy, a monthly popular science magazine published by the Cooperative Publishing House *Czytelnik*, was founded in 1945. The founder and first editor-in-chief of the magazine was Tadeusz Unkiewicz⁴, who had been a

¹ H. Steinhaus, *Słownik racjonalny*, p. 78.

² See for example R. Herczyński, *Spętana nauka: opozycja intelektualna w Polsce 1945–1970*, pp. 101–154.

³ See L. Zasztowt, *Science for the masses*.

⁴ He was also the author of quite popular scientific detective novel *Skradzione głowy* [*Stolen heads*] on the so-called *Nervism Theory* published in 1958.

member of the editorial board of the popular science magazine *Wiedza i Życie* [*Knowledge and Life*] before the war. However, due to the suspicions of the authorities (inter alia, of cooperating with the intelligence services of foreign countries) and multiple hearings in various offices, Unkiewicz's health deteriorated. A specific disorder – *a nervous illness with heart problems*¹ – developed, which hampered him from carrying out his editorial responsibilities. In 1948, following the intervention of Jerzy Borejsza, the President of *Czytelnik*², Unkiewicz received assistance in his editorial work from Józef Hurwic, a researcher and popularizer of science, who had just returned to Poland from the USSR³. His name appears as a deputy editor of the magazine in issue no. 5 in 1948. Gradually Hurwic's participation in the drafting of *Problemy* grew, and finally from issue no. 4 of 1959, these two men – Unkiewicz and Hurwic – were listed as co-editors.

The monthly was intended for readers with at least a secondary education. Among the readership of *Problemy* there were mainly people with a variety of professional backgrounds, among them *university and senior high school students, academics, engineers and technicians, doctors, educational activists, officials*⁴, who might be defined as middle class *intelligentsia*. Less frequently, the magazine was read by craftsmen and skilled workers, and least of all by the rural population.

The magazine developed rapidly from the very beginning. At the end of 1947 it had a circulation of 120 thousand copies⁵, which later reached as many as 130 thousand, finishing with over 122 thousand in 1956. Taking into account the context – the reconstruction of the country after the war, and the limitations of raw materials and technology – this was a fair-sized achievement. As Hurwic underlines, the circulation was bigger, proportionally to the population of Poland, than the thematically related Russian magazines *Nauka i Żyżń* [*Science and Life*] or *Znanie–Siła* [*Knowledge–Power*], and even *Scientific American*⁶.

On the other hand, it was also because of the relatively weak competition in the Polish publishing market that *Problemy* became the most popular science magazine in a very short time. Thinking about the reasons for its popularity Hurwic mentions the editorial policy. According to him the aim was to write

about difficult matters in a clear, comprehensible way; to maintain scientific precision and accuracy; to treat the reader seriously, not to put him off with platitudes; we did not fear the sensational, in the

¹ J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 95.

² See R. Herczyński, *Spętana nauka: opozycja intelektualna w Polsce 1945–1970*, p. 49.

³ Józef Hurwic was the professor of Warsaw Institute of Technology, also the President of Polish Chemical Society. He emigrated to Marseille, France, after the anti-Semitic campaign in Poland in 1968.

⁴ J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 78.

⁵ See J. Sutyła & L. Zasztowt, *Popularyzacja nauki w Polsce w latach 1918–1951*, p. 659.

⁶ See J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 75.

*good sense of the word; we did not shy away from
humour; we avoided the popularizing of science by
amateurs and dilettantes like the plague*¹.

The magazine quickly earned considerable respect and influence in scientific circles. The authors of articles published in *Problemy* were the cream, the elite of contemporary Polish science. Among the representatives of the natural and exact sciences could be found the names of Jan Dembowski (the biologist), Jan Gadomski (the astronomer), Ludwik Hirszfeld (the immunologist), Leopold Infeld (the physicist), Ludwik Natanson (the physician), Arkadiusz Piekara (the physicist), Jerzy Rayski (the physicist), Władysław Szafer (the botanist), and Włodzimierz Zonn (the astronomer)². From the ranks of humanities scholars were figures well-known in Polish academic life such as Kazimierz Ajdukiewicz (the philosopher and logician), Jan Czekański (the anthropologist), Witold Doroszewski (the linguist), Aleksander Gieysztor (the historian), Stanisław Lorentz (the art historian), Maria and Stanisław Ossowski (the sociologists), Tadeusz Sinko (the classics philologist), Bogdan Suchodolski (the historian of ideas), Jan Szczepański (the sociologist), Władysław Tatarkiewicz (the philosopher), and Władysław Witwicki (the psychologist and historian of philosophy). The icons of Polish belle-lettres were also involved. There were such personages as Julian Tuwim – one of the most popular Polish poets of this time – who edited a separate section of the magazine for a while. Texts could also be found by prominent novelists and writers such as Maria Dąbrowska, Jarosław Iwaszkiewicz, Paweł Jasienica, Ludwik Hieronim Morstin, Jan Parandowski, and Jan Sztudynger.

In 1952 the editorial committee was set up. It was an active group which has a real influence on, and made a serious contribution to the preparation of each issue of *Problemy*. Articles and letters from readers were allocated to the most competent committee member. He also answered letters, and when the content of a letter might interest a greater audience he decided whether to publish it along with the answer. Articles were divided into three groups: rejected texts were returned to the authors, those which required changes were sent back with the necessary comments, and the articles which fulfilled the expectations of the committee were passed on for final editorial work before being printed³. Throughout the whole period of its existence – till 1969 (that is until the state-inspired anti-Semitic campaign in Poland which had started a year earlier) – the committee, led by Unkiewicz and Hurwic, consisted of Julian Tuwim (till his death in 1953), Władysław Kapuściński (professor of physics), Witold Rudowski (professor of surgery), and Dr. Jan Żabiński (the zoologist). There were also temporary members of the committee: Mieczysław Zawadka (the historian) and Mieczysław Szleyen (the chemist and Marxist philosopher). The last two figures were a guarantee for the authorities that at

¹ J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 75.

