

WONDERS OF MEMORY

PHILOSOPHERS and men of letters, we are often told, should stick to their specialties and not invade the realm of practical affairs, or trench upon other departments of learning. Thus when Dr. Einstein speaks on religion or politics, he earns the censure of those who feel not only that Einstein has undue influence because of his fame as a physicist, but also that his opinions on matters other than physics are no better than the next man's and ought not to be heard. Thus Spengler earned the undying dislike of academic historians, because he went beyond the bounds of conventional historiography and claimed attention, not by his professional status, but by the power of his ideas.

We have a considerable feud with this sort of criticism. We oppose it on the ground that philosophy and morals are not "specialties," and that no man need keep silent if he has something to say concerning such matters. Academic tradition, while it may establish certain standards of learning, too often stultifies originality and confines scientific thought to narrow grooves defining what is "acceptable."

Scientists who criticize philosophers for launching discussions of scientific matters are both unhistorical and ungrateful. Science—modern science, at least—was born in the arms of Philosophy. The theories of modern physics are directly traceable to Pythagorean and Platonic speculations. The heliocentric theory was propounded by the ancient Greeks nearly two thousand years before Copernicus discovered what they had written on the subject and began his own investigations. Philosophers have often contributed the stimulus to new discoveries in science. Kant wrote a theory of cosmic origins, Goethe speculated on biology, and Samuel Butler, that odd nineteenth-century genius, devised

biological doctrines in opposition to Darwinism which are only now being appreciated. It is the power of the imagination which is important in science, and any man with disciplined imagination may open up new avenues of discovery.

There is the further consideration that, in any of the special sciences, a body of tradition grows up which often places "blindings" on the eyes of men who are rigorously trained in a particular field. The philosophizing intruder does not have this disadvantage. He freely does things his more learned contemporaries would not think of doing. Samuel Butler is a good example. During his lifetime, as R.A. Streatfeild remarked in 1910, "he [Butler] was a literary pariah, the victim of an organized conspiracy of silence." To moderns, Butler is best known for his *Erewhon*, a satire on the English, and *The Way of All Flesh*. His name, however, is not even listed in a leading encyclopedia issued in England at the turn of the century.

The importance of a man like Butler, we think, lies in his vigorous disregard of conventional notions. At a time when Darwin had practically won the field of evolutionary theory with his doctrines of the survival of the fittest through natural selection and chance variation, Butler came forward with ideas which many thought discredited—Buffon's theory of "organic memory" and Lamarck's inheritance of acquired characteristics. That is to say, Butler continued a line of thought which had elements in common with these men. Today, more than half a century later, Butler's penetrating critiques of Darwinian doctrine are beginning to receive the attention they deserve.

But why discuss Butler at all? Simply because he represents a view of life and nature which seems to offer more inclusive explanations

than more popular accounts of the relation between psychological and biological phenomena. The tone of some paragraphs in *Time* for June 8, under the heading of Medicine, will show the disquieting effects of discoveries which seem to go against conventional scientific attitudes in this respect.

To protect itself, perhaps, from suspicion of credulity, *Time* starts out with a light-hearted reference to L. Ron Hubbard, whose most recent revealings propose the advantages of dianetic analysis of former incarnations on other planets. But the facts which *Time* has to report are from the completely respectable London *Journal of Mental Science*. An English psychiatrist, Dr. Denys E. R. Kelsey, describes in this publication the "memories" of patients or subjects which begin with the unborn state. The "recall" of his subjects was achieved through hypnosis, and while we hold no brief for this method of research, the evidence is such that it seems worth taking seriously. At least the *Journal of Mental Science*, as *Time* notes, printed it "with a straight face."

One patient, a woman of forty-four, returned ("regressed" is the technical term) to the age of three weeks and said: "I used to be part of a 'oneness,' and now I am separated." Kelsey invited her to go back further, whereupon she said:

"This is the womb. There is something beating in me and through me—my mother's heart. I can't see—and it feels as if I've got no mouth." He [Dr. Kelsey] asked her in what position she found herself. She answered, "Curled up," and she immediately assumed the fetal position. When Dr. Kelsey tried to get this patient to describe her existence before the "oneness," she babbled some seemingly incompatible impressions. "It was dark, yet filled with colors of indescribable beauty; there was complete silence, yet the place was filled with heavenly music; it was still, yet everything was quivering."

We cannot forebear feeling that this sort of "interview" amounts to an invasion of human privacy, even though there emerges something of the mystery and grandeur which made Wordsworth speak of the infant who comes

"trailing clouds of glory," nor are we persuaded that the findings on the analyst's couch have more validity than the poet's imagining. Yet the next case is still more curious, if in another way. A married woman who, as it happened, knew little of obstetrical matters, returned to the time immediately following her own birth. The account continues:

... She was choking from something wound tightly around her neck. She had no idea what this could be. I asked her to trace it. Her hand went up to her neck and then ... down to the region of her navel—"It comes from my tummy." . . . Despite her conscious ignorance of biology, she told in detail of having been "just a tiny spot," then beginning to grow bigger.

