acculturation, subsocieties, and plural societies, together with his emphasis on a new concept, structural societies, one wonders why the old American ideal has lasted so long. Gordon shows very clearly that there has been much melting in America, but he pictures several pots rather than one, each having distinctive effects. Gordon's inquiry is not about whether foreign immigrants have been changed in America, a matter which Glazer and Moynihan admit at the outset, but about what processes are involved in change and what concepts are needed to understand these processes. Gordon clearly implies that the acculturation and assimilation of alien races into a white community, for example the assimilation of the Negroes into a white community, involves a different rationale than the ultimate status and role of the third or fourth generation of white Irish or Italians. Scientifically, the problem cannot be so stated that people of all kinds can facilely be subsumed in a category of minority groups and meaningful hypotheses about assimilation and change drawn therefrom.

In effect, Gordon shifts the focus from the melting pot to acculturation. The various pots have melted in their own ways and in various degrees. As Gordon stresses throughout his book, Americanization has affected immigrant groups in different ways and for different reasons. Except where racial discrimination is strong, recent generations of white immigrants have increasingly moved into areas of business and society earlier reserved for the Anglo-Protestants. Their acculturation toward the American way of life has placed them in many subsocieties and has caused structural pluralism to take the place of cultural pluralism. That is, diversity of behavior stemming from the country of origin is replaced by diverse roles and statuses in the structure of American society. Increasingly, the descendants of immigrants are crossing the barriers of original ethnicity and are being accepted in business, social, and even marriage relationships with other groups, including the Old Americans.

There are no data on how many immigrant families of many generations ago have already "crossed-over" to the extent that they have completely lost their sense of ethnicity. The number may be far greater than we know, for the processes of acculturation analyzed by Gordon show clearly that in many ways the intermingling of ethnic groups is sharply increasing. The question of racial interrelations and eventual blending is another matter. White immigrants readily changed their ways of life in a few generations. The genetically inherited and ineradicable badge of race does not disappear.

A few postscripts to these volumes may be in order. Since the theme of the melting pot is primary in the book by Glazer and Moynihan and enters Gordon's in some degree, it is worthwhile making one of the assumptions of these authors more explicit. Glazer and Moynihan, especially, seem intent on destroying the myth of the melting pot. Gordon says there are many kinds of melting pots. I think a judicious view of the situation is that masses of people, whether they are immigrants from foreign countries or internal migrants, are necessarily melted and remoulded in some degree. They are not completely remodeled in the old Anglo-American patterns, but they have become strongly Americanized in many ways. They are affected by such national institutions as laws, the countless products of industry, education, the mass media, and the ever-more-pervasive set of American values. On more local levels, they are influenced by state and community laws and institutions. Alien ethnicity has persisted longest where fairly literate and skilled people have introduced whole community institutions—the Chinatowns, the old order Amish settlements, the Greek sponge fishermen of Tarpon Springs, and to a lesser degree many others. The most enduring aspects of ancestral culture are features of the deepest level, which is the family—for example, the Jewish family.

Second, ethnicity means either the ancestral culture or a group with which one can identify. Gordon states (p. 25) that "As though with a wily cunning of its own, as though there were some essential element in man's nature that demanded it—something that compelled him to merge his lonely individual identity with some ancestral group of fellows smaller than the whole human race, smaller often than the nation—the sense of ethnic belonging has survived." In addition to being mainly Catholics, the Irish probably have little in common besides occasional nostalgia for the old sod. But common problems can also create a sense of belonging without ethnic identity. The American Indians are achieving a sense of oneness, despite their extremely diverse cultures, as the result of their treatment by the whites and their recent efforts to do something about it. The Negroes, although culturally not different from the whites, have developed a sense of belonging owing to discrimination against them.

So far as change away from the ancestral culture is concerned, I suggest a distinction that Gordon has not quite made clear. People have become Americanized owing to living in America, participating in its subsocieties, and relating to other groups in different ways. But their ancestral culture has not changed as a whole. That is, social structure, employment, language, and such miscellaneous items as food preferences have been altered according to different rationales. It has been the attempt to view cultural evolution in holistic terms that has made recent writing on the subject very confusing. Aspects of culture change in their own ways, although I would not now postulate the categories that should be distinguished in studies of assimilation of immigrants.

Finally, I think that more attention should be paid to the heterogeneity within the Anglo-American society, which is used as the reference point for assimilation. There were great differences among the early colonists, and there have remained differences between the Episcopalians, Fundamentalists, and Unitarians and between the industrialists of Wall Street and the now disappearing hillbillies. Moreover, all Americans are presently changing at a dizzy rate. These, of course, are cogent reasons for rejecting the idea of the melting pot.

Plant Distribution

The Natural Geography of Plants. Henry Allen Gleason and Arthur Cronquist. Columbia University Press, New York, 1964. 420 pp. Illus. $10.