² For more information about Polish scientific milieu see for example J. Connelly, *The sovietization of East German, Czech, and Polish higher education, 1945–1956*, pp. 162–179.

³ See J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 89.

least a certain amount of political correctness would be maintained by the journal, because they were members of the communist party. On the other hand *Problemy* was then able to enjoy a degree of independence due to their political connections¹.

The political situation in post-war Poland forced the magazine, initially rarely and then more frequently, to publish articles which in other circumstances would not have been given a place in it². This often concerned the texts published under pressure from the TWP – *Towarzystwo Wiedzy Powszechnej* [Society of Universal Knowledge], founded in 1950³. *Problemy* was designated as one of its press branches (the others were *Horyzonty Techniki* [Horizons of Technology], and *Wiedza i Życie*). A new section appeared in *Problemy* from issue no. 3 of 1951, entitled *Chronicle of the Society of Universal Knowledge*. The relationship with the TWP resulted in the mandatory inclusion of its vice-chairman on the editorial committee, who could then influence the journal's content. Usually it was a person who was an idolatrous adherent of Marxism–Leninism–Stalinism, but still the allegiance of the editorial board to the communist ideology was quite limited and moderate.

From 1945 to 1948 the majority of texts were prepared by Polish authors, though a few foreign names also appeared, for example Albert Einstein, Lewis Mumford, and August Piccard in 1946. From 1949 the number of translations increased, involving mainly Russian texts (for more detailed information and data see below). From 1948 a clear profile of *Problemy* started to crystallize. A significant number of regular sections emerged in the magazine from 1949 to 1950. Besides the longer articles, which formed the main body of each issue, new features began to appear in the form of short scientific essays, reports, interviews, biographies of scholars, book reviews, polemics, letters, cartoons and others. The editorial board tried to avoid publishing material in the style of a handbook or encyclopedia; on the contrary, they were focused on new issues which were sometimes still not resolved but which came as first hand information from the frontiers of science⁴. Articles in the journal were usually illustrated by numerous photos and engravings. Initially, for technical reasons, the magazine was black and white, but it soon progressed to two-color print.

The sciences in *Problemy*

The intention of *Problemy*'s editorial board was to supply honest information and popularize the achievements of science not only in Poland, but also abroad. However, there is no doubt that the political pressure imposed on the board influenced the content of the magazine. The proportions of

¹ Hurwic was one of a few editors-in-chief who did not enter the Polish United Workers Party (the communist party *tout court*). See J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 87.

² See J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 88. See also J. Connelly, *The sovietization of East German, Czech, and Polish higher education, 1945–1956*, pp. 180–204.

³ See S. Karaś, *Zarys dziejów Towarzystwa Wiedzy Powszechnej*, p. 136.

⁴ See J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 77.

different texts published in it were gradually changed for propaganda reasons, along with the growing subordination of Poland to its big brother – the USSR.

From the mid 1940s to the second half of the 1950s, it is possible to distinguish three fundamental periods in the state's scientific policy: (i) 1945–1947 – initially, relative independence of science from the state, characterized by comparatively little interference in research topics, then gradually increasing control, (ii) 1948–1953 – the greatest subordination to the USSR and supervision of science by higher authorities, (iii) from the thaw of 1954 to 1956 – a more relaxed period of moderate control¹.

In the first period, 21 numbers of *Problemy* were issued in 18 separate parts. Even a general look at these issues allows us to see the diversity of topics which were dealt with. The majority of texts were written by Polish authors, but there were also articles describing scholarly activity in the USSR, the United States, France, Great Britain and Switzerland, written by authors from other countries. It is quite hard to detect any propaganda on a wider scale in these texts, i.e. there is no characteristic new language (*novomova*) or abusing of quotes mainly from the classics of Marxism–Leninism–Stalinism, although on the other hand, this was later a useful method of pretending that an article was politically correct, thus to some degree allowing it to escape the censor's pen.

In 1945–1947 each issue of the magazine had on average 8 or 9 longer articles and several short reports. The total number of articles published in this period, of different lengths, came to 223 (not taking into consideration short anonymous pieces; but if we include them, then the number rises to 285). Those articles were written by 144 authors. Among the most active and frequent authors were the physicist Jerzy Rayski (5 articles), the astronomer Włodzimierz Zonn (4 articles), the neurosurgeon Witold Rudowski (4 articles), the biologist Artur Ber (3 articles), the economist Henryk Greniewski (3 articles), and the statistician Stefan Szulc (3 articles). The authorship of 28 articles was hidden by pen names and initials. There were also 13 anonymous short reports about scientific innovations. The majority of the articles – 69% – were written by Poles (in 1945 it was 100%). If we take into account the texts signed with Polish pen names and the anonymous paragraphs, the number of Polish texts increases to 87%. The superiority of the USSR over the USA is visible among authors from foreign countries, but at the beginning this is insignificant compared with authors from other Western countries. And at the beginning they are more numerous than the authors from the USSR. The overall number of foreign authors in this first period amounts to nearly 13% of the total number of published texts.

In 1948–1953, 72 issues of the magazine appeared, with only one double issue. In this period the situation of the magazine stabilized and it gained a strong position in the publishing market. 1371 articles, shorter notes and reports were published (without counting sections and columns that appeared regularly). The majority – nearly 90% – were prepared by Polish authors,

