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Marcelo B. Ribeiro  
 Dept. Mathematical Physics  
 Institute of Physics  
 Federal University of Rio de Janeiro  
 C.P. 68528, Ilha do Fundão  
 Rio de Janeiro, RJ 21945-970, Brazil  
 e-mail: mbr@ifjf.br

Antonio A. P. Videira<sup>†</sup>  
 Dept. of Philosophy  
 State University of Rio de Janeiro  
 Rua São Francisco Xavier 524  
 Rio de Janeiro, RJ 20550-013, Brazil

## In Memory: Chalmers W. Sherwin

Chalmers Williams Sherwin (b. November 27, 1916, d. February 20, 1998) was one of America's foremost physicists and science administrators. His professional career included a doctorate in physics at the University of Chicago, a physics professorship and 14 years of teaching at the University of Illinois, posts at the M.I.T. Radiation Laboratory (group leader) and Columbia University, the post of Chief Scientist of the Air Force (1954), positions of leader-

ship in the Office of Deputy for Defense, Research and Engineering (in the Pentagon) and in the Office of Science and Technology, and various administrative positions with industry, including the General Atomic Company (San Diego) and the Aerospace Corporation.

Throughout his varied career Chal never lost his love of physics and his remarkable ability to reduce seemingly complex and sophisticated physical prob-

<sup>†</sup> Also: CIND, Observatório Nacional-CNPq, Rio de Janeiro, Brazil; e-mail: gutto@on.br

lems to their intuitive essence. This is perhaps best illustrated in his book *Basic Concepts of Physics* (Holt, Rinehart and Winston, New York, 1961), which is still one of the most effective antidotes to the prevailing over-mathematization of the subject. He wrote also an *Introduction to Quantum Mechanics* (same publishers). While at Illinois he conceived and caused to be performed the Sherwin-Rawcliffe experiment ("Electromagnetic Mass & the Inertial Properties of Nuclei," Report 1-92, March 14, 1960, Coordinated Science Laboratory, University of Illinois, Urbana, Illinois), an experiment establishing the *lack of tensor properties of nuclear mass* that I personally consider to rank in significance with Michelson-Morley, as one of the great, all-encompassing null results of our time. It is a commentary on the prevailing state of the scientific literature that this experiment was never reported in the regular journals. In 1960 he published in the *Physical Review* a fundamental paper associating the temperature coefficient of the Moessbauer effect with relativistic time dilatation.

One of his last publications to receive widespread notice was "New experimental test of Lorentz's theory of relativity" [*Phys. Rev. A*, 35, 3650 (1987)]. Aware of the longstanding inability of any experiment to reveal the Lorentz contraction, Chal sought to test the observational consequences of interpreting the contraction as a physical phenomenon affecting atomic bond lengths. This was the original idea behind the Lorentz ether theory. Sherwin showed that a consequence would be a "relaxation" time lag of contraction and de-contraction that could be observed as a periodic phase shift in suitable rotary geometry. In his retirement he set up the required apparatus and carried out the experiment with his own resources. The results were again negative: The Lorentz contraction kept its record clean of never having been seen by any scheme of direct observation. The fact of his putting such a question to nature suggests that as Chal matured he became progressively dissatisfied with conventional views and received opinions in physics. Increasingly, indeed, he struck out on his own and had to think and see for himself. And in direct measure as this independence of mind asserted

itself, his papers became unpublishable in the established physics media.

The writer has a number of unpublished "pre-prints" from Chal's later days, dealing particularly with the subject of optical aberration, which became one of his special interests. These show his penchant for down-to-earth detailed calculations of particular cases. For he knew the dangers of leaping to the general without proceeding through the particular. He felt that there were logical problems with special relativity and again struck out on his own to elaborate "A New Theory of Relative Measurement." Readers of *Apeiron* do not have to be told that this, too, was unpublishable in first-line journals.

Anyone so desiring can obtain from me a sampling of such papers from Sherwin's later years. They mark the final accomplishments of a great and original mind that, like Herbert Dingle's, had in maturity freed itself from fealty to the *status quo*. If physics possessed a social dynamic capable of exploiting the distinction between wisdom and senility, the works of such people would be honored as representing the judgment of experience upon the fashions of the herd. But the herd (for which read "professionalism") has no felt need for such judgments and so "progresses" in its own lemming fashion. Those of us lesser lights who have known nothing but frustration in our attempts to loosen the deathgrip of professional consensus (of idiot savants) upon the vitals of science may take some benefaction from Chalmers Sherwin's failure: If that veritable titan of rationality could not restore a modicum of pluralism to the foundations of physics, who could? It lies already beyond the power of any individual.

In his experience of life Sherwin was fortunate to be helped immeasurably by a wife who complemented his own intelligence and handsome physique, and a large family that supported him loyally to the end. Here is a life to be honored, admired, and emulated. One can only say: May his tribe increase.

Thomas E. Phipps, Jr.  
908 South Busey Avenue  
Urbana, Illinois 61801

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## Book Review

***Einstein's Theory of Relativity versus Classical Mechanics*** by Paul Marmet, *Newton Physics Books*, 2401 Ogilvie Road, Gloucester, Ont. Canada, K1J 7N4 -- ISBN 0-921272-18-9.

All students of physics are familiar with the story. At the beginning of this century, the physics establishment thought that it had all of the answers. All physical phenomena could be explained by the two