Each of the 22 chapters in this book begins with a question, a definition, a résumé of a preceding chapter, or with a combination of these introductory gambits. Gleason wrote the first 21 chapters, Cronquist the final one. The authors frankly state that the book

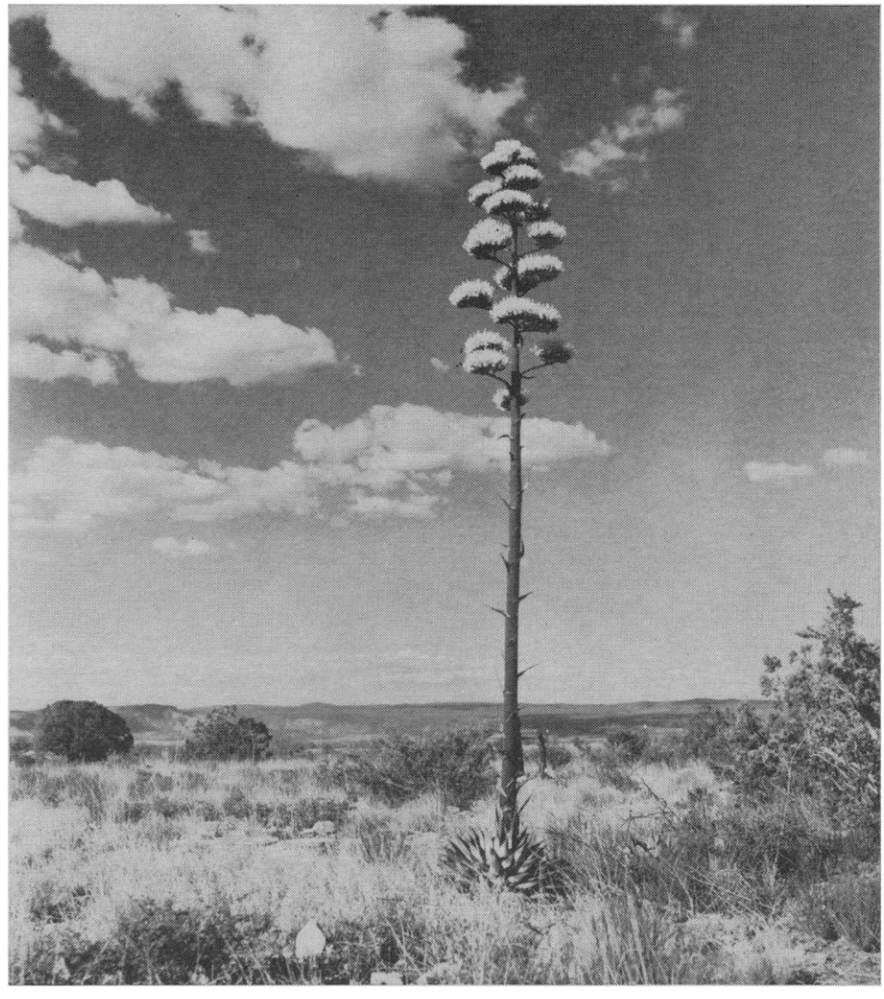
is intended for, and will appeal to, only those curious or interested persons who ponder the significance of the presence or absence of certain plants in a particular place and other facts pertaining to range, distribution, habits, and responses to environment shown by plants. It will, I think, have a wider appeal than this, if for no other reason than that it presents excellent halftones of vegetation and specimen plants. Frequently the authors pose a question and then freely admit that their answer must be "We don't know." This type of frankness and a direct style contribute much toward making the book easy to read and refreshing in its presentation of facts and theories.

Plant geography is the study of the range of plants over a selected area, in this case the United States exclusive of Hawaii, with parts of Mexico and Canada. The study is concerned with methods and rate of dispersal of seeds and, through this medium, with the direction and rate of migration of species and of floristic groups with their interrelated species. Climate and time both influence the range of species, and fluctuations of the former often determine whether migration of a particular species or floristic group leads into new territory or to withdrawal.

The authors make free use of fairly detailed descriptions of an ecological phenomenon to illustrate a particular point. For example, fire had a profound influence on the transgression of grassland upon the westerly border of the Eastern Deciduous Forest Province. Isolated patches of forest are found in the prairie because lakes, ponds, and marshy places protected these patches from fires that raced eastward across the prairies during periods of drought. Fire favored the expansion of grassland and the retreat of forest vegetation.

The first 21 chapters deal chiefly with the presentation of such pertinent observations, with a liberal sprinkling of speculation about cause and effect. In the final chapter, Cronquist characterizes the floristic provinces that they recognize.