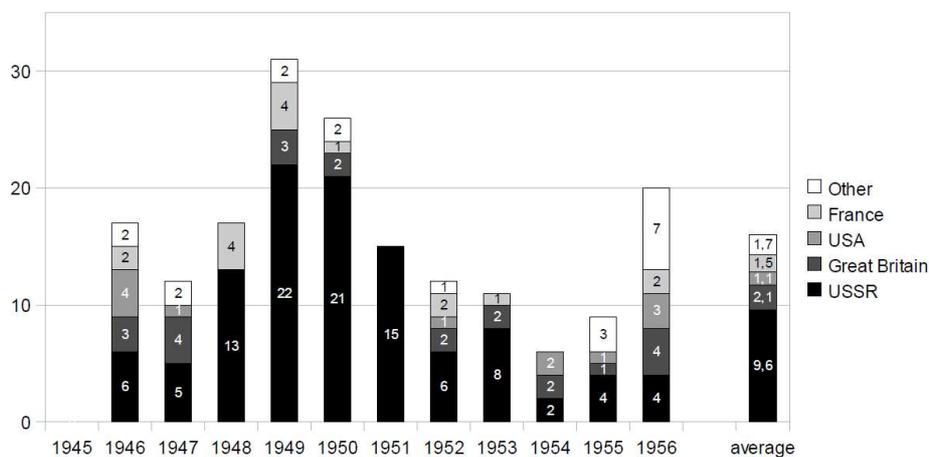
¹ See J. Sutyła & L. Zasztowt, *Popularyzacja nauki w Polsce w latach 1918–1951*, pp. 644–648.

though on average one longer article written by a foreigner appeared in each issue, and most often its author was a citizen of the Soviet Union or a person from the Eastern bloc. Usually the number of articles and notes came to 19–21 in each issue. Of these – on average – 8 or 9 were a few pages long, and the rest were shorter texts. These short pieces were grouped into sections – columns such as *Polemics*, *The Polish contribution to the development of science*, *Science news*, *What do the others say?* and *Scientific chronicle*.

In the last period in question, 1954–1956, 36 issues of the magazine appeared, with a total number of 696 articles. On average each issue had 19 articles, of which 7 to 9 were longer texts, supplemented by short notes such as *Chronicle of scientific life*, *From our scientific laboratories*, *Polemics*, *Science news* or *Language column*. Here too, the number of articles by Polish authors dominated foreign texts (nearly 95%).

A comparison of the numbers of authors from abroad, whose articles were translated into Polish and published in *Problemy*, is presented in Figure 1. It appears that the translations were published most frequently in 1949–1951. We can see that authors from the Soviet Union outnumber the others. From 1952 the number of foreign translations diminished. In this respect the most typical and significant year was 1954, when there were only 6 articles written by foreign authors. The last year of this period, 1956, revealed the growing amount of scientific information from the United States and Great Britain, two countries purposely omitted earlier. This was closely associated with the general social and political situation in Poland, and the political thaw overwhelming the country. After years of Stalinization, contact with Western Europe and North America started to revive and the isolation of Polish scholars from the world's academic milieu slowly began to decrease.

Figure and Table 1. Foreign authors of articles and short reports published in *Problemy*, 1945–1956.

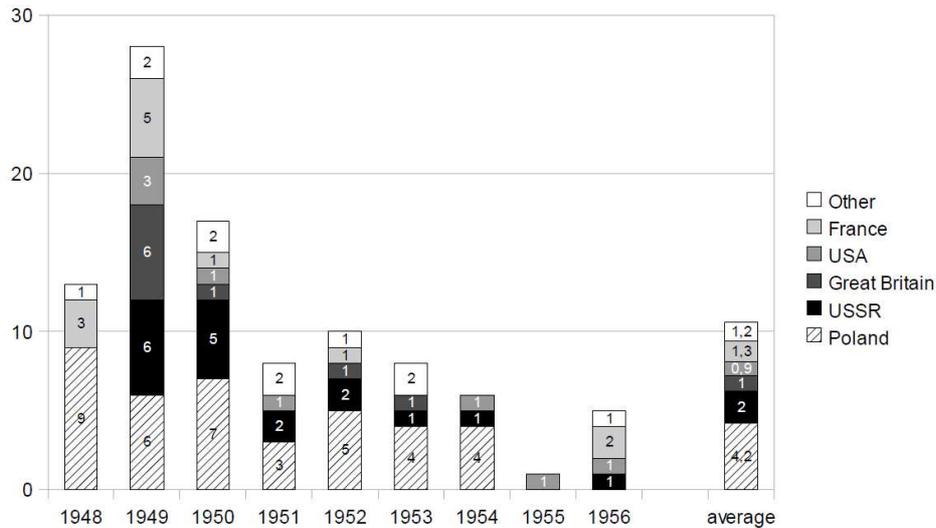


Year/Country	USSR	Great Britain	USA	France	Other ¹	Total
1945	0	0	0	0	0	0
1946	6	3	4	2	2	17
1947	5	4	1	0	2	12
1948	13	0	0	4	0	17
1949	22	3	0	4	2	31
1950	21	2	0	1	2	26
1951	15	0	0	0	0	15
1952	6	2	1	2	1	12
1953	8	2	0	1	0	11
1954	2	2	2	0	0	6
1955	4	1	1	0	3	9
1956	4	4	3	2	7	20
Total	106	23	12	16	19	176

An analysis of the contents of the section titled *What do the others say?* leads us to an interesting observation. This section appeared for the first time in issue no. 9 of 1948. First of all, reports were frequently taken from magazines from the Soviet Union, *Nauka i Życie* [*Science and Life*], *Voprosy Filosofii* [*Issues of Philosophy*], *Literaturnaiia Gazeta* [*Literature Gazette*] and others. Russian texts outnumbered the others especially in 1949 and 1950. At the same time the number of translations from the West – including Great Britain, France, and the United States – goes down (*Newsweek*, *Science et Vie*, *Leader's Magazine* and others). However, throughout the whole period the magazine sourced news from the Polish scientific literature, and some titles appeared more than once, such as *Wszechświat* [*Universe*], *Meander*, *Kosmos* [*Cosmos*], and *Odrodzenie* [*Renaissance*]. Figure 2 presents the figures for these conclusions.

¹ Including China, Switzerland, Germany (both countries), Czechoslovakia, Hungary.

Figure and Table 2. Texts published in section *What do the others write?* in *Problemy*, 1948–1956, according to the language of primary source.



