

Czesław Lejewski as Teacher

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1. Preliminary Caution

I should state right at the outset that my personal experience of Professor Czesław Lejewski as a teacher is relatively modest. I attended one of his University of Manchester courses for a short time, and two complete courses at the University of Salzburg. Nevertheless, I formed a distinct impression of both the substance and style of his teaching, and I have supplemented my recollections with input from a colleague who also experienced his teaching.

2. Personal Background

Czesław Lejewski (1913–2001) studied Classics at the University of Warsaw, where he obtained a master's degree in 1936 with a dissertation on tropes in the sceptics. After military service he returned to the university in 1937 to study for a PhD in Classics, concentrating on ancient logic. This interest drew him to courses and seminars on logic given by Jan Łukasiewicz and Stanisław Leśniewski, and on philosophy by Tadeusz Kotarbiński. His dissertation, *De Aenesidemi studiis logicis*, was examined and passed among others by Łukasiewicz, but he was unable to obtain his degree due to the outbreak of war. He was taken prisoner by the invading Soviets and spent two years in Soviet labour camps, before joining the 2nd Polish Corps under General Władysław Anders after the Nazi invasion of the USSR. He subsequently made a long journey via Africa and the Americas to Britain, where he became an officer in the Polish parachute regiment. After the war, he taught Polish ex-servicemen in Britain, resuming studies with Karl Popper at

the London School of Economics, passing (with Łukasiewicz as examiner again) with the dissertation *Studies in the Logic of Propositions* in 1954. In 1956, he joined the Philosophy Department at the University of Manchester, where in 1966 he succeeded Arthur Prior as professor, and remained there until his retirement in 1980. He was visiting professor at Notre Dame University (USA) in 1960–1961 and at the University of Salzburg (Austria) in 1984.

Lejewski published around 50 articles, almost all on logic, covering both technical and philosophical aspects. The majority comment on, reconstruct, and extend the work of Leśniewski. His first article appeared in 1953, when he was already 40 years old. He was the clearest of Leśniewski's expositors¹ and the one who did most to extend his teacher's ideas in philosophically interesting directions.

3. Manchester Background

To understand the reception and influence of Lejewski as a teacher, it is necessary to know something about the situation in Manchester, where he spent nearly all his teaching career. For its time, for its relatively small size, and for the United Kingdom, Manchester was an unusually eclectic department, with members of the department covering a wider range of approaches than was then standard in Britain, including phenomenology and existentialism, Georg Wilhelm Friedrich Hegel, Karl Marx, and Alfred North Whitehead, as well as the more standard areas, Ludwig Wittgenstein, philosophy of science, philosophy of language, ethical and political philosophy, and parts of the history of philosophy, such as early modern philosophy from René Descartes to Immanuel Kant. Logic was a notable strength, and the professor of logic from 1959 to 1966 was the inventor of tense logic, Arthur Prior. Even logic in Manchester was eclectic, covering not only standard propositional and predicate calculus, but also relevance logic, aspects of the history of logic, and, with Lejewski and Desmond Paul Henry (see below) some Leśniewskian logic.

When Prior left Manchester for Oxford in 1966, Lejewski was appointed as his successor, ahead of internal and external competitors, and it is fair to say the appointment aroused some local resentment, not just because local candidates were

¹ But not the most influential: that title has to go to Bolesław Sobociński (see below).

passed over, but because it was considered by some that Lejewski's interests and expertise were unduly narrow. In the 1960s and 1970s, Britain was going through a social revolution in which music, literature, fashion, politics, and philosophy were embracing new and hitherto exotic approaches and attitudes, casting off the more static and conservative culture of the 1950s. By comparison with this exuberant flowering, Lejewski's teaching came to appear to the students of the time as somewhat unappealingly formal and stuffy, and his lectures narrow and old-fashioned. We should after all remember that he had been a student more than three decades earlier and his attitudes to logic, philosophy, and their history had been forged in the very different climate of pre-war Poland. Also by this time in Britain, students had little Latin and less Greek, both languages in which the classically trained Lejewski was adept. Lejewski's topics were traditional, and his style of presentation (dealt with in its own section below) was low-key, relying on content rather than any rhetoric.

