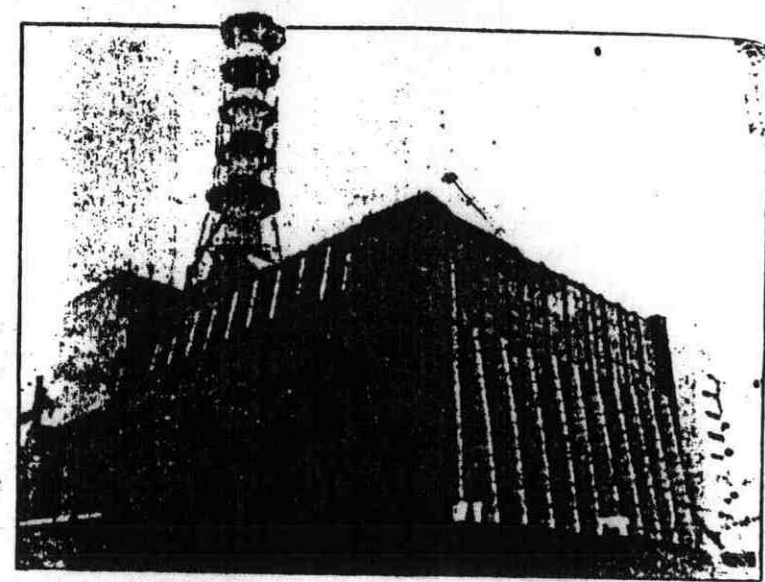


MIKEMA

**Chernobyl
Then and Now**
Photographs of the damaged reactor taken before the construction of its concrete "sarcophagus" are, for obvious reasons, aerial photographs. Left, an artist's reconstruction of the reactor as it would have looked from the ground before the sarcophagus was in place. The point of view is the same as that of an official Soviet photograph, right, taken as the entombment neared completion.



ANDREY ILESH, "Chernobyl" (Richardson & Steirman)

New Fallout From Chernobyl

THE SOCIAL IMPACT OF THE CHERNOBYL DISASTER

by David R. Marples
(St. Martin's Press: \$35, cloth; \$14.95, paper;
316 pp., illustrated; 0-312-02432-0)

Reviewed by James E. Oberg

The onset of the new Gorbachev policy of *glasnost*, commonly mistranslated as *openness* but closer in connotation to *candor* or *publicizing*, has complicated the task of Soviet secret-keepers and has allowed substantial new Western insights into Soviet society. David R. Marples' new book, his second on the Chernobyl accident of April 26, 1986, is a shining example of the best type of non-Soviet analysis into topics that only recently were absolutely taboo in Moscow official circles.

The author, a British-educated historian and economist, is a research associate with the Canadian Institute of Ukrainian Studies at the University of Alberta,

Oberg, a space engineer in Houston, is the author of "Uncovering Soviet Disasters: Exploring the Limits of Glasnost" (Random House).

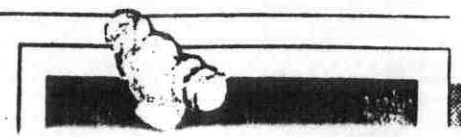
and the academic style of the book is undisguised. However, its intended audience is the general public, and anyone interested in nuclear power, or Soviet economy and society, or human drama, or just plain sleuthing state secrets, will find hitherto unpublished revelations and explanations of the event and its continuing aftermath.

The effects of Chernobyl reverberated throughout so many facets of Soviet society that a continuous coherent narrative is probably impossible. Marples discusses half a dozen major themes arranged in a fairly arbitrary order (as indicated by the frequent and helpful cross references throughout the text) and succeeds in mapping out his main themes. The personal interests of each reader determine which of the sections may be deemed too detailed and which too sketchy, but considering the need for such a comprehensive overview, the levels are generally appropriate.

The book is, on the one hand, not a light read, and an executive summary might have been possible in a quarter the length. But, on the other, so many of the judgments depend on a subtle interpretation of a multitude of sources that the author is obligated to present the raw data for the reader's inspection. The modular nature of the book also allows a reader to skip, browse, and revisit

Please Turn to Page 7

The Aristocrat as Independent Voter



'Chernobyl Disaster'

Continued From First Page

earlier sections, aided by a convenient internal organization and a thorough index.

First in the world's attention, and in the text, is a discussion of the human victims of the accident. The official tally is 31 (only about 20 names have ever been released), but Marples suspects there were other short-term radiation victims. A large number of unnecessary late-term abortions were also performed on local women, and by rights those unborn babies count as casualties. Widespread "radiophobia" led to restricted diets which created malnourishment and subsequent disease in thousands of people. The tens of thousands of people taking part in cleanup operations were never included in official totals of those exposed. Since the book went to press, Soviet

military sources have referred to at least one death in the actual reactor entombment program.

But the greatest toll is likely to occur with the delayed deaths. Here, Marples encounters for the first time the soon familiar theme of official Soviet myth-making around the event: Reality is twisted to serve state policy objectives, which include calming an alarmed public with assurances that all is well when it isn't.