Country/Year	1948	1949	1950	1951	1952	1953	1954	1955	1956	Total
Poland	9	6	7	3	5	4	4	0	0	38
USSR	0	6	5	2	2	1	1	0	1	18
USA	0	3	1	1	0	0	1	1	1	8
Great Britain	0	6	1	0	1	1	0	0	0	9
France	3	5	1	0	1	0	0	0	2	12
Other ¹	1	2	2	2	1	2	0	0	1	11
Total	13	28	17	8	10	8	6	1	5	96

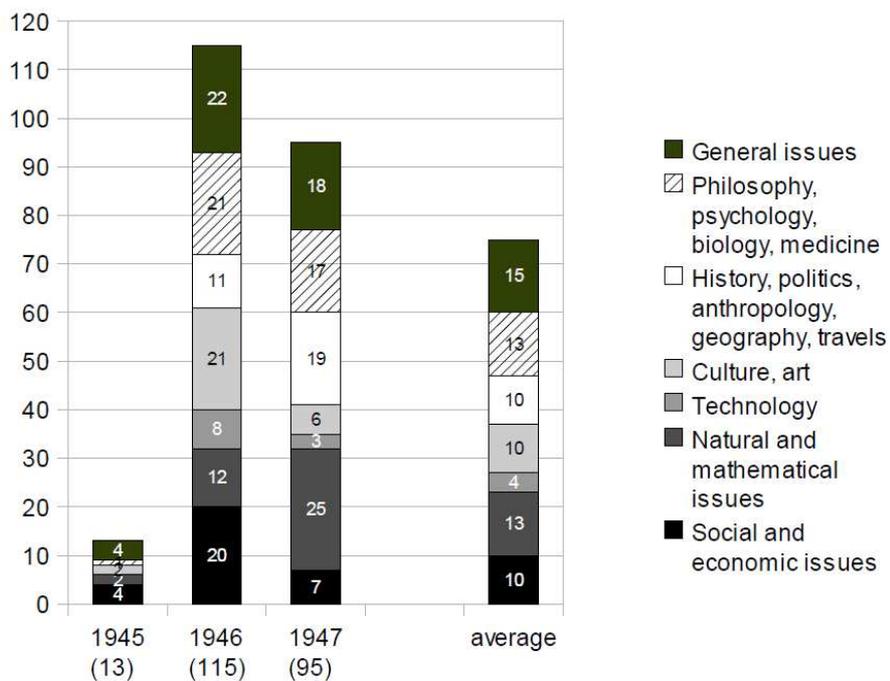
It is not an easy task to classify the articles published in *Problemy* according to the main topics because of their often–interdisciplinary character. Changes in the structure of the magazine content also cause additional complications. Every year the editorial board published a bibliography of the magazine contents, which (though good for recapitulation and helpful in finding the main information topics) is not very useful, because some articles were included in several different sections simultaneously. Figure 3 shows the main topics of articles published in 1945–1947, according to a bibliography prepared by the editorial board of the magazine². Thematic groups in the

¹ Czechoslovakia, Bulgaria, Italia, Switzerland, Germany (both countries), China.

² Certain sections have been integrated for requirements of this article, and the place of some texts has been changed in classification. However, the degree of these changes is small and it does not affect general image.

bibliography were wide, and they usually covered several areas. In the following years the bibliography passed through considerable modifications. Later, however, along with a growth in the number of articles each year, these wider categories were divided into a larger number of more detailed categories.

Figure and Table 3. Main topics of articles published in *Problemy*, 1945–1947.



Topics of the article	Year			Total
	1945	1946	1947	
Social and economic issues	4	20	7	31
Natural and mathematical issues	2	12	25	39
Technology	0	8	3	11
Culture, art	2	21	6	29
History, politics, anthropology, geography, travels	0	11	19	30
Philosophy, psychology, biology, medicine	1	21	17	39
General issues	4	22	18	44
Total	13	115	95	223

The names of several of the groups in Figure 3 are self-explanatory, but some of them require additional clarification. In *Social and economic issues*, there are articles related to the economic and social situation, the reconstruction of the country after the war, but also economic statistics, town-planning and urbanization, sociology, planning, and the economy in other countries (e.g. China, France, and the United States).

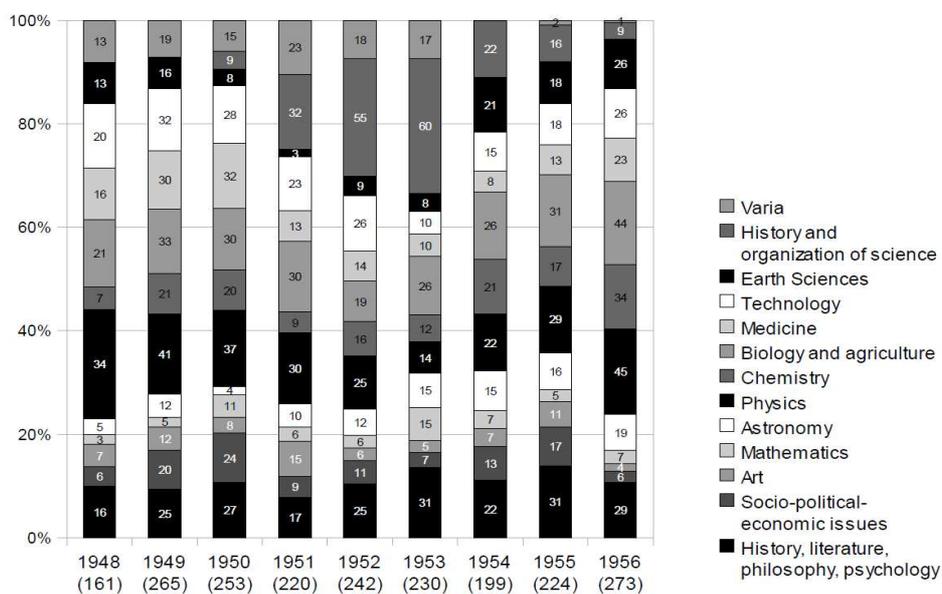
To a great degree *natural science and mathematical issues* includes articles on mathematics, astronomy, physics, chemistry (also the history and organization of these sciences in Poland and abroad, including first of all the Soviet Union). In the *technology* section separate articles were devoted to technical innovations and equipment such as radar, television, space rockets, power stations or microscopes.

