Movie critic for The Saturday Review, *author of many short stories* (The New Yorker, McCall's, etc.), *novelist* (THE SUMMER LOVERS, *Knopf, 1959, and the forthcoming* SOME OTHER TIME)—*Hollis Alpert here tells a wry tale about what he terms mutational possibilities in the next decade.*

THE SIMIAN PROBLEM

by Hollis Alpert

Reprinted from the Proceedings of the Third Annual Convocation of the Society of American Geneticists, October 4, 1973. Place: The Benjamin Franklin Institute, Philadelphia, Pennsylvania. Speaker: Robert Crindall, B.S., M.S., Ph.D., Visiting Professor, Institute for Advanced Studies, Princeton University. Professor Crindall's remarks follow.

Gentlemen:

Science, in the words of Huxley, has fulfilled her function when she has ascertained and enunciated truth. Were I not aware that a larger audience than the esteemed members of this body closely follows our proceedings, I would confine my report to a summation of present-day fact and theory concerning the Simian Problem, including relevant statistical information, and leave broader implications to the journalists and commentators who are here today in such extraordinary numbers. Under the circumstances, it has been thought wise by the officers of this society and, I should mention, by certain high officials of our government, that some one of us attempt a more generalized appraisal of the Problem than has been customary at these meetings. I hesitate to describe the contents of my remarks as a popularization. Let us say that I intend to be non-technical —which is not meant to imply that I mean to be unscientific.

As many of you are aware, my connection with the Problem has been a relatively long one, and I am therefore in a position to adopt a somewhat more historical point-of-view than those pursuing strictly specialized lines of research. My own beginnings, so far as the Problem is concerned, were accidental (accident, too, has its place in science) and I cannot honestly wear the mantle of omniscience that has so often been attributed to me by the press. Nor,

to say the least, can I take even the gloomiest satisfaction in the knowledge to which our researches have led.

As few as eight years ago, none of us in this society had the slightest inkling that our branch of learning would rise to its present high prominence. Dr. Crabwell's study, "Fallout: Early Phases," had appeared in our journal and attracted considerable international attention among scientists, but it was regarded mainly as a source work, one that indicated certain new directions of research on genes and radioactivity. None of us, myself included, was aware of the historic importance of the section devoted to "Evolutionary Possibilities, Strontium and Carbon 14 Variety." The oversight was undoubtedly due to the fact that the section was primarily speculative. One columnist, commenting across the study, wrote that Dr. Crabwell had gone out on a limb. I daresay that the laughter generated by his pun would sound hollow today.

Nor, the following year, did anyone relate to that study my own inquiries into "Suicide Rates in the Eastern and Southern States, 1965 compared with 1955." A current misconception has it that Dr. Crabwell's study influenced the nature of my work at that time. Chronologically speaking, this is not true. I did refer to Dr. Crabwell's study in 1966, but when I began my statistical examination of suicide rates the figures were planned for use as an appendix in my contemplated broad work on "Suicide, Geographic and Economic Factors." That work had, of necessity, to be halted while the intriguing possibilities opened up by the comparison of suicide rates were explored.

To those of you without personal experience in the early period of the branch of genetic research that has dealt with the Simian Problem, there can be little awareness of the puzzling nature of the data phenomena we encountered at the time the shadow of the problem first emerged. We were, putting it mildly, flabbergasted, when struck by the high incidence of double suicide in 1965 as compared with 1955. In New York State, for instance, the rate was approximately seven times that of the 1955 rate. This rate rose to *thirteen* times the norm in Arkansas (using 1955 for that figure) and eleven in Florida—a scattered pattern that was almost uninterpretable. A brilliant young assistant of mine, Casper Smith (now Professor Smith, and a member of the President's committee on Simian Control), made correlations according to race, religion, and economic status, but found little to clear up the mystery. He did show that the rates were higher for the very low and the very high income groups.

