chapter to how the schools fail the children? Why call for a changed curriculum, for "a new breed of educators"? And "only one tense"? This assertion is demonstrably false ("Johnny, he sick" is not the same tense as "he *be* sick," to choose only one of hundreds of examples). The error is Jacobs', but responsibility for it must be shared by those anthropologists and linguists who have been so busy talking to one another that they have left even our sophisticated social critics untouched by their findings.

I do not believe that Negroes have to be held by the hand. If "special, preferential treatment" is required, it is not Negroes that require it but our social system that requires it, if Negroes are to be given what is automatically given to everyone else. I do not believe that Negroes are "ruined" by the age of five or six. They are whole human beings, with the same powers of abstraction, cognition, and perception enjoyed by middle-class whites. The worldly stuff that serves as input to these processes may be different, but the processes themselves are the same. The Negro's problems, as Jacobs himself has shown, lie elsewhere. For those of us who know lower-class Negroes only across a desk or through some test instrument, or in some other setting alien to the ghetto Negro, there might be some excuse for not seeing what is clearly there. But for those who have watched a crap game in an alley, or sat in on a card game, or listened to the street-corner talk, or visited little children as a friend, in their own homes, there is no excuse at all. In fairness to Jacobs, it should be pointed out that it may not have been possible for a white man to enter into such relationships with Negroes in Watts after August 1965.

The book ends with a spectacular inside view of the McCone Commission (in which McCone and his report stand convicted by his own direct testimony) and a ten-page conclusion which calls for an admission that "we *are* a racist society" and for a reordering of our "twisted priorities": for a welfare system "based on the principle that human beings have a basic *right* to a reasonable income even if they cannot work," and for a whole host of new forms in all our institutions.

In the too-short conclusion, Jacobs gives himself enough room to identify some of the fundamental issues of our times but not discuss them. "Above all," he tells us (p. 292), technology must be "put into its proper place." This assertion wants discussion and specification, but Jacobs gives us none. I take the statement to mean that we must be the masters of our technology and bend it to our national purpose. But only three paragraphs later he suggests that we must learn to submit to our technology and to rationalize and quicken our social and cultural adaptations to it: "Technology is forcing us into new kinds of government, but we are not yet engaged in consciously creating these forms; instead, they come into existence in hasty and ill-conceived response to immediate pressures."

Perhaps these two views of technology are not contradictory, but their emphases are clearly different, and surely radically different public policies and social consequences will flow according as we adopt one or another position. The latter emphasis on technology as the independent variable seems to me to beckon us into the trap of faith that has long held captive traditional liberalism: a faith in "progress" that rests on the presumptive primacy of technology as the determinant of social forms and on the belief that, over time, the social forms called into existence by an advancing technology will be increasingly socialistic, democratic, and benign. Despite his lifelong commitment to socialist ideology, Jacobs recognizes—correctly, I believe—that this liberal faith rests on man's hope, not on an iron law of history: "Although I believe private enterprise [in the U.S.] may be replaced by some form of public enterprise society, I do not believe such a society would *necessarily* be free of racism. It is possible to have a . . . socialist society that is still destructive of human dignity" (p. 293).

One could object to the book as a whole (I do not) on the grounds that Jacobs gives us no blueprint for social change; he exhorts us to develop a "will to change" and calls for a global approach to the problems of the ghetto without specifying the ways and means of dealing with these problems. At the present time, I think, this is too much to ask of anyone. We are a divided nation, pulled in many different directions by contending class, race, and other vested-interest groups. There are battles to be fought before a course can be set, and it is only after we decide where we are going that we can decide on how to get there. Jacobs has performed an important public service: he has depicted in detail some of the major things that are wrong with our society and has pointed out one of the general directions we can move in if we choose to do so.

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Cardiac Contractility

Factors Influencing Myocardial Contractility. A Gordon Research Conference, 1966. RALPH D. TANZ, FREDERIC KAVALER, and JAY ROBERTS, Eds. Academic Press, New York, 1967. xxvi + 693 pp., illus. $28.

These papers attempt to correlate past and present physiological, biochemical, pharmacological, and morphological findings related to cardiac muscle function. Sections 1 to 3 pertain to the mechanical properties of cardiac muscle (18 papers). The contractile "defect" in heart failure is discussed in terms of altered ventricular contractile function, diastolic compliance, and cellular and ultrastructural mechanisms. The contradictions in the concepts of active state, diastolic compliance, and structural and functional nonhomogeneity of the left ventricle reflect the limitations of available techniques for dealing with the anatomical complexities of cardiac muscle. A unified concept and accurate quantitative model of cardiac muscle function has not been developed. Section 4 considers the behavior of heart cells in tissue culture (7 papers) and demonstrates the potentialities of tissue-culture techniques for answering many of the questions confronting the cardiac electrophysiologist, morphologist, and biochemist. The coupling mechanism relating excitation to contraction is reviewed in section 5 (5 papers). Although experimental findings based on histochemical studies and calcium flux measurements demonstrate a relationship between calcium movement, the sarcolemma, and the sarcotubular system, the data are insufficient to permit a clear model describing the coupling mechanism in heart muscle. Section 6 considers the problems of cardiac energetics and mechanochemical coupling (5 papers) without detailed consideration of correlative thermal measurements. Sections 7, 8, and 9 are con-

cerned with agents influencing myocardial contraction: catecholamines (7 papers), cardiac glycosides (7 papers), and hormones (7 papers). Surgical and immunological sympathectomy are described as useful techniques for clarifying the role innervation plays in the physiological and pharmacological action of these substances. The diversity of interpretations regarding the inotropic mechanism of action of cardiac glycosides and their interaction with catecholamines clearly points to the need for experimental reevaluation. The quantitative importance of the effects of hormones on cardiac contractility remains to be elucidated; different results have been obtained with different techniques, preparations, and species.