Culture and art focused on articles connected with music, the theater, movies, the fine arts, literature, and esthetics, but also included such aspects as the organization of science in different countries. The specific content of the next two sections in Figure 3 are obvious from the titles, however, the last part, i.e. *general issues*, requires explanation.

Articles which were included in *general issues* were very difficult to classify in any of the sections mentioned earlier (general questions, various). Also law and some economics questions were included here. Some examples of the article topics from this section include the mystery of Atlantis, problems of the future, a photo-reportage on underground human settlements and an encouragement to write memoirs during wartime occupation.

The different capacities of each group make it difficult to compare the contents of the magazine in this period. For example the technology section is very narrow thematically in comparison with the *general issues* section. However, even in spite of these differences it is apparent that from the very beginning of its existence, *Problemy* covered the most frequently asked questions from a wide range of areas of the natural and exact sciences, though humanities and social issues were represented significantly during the early years.

Figure 4 presents a thematic classification of articles printed in *Problemy* in 1948–1953 and 1954–1956. In this period large sections in the bibliography were divided by the editorial board into more specific and narrow parameters, to enable the readers to find information more easily.

Fig. and Table 4. Main topics of 1371 articles published in *Problemy* between 1948 and 1956 (absolute numbers in bars, yearly total in brackets below year).

Year/Subject	1948	1949	1950	1951	1952	1953	Total
History, literature, philosophy, psychology	16	25	27	17	25	31	141
Socio-political-economic issues	6	20	24	9	11	7	77
Art	7	12	8	15	6	5	53
Mathematics	3	5	11	6	6	15	46
Astronomy	5	12	4	10	12	15	58
Physics	34	41	37	30	25	14	181
Chemistry	7	21	20	9	16	12	85
Biology and agriculture	21	33	30	30	19	26	159
Medicine	16	30	32	13	14	10	115
Technology	20	32	28	23	26	10	139
Earth Sciences	13	16	8	3	9	8	57
History and organization of science	0	0	9	32	55	60	156
Varia	13	19	15	23	18	17	105
Total	161	265	253	220	242	230	1371

Year/Discipline	1954	1955	1956	Total
History, literature, philosophy, psychology	22	31	29	82
Socio-political-economic issues	13	17	6	36
Art	7	11	4	22
Mathematics	7	5	7	19
Astronomy	15	16	19	50
Physics	22	29	45	96
Chemistry	21	17	34	72
Biology and agriculture	26	31	44	101
Medicine	8	13	23	44
Technology	15	18	26	59
Earth Sciences	21	18	26	65
History and organization of science	22	16	9	47
Varia	–	2	1	3
Total	199	224	273	696

We can see that the natural and exact sciences prevailed in the magazine content in 1948–1953, and that physics was always in first place. A similar number of articles on biology, agriculture and the history and organization of science were also very frequently published. (These were categories created for the First Congress of Polish Science and later activities of the Polish Academy of Sciences.) The natural and exact sciences generally outnumber humanities and art, even though for some time, these domains too were widely enough represented. Before the ideological offensive and attack on science which started in the middle of 1950, prohibited disciplines such as sociology or philosophy were quite often given a place in the columns of *Problemy*. The authors of these articles were prominent scholars and renowned academics such as, for example, Stanisław Ossowski and Władysław Tatarkiewicz, the professors who created and formed the modern Polish humanities and social disciplines. Later in the areas of history, literature, philosophy, and psychology, the predominant themes supported by the authorities were, for example, the progressiveness of the Renaissance period, the life and legacy of Adam Mickiewicz or the principles of the development and evolution of life. Progress was the most important *key-word* in the sciences and in social life.

In 1954–1956, the superiority of biology and agriculture as well as physics is visible over other disciplines, and physics was to some extent dethroned. But if we take physics together with astronomy, then obviously the number of articles in these two disciplines prevails over the other fields. It may seem that in this period the *history and organization of science* is most dramatically marginalized, especially in comparison with 1951–1953.

However, this tendency was connected with at least two different factors. Firstly, in 1952 the First Congress of Polish Science was held, and after this event the number of texts devoted to the organization of science significantly diminished. Secondly, in 1953 in Poland, the 480th anniversary of Nicolaus Copernicus' birth and the 410th anniversary of his death were celebrated, and these events produced a large number of texts on Copernicus and the history of science in his times.

The popularization of science and scientific policy

Among the authors of articles printed in *Problemy* it is possible to find not only prominent and less well known scholars from Poland and abroad, but also individuals from the upper echelons of politics, who from time to time even held high positions in the state apparatus. In the first period (1945–1947) there were, for example, Eugeniusz Kwiatkowski (Vice–Premier and Minister), Adam Krzyżanowski (member of Parliament; economist), Stefan Mizera (from the Ministry of Reconstruction), and Tadeusz Szumowski (the advisor to the Polish Embassy in London). In later years one could find such names as Włodzimierz Sokorski (Vice–Minister of Culture), Henryk Golański (Secretary of State, then Vice–Minister in the Ministry of Higher Education and Sciences), Henryk Jabłoński (Vice–Minister of Education), Eugenia Krassowska (Under–Secretary of State in the Ministry of Higher Education and Sciences), the post–war President Bolesław Bierut, and the *father of all sciences* – Joseph Stalin.

These names appear most often in the context of information about the situation in the country or important political events, for example, news about the project to draw up a new constitution for the People's Republic of Poland (1952), about the death of Joseph Stalin (1953), the realization of the six–year economic plan for economic development, changes in the organization of the higher education system, or other matters. Some of them were quite often very ordinary but they were always linked to the *politics of development* as, for example, an enthusiastic description of the Warsaw Residential Cooperative and its successes in building houses. It is appropriate to point out that the articles by authors with important political backgrounds were usually placed on the front page of each individual number. Of course this additionally underlined and highlighted their rank and political position. The number of such articles increased whenever the introduction of important changes in the country was taking place or when important events were being prepared, such as for example, the First Congress of Polish Science (1952). The number of these celebratory articles was not big compared with the overall number of texts, and still the popularization of science formed the main part of the magazine.