It developed that this patient had almost been strangled at birth by the umbilical cord—a fact which Dr. Kelsey afterward learned from her mother. He also reports other cases in which subjects recalled things about their birth which he was able to verify, concluding, "It is my belief that these so-called fantasies are in fact the reliving of events which were experienced and appreciated and promptly repressed."

A number of things might be said about this strange psychiatric revelation. First of all, the recall seems to be at what might be called the level of organic memory. If we can credit such testimony, it seems reasonable to suppose that there are other levels of recall—other intimations from the remote past. Lafcadio Hearn provides two instances of similar "memories" in his *Gleanings from Buddha Fields*—one in the story of the Japanese boy, Katsugoro, the other apparently related to his own psychological experience and explained by him in terms of Buddhist psychology under the title, "Within the Circle."

What we may come to learn from such experiments as Dr. Kelsey's is that the fabric of our bodies is saturated with memories which reach back to its very beginnings. There should be no reason why a man could not learn to establish his own recall of such memories, without the unnatural intervention of a hypnotist—supposing,

of course, that the project is worth the difficulties which might be involved.

On the theoretical side, there are the reflections of Samuel Butler to be considered. Butler maintained that heredity depended not upon natural selection according to the Darwinian formula, but upon "unconscious memory" transmitted as habit from generation to generation. With Butler, the passage of traits from parent to offspring was a psychological as well as a physiological process. We quote at length from Butler's *Life and Habit*, in which he, in turn, quotes from and comments upon Darwin's *Variations of Animals and Plants under Domestication*. He begins:

"... Brown Séquard has bred during thirty years many thousand guinea pigs, . . . nor has he ever seen a guinea pig born without toes which was not the offspring of parents *which had gnawed off their own toes*, owing to the sciatic nerve having been divided. Of this fact thirteen instances were carefully recorded, and a greater number were seen; yet Brown Séquard speaks of such cases as among the rarer forms of inheritance. It is a still more interesting fact—'that the sciatic nerve in the congenitally toeless animal has inherited the power of passing through *all the different morbid states* which have occurred in one of its parents *from the time of division* till after its reunion with the peripheric end. It is not therefore the power of simply performing an action which is inherited, but the power of performing a whole series of actions in a certain order'."

I feel inclined to say it is not merely the original wound that is remembered, but the whole process of cure which is now accordingly repeated.

The proposition which Butler is defending is that such "memories" are transmitted—

From a single deep impression on a parent, affecting both himself as a whole, and gravely confusing the memories of the cells to be reproduced, or his memories in respect of those cells—according as one adopts Pangenesis and supposes a memory to "run" each gemmule, or as one supposes one memory to "run" the whole impregnate ovum—a compromise between these two views being nevertheless perhaps possible, inasmuch as the combined memories of all the cells may possibly *be* the memory which "runs" the impregnate ovum, just as we *are* ourselves the

combination of all our cells, each one of which is both autonomous, and also takes its share in the central government....

With this background, the idea of Alice writing a letter to her left foot, concerning a question of mutual interest, seems not so very fantastic, after all. At any rate, it seems quite reasonable that we may have conscious relations with our members and organs, in terms of the memory of the part and the memory of the whole, which makes the human individual more like a constellation of faculties, instruments, and powers than a simple, single organism.

Butler claimed for his work that he had achieved "the re-introduction of teleology into organic life"—since Darwin had left the progress of the species pretty much up to chance and more or less "mechanical" causes. As to this, we cannot say. We know that the Lamarckian theory of consolidating the gains of each generation through the inheritance of acquired characteristics has always appealed to many people, since it has seemed such common sense to suppose the life and development of organisms to be ordered in this way. Only with reluctance, and after much grave indoctrination do students abandon the Lamarckian view, and it still keeps up a series of "come-backs" at the hands of talented biologists (such as MacBride) who offer evidence puzzling for the Darwinists to dispose of. Perhaps the psychological mechanism suggested by Butler is the key to this mystery—the source, in some cases, of mutations, and, again, of what the doctors deny to be possible—prenatal suggestion. Such psycho-organic processes may be mere routine behind the major mystery of procreation.

But the doctrine of universal memory—memory at every level of natural integration—seems to deserve further attention. In a volume we have long admired, *The Earth as Modified by Human Action*, by George P. Marsh, we found on the last page a passage which is surely worth repeating. Among other things, Mr. Marsh was a scientist of some distinction and shared in the

illustrious tradition of nineteenth-century humanitarians who sought to combine their understanding of nature with a comprehensive philosophy of life. One wishes that more scientists of the present day were capable of prose of this depth and quality:

In the vocabulary of Nature, little and great are terms of comparison only; she knows no trifles, and her laws are as inflexible in dealing with an atom as with a continent or planet....

