

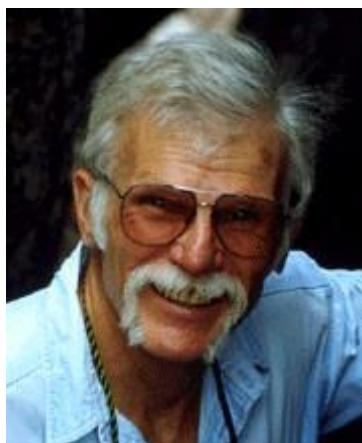
## Joe Sneed, *in memoriam*\*

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C. Ulises Moulines<sup>†</sup>

JOSEPH D. SNEED

(September 23rd, 1938–February 7th, 2020)



I met Joe Sneed for the first time in the autumn of 1974, while I was a research assistant and a post-graduate student at the Munich Institute for Logic and Philosophy of Science. This Institute was chaired by Wolfgang Stegmüller, the most renowned German-speaking philosopher of science at the time. I was then writing my PhD thesis on the foundations of thermodynamics. Stegmüller told me that I might take a look at a book on the foundations of physics that had recently been published under the title *The Logical Structure of Mathematical Physics*, authored by a certain Joseph D. Sneed. In this work, so Stegmüller claimed, a thoroughly new, even revolutionary view of the deep structure of physical theories was offered. I bought the book and I immediately started reading it. I found its content quite difficult to understand but at the same time extremely stimulating. After some efforts made to digest those new ideas, they became my main source of inspiration for my own work. A bit later, Stegmüller announced to his collaborators that he had managed to get financial support to invite Sneed as a visiting lecturer at our Institute for at least one year, perhaps two. I was quite excited at the prospect of personally meeting that revolutionary philosopher of science. I asked myself what kind of person he might be — perhaps a stiff, highbrow egghead, an unapproachable and boring scholar? To my surprise, I got confronted with a young and congenial fellow, bearing an impressive mustache and cowboy boots (much to the distress of Stegmüller’s secretary) and, of course, no tie. I introduced myself and told him I was using his ideas to reconstruct the foundations of thermodynamics. He immediately showed much interest in it and read some parts of my work in process. We decided to meet regularly to discuss, not only my own work, but also some of the new ideas he himself had been developing after the publication of his book.

As it happened, our discussions were greatly facilitated by the fact that we were almost neighbors: We both lived in the so-called “Olympia-Stadt”, a pleasant and quite neighborhood at the outskirts of

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Munich that had been built for the Olympics some years before. It was now being used to accommodate students and visiting lecturers. We often met in Joe's apartment (mine was too small), where I had the opportunity to meet his wife Constance and his son Ian, a remarkably clever and lively little child, who, by his way of behaving, seemed to be older than he really was, and who addressed his father not as "daddy", much less as "father", but just as "Hey, Joe!".

The topics of our conversations in Joe's flat were not only philosophical or scientific, but also all kinds of issues of common interest, ranging from American politics through the German *Bauhaus* movement up to the background of the Spanish Civil War. I was impressed by the very wide range of Joe's political and cultural interests. A further tie that strengthened our friendship was the fact that we both liked hiking in the wonderful region between Munich and the Alps (when the weather allowed it, which unfortunately is not often the case in Bavaria).

Formally, Joe's academic duties in Munich were limited to do some research, but informally it was expected that he would also do some teaching for advanced students, something he was delighted to do. His main topic was the foundations of quantum mechanics. The first semester he gave the seminar alone, later on I cooperated with him in the organization and development of the seminar. Joe's German at the time was not quite fluent, but it was good enough for him to make a point of talking and discussing in German — an attitude that was deeply appreciated by his students and colleagues.

During that time, Joe and I became acquainted with Wolfgang Balzer, another of Stegmüller's graduate students who was applying Joe's approach to his doctoral project on the foundations of physical geometry. The three of us developed a very close friendship that lasted forever. We met frequently, including some trips in the region near the Alps. In our informal discussions, we started considering the project of further developing and consolidating Joe's approach initiated in his *Logical Structure of Mathematical Physics*, and further developed first by me for thermodynamics and somewhat later by Wolfgang for geometry. We envisaged transforming it in a more general *metatheoretical* approach, applicable to all sorts of empirical disciplines and not just physics. Also, we felt the need to make the general frame of this approach more stringent, more flexible and better applicable than before, as well as examining its possible consequences for general epistemological issues, like holism, the different kinds of intertheoretical relations, the thesis of incommensurability, or the nature of empirical approximation, among others. However, for the time being, those ideas remained in the state of a vague project. For a number of reasons, the project would really be implemented only ten years later! During this pioneering time in Munich, the three of us discussed a lot about our common approach, but we didn't still have an official denomination for it. We just spoke of "our stuff" — certainly not a denomination that might be offered to an academic public... It was only some years later, by the end of the 1970's, that Stegmüller (who followed our researches and discussions with lively interest) coined the official denomination "structuralism" or, more precisely, "the structuralist view of theories". It is under this denomination that the new approach would become internationally widespread.