It should be acknowledged that the majority of articles published in 1945–1947 were objective and honest. The editorial board did not use propaganda on a wide scale, although in later years this became so omnipresent, especially in advertising each, even insignificant, Soviet achievement. In 1945–1947 the belittling of American or Western European achievements was also absent.

Different fields of knowledge were presented to the reader without political sentiments.

On the other hand, sometimes it is possible to notice that certain problems began to be underlined and exposed, initially softly and delicately, and later in a more direct manner. This was the case, for example, with the articles devoted to economic planning, which was introduced and presented as an advantageous solution and a great opportunity in the reconstruction of a country destroyed by war¹. The Soviet Union was already held up as a ruling force in the sciences, advertised by such prominent Soviet scholars as the physicist Piotr Kapica², but still information about the significant achievements of Western countries appeared, especially dealing with work which changed the human environment. An example of this might be the enthusiastic photo-report about the urban transformation of the Tennessee River Valley in the United States³. Quotes from the classics of Marxism–Leninism–Stalinism rarely appeared. The language of the texts published in these years was still quite objective and concrete.

In the following years we can see a decreasing degree of objectivism in the range of article topics published in the magazine, as well as in the way those topics were presented. The Stalinist period was characterized by increasing propaganda and growing subordination to the state in every domain (including the sciences), forced and imposed on society by the communist authorities. Unfortunately Poland was not a simple copy of the situation which already existed in the USSR⁴. In 1948–1953, which might be defined in Poland as the advanced Stalinist era, more and more mind re-education and political influence on society's consciousness took place. All this happened simultaneously with the growing international tensions of the Cold War, and the ideological offensive against cosmopolitanism of Andrei Zhdanov in the USSR, which also had its consequences in Poland.

All of this had to have an effect on the contents of the magazine. *Problemy* was not and could not have been the only isolated exception to this. More and more articles started to appear using quotes from the Fathers of Revolution: Marx, Engels, Lenin, Stalin, even if those quotations had nothing to do with a specific scientific theme⁵. Also the way the United States and other capitalist countries were presented was changing rather rapidly. Even the most prominent writers and poets had to pay their respects to communism, as did Ilia Erenburg in the USSR. The Western powers became *atrocious* (Ilia

¹ E.g. E. Lipiński, *O planowaniu gospodarczym w Polsce* [About the economic planning in Poland] in: *Problemy* 2, 8/1946, pp. 2–8 & K. Romaniuk, *Gospodarka planowa i statystyka* [Planning economy and statistics] in: *Problemy* 2, 1/1946, pp. 24–29.

² See P. Kapica, *Organizacja badań naukowych w Związku Radzieckim* [Organization of scientific research in the Soviet Union] in: *Problemy* 2, 9/1946, pp. 55–57.

³ T.V.A. in: *Problemy* 2, 5/1946, pp. 59–63.

⁴ See J. Andrews, *Science for the Masses: The Bolshevik State, Public Science ...*

⁵ See J. Sadowski, *Między Pałacem Rad a Pałacem Kultury. Studium kultury totalitarnej*.

Erenburg)¹, *parasitic* (Mieczysław Szleyen)², and the future of those countries was painted in dark colors³. Additionally, as a contrast, there were more and more frequent presentations of the glorious and advanced achievements of *the excelling and the most progressive power in the world – the Soviet Union*, where the good of humankind was the top priority, and research into atomic energy was to serve exclusively peaceful purposes and contribute to the enrichment of every human being⁴.

It is hard to indicate here what percentage of articles presented in *Problemy* as a tribute to communism belonged to each category. It is possible to find at least one large article in each number in 1948–1953, which underlined the achievements of the USSR in different fields, and diminished or omitted the accomplishments of the USA, Great Britain and other Western countries. Discoveries made in the United States (including discoveries of new chemical elements) or the research conducted there were usually described in a very short, laconic form in such sections as *Science news* or *Notebook*. In spite of the efforts of the editorial board to publish good, reliable and honest articles, this did not always happen. As Hurwic recalls in his autobiography: *Occasionally we had to publish articles under the pressure of the political authorities; these were texts we would usually have been happy not to publish*⁵.

A bitter example of *new biology* – the Lysenko theory

One of the clearest examples of this situation was the well-known case of the Ivan Michurin and Trofim Lysenko theory of *new biology*, which was introduced by administrative methods in the USSR and officially supported in its satellite states. In a very short time this theory turned out to be a pseudo-scientific package of its founders' wishes and, as a shameful incident, it was forgotten quickly enough. However, from 1948 till the mid 1950s it was presented as a genuine and officially admissible theory; criticism of it was forbidden and – simultaneously – the continuation of further genetic research in the Eastern bloc was prohibited. What was at least acceptable in Michurin's work (Michurin died in 1935) was totally misunderstood in Trofim Lysenko's studies, and as the President of the Academy of Agriculture of the USSR, the omnipotent Lysenko personally decided on the life and death of many of his opponents. He was responsible not only for the end of many of his colleagues' careers, but also for their total collapse and death⁶.

¹ See I. Erenburg, "Nadludzie" Ameryki [*America's Supermen*] in: *Problemy* 6, 2/1950, p. 125. The most famous Ilija Erenburg novel *The Thaw*, signing the Khrushchev liberalization after Stalin's death, has been published in Poland in 1955–1956, a year later than its first Russian edition.

² See M. Szleyen, *Militaryzacja nauki* [*Millitarization of Science*] in: *Problemy* 7, 6/1951, pp. 362–367.

³ See S. Sokołowski, *Amerykańska droga do ruiny* [*American way to disaster*] in: *Problemy* 7, 9/1951, pp. 578–581.

⁴ See M. Iljin, *Ziemia i ludzie* [*Earth and people*] in: *Problemy* 6, 8/1950, p. 509.

⁵ J. Hurwic, *Wspomnienia i refleksje: szkic autobiograficzny*, p. 88.

