sector's labor-intensive production techniques create numerous jobs and seem to approximate the "appropriate technology" that United Nations development specialists advocate. Nevertheless, because this output is not identical to that produced by large, capital-intensive firms, one paper recommends measures (p. 277) that would in effect destroy the small-scale sector.

Likewise, the authors give little attention to the possibility that promotion of local electronics production may impede the achievement of other important development objectives. The technical and administrative resources available to an LDC at any point in time are usually limited. A decision to allocate those resources to a local electronics industry may mean that less R & D is done on domestic food production. Electronic technology can be imported, and usually from a number of competitive suppliers. By contrast, agricultural know-how is ecologically and geographically specific and must be developed locally. Hence an LDC may face a trade-off in which promoting domestic technical capacity in electronics involves high costs in terms of local agricultural development. Only one of this study's ten authors even mentions this trade-off. The others seem to have adopted a technological-prowess rather than a human-welfare view of development.

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Compact Objects

Black Holes, White Dwarfs, and Neutron Stars. The Physics of Compact Objects. STUART L. SHAPIRO and SAUL A. TEUKOLSKY. Wiley-Interscience, New York, 1983. xx, 646 pp., illus. $39.95.

The story of the discovery of compact objects—white dwarfs, neutron stars, and (still controversial) black holes—has been widely recounted in astronomical texts and popular books. There is general understanding of how these stellar corpses can be resurrected by simply pouring gas on them or letting them spin. This is one of the great successes of contemporary astronomy. However, so incessant and superficial appear the claims for new black holes and pulsars that the bystander might assume that the subject has rather feeble physical underpinnings. Not so. Neutron stars and black holes were seriously discussed by a distinguished series of physicists and astronomers (including one of the 1983 Nobel laureates) long before there was any observational evidence for their existence. White dwarfs were correctly interpreted within months of the formulation of Fermi-Dirac statistics. For over 50 years compact objects have fascinated scientists who have found in them arenas for the discovery of new effects through the application of physical principles under extreme conditions. It is extraordinary just how many of these effects are actually observed.

Black Holes, White Dwarfs, and Neutron Stars is the first serious textbook to consolidate this research. The authors, both active researchers in the field, have taught a graduate course on the subject at Cornell for several years. The book is firmly based in fundamental physics and observational astronomy. The equation of state for a degenerate electron gas is derived in considerable detail and then used to construct white dwarf models; likewise for the equation of state at nuclear densities and neutron star models. Cooling rates, which dictate the luminosities of isolated stars, are then calculated carefully. A short chapter on general relativity (possibly unnecessary in view of the excellent textbooks available) precedes a concise treatment of the standard results on the geometry of black hole space-times. The observational status of all three types of star is critically examined, and the reader is left in no doubt about the reality of neutron stars or, in contrast, about the genuine uncertainty that still lingers around the best black hole candidate, Cygnus X-1. Perhaps the most celebrated recent observational success—the quantitative confirmation of the general relativistic prediction of orbital decay through gravitational radiation in the binary pulsar PSR 1913 +16—is clearly described, and the incomplete but potentially just as decisive theory of stellar collapse is carefully outlined.

The book can be unreservedly recommended as a graduate textbook as well as a researcher's vade mecum. Among its many strong features is a consistent and clear distinction between generally accepted and applied theory, such as the Kerr metric, and still-controversial issues, such as the equation of state above nuclear density and pion condensation. There are over 250 exercises, many of which involve numerical solution—excellent training for the student. (This reviewer found the answer to a current research program worked out in one of them.) Basic principles are emphasized throughout by well-posed questions carefully answered and by an avoidance of some of the softer and possibly ephemeral lines of inquiry. The historical development of the subject is carefully sketched.

Of course, there are omission and superfluity. The subjects of surface effects on neutron stars and settling in white dwarf atmospheres are curiously absent. The difficult subject of radio pulsar emission mechanisms is largely, and probably wisely, avoided. The chapter on supermassive stars is quite out of place and is a poor reflection of contemporary research on active galactic nuclei. However, these are minor stylistic issues that cannot detract from the book's overall clarity and accuracy. "Astronecroscopy" flourishes and is well served by this excellent textbook.

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Austral Botany

Flora of Tierra del Fuego. DAVID M. MOORE. Line drawings by R. N. P. Goodall, Flora Patagónica, and S. Parkinson. Anthony Nelson, Oswestry, Shropshire, England, and Missouri Botanical Garden, St. Louis, 1983. x, 396 pp. $99.

Tierra del Fuego is one of the most remote areas of the world, climatically inhospitable and sparsely populated. Known to the public mostly from sporadic border disputes between Argentina and Chile and perhaps from stories of tall ships inching their way around Cape Horn, Tierra del Fuego has not been a focus of intensive botanical research. The publication of a current flora of the area is a scientific achievement in its own right. However, the importance of this work goes beyond this. Oil drilling is under way in Tierra del Fuego, and the population is increasing. Comprehensive ecosystems studies are needed to predict the degree of damage to the Fuegian environment that might occur and to find measures to keep the perturbations at a minimum. Moore's *Flora of Tierra del Fuego* provides a basic tool for such studies.

Several aspects of this flora are outstanding. For example, there is a table that summarizes the chronology of plant collections in the area that makes fascinating reading. One can sense the difficulties the first explorers experienced when they collected their specimens and assembled their plant presses. Not only names of collectors are given but also dates of visits, collecting areas, and the