The data grew more fascinating the more we correlated various factors. We studied New York City, Boston, Little Rock, Arkansas, and Miami, Florida, and the first breakthrough came when we examined age groupings. The double suicide, until approximately 1965, was relatively rare. From 1965 onwards we had to contend not only with greatly increased frequency, but with the fact that the two self-killers were invariably husband and wife. This was a clue, of course, but what sort of clue? Imagine our further perplexity when we discovered that the ages of the suicides were rarely beyond forty-eight in the case of men, and forty in the case of women. Encountering data of this kind can be compared to discovering that a trusted compass at sea has suddenly become a wildly gyrating and quite useless indicator. Thus, in Nashville, Tennessee, in 1955, we found only two recorded cases of double suicide. In 1963 there were six such cases, and in 1965 a total of twenty three. Casper Smith was unable to obtain a fund for investigation of the phenomenon from either the Ford or Rockefeller Foundations, but was able to arrange for a small grant from the Kinsey Institute, on condition that he also investigate sex factors in double suicide.

Yet it was in my own backyard, so to speak, that the lightning struck. I hope I will be pardoned for indulging in personal reminiscence, but it bears upon the historical picture I am attempting to give. My niece, whom I will call Mary Jones, visited me at my office at Columbia, where I was then associate professor. Mary had lost her child during delivery ten days before, but I was not prepared for her agitation when she appeared in my office, and insisted that the door be securely locked. A tall, blonde young woman of 22, healthy and normal in all respects until her experience in the maternity ward at Doctor's Hospital, she was now thin, haggard in feature, and had suddenly developed pronounced streaks of grey in her hair. Alarmed, I calmed her as best I could, and listened to what she had to tell me. In essence, it was as follows:

She had been informed by both doctor and nurse that her child had emerged still-born, but having arranged to have the child by the method then known as "natural" (and abandoned by law in 1971), she had not only been conscious during all stages of the birth, but had distinctly heard, immediately after the delivery, the normal sound of a baby crying. Her anxiety grew during the following week, and she could not rid herself of the memory of the baby's cry. She called upon her doctor again and again, insisted (pleaded) for all possible details, until at last the doctor told her

what had actually transpired. A male child, alive and well, had indeed been born. But it had been born with a pronounced cauda, a flexible appendage, simian in characteristic. Arms, legs, and chest of the newborn child were extraordinarily hirsute. An operation was immediately performed to remove the cauda, and the baby died.

I can still remember, gentlemen, the harsh, near whisper of my niece sounding in my office. "Uncle Bob, my child was not human. My child, Uncle Bob, was a *healthy* monster."

I gave her a sedative, cautioned her against telling her husband what she had told me, and visited her daily until her strength and fortitude, if not her good spirits, were restored. She immediately ceased all marital relations with her husband. I relate this anecdote to stress the fact that we, as scientists, must be prepared to encounter the emotional element as we investigate. I must confess that the scientist in me came to the fore. I telephoned Casper Smith, who was then in New Orleans, to look into any possible relationship that might show up between double suicide and the incidence of deformed and monstrous births. It was a wild shot, but if you will pardon the metaphor, it landed on Mars. Within two weeks, Casper Smith had verified a strong correlation, even though he had to contend with stubborn silence on the part of many hospital authorities.

It was then that I re-examined Dr. Crabwell's Fallout studies, reread the section on Evolutionary Possibilities, Strontium and Carbon 14 Varieties. I wrote Dr. Crabwell a letter, communicating to him some of my suspicions, and asked if we could meet. He dictated a letter to his secretary, informing me that all material relevant to his studies had recently been placed in the hands of Dr. Randolph Sills, of New York City. I subsequently learned that Dr. Crabwell had developed cancer, was aware that his was a terminal case, and wished his researches to be carried forward.

I will always remember the last words in his letter to me. "See Dr. Sills," he wrote. "That limb we are out on is very solid."

