northwestern corner of Syria and the Mediterranean Sea.

The bibliography contains 4500 references dating from "*ca.* 1250" through any, zoology, and archeology are in- 1963. Peripheral subjects such as botcluded. Original titles in European languages are retained; non-European titles are translated into English. The chronological index shows that publications increased progressively from the rate of five papers a year during the years from 1849 to 1865 to more than 120 a year during the time 1949 to 1963. The National Union Catalogue shows that 11 of the 19 references published prior to 1800 are available in the United States.

Avnimelech processed a wide group of publications, and retrieved references that are not readily available. In order to assess the coverage, I compared the 1962 references in the analytical subject index, listed under the Levant country headings, except Hatay and Israel, with those in the *Bibliography and Index of Geology Exclusive of North America* (Geological Society of America, 1964). The Levant bibliography includes 13 titles not listed in the G.S.A. bibliography, and omits two titles recorded in the latter.

This book is a valuable research tool for those interested in geological and peripheral disciplines of the Levant countries. Typographical errors are few.

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Developmental Psychology

Henry Maier's intentions in writing **Three Theories of Child Development** (Harper and Row, New York, 1965. 332 pp., $6.75) are to explicate and compare major orientations in the realm of child development. He does so with the hope that the presentation of these theories, together with their implications for current practice in the helping of children in their development, will generate new ideas, guide professional practices, and lead to new explorations in this area. The orientations of Erik H. Erikson, Jean Piaget, and Robert Sears are chosen from among others. A primary criterion leading to this decision was that these three approaches dealt with "personality development as a continuous and sequential process, starting with a child's status as an infant and dealing with each subsequent stage of psychological growth: early childhood, childhood, and adolescence. Moreover, theories to be selected had to supplement one another to provide a composite explanation or description of human personality development" (p. 6). These theories were contrasted with most, which were characterized as concerned with man as a virtually completed product. The perspectives are seen to supplement one another in that Erikson is viewed as focusing primarily on emotional development, Piaget on cognitive development, and Sears on behavioral development.

Separate chapters are devoted to the somewhat informal explication of the primary substance of each of the orientations. After these presentations, the author, who has a primary concern with child guidance, outlines what he sees to be the fundamentals in the helping process. The "helping process" is defined as "A process of socially engineered intervention in which the practitioner deliberately introduces into the experience of an individual specifically structured means of preventing or treating deviant development" (p. 207). The helping process is subdivided into (i) study processes, (ii) appraisal processes, and (iii) treatment processes. The three theoretical orientations are then compared, with the result that they are found to be primarily congruent. A primary congruence is argued for their treatment of similar developmental phases. The loose complementarity established in this chapter is then interpreted in terms of its implications for the helping relationship.

Developmental psychology, like its superordinate subject matter, psychology, needs theoretical integration. Although this volume perhaps does not attain the rigor of Hall and Lindzey's *Theories of Personality*, let alone that of a volume like *Modern Learning Theory*, by William Estes and others, it is informative and has value as a step in the right direction.

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On the Perceptual Worlds of Philosophers and Scientists

It is the intention of the author, Rom Harré, in this essay, **Matter and Method** (Macmillan, London, 1964; St. Martin's Press, New York, 1965. 135 pp., $3.25), to show the importance of the "general conceptual scheme" in the development of natural science, and to illustrate this by the discussions of the nature of matter and its relation to the perceptual world by 17th-century philosophers and scientists.

Harré begins by distinguishing two sorts of scientific theories. Reticular theories, the first type, consist of "a set of relationships between refined observational concepts, mediated by one or more theoretical concepts which are to be understood wholly in terms of a complex of the refined observational concepts of the theory" (p. 13). In contrast to this, there are explanatory theories in which a set of generalizations stated in terms of essentially observable features of the physical world are explained by the assumption that there are some theoretical entities and some relations among them which are, in turn, so related to the observables that changes assumed to occur among the theoretical entities can be said to explain the regular changes among the observables.

Harré emphasizes that in explanatory theories there are two quite different connections or links between the theoretical and the observables. One is the *causal* link (when a theoretical concept refers to an event that causes an observable event); the other is the *modal* link (where a theoretical concept and an observable concept express two aspects of the same "phenomenon"). In the case of *causal* links, Harré states that cause here must mean more than regular sequence—that is, it must mean generation or production. His argument is as follows: "We cannot observe a concomitance between the phenomena posited by the theory and the phenomenon observed, since, at least in the initial period of a thing's history, the former cannot be observed." This argument does not convince me for the following reason: we must distinguish between (i) the *meaning* of causal connection in the regular sequence theory, and (ii) the *evidence* for causal connection in the regular sequence theory. If this is done (even though the earlier adherents of the sequence theory of causal connection may have made something of a mess of this), the regular sequence theorist is surely at as much liberty to posit sequences that are unobserv-