And thus is born what he properly labels the "myth of Chernobyl," the official line that the disaster provided a test that Soviet society passed with honor. "In the Soviet view," he writes, "it was first and foremost a victory, a story with an ending, and an ending that was triumphant."

Thus, when sober Western medical estimates placed the future

"excess cancer deaths" at several tens of thousands, both in the Soviet Union and in Europe (a few tenths of a percent elevation of the natural cancer rate), the Soviets reacted furiously. The estimates are branded "nonsense" and the estimators are dismissed as "panic mongers" promulgating "anti-Soviet venom."

Subsequently the author addresses themes of environmental impact, economic and political repercussions, public images, and the recovery operations. Along the way, Marples provides a damning list of examples in which Soviet officials attempted to retreat behind old-style cover-ups and outright lies. False information was issued on radiation levels, on subsequent accidents at the site, on contamination levels of the Kiev water supply, on severe discipline against non-volunteer cleanup personnel, on reactor entombment schedules and on operator training

levels.

A severe 1986-1987 countrywide electrical power shortage was officially denied although it was real enough to compel the restart of three Chernobyl reactors in explicit violation of Soviet safety regulations. Design deficiencies of the Chernobyl-style reactors were downplayed and human errors were declared to be the primary culprit.

Ultimately, observes the author, "It is ironic that in an era of openness, Chernobyl may have been both the pioneer of *glasnost* under Gorbachev and then subsequently its first casualty." He ultimately concludes, "Aspects of the disaster . . . have rarely been dealt with thoroughly or even honestly by Soviet sources." Hence the need for this book, a need which is admirably fulfilled despite the many remaining mysteries and uncertainties.

The July, 1987, trial of reactor personnel marked a full circle of disclosure. Journalists were allowed into the pre-scripted first and last days, but the weeklong deliberative sessions were held in secret and no word of their substance has ever been released.

The propaganda purpose of the trial and surrounding official publicity, he maintains, had one goal: "To divert culpability from the party hierarchy, in Kiev and especially in Moscow." This is precisely the theme I have also encountered in my own investigations of aerospace accidents of the past. Where individual human failings led to catastrophe, a sanitized story may eventually be released, but where Kremlin policy led to disaster (such as the Nedelin catastrophe of

1960 or the Soyuz-1 disaster 1967), the entire event remains absolutely off limits to *glasnost*.

The closing blow-by-blow description of the nuclear power debate presages a dramatic event which occurred too recently for inclusion in this first edition. Viktor Legasov, tagged by the author as one of the country's two leading pro-nuclear advocates, actually was sinking into private despair over the poor implementation of safety standards. In the end, he made his final and most eloquent testimony to this despair on the second anniversary of the accident, by committing suicide. For several weeks the Soviets tried to sit on the circumstances of his "tragic death," even issuing official non-explanations which asserted that the death was not due to medical effects of radiation. Finally, crusading journalist Vladimir Gubarov, with access to Legasov's notebooks, broke the story in Pravda. Readers of this book will come to know these and other characters so well that the suicide fits right into the "big picture" of the catastrophe's social impacts.

For an author to so accurately describe a social milieu that subsequent unpredictable events only enhance his insights is testimony to the highest quality of scholarship. Readers of Marples' book will rarely be surprised as the Chernobyl catastrophe's consequences continue to unfold in the future.

On a recent visit to Kiev, David Marples was surprised to be asked for his autograph as the author of "Chernobyl and Nuclear Power in the USSR" (St. Martin's, 1986). The book, warmly praised in publications as diverse as Nature and the Wall St. Journal, is far better known in the Ukraine than its author would have dreamed. That a Canadian book on Chernobyl has found its way to so many Ukrainian readers is a part of the reason for Marples' second Chernobyl book, as he explained by telephone from his University of Alberta office:

"From the outset there were other voices virtually crying out to be heard. There were the bewildered parents in Pripyat (where the plant is located), whose children played on the

lished posthumously in Pravda. Legasov refuted everything he had stated previously about the safety of Soviet nuclear power plants," Marples notes.

Fear has led to activism, not just by the Ukrainian Writers'



ten, in part, by the expatriate Ukrainian National Assn. Despite this, however, and despite the fact that he was several times denied entry to the Soviet Union during the Brezhnev era, Marples received a visa quite easily for his last trip to the Ukraine. The reason, or so he speculates: Anti-nuclear activism, so recently an utter novelty in the Soviet Union, is now alive in Moscow as well as in Kiev.

In confirmation, Marples describes a recent anti-nuclear demonstration in Kiev. The rally was sponsored by a Ukrainian nationalist group and an anti-nuclear organization called "Ecology and Us." One of the main speakers, however, was a Russian, I. U. Shipunov of the Moscow Academy of Sciences, who pointed with alarm to the deterioration of the ozone layer

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