No atom can be disturbed in place, or undergo any change of temperature, of electrical state, or other material condition, without affecting, by attraction or repulsion or other communication, the surrounding atoms. These, again, by the same law, transmit the influence to other atoms, and the impulse thus given extends throughout the whole material universe. Every human movement, every organic act, every volition, passion, or emotion, every intellectual process, is accompanied with atomic disturbance, and hence every such movement, every such act or process, affects all the atoms of universal matter. Though action and reaction are equal, yet reaction does not restore disturbed atoms to their former place and condition, and consequently the effects of the least material change are never cancelled, but in some way perpetuated, so that no action can take place in physical, moral, or intellectual nature, without leaving all matter in a different state from what it would have been if such action had not occurred. Hence ... there exists, not alone in the human conscience or in the omniscience of the Creator, but in external nature, an ineffaceable, imperishable record, possibly legible even to created intelligence, of every act done, every word uttered, of every wish and purpose and thought conceived by mortal man, from the birth of our first parent to the final extinction of our race; so that the physical traces of our most secret sins shall last until time shall be merged in that eternity of which not science, but religion alone, assumes to take cognizance.

And not only, we may add, our most secret sins, but the noblest achievements of mankind as well. These latter, we think, are the foundation of the universal longing for a Golden Age to come—born from the hidden memory of greatnesses of which man has proved capable.

Letter from **CYPRUS**

ISLAND OF CYPRUS.—The British Crown of Cyprus affords an interesting opportunity to examine one of the various conflicts of colonialism and nationalism which plague this part of the world. This particular conflict has none of the violence which characterizes present events in Iran, and there are nothing like the strategic factors which hang over the Anglo-Egyptian Suez Canal dispute. At times, for the casual observer, an almost comic opera atmosphere seems to pervade Cyprus, but, comic or not, there is a good deal to be learned of the strange complications into which even a reasonably beneficent colonial ruler may tumble.

Eighty per cent of the Island's 500,000 population speaks Greek; 17 per cent speaks Turkish. The remaining 3 per cent include a number of retired British civil servants from all over the Commonwealth, a smaller number of RAF and Royal Army personnel connected with the Island's constant role as a stand-by and largely undeveloped and unmanned military base, and an even smaller number of American personnel of one of our high-powered radio installations.

By a curious bit of tortured colonial logic, the Island was given to Britain in 1878 by the Turks in return for a satisfactory British political attitude toward the Russians. Since the entire previous history of the Island seems to consist of a series of conquests by a wide variety of suzerains, one might expect to find a tangled skein of emotional loyalties. But the truth is beyond any reasonable credibility. Today the strongest political force in the Island is "ENOSIS," or the movement for union with Greece. It is of course described as *re-union*, but a careful search of history reveals no Greek political authority since the Byzantine Empire finally gave up the ghost at the time of the Crusades. (Incidentally, then, too, to the British, represented by Richard Coeur de Lion.) And before that, if one must be a fundamentalist in

these matters, the last Greek authority was that which fell before the Romans in 58 B.C. So one may be forgiven for imputing to *Enosis* something of a comic opera character. But it is a real force, for all of that.

The seventy-five years of recent British rule in Cyprus have been such fruitful ones for the Island that one might say that in 1953 Cyprus seems to be a showcase for the colonial system. Its economy is sound and healthy. In 1951 over 1800 freighters called at its four ports in handling foreign trade of over 34 million pounds Sterling. Primarily agricultural, Cyprus yet has several important industries based in the extraction of various natural resources. Its Departments of Agriculture and of Cooperative Development administer an agricultural system based upon about 650 credit and thrift societies which have succeeded in removing the farmers from the clutches of the moneylenders, which act as the agents of the Government's programs of compulsory produce pooling for export marketing, and as a sideline handle the chores of cooperative purchasing of supplies, seed improvement, and the like. One gets the feeling in all this of a rather stern paternalism, but of its effectiveness in improving the peoples' lot there is no doubt. In the field of public health, there are said to be doctors and hospitals immediately available to all villages; the dread trachoma has been totally eradicated, and of malaria the Governor General's annual message of January, 1953, solemnly reported that it was considered eliminated, no new cases having been disclosed during the year. But four adult female anopheles mosquitoes had been caught on the island and "search and eradication measures now . . . maintained are regarded as an indefinite requirement. . ."