4. My Experience of Lejewski as a Teacher

I was a postgraduate student of philosophy in Manchester from 1971 to 1975, when Lejewski was professor. In 1972, I started to attend his second-year undergraduate course "Metaphysics." It was a small group, taught in his office. He started by giving us an account of Aristotle's understanding of *first philosophy* as "the science of being as being," and discussed the various alternative accounts of this science in Aristotle, and how they might be related. There was a typewritten handout giving the quotations in English, and Lejewski went through the handout calmly and quietly, as was his general manner when teaching. Shortly afterwards, maybe after just one or two meetings, my supervisor called me in and basically forbade me from attending further meetings of the course. He and Lejewski had been rivals for the chair, and they were personally as well as philosophically opposed to one another. I had little choice but to agree, as my career had not yet properly begun.

The course later² discussed the distinction between unicategorical ontologies and multicategorical ontologies, which was compared to the difference between

² I am indebted to Robert Campbell for information on the later part of the course – the part that I missed.

black-and-white and colour film. Colour film can record black and white but black and white cannot record colour. So even if one thinks (as Lejewski did) that a unicategorical ontology adequately describes the world, one may employ the *language* of a multicategorical ontology to engage in discussion with someone who believes in several categories, though ultimately holding to the view that none of these extra categories is exemplified. Also, an important mereological distinction was made between *car parts* and *parts of a car*; the mereological sum of the fuel tank and the disc brake next to it are a part of a car, but *it* is not a car part (though those two summands of it are).

Despite my warning, I began reading around ideas I knew Lejewski worked on, such as mereology, initially through the delightful little book *Medieval Logic and Metaphysics* by Desmond Paul Henry. Henry was a historian of medieval philosophy and logic.³ Initially an adherent of Russellian predicate logic, he had been persuaded by Lejewski of the greater suitability of Leśniewski's systems for representing medieval work, and had become a "convert" to Leśniewskian thinking. I became interested in mereology, having read about early attempts by Edmund Husserl to develop a formal theory of part and whole, and wondered in my innocence how to formalize the theory of part and whole. I was showing some tentative axioms around the department to get comments and Lejewski happened to notice this. He told me my axioms were *far too weak*. From then onwards I became fascinated by mereology. This was not a formal meeting, just informal advice, but it was valuable, even though in the end I came to think his preferred theory (that of Leśniewski) was *far too strong*.

Later, after I had moved to Austria and Lejewski had retired, the Salzburg department invited him for the summer semester of 1984 as a guest professor. He taught two courses (in English): a seminar, "Ontology," and a research seminar, "Logical Consequence." I attended both courses from start to finish and it was these that gave me what knowledge by acquaintance I have of Lejewski the teacher.

³ Desmond Henry was also a notable graphic artist, producing complex abstract pictures made using modified wartime analogue bombsights together with pens and a drawing table. He was also something of a wit. He claimed – probably apocryphally – that Lejewski was once invited to and attended a conference thinking it was on mereology, only to find it was on Mariology.

5. Content

Lejewski's Salzburg seminar on ontology began very much as his metaphysics course had in Manchester a dozen years earlier: with Aristotle and the most general science. In quick succession, reference was made to other ontologists: Christian Wolff, Alexander Baumgarten, George Edward Moore, Franz Brentano, Kazimierz Twardowski and Tadeusz Kotarbiński. Lejewski supported Wolff's contention (though not his practice) that ontology could be pursued as exactly as Euclid had pursued geometry, namely as a formal science. The flavour of these introductory remarks can be readily captured by looking at the opening pages of Lejewski's papers in the bibliography given below, all of which are quite similar.⁴ Very quickly, the focus shifted to Kotarbiński's reism or pansomatism, of which Lejewski was a convinced adherent. In the paper *On the Dramatic Stage in the Development of Kotarbiński's Pansomatism*,⁵ he defended Kotarbiński against criticisms by Kazimierz Ajdukiewicz, and indeed in *Outline of an Ontology* he went beyond Kotarbiński to uphold an anti-atomistic ("gunky") ontology, according to which all objects have proper parts.⁶ The course, like that in Manchester, mentioned the idea of multicategorical ontologies, as found in the paper *A System of Logic for Bicategorical Ontology* as well as in *Ontology and Logic*,⁷ and ended with a sketch of *chronology*, Lejewski's own extension of Leśniewski's systems, dealing with temporally extended entities, a theory outlined in *Ontology: What*

⁴ C. Lejewski, *Ontology and Logic*, in: *Philosophy of Logic*, ed. S. Körner, Blackwell, Oxford 1976, pp. 1–28; C. Lejewski, *Outline of an Ontology*, "Bulletin of the John Rylands University Library of Manchester" 1976, Vol. 59, pp. 127–147; C. Lejewski, *Logic and Ontology*, in: *Modern Logic: A Survey*, ed. E. Agazzi, Reidel, Dordrecht 1981, pp. 379–398; C. Lejewski, *Ontology: What Next?*, in: *Sprache und Ontologie / Language and Ontology: Proceedings of the 6th International Wittgenstein Symposium*, eds. W. Leinfellner et al., Hölder-Pichler-Tempsky, Vienna 1982, pp. 173–185; C. Lejewski, *Logic, Ontology and Metaphysics*, in: *Philosophy in Britain Today*, ed. S.G. Shanker, State University of New York Press, New York 1986, pp. 171–196 (Polish translation: *Logika, ontologia, metafizyka*, "Filozofia Nauki" 1993, Vol. 1, pp. 15–33).