Ten floristic provinces occur in the continental United States, Canada, and parts of Mexico. They are, beginning in the Arctic, the Tundra Province, which supports no true trees but shows vast expanses of sedges and low perennials on water-logged soil; the Northern Conifer Province, with dense to



Century plant in Arizona. [U.S. Forest Service photo by Bluford W. Muir]

Effect of moisture relations on vegetation in the mountains of northeastern Oregon. Coniferous forests occupy the relatively moist north slopes, while blue-bunch wheatgrass (*Agropyron spicatum*) grows elsewhere. [U.S. Forest Service photo by Melvin H. Burke]

open stands of conifers and aspens; the Eastern Deciduous Forest Province, the largest of the provinces in area, which supports oaks, maples, elms, ash, and other broad-leaved deciduous trees but only pockets of conifers; the Coastal Plain Province, with fire-resistant yellow pines the dominant tree and hardwoods occupying only certain habitats; the West Indian Province, which occurs only in southern Florida and is exemplified by the Everglades; the Grassland Province of central North America, with tall grass, short grass, and mixed grass prairies characteristic of zones receiving successively less annual rainfall; the Cordileran Forest Province, with marked zonation shown by the various conifers at different elevations; the Great Basin Province, with sagebrush, greasewood, and shad-scale as its dominant shrubs; the California Province, with a Mediterranean climate and a complex variety of plant assemblages and soil patterns; and the Sonoran Province, which is confined to the southwestern part of the United States and adjacent Mexico, an area of hot desert where trees are small or are supplanted by shrubs, where there is much unoccupied ground during the dry season, and where annuals are conspicuous for short periods following rains.

Scores of excellent halftone illustrations are distributed throughout the book, and the photographs from which they were made were chosen meticulously. Some show details of fruit, seed, or flowers, such as the cover on this issue of *Science*.

This book is much needed in the American literature dealing with the plant geography of the continent. The authors are to be congratulated on the neat completion of an arduous task. Among botanists and ecologists the task surely will not be a thankless one.

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Mental Disorders of the Aged

Geriatric Psychiatry. Kurt Wolff. Thomas, Springfield, Ill., 1963. x + 125 pp. $5.75.

This book is the fruit of many years of practical experience in the treatment of psychotic geriatric patients. It is not a textbook of geriatric psychiatry. It does not deal with the symptomatology, the course, and the outcome of the mental disorders of the aged. It deals mainly with individual and group psychotherapy of aged patients hospitalized in psychiatric institutions, most of them chronologically old schizophrenics.

Aging is considered a highly individual phenomenon. One specific formula cannot be applied to all people, and the patient and his treatment should be handled by a coordinated approach of the psychiatrist, the internist, and the general practitioner. The biological, psychological, and sociological aspects of aging should be considered.

In individual psychotherapy, Wolff uses the "brief psychotherapy" of Goldfarb and finds it most helpful with patients who present management problems and depressive features. Individual, psychoanalytically oriented psychotherapy was found helpful to 10 out of 14 patients. Extensive case histories and reports of the individual sessions are presented as examples of successful treatment.

Wolff has used group psychotherapy since 1954. During a period of 6 years, he treated 110 geriatric patients by this method in three psychiatric hospitals. The majority (70 percent) of the patients were schizophrenics and had been hospitalized for an average of 20 years; the remainder were organic cases (the average age, 63 years), and 40 were females. Forty percent improved and could be discharged from the hospital. The improvement was evident within 3 months after the group sessions were started. Six months of treatment was necessary to secure a "better emotional equilibrium." Control studies with patients treated by occupational or recreational activities alone revealed the superiority of group psychotherapy as a therapeutic tool. It was also found to be superior to individual psychotherapy, because elderly patients are less alarmed by group treatment than by talking to a therapist in individual sessions.

Countertransference could become a problem, because the therapist may be reminded of his own father or of another important figure in his past life by the patient. Some insight can be achieved, but deep insight is not only impossible, but also undesirable, because it is disturbing to the elderly patient and may increase his symptoms. Support rather than insight is indicated.

Other forms of therapy are dealt with rather briefly by the author. Among these, he is mainly concerned with the use of psychopharmacological drugs in treating agitated, depressed, and withdrawn and apathetic patients, and "milieu therapy"—namely occupational therapy, recreational activities, music, and industrial therapy, educational therapy, and physical and hydrotherapy, and habit training.

In the concluding chapter, entitled "From custodial care toward rehabilitation," the author presents his basic philosophy. The psychiatrist should be able to feel that death is not a cause of fear, but a meaningful rest. He then will be able to really understand his geriatric patients and to show them the way out of emotional conflicts toward freedom, calm, and serenity. The ultimate goal is to restore and keep up the physical strength and vigor of the geriatric patient and to help him regain his emotional equilibrium. The aged patient must again become part of humanity, adjusted to the problems of the progressive world, with faith in himself and in his future.

Those interested in geriatric psychiatry will find in this book many valuable practical hints for the individual and group psychotherapy of aged psychotic patients.

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Chemistry

Friedel-Crafts and Related Reactions. vol. 2, parts 1 and 2, *Alkylation and Related Reactions*. George A. Olah, Ed. Interscience (Wiley), New York, 1964. Part 1, xxx + 658 pp.; part 2, xxvi + 704 pp. Illus. Set, $50.

This is the second volume of a four-volume treatise on the subject. The titles of the sections are "General Aspects," "Alkylation and Related Reactions," "Acylation and Related Reactions," and "Miscellaneous Reactions." It is the stated hope of George Olah, the editor, that the complete series will be published by the end of 1964.

Volume 2 represents a major effort in itself, comprising some 1400 pages and covering not only alkylation of aromatic and related systems, but alkylation of paraffins, haloalkylation, hydrogen exchange, and numerous other related reactions, including paraffin hy-