⁶ See for example enthusiastic J. Fyfe, *Lysenko prav* and critical S. Amsterdamski, *Życie naukowe a monopol władzy (casus Lysenko)*.

There were many reasons for accepting *new biology* in Poland, however the fundamental one was connected to the general political situation of the state at that time. The growing atmosphere of intimidation and uncertainty, preventive censure, decreasing liberty, as well as the increasing number of political trials and developing apparatus of compulsion, primitive propaganda, omnipresent denunciation – in short, everything in the whole contemporary reality, encouraged the promotion of Lysenkoism in Poland. This tough picture was completed by the central control of science by the ruling Polish United Workers' Party and its Political Bureau and Central Committee, which decided what was right or wrong in research. It is also worth mentioning other internal factors which influenced this difficult situation in science such as war losses, the post-war reorganization and isolation from Western thought.

After World War II Polish science experienced considerable transformations, which finally resulted in its deep dependence on and total subordination to the state, that is, to the communist party and its ideology. The authorities controlled academic careers, rewarding the loyal and rejecting the scientific titles of those who were not humble or submissive. At the First Congress of Polish Science in 1952 a new model of science was accepted, which was a copy of the Soviet system¹. A decision was made to establish the Polish Academy of Sciences on the pattern of the USSR Academy of Sciences. One of the many tasks of this new institution was to propagate Lysenkoism in the biological sciences. This task was made easier by the fact that the academic milieu felt intimidated and bullied, and also that many prominent scholars had died during the war. After 1945 the country was short of highly qualified personnel. There were not enough teaching staff, and those who could work were deprived of any contact with international science and with Western science in particular, links which had been very strong before the war.

The latest scientific literature did not reach Poland in sufficient quantities. Scholars did not obtain permission to go on foreign research trips and scholarships. The country was swamped by Soviet literature, very often of low quality. Each achievement of the USSR was exaggerated, and – simultaneously – *capitalistic* science was constantly condemned. From 1948 the Lysenko theory was presented as a tried and tested theory which brought excellent economic results and many scholars, both young and old, surrendered to this *brain washing*, or at least pretended to believe it. Propaganda gradually encompassed the publication of all books, as well as articles in scientific magazines and periodicals devoted to science and its applications such as *Kosmos* [Cosmos], *Postępy Wiedzy Rolniczej* [Advancements in Agricultural Knowledge] or *Wszechświat* [Universe]. An important role was also played by periodicals of a general and socio-political character and dailies such as *Trybuna Ludu* [People's Tribune – the daily of the communist party Central Committee], *Nowa Wieś* [New Village – the organ of the United Peasants' Party, the supporter of the communists], *Sztandar Młodych* [The

¹ See P. Hübner, *I Kongres Nauki Polskiej jako forma realizacji założeń polityki państwa Ludowego*.

Banner of the Young – the organ of the Polish Socialist Youth Union, a copy of the Russian *Comsomol*]. Changes were introduced in the education of young people in schools too. Lectures and conferences were organized to popularize Lysenkoism. Polish scholars were sent to the USSR in order to learn new ideas directly from this brilliant researcher¹.

The first news about the *visionary achievements* of Michurin and Lysenko appeared in the columns of *Problemy* in issue no. 10 of 1948. After a general presentation by the editors of the results of the proceedings of the Soviet Lenin Academy of Agricultural Sciences in Moscow, there follows a detailed summary of the enthusiastic article entitled *Man changes nature*, written by Professor V. Stoletov, the rector of Moscow's Timiriazev Academy of Agricultural Sciences. The author puts particular stress on the practicality of Lysenko's results, as well as on discrediting Western genetics as reactionary science which has no future and has made no serious achievements useful in everyday life. From the time when this article appeared until 1956, it was useless to look for any honest reports on genetics in the magazine. From that moment genetics in Poland was acknowledged as false and reactionary (even though several numbers earlier one might find articles on genes as a phenomenon already accepted in science, and the results of Western research were cited)².

In 1949 and 1950 long articles and short references appeared in *Problemy* relatively frequently on the subjects of Michurinism, Lysenkoism and the research of Olga Lepeshinska, along with the condemnation of Western genetics. There were 11 references in 1949 and 10 in 1950. Western research into hereditary processes and genes were compared in propaganda manifestos with racism and even equated to the criminal activity of the Nazis during the war³. In the readers, especially those who had experienced the atrocity of war, these arguments were supposed to evoke an understandable reaction of total hatred towards all capitalist science. In acknowledgment of the editorial board's effort to stay objective in this difficult time we should point out that a fair discussion was published in *Problemy*. Tadeusz Dominik, an opponent of Lysenko's theories, who was head of the Phytopathology and Plant Protection Department of the University and the University of Technology in Wrocław, had a debate with the greatest supporter of this theory at that time, Szczepan Pieniążek, a professor in the Department of Pomology at Warsaw's University of Life Sciences (SGGW). This and similar discussions were published in 1949 and 1950 in the *Polemics* section, and covered such questions as chromosomes, vegetative hybrids and the inheritance of acquired features.

Pieniążek, according to the guidelines of Lysenkoism, tried to prove that during the transmission of hereditary features in organisms, chromosomes do

¹ See R. Herczyński, *Spętana nauka: opozycja intelektualna w Polsce 1945–1970*, pp. 135–140 & Köhler 2008.

² See W. Stoletov, *Człowiek zmienia przyrodę [Man changes nature]* in: *Problemy* 4, 10/1948, pp. 586–590.

³ See W. Szukiewicz, *Na drodze do realizacji fantazji [On the way of realization of fantasy]* in: *Problemy* 4, 3/1948, pp. 146–155.

not have exclusivity, because a similar role is also played by *biozones* (extranuclear creatures in plasma, which multiply by division), and even plastic (formative) substances and other chemical compounds circulating in plants¹. However Dominik noticed that such a generalization leads to the assertion that water and carbon dioxide (as examples of chemical substances) can also transmit hereditary features. He also asked Pieniżek to present in the magazine columns some examples of such hybridizations, which he had managed – supposedly – to breed². In one of the following issues Pieniżek finally presented the results of the work conducted by Edmund Malinowski on the vegetative hybridization of a tomato³. And that was the end of the dispute.