The Greek Orthodox Church next to our seaside hotel flies the flag of Greece. Over the huge, semi-ruined thirteenth-century Cathedral of St. Sophia in the old city flies the standard crescent of the Turkish Republic. The Island's

public primary schools are taught, according to the community each serves, in either Greek or Turkish. Until recently, English was not taught at all in the public schools, and is still not a required subject of study. A somewhat moth-eaten green building nearby, bearing the sign "English High School," is one of an extremely small minority in which English is the language of instruction.

All road signs and public announcements are in the three major languages. English is not accorded first position, and it is said that a consistent effort is made to avoid placing any handicap upon the non-English speaking person.

This is a puzzling sort of colonialism, genuinely self-effacing, seriously and purposefully organized for the maintenance of local culture and for the physical benefit of the local population. One soon sees that this attitude, however, is not universal. An officer of H.B.M. forces at Suez, here for leave, said recently, *à propos* of the Greek flag: "I wouldn't allow it. Not in a British colony, I wouldn't! People are better off under British rule, but they don't appreciate it!"

This much is true, at any rate: *Enosis* is a constant reminder of the force of an irrational, highly emotional local desire for a change. If it were a desire for freedom, it would be more understandable, but it is, instead, apparently a desire only to exchange the tolerant, efficient and beneficent British overlordship for that of the politically and economically bankrupt Republic of Greece—a change, but hardly an improvement. The core of *Enosis* is said to lie in the Greek Orthodox Church, whose character, in common with that of other Eastern Christian sects, is primarily political rather than what we would call *spiritual* (or religious?). And that there may be more than meets the eyes in *Enosis* is perhaps indicated by an event of some years ago. The British, seeking to align Greece with the Allies against the Germans in World War I, offered Cyprus to Greece as a prize for entering the Entente. When informed of this offer, a prominent Cypriot leader of *Enosis* is said to have

cried: "What! They can't do this without consulting us!"

It would be presumptuous to suppose that in a casual visit of a few days one could, Gunther-like, learn what goes on "Inside Cyprus." It would be deceptively easy—and I think incorrect—to assume that its waters are troubled solely because of the iniquities of imperialism. On the contrary, one wonders whether the villain of the piece may, instead, appear in dusty black clericals and carry a mitre instead of a sword.

CORRESPONDENT IN CYPRUS

REVIEW

BOOK OF THE MONTH

WE have had little truck lately with Book-of-the-Month selections, our attention turning to interesting works not quite so much in the public eye. However, we shall probably always return to examination of books such as BoM selections, and do so with something other than a critical eye.

Pearl Buck, we have often recalled, once discussed "popular-appeal" literature in the following words.

It would be easy for me to do what many have done—simply shrug my shoulders at the mass of popular writing and say it has nothing to do with literature. But I cannot. I keep going back to it—it is what most people read—then it must have its importance somewhere in relation to literature. One cannot dismiss lightly a magazine bought and read by three million people or a book bought and read even by thousands. It is important.

BoM selection for April is Ernest Gann's *The High and the Mighty*. A versatile man as well as versatile author, Mr. Gann is best known by his *Fiddler's Green* (made into a motion picture, *The Raging Tide*, starring Richard Conte and Walter Huston). *The High and the Mighty* is neither great literature nor will it become the most popular story of the year, but in comparison with television entertainment this novel of the airways comes out more than fairly well.

As a matter of fact, perhaps A.D. 1950-5 is a time for all lovers of literature to go around defending the book clubs and the 25-cent reprint racks in the drug stores, since there is little question but that reading develops more inner resources than television watching. We are reminded of one of Webster's cartoons, depicting a long line of television-equipped houses surrounding a single naked roof. Two men are conversing, one of whom, explaining the characteristics of the neighborhood, points to the lack of aerial on this one house and says, "That's the neighborhood eccentric. Of course it may be only malicious gossip, but they say he even keeps books in his house!"

Ernest Gann's *The High and the Mighty* employs techniques quite similar to those applied by George Stuart in *Fire and Storm*. In an eventful airline crossing from Hawaii to the mainland, the reader flies along with each one of the crew members, becoming acquainted with the techniques of their special skill. Around and in between such descriptions are the inevitable psychological dramas beneath official behavior and relationships.

A freak accident occurred to Plane 420, broken propeller fragments tearing away a portion of a wing tank just after the ship had reached "the point of no return," thus leaving fifteen passengers facing probable destruction in an angry sea. As the plane limps along on its remaining gas supply (and with the passengers apprised of the necessity for a crash-landing in the ocean), the sure-fire dramatics of the story find an ideal backdrop.

The superintendent of operations in San Francisco, musing worriedly, reflects upon the plight of men jerked from their routines of thought by the probability of death occurring in the next few hours. Garfield's thoughts give a setting for the general tone of the book and indicate the suspense which carries throughout:

The terse, inescapable words from Aircraft Four-two-zero.