Dr. Crabwell, it must be admitted now, saw through the glass only darkly, and at the time of his death he was not aware that the Simian Problem existed to the extent that it has lately emerged. His theory, in brief, was that mutations and variations in the human species as a result of Strontium 90 in the soil and the atmosphere were not only possible but must be expected at an accelerated rate. He failed to specify what forms these variations would take, and it is unfortunate that one of his speculations—that the

human race of the year three thousand would undoubtedly bear little resemblance in physical appearance to the race as we now know it—was quoted so extensively and sensationally. Overlooked was another insight of his, to wit: if variations could be expected in the human species, variations could also be expected among lower mammalians. Thus one can say that the entire direction of present day Neo-Simian research was laid out in advance by Dr. Crabwell.

The details of my visit to Dr. Sills have never been recorded in our Proceedings, and this, perhaps, is the proper moment to repair the oversight. The name of Dr. Sills has seldom appeared in references to the Simian Problem; yet, though not strictly speaking a geneticist, he must be considered a pioneer in our research. It may interest you to have a brief description of him, as he was in 1966. (His death occurred in 1969.) When I saw him he was on the staff of consulting surgeons at New York General Hospital, a specialist in the field of spinal correction. He was a small man, with sparse grey hair, and bright, lively, blue eyes. He smoked a pipe and, when I visited him at his home in Greenwich, Connecticut, was sixty six years of age. The date of our consultation was September 14, 1966.

"I understand," I began, "that Dr. Crabwell has sent you certain of his papers."

"Correct," he said. "I have been in correspondence with Crabwell for the past year and a half, and have furnished him information he has asked for."

"May I ask what form this information takes?"

"Only if we are speaking in complete confidence."

"We are," I replied.

"In that case, I'll not only be glad but relieved to tell you. Dr. Crabwell asked for any information I possessed on unusual deformities in the newborn, and in children under the age of nine. He had made this same request of other surgeons, particularly those concerned with orthopedics and the spine, but had had remarkably little response."

"Can you be more specific?" I asked.

"I take it you wonder if we have been encountering anything unusual in our hospitals?"

"Exactly," I said.

Dr. Sills hesitated, relit his pipe, and went to his desk, where he rummaged through some papers until he found the sheaf he wanted. "I've been keeping a young fellow at the hospital busy for the past months working with our electronic calculator," he said. "I provide him with sets of figures, unindentified, and ask him for probabilities: the year 1980, the year 2000, and so on. When I

look at this processed data in my hand I sometimes feel I might be losing my mind. Do you know, Crindall, that in the past week alone at New York General seventeen children were born with some type of caudal appendage? What do you do with a fact like that?"

"Before you go any further," I said, "let me tell you of my work, and that of my assistant, on double suicide rates." I also told him of the recent case of my niece.

"I haven't been aware of the double suicide angle," he said, thoughtfully. "We are very careful to protect the parents at New York General, tell them neither of the operation nor the results. Our policy is secrecy, but naturally we can't control individual doctors and nurses. We intend to keep the matter secret until we have more than limited success with our operations."

"Limited success?"

"We have a closely guarded room at New York General with six babies, ages one day to three weeks, who have survived operations. The parents have been told the children are critical and are in a incubator."

"Any other characteristics beside the cauda?" I asked.

"Hirsute bodies, elongated arms, shortened limbs, highly flexible spines, beetling brows in most cases. Damn it, Crindall, there are two and three year old children tottering around today who will develop fantastic climbing ability, even without the use of their rudimentary tails."

"You mean you have examined children with appendages?"

"Unmistakable," Dr. Sills answered. "No need to tell *you* what this does to the parents."

"What do your calculations show?"

"Within ten years—it's an absolutely amazing figure, and I hope to God the damnable machine has gone haywire—roughly two out of five children will be born with tails of an anthropoid type. Even now we have a moral problem with those little hairy creatures in the hospital we've managed to keep alive. The cranial capacity, you see."

"What about it?"

"Somewhere between man and anthropoid, almost the missing link. I would say that these children will develop mentally about to the level of three years old."

"Do your figures show the rate for fifty years from now?"

