

13 carbons.
Double bond

Albert Schweitzer, Physician and Humanitarian

By Frank Catchpool* and Linus Pauling**

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** Linus Pauling was associated with Albert Schweitzer for several years in the effort to stop the testing of nuclear weapons and to prevent war. In 1959 he spent two weeks with Schweitzer in Lambaréné. After more than forty years as a member of the staff of the California Institute of Technology he assumed his present

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Of the thousands of millions of human beings who have lived during the first half of the Twentieth Century, we may expect that the memory of only a few will be preserved in history - of Einstein, whose new ways of looking at the world brought about a

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revolution in scientific
thinking; of Bertrand
Russell, who by application
of his incisive intellect
brought clarification to
mathematics, philosophy,
and politics; and, with
little doubt, of Albert
Schweitzer, who will be
remembered as an
outstanding musician
and musicologist,

philosopher and moralist,
physician and humani-
tarian, and leader of
and active participant
in the effort to save
civilization from
destruction in a nuclear
war.

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Schweitzer's humanitarian work is symbolized by the hospital in Lambaréné, the product of fifty years of sweat in the torrid waterlogged equatorial West African jungle, fifty years of frustration, fifty years of heartbreak as the unending stream of suffering humanity washed up ~~to~~ the doors of the

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hospital like the tides on
the shores. No case was
ever refused, no sufferer
was ever turned away, ~~and~~
and no payments or
thanks were ever sought
except, when feasible, a
token gift or donation of
labor to the chores of
the hospital.

In his book "Out of My Life and Thought" Schweitzer recalls that when he announced his intention to leave for Africa his friends, colleagues, and relatives "expostulated with him on the folly of his enterprise". For one who had so much to give, and who was then at the pinnacle of three careers, this epic gesture must have seemed like an act of renunciation that could only be described as foolhardy and absurd.

By the time that he was thirty years old Schweitzer had earned three separate doctorates. Among his many published ^{books} ~~works~~ in the fields of theology, philosophy, and musicology ^{there were several} ~~were~~ important definitive works, such as "The Mystery of the Kingdom of God" and "The Quest of the Historical Jesus", "The Philosophy of the Religion of Kant", and "J. S. Bach, the Musician-poet", that will remain as literary landmarks in the history of

these subjects. As a scholar, lecturer, and organist he was acclaimed and honored throughout Europe, and ~~the world was at his feet~~ ^{a career leading to worldwide fame seemed} ~~in the~~ ^{to be assured to him.} Then, ^{at the height} ~~in the~~ ^(vigorous) ~~midst~~ of his ~~career~~ ^{and} as writer, concert organist, university lecturer, he took up the study of medicine.

His energy was enormous. Whilst studying medicine at the University at Strassbourg, a grinding ¹ ~~six~~ year course, he managed to continue as

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"Maitre de conferences" of the Theological faculty and as vicar of St. Nicolas cathedral. During this period he also published a six volume work on Bach and a classic book on the ^{of} Mysticism of Paul the Apostle. He ^{later said} ~~was~~ that he sometimes went to his organ studies in the morning without having been to bed at all.

Why ~~that~~ did he renounce all this to go to Lambaréné as a doctor? Why did he ^{go} not as an evangelical missionary? He ^{chose to go as a doctor,} ~~went~~ he said, because he was tired

of talk and wanted action. He ~~was~~ chose Africa because of early conversations ^{about}

^{Africa} with his father and because as a child he had been deeply impressed by a

statue by Bartholdi of a Negro in chains that stood in the market place in

Colmar. Europe at this time was just beginning to hear of the atrocities

being committed by white men in Africa, ^{about} the baskets of human hands collected

by Leopold's agents in the Congo, ^{about} the appalling suffering and wastage of

life that had been inflicted by the slave traders, who counted themselves

lucky if 20% ^{percent} of their catch was brought alive to the coast, who allotted ^{to each}

^{slave only} four cubic feet of cargo space in the holds of the slave ships, ^{and who} expected

a 40% ^{percent} spoilage rate during the Atlantic crossing, ^{and about} the plantation managers

who were thought to be not making adequate use of their investment if the

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slaves survived more than three years. The European conscience was stirring, the time for words was past. Medicine had ~~turned the corner so~~ *made such progress that* that doctors could honestly say they were doing more good than harm. The hideous tropical afflictions were being catalogued and effective chemotherapy was being ~~developed~~ *developed.*