⁵ C. Lejewski, *On the Dramatic Stage in the Development of Kotarbiński's Pansomatism*, in: *Ontologie und Logik / Ontology and Logic*, eds. P. Weingartner, E. Morscher, Duncker & Humblot, Berlin 1979, pp. 197–214 (Polish translation: *O dramatycznej fazie rozwojowej pansmatyzmu Kotarbińskiego*, "Filozofia Nauki" 1994, Vol. 2, No. 1, pp. 23–36).

⁶ C. Lejewski, *Outline of an Ontology*, op. cit.

⁷ C. Lejewski, *A System of Logic for Bicategorical Ontology*, "Journal of Philosophical Logic" 1974, Vol. 3, pp. 265–283; C. Lejewski, *A System of Logic for Bicategorical Ontology*, in: *Problems in Logic and Ontology*, eds. E. Morscher, J. Czermak, P. Weingartner, Akademische Druck- u. Verlagsanstalt, Graz 1977, pp. 99–117; C. Lejewski, *Ontology and Logic*, op. cit.

*Next?*⁸ In general, the material of Lejewski's taught courses tended to stay fairly close to ideas he had already put in print.

The other course, on logical consequence, overlapped in content considerably with his Popper "Library of Living Philosophers" piece,⁹ although towards the end of the course he elaborated a metalogical conception of the classical truth values T and F as names of classes of sentences: "T" naming all and only the true ones, and "F" naming all and only the false ones, and he sketched axioms for these, with nominal variables being variables for *names* of (declarative) sentences. To my knowledge, these ideas were not published. It should be said that Lejewski offered a completely metalogical reworking of Popper on inference, producing a typically impeccable account. For this "rescue of his honour" Popper was grateful, as his own attempts to "simplify" logic in the late 1940s had been severely criticised at the time. However, I later came to consider that Popper's ideas did not require such a rescue, but, after some fairly minor adjustments, could stand on their own terms favourable comparison with other "natural" ways of doing logic.

Lejewski spent a year at Notre Dame University in South Bend, Indiana, in 1960–1961. I have been unable to contact anyone who might have heard these classes, but I venture a conjecture. The principal figure of interest is Bolesław Sobociński, who had studied with Łukasiewicz and Leśniewski before the war, known Lejewski, and after the war emigrated to the United States, moving to Notre Dame in 1956, where he founded and edited the prestigious "Notre Dame Journal of Formal Logic." Unlike Lejewski, Sobociński was able to develop and nurture a flourishing school of talented young logicians, and thus to recreate some elements of pre-war Warsaw intellectual life. Lejewski would doubtless have felt very much at home in this milieu, and I expect his teaching would have been more technically logical than in Manchester. The three-part series *Studies in the Axiomatic Foundations of Boolean Algebra*¹⁰ – in which Boolean algebra as treated by Ernst Schröder is interpreted within Leśniewski's ontology – was, although written in Manchester, published in the first volume of the "Notre Dame

⁸ C. Lejewski, *Ontology: What Next?*, op. cit.

⁹ C. Lejewski, *Popper's Theory of Formal or Deductive Inference*, in: *The Philosophy of Karl Popper*, ed. P.A. Schilpp, Open Court, La Salle 1974, pp. 632–670.

¹⁰ C. Lejewski, *Studies in the Axiomatic Foundations of Boolean Algebra: Part 1*, "Notre Dame Journal of Formal Logic" 1960, Vol. 1, pp. 23–47; C. Lejewski, *Studies in the Axiomatic Foundations of Boolean Algebra: Part 2*, "Notre Dame Journal of Formal Logic" 1960, Vol. 1, pp. 91–106; C. Lejewski, *Studies in the Axiomatic Foundations of Boolean Algebra: Part 3*, "Notre Dame Journal of Formal Logic" 1961, Vol. 2, pp. 79–93.