After finishing my PhD, I still remained at Stegmüller's Institute as an assistant professor for some months, but beginning 1976 I got a tenured position as a researcher at the Institute for Philosophical Research ("I.I.F.") of Mexico's National University ("U.N.A.M."). Joe still remained in Munich for a further year, more or less. Then, he got a tenured position first at the University of New York at Albany, then at the Colorado School of Mines at Golden. He went to live in Boulder, Colorado, which is not far away from Golden.

The U.N.A.M. is a very generous institution, especially for its researchers — at least in those days. Thus, I got the financial possibilities to invite foreign colleagues to Mexico for some more or less long periods in order to participate in conferences or to give some lectures. It goes without saying that the foreign colleague I managed to be invited most often was Joe. As far as I can gather from my own records, besides having Joe invited to attend some international conferences at the I.I.F. on several occasions, I managed three times between 1976 and 1983 to get him invited for longer periods of about one month to give a series of lectures. During these periods, he stayed at our home, where he had the opportunity to enjoy two things: Adriana's famous gastronomic abilities and the collection of

pre-Hispanic figures (essentially Aztec, Olmec, and from Michoacán) she had inherited from her father at times one could still collect pre-Hispanic figures without getting into trouble with the authorities. I know Joe had already been interested in Mexican pre-Hispanic civilization before he came to visit us, but, at the time he stayed with us, he was extremely impressed by the richness and variety of our collection, and I think this impression would last forever in him and influence to some extent his intense study of pre-Hispanic culture in latter times. He was so enthusiastic about our collection that Adriana decided to give him a precious Olmec figure as a farewell present. I know it accompanied him for the rest of his life.

It was also around this time that Joe started developing his command of the Spanish language. At the U.N.A.M., he still gave his talks in English, but in the informal discussions he was able to use some Spanish, especially when confronted with some students who had a very poor command of English. Other than many of his Anglo-Saxon colleagues, Joe would never presuppose that any student or teacher anywhere in the world is expected to have a perfect command of Shakespeare's tongue if s/he doesn't want to be regarded as mentally handicapped. Later on, Joe was going to consolidate his knowledge of Spanish, and in the last part of his life he would come to speak and write Spanish fluently. As a matter of fact, he wrote his last publication before his death, "El estructuralismo, sus orígenes y desarrollo"<sup>1</sup> ("Structuralism, Its Origins and Development"), directly in Spanish.

In the summer term of 1980, I was invited by Stegmüller to spend some months as a visiting lecturer at his Institute in Munich. There, I had plenty of time to meet Wolfgang and discuss with him a sketch of what could be our joint "big book" on structuralism. We sent a précis of our ideas to Joe. In the summer of 1982, once again I could invite Joe to Mexico for some weeks to give some lectures and stay with us. He arrived with a long manuscript inspired by the notes Wolfgang and I had sent him. We discussed it at length, but it became clear to us that it was too soon and still somewhat problematic to make a book out of it. We continued to discuss the matter a few weeks later, when Joe invited me to give some lectures at the University of Colorado. There, we had again plenty of time to discuss the prospects of "our stuff" — besides climbing the Rocky Mountains that rose up just in front of his door.

Beginning 1984, I got a tenured position for philosophy of science at the University of Bielefeld (Northwest Germany). Adriana and I decided to (re-)emigrate to Germany for good. It was not an easy decision, since our emotional ties to Mexico were very strong. But the increasingly critical social and economic situation there left us no choice. Living in Bielefeld, it was easier for me regularly to contact Wolfgang, who had already got a tenured position in Munich, and so we decided that the time was ripe finally to set up our common "big book" on structuralism, together with Joe, of course. An additional fortunate factor was that at the University of Bielefeld I had an extremely competent secretary, Frau Einsporn, who was able patiently to write and rewrite our awful text full of mathematical symbols and graphics as often as needed. (At the time, she still couldn't use a computer to do that.) Thus, finally, *An Architectonic for Science* came out in 1987.<sup>2</sup> Since then, this book is widely considered the standard exposition of metatheoretical structuralism, both with respect to the general conceptual framework and to the numerous detailed reconstructions of real-life theories from different disciplines (physics, chemistry, economics).