Schweitzer chose Lambaréné because it was one of the most inaccessible areas of the world, an area heavily infected with sleeping sickness, elephantiasis, malaria, schistosomiasis, Framboesia, leprosy, and many other ~~parasitic infestations, an area without any doctor at all~~ *terrible diseases, a large area without a single doctor.*

Schweitzer had to promise the Paris missionary society that in Africa he would remain "as silent as a carp" on theological matters. His ^{religious} thinking was held by many to be dangerously heterodox. His doctoral thesis in medicine had been a critical evaluation of psychiatric studies of Jesus. And since childhood he had been in the habit of asking rational questions such as "if the wise men brought such precious gifts, why were the parents of Jesus always so poor?".

In 1913, before leaving for Africa, Schweitzer had said to friends that he credited himself with health, sound nerves, energy, practical common sense, toughness, and prudence, and that he believed himself to be

quite capable of enduring the eventual failure of his plan. These qualities

were soon tested. Arriving at Lambaréné in 1913, he set up his first

consulting room in an empty chicken hut in the grounds of the Protestant

mission, ^{then} but in 1914 the war started, and Schweitzer was promptly placed under

house arrest by the French as an enemy alien, ^{He could only} and ~~had to~~ watch as all his supplies

and equipment so carefully purchased with his life's earnings and the gifts

of his skeptical friends were looted by those who ^{he} had come to help. Later

on, as the war became more bitter, he was transported back to France and

interned in a concentration camp, where he became sick for the first time in

his life.

In 1925 he returned to Africa with supplies to build a new and better

hospital, purchased with the royalties of six more books and the honorariums

of many lectures and concerts. Working to an undrawn masterplan, he built

the hospital that stands today. ~~(Insert in to n page 4)~~

By the mid 1930's it was probably the most modern bush hospital in all Africa. It stands today, just after Schweitzer's death, still pulsing with activity, a total of 56 galvanized iron-roofed sheds, many already ^{musty} musty with age, a monument to Schweitzer's incredible energy and ingenuity.

Schweitzer, the intellectual, pushed back the forest, planted the fruit trees, dug the well. (He told ~~us~~ ^{one of us} how after a certain depth had been reached, the walls were in danger of collapsing; ~~he~~ he ordered his men out and finished the well himself.) Schweitzer, the intellectual, taught the convalescent patients how to make string from cactus leaves and how to forge nails from old scrap iron, for in the jungle everything ~~is~~ ^{is} suddenly ~~becomes~~ precious. It was a prodigious effort to supervise the sawing of lumber from the huge ironwood logs, the mixing of concrete with ~~stones~~ ^{hand-} broken stones, ~~broken by hand~~. His vegetable gardens were a source of amazement to the old African hands. Boats incongruously resembling Rhine River ~~boats~~ ^{boats} punts ~~were~~ ^{under his supervision; they} built ~~with his own hands~~ ^{with his own hands} ~~and paddled by ropes~~ ^{and still ply} the Ogoe today.

The trickle of patients soon grew to a steady stream, and Schweitzer, the mason and carpenter, labored ^{also} as Surgeon and Dentist, as Obstetrician and Pharmacist, compounding his own drugs and teaching the patients how to knit bandages. In "The Edge of the Primeval Forest" Schweitzer recorded how glass containers in which to dispense medicines became infinitely valuable. ^{Did not later} ~~Readers~~ ^{were} of the book ~~are~~ still moved to send him crates of old medicine bottles. Schweitzer would solemnly pay duty on the incoming parcels of

bottles, write in long hand a sincere letter of thanks, and then dump
 the bottles in the river, since ~~nowadays~~ ^{by that time} medicines ~~were~~ ^{were arriving} already mixed
 in individual bottles.

In later years, as the hospital grew and more doctors and nurses came
 to assist him, Schweitzer would survey the teaming pharmacy, and say
 "Ach, wie ~~forchbar~~ ^{lurchtlos} gross ~~war~~ ^{ist} ~~meiner~~ ^{meiner} ~~Spital~~ ^{Spital} ~~ist~~ ^{geworden!} ~~geworden~~", and turn with renewed
 energy to build more accommodations for the patients and staff. Schweitzer
 always managed to keep his eye on the main objective - to treat suffering
 Africans. The treatment remained the first priority; no one should be
 turned away. Even ~~if a patient were~~ ^{in a visitor to the hospital,} in his normal state of health, several
 parasitic diseases could be found and treated. No payment was asked other
 than a "coup de main" from those fit enough to work, and a token gift to
 the hospital. The tasks were tailored to suit the Africans' ability. The
 wives of the operated man were requested to help scrub the operating room
 floor. Other ~~patients~~ ^{members of the family} would haul water for the vegetable garden. Squads
 of the patient's relatives would be put to the endless task of keeping the
 jungle at bay. Others would help with the construction of new buildings.
 The effort required to organize and direct these work teams, often recruited

