women who were not college-educated. Such findings are interpreted in terms of systematic differences between social classes in the degree of similarity (continuity) between adolescent and midlife socialization. Thus, for non–college-educated women, a double-track career was more consistent with their own and societal expectations than for college-educated women.

A final example that illustrates the fertility of this project involves the identification of two personality dimensions that appear to act like central control mechanisms for later development: emotional control and cognitive investment. Emotional control in adolescence proved to be a strong predictor of adult health, marital and occupational career, and IQ. For the dimension cognitive investment, an index category measuring cognitive competence and commitment, a similar pattern is identified. Investment in oneself and one's growth during adolescence appears to be a major driving force in achieving "healthy and effective" adult functioning.

The present volume, like any long-term longitudinal research on human development, has its limitations. The adequacy of design and statistical controls and analyses varies. Despite much effort to avoid it, several authors succumb to the temptation to speak about causal mechanisms and linkages where it would have been more appropriate to limit themselves to reporting correlations. Similarly, one wonders whether the high degree of stability in personality functioning found may in part be a methodological artifact. If a few items in the pool used for rating of personality are stable over time and these items function as "trend setters" (prototypes), they could produce a halo effect based on belief systems about people rather than on people's behavior, with resulting overstatement of the case for developmental continuity. The reader would be aided also if the editors had presented a table summarizing the timing, format, subject composition, measurement battery, and other such features of the various longitudinal studies.

In sum, despite its shortcomings this volume will, in our view, become a classic of the literature on human development. It is a testament to the rewards of cooperation, and the harvest is rich enough to encourage our interest in the next season of the subjects' lives.

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A History of Platinum and Its Allied Metals. DONALD MCDONALD and LESLIE B. HUNT. Johnson Matthey, London, 1982 (distributor, Europa Publications, London). xii, 450 pp., illus. $37.50.

Platinum entered the purview of science in 1750, when recent studies of the "new semi-metal" were made known to the Royal Society of London. But this was rather an identification than a discovery. As is related in this book, platinum was known to visitors to South America in the 16th century and has been found among the objects of pre-Columbian archeology. The metal was virtually unworkable, and the successful resolution of this problem, accomplished by 1782, was a remarkable exemplification of the powers of applied science, involving several scientists and several techniques, including powder metallurgy. The growing sophistication of the chemist was further shown in the discovery of other elements in crude platinum, iridium, osmium, palladium, and rhodium (1802–1804). By 1805 W. H. Wollaston was able to supply small articles of malleable platinum for uses where corrosion resistance was important enough (his price was £16 an ounce). The predominant early uses were for touchholes and pans of flintlock guns and for boilers for concentrating sulfuric acid, of which the first was made in 1805. Other uses of the metal were obvious enough to outrun supply, but its suitability for what was to be its most important use, in catalysis, was not unveiled until 1822, by J. W. Döbreiner. A worldwide search for sources of platinum has since been continuous, and largely successful, the most recent source described here being South Africa.

This is an excellent book, to be recommended not only to scientists and historians interested in the topic (which is, as the book shows, wider than most of us realize) but especially to anyone involved in the history of a science-oriented business. The publisher is a principal producer of platinum and the authors are long-time associates of the firm. Together they have virtually set a new standard for this genre of publication.

In 1960 the senior author published *A History of Platinum*, "from the earliest times to the 1880's," which was well received, being criticized mainly for its early cut-off date and for neglecting the scientific aspects of the subject. The present book is responsive to these criticisms. The former book had 18 chapters in 254 pages; this one has 24 chapters in 450 pages. Chapters on catalysis, the chemical history of the platinum metals, their place in the periodic table, and platinum in the measurement of high temperatures have been added. And the subject is brought up to the 1960's—still not quite the last word; we are told in the preface that the scale of production of the platinum metals has increased fivefold since 1960.

Revision appears to have been principally the work of the junior author, for the understandable reason of McDonald's advanced age—he died at 92 while the book was in press. The writing is straightforward, descriptive rather than analytical; but historical analysis depends on the prior existence of books such as this.

The 1960 volume was praised for its elegance. This one improves on it, the illustrations being even more numerous and some of them in color. The sponsoring firm, and its members who are the authors, have exercised a restraint and modesty that are, to say the least, unusual in historical publications emanating from commercial firms. It is to be hoped that others may take this as a model for how to expend a small fraction of their substantial expenditures for public relations, or "understanding."

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Particle Physics

Proceedings of the Seventeenth Rencontre de Moriond. Les Arcs, Savoie, France, March 1982. J. TRAN THANH VAN, Ed. Editions Frontières, Gif sur Yvette, France, 1982. In two volumes. Vol. 1, Quarks, Leptons and Supersymmetry. 650 pp., illus. $60. Vol. 2, Elementary Hadronic Processes and Heavy Ion Interactions. 702 pp., illus. $65.

It is useful to view the present volumes from the perspective of the past ten or 15 years in particle physics. Tremendous progress has been made, both theoretically and experimentally, in understanding particles and their interactions. A real unified theory of weak and electromagnetic interactions was written and experimentally tested in many ways. A possibly fundamental theory of strong interactions (called quantum chromodynamics) was found; many of its predictions are, so far, only qualitatively tested, but agreement between theory and experiment is good, and the circumstantial evidence is highly favorable. There exist theories that describe all known