Journal,”¹¹ appearing when he was himself in Notre Dame, and bearing the telling acknowledgement: “In preparing the present essay for publication I have been helped by generous advice and illuminating criticism from Professor Sobociński.” My conjecture then is that this was the subject matter of at least some of his teaching during his time at Notre Dame University.

6. Manner

Having taught English since the 1940s, Lejewski spoke the language with exceptional accuracy, and only the faintest of accents. His diction was measured and careful, and he spoke in a quiet voice, which was never raised. He never pursued rhetorical effect. Though not lacking in humour, what amused him were things cerebral rather than earthy or ribald. He always spoke with quiet conviction, and I rarely if ever heard him back down in response to criticism or questioning. Especially among those with whom he was unfamiliar, he was polite in an old-fashioned way, which contributed to the impression among students that he was aloof and distant. As one got to know him better, and shared discussion of points, he would gradually unbend, and could be entertainingly informative, not least about some of the characters of the Warsaw School whom he had known. He reserved especial affection and admiration for his two favourite teachers, Leśniewski in logic and Kotarbiński in philosophy. He regarded both Jan Łukasiewicz and Alfred Tarski as more mathematical than philosophical, though he clearly respected them both in their different ways. I recall seeing him in the company of Józef Maria Bocheński, to whom he was evidently respectful though not deferential, and they happily traded stories about the rich panoply of Polish personalities.

When delivering lectures, Lejewski would dress smartly, usually in a grey suit, or blazer and grey flannels, with white shirt, and tie. Though his courses and non-technical papers would start with prose, pretty quickly logical symbolism would be brought in, and the blackboard would begin to be covered in formu-

¹¹ The articles are “symbol heavy,” and my offprint copy of the first article contains many pencilled corrections to formulas, inserted manually by Lejewski. Indeed, in the fourth number of the first volume (the three parts appeared one in each of numbers 1–3), he had to publish a list of 66 errata for Part 1. For the scrupulously accurate Lejewski this would doubtless have been a source of discomfort.

las. The symbolism was invariably that of Leśniewski's "informal" notation, itself based broadly on that of *Principia Mathematica*, with groups of dots in place of parentheses, dots for conjunction, and quantified variables for the universal and particular (not existential!) quantifiers placed in square brackets rather than parentheses, to emphasize that Leśniewski's quantifiers were *unrestricted*, that is, allowing substitution of expressions with any available semantic value for their syntactic category. In the case of nominal variables, that meant that empty names were admissible substituends, so that nominal quantification lacked existential import. Minor deviations from Leśniewski's practice were that in ontology Lejewski did not distinguish typographically between singular variables and not-necessarily-singular ones as Leśniewski did. His expressions for constants from ontology and mereology were adapted to the English language, so, for example, the mereological constants "cz," "ing," "zb" and "Kl" were rendered as "ppt," "pt," "cl" and "ccl" respectively, being mnemonic for "proper part," "part," "collection" and "complete collection" respectively. Collections were not sets or pluralities but mereological wholes, being either some-or-all of the *as* ("cl(*a*)"), or all of the *as* ("ccl(*a*)"). Semantically, "cl(*a*)" is usually plural if there is more than one *a*, singular if there is exactly one *a* (and denoting just this one *a*), and empty if there are no *as*; "ccl(*a*)" is a singular term provided there is at least one *a*, otherwise empty.

When writing formulas, Lejewski would write the variables and logical constants first, and then go back and fill in the requisite number of dots to get the bracketing right. It was clearly second nature to him, but listeners, including, it must be said, myself, were always struggling to keep up. How I longed for parentheses! All the while, Lejewski would keep up a gentle commentary, often reading formulas as something closer to English, and interspersing these with the usual patter of such expressions as "so now we can derive..." "we now assume..." "we can define..." and the like. Sometimes he would work from notes, but as often as not he did not need to consult these. For particularly intricate derivations, in Salzburg he wrote out formulas and sequences of formulas by hand; these were then distributed in photocopy. The special symbols and groups of dots would have taken too long to do in a more "typographical" way, and his handwriting was neat, so no ambiguity resulted. His typescripts submitted as copy for publication used the available alphanumeric and other characters from a standard typewriter keyboard; additional symbols not thus available were added by hand.

Throughout all his talks, lectures and seminars there was a certain gentle confidence and serene certainty in the way in which he made assertions, as if it would

be clearly out of the question to think otherwise. To sceptical or critical questions, he would respond patiently but unbendingly. If weighing up alternatives, they were always those he thought were plausible, and he was trying to work out which he thought was right. It was more a dialogue with himself than a discussion with his listeners. There were things he was ready to admit we did not know for sure, such as whether or not there are mereological atoms, but on an opinion that he held firmly, I never knew him to back down.