After the publication of *Architectonic*, Wolfgang and I continued to have a close contact, both personally and scientifically, enhanced by the fact that, in 1993, I got a tenured position in Munich as Stegmüller's successor. On the other hand, the interaction with Joe became weaker in the course of time. Certainly, part of this was due to the geographic distance. But some other, more intellectual factors may have played a role. I have the impression (though, of course, I might be wrong) that Joe became in time less and less stimulated by issues in the philosophy of science, and much more by archaeology, especially as far as the pre-Hispanic cultures (both in the Southwest of the U.S.A. and in the North of Mexico) were concerned — a research field to which he came to make notorious and highly professional contributions. This is not to say that he completely abandoned his work in

<sup>1</sup> In Diez, J. A. (ed.) (2019), *Exploraciones pluralistas – Las filosofías de C. Ulises Moulines*, Madrid: U.N.A.M./U.A.M./Tecnos, pp. 67-80.

<sup>2</sup> Balzer, W., Moulines, C. U. and J. D. Sneed (1987), *An Architectonic for Science – The Structuralist Program*, Dordrecht: Reidel.

philosophy of science, especially as the structuralist program was concerned. For example, he cooperated with Wolfgang and myself in editing a voluminous anthology of case studies of structuralist reconstructions of theories from very different disciplines, which appeared in 2000.<sup>3</sup> Also in 2003, he attended a symposium jointly organized by the Universities of Munich and Konstanz in memory of Wolfgang Stegmüller's lifework, to which he had been invited. Indeed, this was the last time I saw Joe. He stayed at our home in Munich for several days, and once again we had plenty of time to discuss all kinds of matters — not just philosophical ones. On that occasion, he told me that he had severe health problems that made increasingly difficult for him to undertake long trips. As far as I know, this was the last time he came to Europe.

About ten years ago, Joe took up again one of his favorite subjects in philosophy of science: the foundations of quantum mechanics. In 2011, he published a lengthy article on it.<sup>4</sup> He also wrote down a voluminous typescript on the subject within a very general formal framework. He sent the typescript to some of his friends, myself included, to get some feedback. I must shamefully avow that I found the text so difficult to follow that I didn't feel able to read it thoroughly, much less to make sensible comments on it. Some other of Joe's friends may have been more reactive. Be that as it may, to my knowledge, Joe never produced a readable version of this text that could be published somewhere, and I have the impression that he himself didn't envisage this anyway.

In the last times of his life, we still exchanged e-mails frequently, but not on structuralism (nor on pre-Hispanic cultures, for that matter), but rather on politics, especially Spain's political situation in recent times. Joe knew that I am of Catalan descent and he was very much interested in following the efforts towards independence that have taken place in Catalonia in the last years. Being himself partly of Scottish origin (and being quite conscious of it), he had an acute sense for what it means for a small nation to resist being swallowed by a bigger and more powerful one. So, he regularly sent me articles of the *New York Times* or other American journals concerning Catalonia, and asked me about my own opinion. Ironically enough, after decades of exchanging views about all kinds of topics, philosophical or other, the Catalan issue was the last one about which Joe and I found a field for shared reflections.

Joe Sneed was undoubtedly a genius. He developed from scratch one of the most original and fruitful approaches that have ever been proposed in the philosophy of science. At the same time, he was an extremely modest, unpretentious genius, and a notoriously humane, generous fellow. Indeed, generosity, both in academic and everyday matters, was the essential mark of his personality. In sum, I have lost one of the best friends I have ever had all over the world. It is just a consolation that he continues to be very present in my memories, and surely as well as in those of so many of his friends and disciples.

Joe Sneed died in Bedminster, Pennsylvania, on the 7th of February of 2020.

Auxerre, France, March 2020

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<sup>3</sup> See Balzer, W., Moulines, C. U. and J. D. Sneed (eds.) (2000), *Structuralist Knowledge Representation – Paradigmatic Examples*, Amsterdam-Atlanta: Rodopi.

<sup>4</sup> Sneed, J. D. (2011), "Prolegomena to a Structuralist Reconstruction of Quantum Mechanics", *Metatheoria* 1(2): 93-130.