The organization of the material within each section does not allow the reader to follow the articles sequentially. There are several related papers which should have been presented consecutively and cross-referenced for the sake of clarity and continuity. The informative discussions of the Gordon Conference are lacking. However, the editors have organized and conveniently assembled accounts of a broad array of topics related to cardiac contractility. The volume should be useful as a supplementary reference book in institutional libraries. The publishing delay, the cost of the book, and subsequent extensive publications by several contributors detract from its current value for specific needs of personal libraries.

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Coronary Circulation and Energetics of the Myocardium. Proceedings of an international symposium, Milan, Italy, 1966. G. MARCHETTI and B. TACCARDI, Eds. Karger, Basel, 1967 (distributed in the U.S. by Phiebig, White Plains, N.Y.). xvi + 320 pp., illus. $18.

The theme of this publication is the identification and ultimate quantitation of the parameters concerned with myocardial energetics. It contains recent data as well as a review of previously published information of several American and European investigators interested in myocardial bioenergetics. The book is somewhat unusual in that it includes structural, hemodynamic, metabolic, electrophysiologic, pharmacologic, and clinical data on the normal and ischemic myocardium. Also discussed are relevant clinical advances in the management of patients with myocardial ischemia.

Of timely interest are the data on the transmural distribution of myocardial tissue pressure in relation to blood pressure and regional tissue flow in the inner and outer cardiac shells, the response of the coronary circulation to various physiologic and pathological stresses and drugs, the relationship between myocardial metabolism and energetics, the electrophysiologic changes due to beta blocking agents and the electric field surrounding the heart in experimental myocardial ischemia. A limited attempt has been made to integrate the material in the discussions of the papers by the participants.

Those interested in the parameters which determine myocardial energetics and, ultimately, quantitative models of ventricular contraction, especially in relation to ischemic heart disease, will find this book interesting.

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Rocks Studied in situ

Metamorphic Petrology. Mineralogical and Field Aspects. FRANCIS J. TURNER. McGraw-Hill, New York, 1968. xii + 403 pp., illus. $13.50. International Series in the Earth and Planetary Sciences.

This book is in many ways essentially an amplification and revision of the last chapters of *Igneous and Metamorphic Petrology* by Turner and Verhoogen (1951, 1960) and of Turner's earlier Geological Society of America Memoir on *Mineralogical and Structural Evolution of the Metamorphic Rocks* (1948), but to dismiss it as this and no more would do the author a considerable injustice. The three volumes taken as a series do, however, provide an interesting example of the evolution of one scientist's thinking in the field of study in which he is most at home. The first was a highly organized synthesis of metamorphic petrology as it then stood, the second a simplification and codification thereof, primarily for students, and the last is a comparatively mellow reassessment of the field with many reinterpretations necessitated by recent experimental and theoretical studies.

The emphasis in the present volume is on those aspects of the subject in which the author's personal experience is most extensive, namely the information that can be gleaned from the direct study of rocks as they occur naturally in the field. In this it is far more complete and up-to-date than its predecessors. The treatment of the several metamorphic terranes selected for special discussion, however, is of rather uneven quality, and in a way that correlates fairly closely with the degree of firsthand experience that the author has had in a given region. Students of New England geology, for example, will undoubtedly be surprised to read (page 29) that: "Over much of this area, biotite, garnet, and staurolite crowd so closely on one another that separate zones for each cannot be distinguished." The documentation accompanying this highly inaccurate generalization is meager, creating in addition an incorrect impression that little has been done in this region. The Scottish Highlands and the South Island of New Zealand, on the other hand, are given a thorough treatment (at least to this reviewer's provincial eye) that reflects the author's long experience with each.

There is, in the second and third chapters, a discussion of certain thermodynamic aspects of metamorphic petrology but, as in earlier collaborations by Turner and others (Turner and Verhoogen, 1951, 1960; Fyfe, Turner, and Verhoogen, 1958), the happy union of rocks and thermodynamics is not quite accomplished. It can never be, of course, if the treatment is limited to simple reactions among pure substances. More elaborate approaches are referred to in the author's introduction in a somewhat apologetic way, but are in fact necessary to cope with the real equilibria among complex substances such as the rock-forming minerals. It is unfortunate in this regard that the work of D. S. Korzhinskii and coworkers goes wholly unmentioned, although apparently referred to indirectly in a brief and highly parochial discussion on page 59.

Pertinent experimental investigations and the graphical representation of mineral assemblages are fairly well covered. An error in figure 5-8, page 181, however, may create some confusion unless corrected: Three-phase (really five-phase) field (5) is in fact identical to (4), rather than as indicated, and is simply a part of (4) that projects negatively. The error is repeated in figure 7-26, page 312.

A welcome change in the present