"Plane ditching at zero one thirty."

Words flashed through the night sky. Words which must affect the lives of twenty people who only this morning awakened as other people, and looked at the sun, perhaps, without the faintest notion they might never see it again. How much difference it would have made to them if they had known! How many of them would have gone about their last living normally-keeping appointments, reading about the world's wounds in their breakfast newspaper and caring if those wounds bled, complaining of lukewarm coffee, even shaving or brushing their teeth with ordinary attention? How many of them, knowing they were condemned, would have gone to church, frantically hoping for a formal introduction to immortality and how many of them would have said the hell with it—trying perhaps for a last-minute immersion in what they considered the real way of life?

They would change, Garfield thought. Each one of them would change in his own way. Certain things that seemed important before would suddenly become valueless—because you had to stand very near to complete destruction before you could see anything clearly. Then, and only then, did the chromatic scale of values become brilliant. Red became red, and blue pure blue. Garfield knew this because in the old days of flying, before his confinement to an office, he had several times had occasion to observe the scale. If it changed me then, he thought, then it must change them now.

At first sight, the passengers on Flight 420 look like any other people ready to board a plane or train. One, a successful business man, carries advanced paranoid complexes along with his brief case, and is planning to kill another passenger he imagines to have been familiar with his wife. The impending disaster inspires him to get his histrionics over with early in the flight, the intended victim being aboard, and when his attempt is frustrated he finally corrects his distorted perspectives, in the face of a death looming a few hours ahead. Another passenger is an atomic scientist who has become bitterly disillusioned with the destructive potential of work he has been engineering, and, in fact, is so imbued with a personal sense of guilt that the idea of his own destruction is a rather welcome thought. A spoiled rich woman, determined before the flight to divorce her husband who disdains social life—he plans a long-term mining venture that would take them into the North woods—finally reshuffles her values, discovering that her husband is worth a round dozen or so of her socialite acquaintances. A Broadway producer, an egoistic genius, frightened at the very thought of leaving the ground in an airplane, finds reserves of inner strength and emerges as one of the bravest men aboard; and for the first time in his life, knows and expresses humility. The greatest suspense, perhaps, is that in which one becomes involved while a skilled author depicts the dynamics of character transformation. Here, again, Gann puts an element often important to great art in a twentieth-century fuselage.

But the story is primarily about airmen and their special life and problems, despite the interesting developments of psychological drama concerning the

passengers. Captain Sullivan has reached a time in flying which Mr. Gann implies is nearly inevitable for all pilots who log enough miles. He is afraid. The thousands of hours of special responsibility and the need for being aware of numerous intricate details bearing upon the safety of the plane have created a state of tension in which his hidden fears flourish, finally rendering him unable to make well-considered decisions. His co-pilot is a much older man, but one who has been through the same furnace before, has feared every fear, in its turn, and emerged with sure strength on the other side. It is this older man—considered by the younger pilots to be near the end of the line—who finally saves both the captain and the plane.

We have often wondered about the thoughts that may come to a man who faces possible death in the near future. Perhaps Mr. Gann's story device is a kind of twentieth-century duplication of the psychological ingredients present in great classical tragedies, and so of real worth. Therefore, in conclusion, we would not only recommend *The High and the Mighty* as a much more worthwhile diversion than three evenings of television entertainment, but also feel it incomparably superior to the many clever yet superficial stories which abound between the covers of most popular magazines. The Los Angeles Public Library once ran a series of billboard ads which invited the public to "read a book tonight." And while at first glance this slogan-like advice seemed rather inane, since so very many poor books are everywhere available, it is a moot question whether there are not times and circumstances in which *any* book is better than none. BoM selections, moreover, are usually well above average, and *The High and the Mighty* stands well up among these.

COMMENTARY

THE MANAS PACKAGE PROJECT

SEVERAL readers living in the Los Angeles area responded to our editorial of June 3, in which we invited cooperation and help in the shipment of clothing and books to South Africa, for use by the African people. We have already accumulated a number of men's suits (no women's, as yet), and a collection of magazines. One reader sent fifty dollars, which has been forwarded to our South African Correspondent. A room for sorting and packaging has been provided, where volunteer workers may meet regularly to prepare the parcels for mailing. Send your clothing and books to MANAS PACKAGE PROJECT, 521 El Centro Street, South Pasadena, Calif. The family at this address has obligingly agreed to receive the parcels and place them in the packaging room.

Saturday evening seems to be the time most likely to be free for those who have offered to help with the project. With a small group of people, the work should easily be accomplished in about two hours, one evening a month. We suggest the first Saturday of each month as a tentative date for gathering at 7:30 P.M. at the above address. (Confirm by telephone: CUMberland 3-2085.)