amongst Africans whose physical and mental powers and will to work had been eroded by years of malnutrition, anaemia, and repeated fevers, absorbed a large amount of Schweitzer^{is} and his assistants' energy. The exhortations to accomplish the task at hand often led casual observers and transitory visitors to the ~~impression~~^{impression} that Schweitzer was autocratic in his manner and dictatorial in his administration of the hospital.

There are many strange customs unique to his hospital, and it is sometimes difficult to understand Schweitzer's fundamental logic behind

each custom. For instance, after having been caught short of supplies in two world wars, Schweitzer decided to build and stock many storerooms, in order to be prepared for emergencies. After he had learned that the label on a bottle of medicine might well fall off because of the humidity or become illegible after attack by termites, he ordered that every bottle should be carefully

labelled on both sides and also on the bottom - an unidentified bottle of medicine is dangerous.

The criticism has often been voiced that Schweitzer did not move with the times. Visitors to the hospital ~~in recent years were astonished~~ ^{in recent years were astonished} that Schweitzer had no power boat to move supplies and visitors to the hospital.

In the early days of the hospital there were one or two passenger boats a year reaching the west coast of equatorial Africa; ~~then came~~ ^{then came} ~~known~~ a dangerous two- or three-day motor-boat trip up the Ogo~~we~~ ^{we} river ^{to Lambarene.} Now one can reach an airfield near the hospital by airplane. From the dirt runway hewn out of the jungle there is a short ride by truck, if it is running, to the south bank of the southern fork of the river.

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Visitors to the hospital find the hospital canoe waiting for them at the river's edge. This venerable craft, ~~built to Schweitzer's own specifications~~

~~on the hospital premises by carpenters assigned by~~ has outlasted a dozen motor boats, and its motor has never failed. It is powered by four or five lepers from the leper village. These men, long-time residents of the hospital, have feet so eroded by repeated injuries and infections resulting from their disease that they are barely able to walk. The

padding of the canoe provides them with the ideal ~~sheltered~~ occupation. ^{They are} ~~pleased~~ ^{and} the fresh air, the trip downstream is really no effort at all; the trip back gives them three-quarters of an hour of good, solid exercise.

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The long wait at the river's bank keeps them off their feet. For this wait they are provided with a hut, treated with medicines, fed, and clothed. Schweitzer has been criticized for not modernizing his transportation. However, if one looks in the shed just below the pharmacy, one will find the remains of two eight-passenger river boats, each fitted with an antique one-cylinder engine. These boats were a gift to the hospital from a group of Swedish admirers in the 1920's. In fact, the hospital was motorized at a time when there were few motor boats in Africa. Unfortunately, the hulls were made of good Scandinavian pine wood, which has a very short life in the tropics.

It has been said that Schweitzer denied his patients modern drugs and treatment and that the standards of hygiene ^{and} were bound to prejudice

the patients' recovery. However, it should be remembered that

primarily
the determining factor in ~~any~~ a

surgical operation is the skill of the surgeon rather than the complexity of the instruments. Sterility depends on the care with which the instruments and the linen are sterilized rather than on their color and polish. At Schweitzer's hospital the preparation of patients for operation and the sterilization of linen and instruments ^{were} ~~are~~ conducted in an elaborate ritual carefully worked out thirty years ago, and modified only as proved innovations ^{were} ~~are~~ introduced into practice. Africa is no place for experimentation, because the press of routine, life-preserving surgery ~~makes~~ it seem almost criminal to waste time on unproved techniques. New techniques

cannot easily be evaluated in Africa because of the multiplicity of diseases and the uncertainty of environmental factors.

...ence, goats, and children, and to be fed with food cooked in the traditional manner by their own women folk, with the cooking pots balanced on three large stones and heated by a handful of burning sticks.

It has often been asked why Schweitzer ~~does~~^{did} not train Africans to staff his hospital and other hospitals. One answer may be that he came to wash their feet and to bind up their wounds himself, and not to train others to do the task that he had taken up in the name of all white men; but there is also the suggestion in some of his writings that he ~~was~~ doubted that the Africans had reached the stage in their development when this training would be successful.