In 1951 news about the Lysenko theory appeared in five issues of the magazine. Over half of the capacity of the March issue was devoted to the famous conference which took place in Kuźnice, and to reprints of articles presented at this convention⁴. Nowadays the conference in Kuźnice is known as the saddest event in the whole period of the Lysenkoism invasion of Poland⁵. The conference was organized by the Union of Marxist Naturalists, with the cooperation and support of the Ministry of Higher Education and Sciences and the Ministry of Health and Agriculture. It was held from 27 December 1950 to 6 January 1951. Over 120 Polish and Soviet delegates took part in the event, but the main emphasis was on criticism of genetics as *reactionary* science and the denunciation of scholars who were involved in it⁶.

In the following years the issues of *new biology* were discussed in *Problemy* with varying frequency and attitudes. Reports of different lengths on this topic appeared 57 times in 41 different numbers of the magazine within 9 years. So we can acknowledge that the readers of *Problemy* were well informed about the current state of research in this field. The articles devoted to Lysenkoism or in various degrees referring to its position, usually on average 10 or 11 a year, were published most frequently in the period recognized as the height of Stalinism, 1949–1953. From 1954 to 1956 a distinct U–turn in publishing articles related to this topic can be seen. Lysenko’s name appears occasionally in the context of describing research results in the Soviet Union, and among the texts devoted to vegetative hybrids in the animal world. But there is almost no mention of *new biology*. On the other hand, there was still no official consent from the authorities to present and publish any results

¹ See S. Pieniżek, *Rola chromozomów* [Chromosomes’ role] in: *Problemy* 5, 8/1949, p. 573.

² See T. Dominik, *Dalej o chromozomach ...* [On chromosomes continue ...] in: *Problemy* 5, 12/1949, pp. 855–856.

³ See S. Pieniżek, *W odpowiedzi prof. Dominikowi* [Answer to professor Dominik] in: *Problemy* 6, 3/1950, p. 205.

⁴ See *Konferencja biologów, agrobiologów i przedstawicieli ogólnych nauk lekarskich* [Conference of biologists, agrobiologists and the representatives of general medicine sciences] in: *Problemy* 7, 3/1951, pp. 146–179. It contains the summaries of major papers from the conference written by most prominent authors as Włodzimierz Michajłow, Jan Dembowski, Mikołaj Olenkiewicz, Romana Kozłowski, Aniela Makarewicz, Teodor Marchlewski, Kazimierza Petruszewicz and Norair Sisakian (Soviet delegate).

⁵ See L. Kuźnicki, *Ewolucjonizm w Polsce 1883–1959*, p. 306.

⁶ See L. Kuźnicki, *Ewolucjonizm w Polsce 1883–1959*, p. 305.

of research in genetics during those years. So biological topics appeared in the columns of the magazine less frequently than they had earlier.

Finally in issue no. 10 of 1956 a major article by Waclaw Gajewski was presented, in which the author gave a decisive critique of the Michurin–Lysenko theory, and clearly explained the current situation in the biological sciences, with numerous references to the state of European and American studies¹. Gajewski's work, written during the fall of Lysenkoism in Polish science, was one of the first attempts to analyze this phenomenon as an example of the deplorable results of the falsification of facts and lack of scientific freedom².

Conclusion

Problemy was a kind of mirror in which – on a micro-scale – contemporary scientific reality and the situation of science in Poland was reflected. Was there any way of conducting the editorial policy differently? Was it possible – in those political conditions – to be more independent? It seems that there was no such chance. The reality of political circumstances was even more brutal³. Scholars who were connected with the anticommunist resistance, especially with the Polish Peasants' Party, led by Stanisław Mikołajczyk who came to Poland from London, were arrested and detained in prison⁴. This happened in 1945–1947, in the period of upcoming elections, which were falsified and which brought a total victory for the communists. Stalin's golden rule – *it is not important how people vote, it is important who counts the votes* – was skillfully applied in Poland too.

Problemy managed to survive the whole difficult epoch of Stalinism without serious losses. No doubt this was a result of the wise policy of the editorial board, and primarily of Józef Hurwic, who due to his wide contacts with Soviet scholars from the time of his stay in the USSR, was the person the communist authorities had to reckon with and whom they approached with at least some respect. The journal also managed to maintain its high position among popular science magazines in Poland in the 1960s and especially in the 1970s. However its editor-in-chief did not wait to see this, because he was one of those who were forced to emigrate to the West after the anti-Semitic campaign was unleashed in March 1968⁵.

Finally it is appropriate to underline that the phenomenon of *Problemy* – if compared with similar journals in other Eastern bloc countries – was a relatively mild and lenient case. None of the collaborators of the journal were arrested, or given a death sentence or lost their lives in the Stalinist period. Such things happened in other countries on an everyday basis. Tadeusz Unkie-

¹ W. Gajewski, *Parę słów o sytuacji w naukach biologicznych* [A few words about the situation in biological sciences] in: *Problemy* 16, 10/1956, pp. 698–705.

² See P. Köhler, *Lysenkizm w botanice polskiej*, p. 121.

³ About the general situation see P. Hübner, *Polityka naukowa w Polsce: geneza systemu*.

⁴ See A. Paczkowski, *Stanisław Mikołajczyk czyli klęska realisty: zarys biografii politycznej*.

⁵ See J. Eisler, *Marzec 1968: geneza, przebieg, konsekwencje*.

wicz, in spite of the regime's suspicions about his contacts with Western intelligence, was able to remain editor-in-chief of the magazine. That would not have been possible in other countries in the Eastern bloc. In Czechoslovakia or in the Soviet sector of the future GDR he would have been arrested and probably have lost his life at the very beginning of his career. Therefore the fate of the editorial board of *Problemy* confirms the thesis that communism had a much tenderer, more human face in Poland than in other satellite states, including big brother – the USSR itself.

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