Our experience with such volunteer groups is extensive, since MANAS is wrapped for mailing every week by several people who spend an hour this way at our print shop. Perhaps we need only point out that when people don't come to take part in an activity of this sort, a heavier burden of work always falls on those who do come.

What to send for mailing: Any sort of clothing, all sizes, in which there is still plenty of wear, is appropriate. Shoes, hose, underclothing, shirts, ties, dresses and women's coats are all needed. One criterion is to send what you might gladly use yourself, provided it would fit, and you had the need for it. There is nothing sentimental, either, in the suggestion that people who have no false pride about wearing hand-me-downs,

themselves, whenever this enables a practical saving of cash for other things, will probably show the best judgment in selecting clothes to send to South Africa.

Books: Try to choose books which will have more than casual value to the reader. Technical books and texts, even if old, may be welcomed by people hungry for education. The same applies to magazines. Some of these books and periodicals will go to students, so that volumes on cultural subjects, when available, will be particularly appreciated.

Finally, let's remember that the people who will do the work of mailing are likely to be few in number. If possible, sew on the button yourself before you mail the coat. The same applies to cleaning, when this seems necessary.

Perhaps we shall have more information later on, after some packages have been received, concerning things most needed by our South African friends.

CHILDREN ... and Ourselves

WHILE we have some doubts about the prudence of admitting it, the fact is that much of the correspondence received by this column during recent weeks has concerned cats. Several suggestions have arrived regarding the disposal of surplus kittens. Other readers have sidestepped the basic issue completely, as for instance the communicant who blithely recommends canaries. (It seems that canaries are observed to have natural affinities for the hermitage, and behave approximately the same after as before having any incidental young. And we suppose it is, indeed, easier to give away an egg than a cat.)

One colorful resolution proposed for our Malthusian dilemma involved the use of mailboxes. A cartoon was appended to our informant's letter, depicting a row of R.F.D. boxes into which extra kittens had been inserted. The gracious donor of the cartoon, though, had the psychological advantage of being a postman. He could saunter up to the boxes and stuff any sort of thing inside without attracting undue attention. Besides, this approach calls for an anarchistic "why worry about other people's reactions" approach a bit beyond our stock of *savoir faire*.

Well, as usual, while all of us were theorizing someone came up with a practical—even a useful—answer. The extra kitties, together with their prolific Mother, now live on a ranch. This ranch has lots and lots of mice and gophers for them all to play with, and, apparently, the ranch owners were so impressed by our brief philosophical comments on "the balance of nature" that they wished to see how it would work out all by itself—waiting to be instructed by old Survival-of-the-Fittest herself, as it were.

One kitten remains, a condition of the transaction on which our six-year-old was adamant. We *think* it is a male, and therefore reason that further litters are unlikely. Clarence, as he is named, has numerous other talents,

however, to make up for his blessed incapacity to reproduce in our basement. He can climb curtains, chew shoes and knock over almost anything not more than six times his size. He sleeps in a doll bed, has breakfast brought to him on a tray and, like many another child, is rapidly acquiring the notion that the world owes him a living.

Well, the world does as long as the world thinks it does, but trouble will come for Clarence when he reaches his majority. About the time when he begins to think of objects of affection other than balls of yarn and people who tickle behind his ears, his doting six-year-old nurse will stop bringing him his dinner; this and other prices he must pay for deciding to live his own life. Finally, he will have to walk all the way to the back porch to dine, and, occasionally, probably, preparation of his meal will be forgotten, making it necessary for him to yell like anything.

Our six-year-old isn't really any more fickle than most, but the thing is that most people *are* a bit fickle. A kitten is a novelty, for a time; he is invariably cute, and besides, he needs you if he doesn't have a mother. A human child is a novelty for a time and dependent, too, for a much longer time, because of the alternating currents of pride and worry which most parents generate, and because the awakening of a self-conscious mind is a long process and needs a lot of help. But we have often discovered, somewhat to our idealistic horror, that many women want babies in order to distract themselves from boredom. When little Waldemar is born of such a mother he will be, like Clarence, swamped by lavish attention. Anyway, Waldemar, or Clarence, as the case may be, will be at first strongly inclined to think that the universe was created expressly to cater to his every whim. But as he gets older—and develops more involved whims, especially in the case of a human child—he is no longer so tractable for mothers; thus parents have been known to become annoyed with signs of independent behavior, or a little tired of it all.