Dr. Sills tapped his pipe on his desk for emphasis. "Every child born, according to that machine's calculations, will have a tail, fully developed and highly useful in the majority of cases. My assistant is working now on the figures relating to cranial capacity and mental development, and thank God he doesn't know what he's working on. You can make your

own guess. I've made mine. Naturally I plan to have all the figures closely rechecked at M.I.T. before I make contact with government authorities."

I left Dr. Sills after we had spent several hours in further speculation, and we maintained a liaison until his death. As it happened it was Casper Smith who on his own, and with neither my participation nor approval (I must frankly say this) contacted the General Surgeon of the United States, and who then allowed himself to be interviewed by a Washington political columnist, with what world-wide reverberations we now all know about. The brave work of Dr. Sills has largely gone unrecognized, as a result, and at this point I would like to ask for a moment of silence in his memory.

(Editor's note: A minute of silence ensued at the meeting, after which Dr. Crindall resumed his remarks.)

Thank you, gentlemen.

Time forbids the listing of the varied contributions made by many distinguished members of this society since we literally stumbled on the Simian Problem. Nevertheless, I feel I must briefly remind you of Dr. Harvey Goldblatt's work on psychological factors of adjustment for parents of Neo-Simian offspring, and how richly he deserves the awarding of last year's Nobel Prize for science. Dr. Harrison's work, "Rearing the Neo-Simian," has been justly acclaimed by press, public, and medical authorities. Morton Gehman's "The Simian Problem in the Soviet Union" has lighted up that little-known area, and has led directly to the admission by Premier Gromyko that the problem exists in equal measure in his country. Richard Felker's lecture series at Harvard: "Can Reverse Evolution be Reversed?" has resulted in a grant by the General Motors Foundation for a large-scale crash program on the anti-Strontium frontier.

We must commend the government, led by the President's Commission, for its far-sighted construction programs, particularly for the Forest Play Areas recommended by the Secretary of the Interior. This year, for the first time, we can point to a plateau, instead of a rising incidence, on the curve of suicide rates, both single and double. While child homicide is, unfortunately, still on the increase, the work of the United Campaign for Simian Tolerance can be expected to bring results in the near future.

And what about that future? I know that this solemn question accounts for the large attendance at these meetings, and we must ask ourselves: is it our function to make assumptions until all the returns are in from those dark areas of uncompleted research?

Facts can be faced, but assumptions can be highly dangerous. This much I can say: it is definitely not the position of the Society of American Geneticists that the human race will descend a notch on the evolutionary ladder during our lifetimes or those of the next generation, despite the gloomy predictions of certain scientists. We believe that the descent of man can be checked. There is, first of all, much hope in anti-Strontium research. The ingenuity that created thermonuclear explosions can be applied in the opposite direction.

I, for one, believe in the possibility of anti-Strontium, regardless of whether or not a significant breakthrough has as yet occurred. Training of our anthropoidal children has developed to the point where it may be confidently assumed that they can handle the responsibilities of a six-year-old age level. Having gone this far, there is no reason why we cannot go farther. It hardly needs saying how urgently required are training centers for these children, and for the immense numbers yet to be born until sterilization procedures are stabilized. The bill pending in Congress for the construction and development of these training centers should be passed without further delay. Only forthright action can prevent time running out on us.

There is another encouraging development. As you know, our Society has sponsored an expedition, the most completely staffed and equipped ever to be organized, to investigate possibilities in animal mutation. The areas south of the Sahara, in the jungle regions closest to the site of the French thermonuclear explosions of 1967 (the so-called "dirty year"), have been under close surveillance for the past two years. Colonies of apes, chimpanzees, gorillas, and gibbons have been formed and ceaselessly observed. I can make public a hitherto secret staff report: recent offspring in one of our gorilla colonies have shown the following characteristics:

Reduction of hirsute areas, less flexible spines, higher brows, a slight enlargement of cranial capacity and . . .

Gentlemen, *gentlemen*. . . .

(Editor's note: *Dr. Crindall was forced to break off his remarks at this moment, due to an interruption and hubbub caused by reporters leaving their seats and rushing to the doors. Order was not restored, and the Convocation was therefore adjourned for the day.*)