As one scrolls through the hospital one is buffeted by conflicting impressions - repelled by the hideous afflictions of some of the patients, but cheered by the sound of laughter, since the hospital is surely one of the happiest of hospitals; appalled by the squalor and filth, then comforted by the thought that the hospital dormitories closely approximate an average African's village; shocked by the meager rations, but chastened by remembering that few "civilized" hospitals provide free food.

Schweitzer ~~has written~~^{wrote} that "A single doctor in Africa, even with the most modest equipment, can mean very much for very many. The good which he can accomplish surpasses a hundredfold what he gives of his own life and the cost of the material support that he must have. With a few simple drugs, and sufficient skill and apparatus for the most necessary operations, he can, in a single year, free hundreds of men from the grip of suffering and death." If this be true, can a doctor justify taking time out from the

struggle with suffering and death to labor with an air-conditioning plant for his operating room? Can he divert funds from the purchase of life-saving drugs to purchase the comforts of civilization for himself or his patients? Today in other parts of Africa there can be found several white-elephant hospitals, beautiful to look at, but understaffed and underprovided with drugs because the cost of building has been so great that there was nothing left over.

On one notable occasion, in April 1957, Schweitzer did take time off from his medical and administrative duties in the hospital. For many years he had become increasingly concerned about the nuclear arms race and concerned about the havoc being wrought on the genetic material of all life. He was concerned that this beautiful world, with all its myriad forms of life, was being slowly and permanently altered. Mutations of genes were taking place at a rate considerably higher than before the advent of man-made ionizing radiations. Recognizing that there was a real risk that the unrestrained arms race would degenerate into a cataclysmic holocaust that could terminate all life on earth, he determined to use the voice given him by the award of the Nobel Peace Prize to speak loudly and clearly to all who would listen.

In order that he could not be accused of speaking like a dotard, he set himself to understanding the mechanism of creation of radioactive elements in a nuclear explosion, the injection of the radioactive dust created in atomic explosions into the upper atmosphere, the patterns of fallout of this radioactive dust, the routes of assimilation of radioactive isotopes into living tissue, the modes of genetic and somatic damage by high-energy radiation, and the half-lives of the radioactive

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elements. He also set himself to studying the available information about the probable effects of the explosion of megaton bombs in heavily populated areas in a nuclear war, studies which only a few military men had bothered to make.

On 24 April 1957 Schweitzer dramatically added his name to the growing list of those world leaders who had publicly taken a position against the continued testing of nuclear weapons. From Radio Oslo in Norway there was issued, and rebroadcast ^{all over the world,} ~~by all countries except the United States of America and Great Britain,~~ his now famous statement "Peace or Atomic War." This statement, reviewing the discovery of radioactivity and X-rays at the end of the 19th century and the realization that these rays can damage living tissue, echoed President Eisenhower's call for a "gigantic leap into peace rather than a leap into space," and called for an end to atomic testing on the grounds that "We of this generation cannot take responsibility for the consequences of a raised background level of radioactivity on the generations to come." "We must muster the insight, the seriousness, and the courage to leave folly and face reality," he said; "The end of further experiments with atomic bombs would be like the early sun rays of hope which suffering humanity is longing for!"

^{Two years ago,} ~~last year,~~ after six years of uncertainty and after a period of renewed nuclear testing and further contamination of the atmosphere with radioactive fission products and carbon 14, the bomb-test treaty advocated by Schweitzer was formulated and then subscribed to by most of the nations of the world. This act has led to reduction of tensions and to an increased

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hope for the abolition of war and its replacement by world law. The award of the Nobel Peace Prize for 1952 to Albert Schweitzer was presumably made on the basis of the reference of Nobel's will to work for fraternity among nations; Schweitzer's labors since 1952 provide the additional justification of effective work toward the abolition of standing armies.

One of Schweitzer's last acts

~~was~~

~~During his last year~~ ^{one month before his death,}

One of his last acts was to join seven other recipients of the Nobel Peace Prize in issuing an appeal to all the governments and parties concerned in the war in Vietnam to take immediate action to achieve a cease-fire and a negotiated settlement of the tragic conflict. Albert Schweitzer's

work for world peace may well
be considered by ~~coming~~
by future generations to
have been his greatest
contribution to humanity.