The psychologists have been telling us for some time that over-indulgent mothers usually raise "dependent personalities" instead of sons and daughters. Many marriages fail because the man or woman is man or woman in name only, actually still existing in a childhood universe revolving around his desires. It's a rather curious twist, this, for the over-indulgent mother is really indulging herself, first of all, by focussing her whole emotional nature upon her child. She *wants* the child to remain dependent upon her, labors unconsciously to achieve that end, yet at the same time is unable to respect any child who submits to so much domination. Without respect there is no genuine love, and the child, denied both self-respect and the respect of its parent, tries to make up for the lack by seeking more possessions and amusements. If this half-grown child marries, a strong tendency will exist in him to recreate relationships on a similar basis. But since love necessitates an attitude of giving as well as receiving, such an one is ill-equipped for love, and both partners suffer the consequences.

A mother cat, at least, stands for little nonsense from its progeny. They are fed, but only until they become large enough to feed themselves. We have never yet seen a cat who desired to prolong the unweaned condition, or would allow a fully grown specimen to mope around behind her everywhere she goes. She has other projects afoot. For one thing she apparently conceives herself as having an obligation to nature—that of providing new kittens a place in the sun. Humans, fortunately, or unfortunately, are not moved so inevitably by natural impulse. A man or woman can choose to forget the species and devote exclusive attention, in an in-bred sort of way, to his present "family."

This is not the only alternative choice open to a parent, however. We neither have to have litters every year nor "live in our children." Our obligations to the human race are clearly much more subtle and complicated than those of a mother feline to her brood. A man can provide a

place in the sun for more of his fellows, each year, for instance, by assisting them to educate themselves, by sharing ideas with them—and, even on a few rare occasions, by inspiring them. A passage in Edmond Taylor's *Richer by Asia* carries this thought into the realm of word poetry—"Because a man is gentle with a woman or a woman kind to a man," he wrote, "a child may be born who will be lighted by a glow of gentleness and kindness, and this light will be transmitted to other children, to many children, for children are made in many ways, and may be many things—a song may be a child, or a gentle law, or a kindly treaty, or a mathematical formula expressing the tenderness of figures, an idea that will become a machine, expressing the tenderness of cogs and levers, before it becomes again an idea and then an emotion."

Yes, there is no doubt about it—we can learn more from cats than they can learn from us, which is really what gives us the right to think ourselves a higher order of intelligence. One other thing that little ones will discover when they play with kittens, incidentally, is that if you want to be liked by a kitty you must approach her slowly, or, better yet, let her approach you. Little girls who learn this lesson will make terrible politicians, but who cares?

FRONTIERS WHAT LIVES?

THE question of what is really "alive" did not begin to trouble anyone seriously until the nineteenth century, when, feeling their anti-theological oats, the scientists became eager to prove that all the world but a few "disciplined thinkers" of the new scientific learning was woefully backward and superstitious. In 1860, the famous French chemist, Pierre Berthelot, declared, "The object of our science is to banish 'Life' from the theories of organic chemistry." The idea was to eliminate all "spirits" or minor "hants" or even intelligence from the beautifully simple equations of chemical science, thus once and for all barring re-entry of any sort of "divine" or "supernatural" influence into the explanation of natural phenomena.

Intelligence, it is easy to see, is a manifestation of life, and intelligence is basically an incommensurable, so far as science is concerned. What a good scientist wants to study is material that will play no tricks on him; he has a natural fondness for matter with no will of its own, that will respond simply and mechanically—or at least predictably—to external stimuli. At any rate, this seemed the case with most scientists until about twenty years ago, when experiments carried on by Wendell M. Stanley of the Rockefeller Institute began to erase the boundary between "living" and "dead" matter, so-called. Dr. Stanley's work with the tobacco mosaic virus caused him to say: "Crystallinity is simply a structural regularity . . . and actually there need be no incompatibility between the living and the crystalline state." Similar conclusions were reached by another biologist, Basile Luyet, who reviewed facts making it "highly probable that the cell is not the necessary structural unit of any living matter." The New York *Herald Tribune* science editor, John J. O'Neill, summed up the views of such workers by saying:

This new conception has resulted from research in which biologists sought to find life in its simplest form and chemists attempted to determine at which point the properties of life first appeared.

The biologists and chemists eventually found that they were studying the same substance, one calling it living, one calling it dead, and so agreed that there is no dividing line between living and dead matter.

Somewhat earlier than the work of Stanley and Luyet, an organic chemist, Albert P. Mathews, had written in a widely used text:

Living things show an attribute which we may call mentality or psychism, and this psychism is as yet unrecognized elsewhere than in living things. No one speaks of the psychology of this great rock upon the illuminated surface of which we crawl But who can deny to the inorganic earth that which is in the same inorganic elements when in the organized, the organic form? The biochemist of the future, then, must be more than an electrical engineer, for he must be a poet and a psychologist as well.

Thus it is plain that, whatever the ambitions of the nineteenth-century science, present-day biologists and organic chemists have given up the feud with "life," and are quite willing to concede that both life and even consciousness of a sort may have a role in the behavior of supposedly non-living" material.