7. Reception

For those already interested in what Lejewski was talking about, it was always instructive to listen to what he said, even if one disagreed. Indeed, most listeners disagreed with some of what he said, because his uncompromising materialistic reism was such an extreme ontological view. On the history of logic or on particulars of Leśniewskian lore, he was a reliable oracle. Nevertheless, there was a pronounced narrowness to his fields of interest, and as indicated earlier, when I first encountered Lejewski, his interests seemed extremely ascetic in comparison with the rainbow of exotica emanating from other, more “trendy” philosophers. In the 1970s, Britain was still under the strong influence of the later Wittgenstein, with the rejection of philosophy as a discipline in favour of a therapeutic dissolution of the so-called problems of philosophy. Lejewski’s conviction that the fundamental disciplines of philosophy could be built up in a series of formal theories, starting from protothetic and proceeding through ontology, mereology, stereology, kinematics and onwards through to mechanics and beyond, appeared to be either a throwback to Spinozistic *more geometrico* rationalism or unfounded optimism. It was almost as far from Wittgensteinian therapy as it was possible to get, which, given its roots in Aristotle, Wolff, Brentano, Leśniewski and Kotarbiński, was to be expected. Logical positivism was by then fundamentally discredited, but like all Warsaw-trained philosophers, Lejewski was no positivist, but on the contrary, a wholehearted metaphysician with a logical method.

For all these reasons, though mostly highly regarded by the staff and students as an important and illustrious logician, undergraduates found him, while a patient teacher, a little remote and rather intellectually intimidating. He did not attract doctoral students. Had he been able to remain in Poland, or perhaps have followed Sobociński and Tarski to the United States, no doubt it would have been

different. He would probably then have known more people sharing his interests and ambitions. As it was, one got the feeling that in England he was a relatively isolated figure, despite enjoying the respect of such logicians as Arthur Prior and Peter Geach, and his former teacher, Jan Łukasiewicz.¹² The one disciple of whom Lejewski was genuinely proud was Audoënus Le Blanc, who came to Manchester to study with him when he was in retirement, so that Le Blanc's nominal PhD supervisor was another logician. Sharing the general Polish logical obsession with axiomatic systems with fewer, shorter, simpler, etc. axioms and primitives, Lejewski was clearly delighted that Le Blanc was able to shorten axioms for mereology, and produce an elegant system of computational protothetic.

Having started subjectively, I will finish in like vein. Czesław Lejewski was clearly pleased with and encouraged my own efforts to propagate mereology as a central part of ontology, even if he disagreed with some of the more speculative aspects of my work, so that while we had initially had a distant relationship, we eventually became firm friends. My own views in logic are basically Leśniewskian, and my ontology, while not reistic, is nominalistic and austere, so his example, both in person and through his writings, has affected my own standpoint. It is to be hoped that his legacy, some of it no doubt slumbering in his uncatalogued *Nachlass* in the Library of the University of Leeds, will be taken up, examined, and thought about by others, despite their being unable to hear it from him in person.

¹² When Łukasiewicz travelled from Brussels to Dublin, he went via London, meeting Lejewski for dinner in a Polish restaurant (J. Łukasiewicz, *Pamiętnik*, eds. J. Jadacki, P. Surma, Semper, Warszawa 2013, p. 90). Lejewski later visited the Łukasiewiczzes in Dublin: in February 1947, Łukasiewicz, who was feeling very isolated and alien in Ireland, wrote to Bocheński: "With Lejewski I talked to my heart's content about scientific matters and pre-war Warsaw" (ibid., p. 118), describing Lejewski as a "talented, nice and conscientious man" (ibid., p. 110). In February 1954, Łukasiewicz flew from Dublin to London (then a much rarer way to travel) to examine Lejewski's second PhD at the London School of Economics. According to Lejewski, his nominal supervisor, Karl Popper, opened the proceedings with: "Well, you've passed. Now let's talk." When Łukasiewicz became too ill to see the second edition of his *Aristotle's Syllogistic* through the press, the proofs were read and corrected by Lejewski, by this time in Manchester. This helps to explain why Łukasiewicz's (uncatalogued) *Nachlass* resides in the John Rylands University Library of Manchester. The Łukasiewiczzes had visited Manchester in February 1950 at the invitation of the mathematician Max Newman, where Łukasiewicz was happy to meet Alan Turing, whom he (rightly) regarded as the finest English logician of the time (ibid., p. 93).

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