Modern psychologists, however, take a somewhat different view. The *Scientific Monthly* for April carries an interesting article, "Animistic Thinking among College and University Students," by Wayne Dennis, psychologist of Brooklyn College, New York, in which the writer contends that practically medieval notions about life and mind are astonishingly common among educated people. Briefly, unless specifically instructed otherwise, many of us regard as "living" a lot of things which nineteenth-century science has definitely informed us are "dead."

The investigation carried on by Prof. Dennis was of a sort usually made with children. "There is evidence," he begins, "that a large percentage of children, up to at least twelve years of age, believe that many objects, classified by biologists as

inanimate, are alive." Prof. Dennis plied college students with the same sort of questions, often finding their reactions similar to those of the "animistic-minded" children. One group of sixty-seven graduate students was questioned about "an unlighted match held before them, the same match lighted, an electric clock on the wall of the classroom, the sun, the wind, a five-cent piece, a pearl, gasoline, and the ocean." Prof. Dennis continues:

Forty-five of these subjects stated that one or more of these objects were living. The objects most often called living were the lighted match, the sun, and the ocean. In the case of each of these, approximately one third of the group gave animistic answers.

Lest anyone suppose that the graduate students were being "poetic," he provides samples of the answers obtained:

The lighted match: "Living, because it has flame which indicates life." "Living because it is burning brightly, giving forth something." "Dying—I saw it being burned."

The sun: "Living because it gives forth energy. Gives us power, warmth, light, and energy. Makes things—living things—thrive and exist." "Living because it gives off heat."

"Yes! Living! Without breath, but living, scientifically living, changing."

The ocean: "Living because it is constantly maintaining life. Movement is characteristic of it, and life is brought forth by it." "Living. It has moods and is temperamental just like many human beings." "Living—it moves and makes noise and is powerful and changing. Sometimes calm, sometimes stormy. We cannot control it. Living, continually in motion, changing, etc."

In order to be sure, Prof. Dennis pressed the students further, asking if the sea "knew" where lost ships lie on the bottom. There were these answers:

"Yes, the chemicals in the sea come in contact with sunken vessels and are aware." "Yes, the sea does know the location of lost ships because they are in the bottom of the sea." "Yes, if it (the sea) is living,

it ought to." "Yes, the sea rubs over the lost ships and knows them to be there."

Of twelve students who said that the sea was alive, five thought that the sea could "feel the pull of the moon which causes high tides."

Concerning these results, Prof. Dennis announces that such anthropomorphism is not limited to children." He says in conclusion:

One would not be surprised if ideas such as those just described were found in a primitive or a backward group (I have data showing that in some little-educated groups the percentage animating the sun and other natural objects is close to 100). But, in my experience, few psychologists expect to find such ideas among teachers and college sophomores. It should be borne in mind that teachers and sophomores often have had no more specific instruction than primitive peoples concerning the distinction between the animate and the inanimate and concerning the dependence of consciousness upon a nervous system. Apparently, in the absence of specific-instruction, "educated" persons in modern societies possess many conceptions of the world that are identical with those of the child and of the uneducated....

There is a difference, of course, between Prof. Albert Mathews' mature conviction that even the "great rock" of our planet lives and has a psychic aspect, and the simple reactions of students concerning the life and consciousness of the sea, the sun, and other things, yet the similarity, we think, is greater than the difference. In short, without wishing to come out strongly for pixies in flowers and dryads in trees, we feel a great sympathy for the natural "animism" of children, primitives, sophomores, and graduate students. Even the issue of the "nervous system" may, we think, be resolved by some wider view of mind than that which insists that minds are only in brains, and nowhere else.

It is quite conceivable that the somewhat "loose" thinking of these students is at least closer to reality than a cold, chemical view of the nature of things. Both Shakespeare and Melville held that the sea has "moods," and the ancient Greeks regarded the earth as a great and living animal.

Medieval writers believed that the Black Plague assuaged a dread infection of the planet—a moral infection, perhaps—and we see nothing genuinely scientific against the view that all beings, creatures, and things live suspended in a great continuum of life and consciousness—an idea expressed by Newton in the words, "Divine Sensorium," and by other philosophers in other ways. *Anima Mundi* may be an ancient notion, but it supports the instinctive animism felt by so many of us, unless rejected after years of intensive indoctrination at the hands of a few narrow specialists.

Finally, what actual "knowledge" do we gain from a science which acquires its precision and certainty by ignoring entirely the subtler aspects of human experience, and declaring all incommensurables out of bounds? Precisely this sort of limitation on thinking about the *possible*, it seems to us, will bring on another and defiant age of superstition. A philosophy that is hospitable to life and mind as universal principles will at least keep our inevitable "animism" from being naive and uncritical, and would be the best protection against the superstition which scientists claim to oppose.