

A SADHU'S ATTAINMENT

SAGA OF GHESSAR; KHAN

THE MESSAGE

—Three masterly paintings by SVETOSLAV ROERICH

HIMALAYAS: THE GREAT TEMPLE OF NATURE

Mr. Svetoslav Roerich, author of the following article on the beauty of the Himalayan range, is the son of that great Russian artist, Nicholas Roerich. As great a painter as his father, his portraits have won for him international fame. The writer is the director of International Art Centre of New York and is also closely connected with many cultural and scientific institutions of Europe and America. Mr. Svetoslav Roerich, it may be recalled, recently married Devika Rani, hailed as First Lady of the Indian Screen.

FOR over fifteen years I have intimately known the Himalayas, the Mighty Ranges of the West as well as the Towering peaks of the East. My first impressions and visions called forth by their unparalleled beauty and grandeur have only become more vivid, as the years have gone by, and their message has become even more eloquent. Gradually their outward form and inner meaning have assumed a new significance, blended into one and transmuted by the very power residing in the multiple concepts for which the Himalayas stand. This Great Temple of Nature is reserved for true seekers after truth in all its forms. From time immemorial the best aspirations of mankind, the loftiest concepts and legends have been woven about the Himalayas.

Shrines & Caves

Throughout the world, whenever the word Himalayas is pronounced, people become attentive, and a special eagerness and expectation light up their countenance. It is not only the concept of tremendous heights, the call of unconquered Peaks, uncharted glaciers and valleys, or the unbelievable richness of vegetation and animal kingdom: there is something else besides these outward attractions; there is a greater and deeper significance the word Himalayas

conveys to the listener, as if an unseen spiritual influence lives in this very word, a special magnet which made the Himalayas the greater centre of spiritual pilgrimage. Innumerable are the shrines and caves dotting the valleys and slopes of the Himavat. Every one knows Kailas, Mansarovar, Badrinath, Kedarnath, Ravalsar, Triloknath, the caves of Arjuna and Milarepa-these centres of spiritual search and aspiration. But how many are the shrines unknown, reserved for the true seekers after truth, either on this or the other side of the Range!

Holy Quest

The great Rishis directed their sly quest towards the Himalayas. ighty teachings and doctrines ere born under the lowering maks. Is it not strange that roughout the world, the great achers of all races or faiths have ways gone to the heights to ceive some of their greatest

SVETOSLAV ROERICH

revelations? Does height, does eternal snow, the rarified atmosphere contribute towards greater lucidity, or is it in order to rise above the sphere of turmoil of life?

Those of you who have climbed great heights—you will know how active your mind becomes, how light and even unnecessary becomes sleep. Are these some of the qualities that attracted the great searches after truth from times immemorial?

Pure thoughts are born in pure places, in places unsullied by the lower selfish passions generated in the struggle for existence and self-gratification.

Best Abode

The Caravan is nearing the highest point of the pass. The men dismount and gather bright little primulas; reverently the y place these offerings on the nearby rocks, "to the Devas, who live on those Peaks." Truly this is the

perhaps, could contact these spiritual influences; they most probably could or else they would not turn towards these mighty peaks. These great souls, these brilliant minds, who have given us the loftiest philosophies, systems and concepts, could they make a mistake in choosing their abode? Could they ever be justly suspected of not knowing what place was best for the generation of transcendental thought?

The Great Sages and Rishis,

What They Achieved-

These great philosophers proclaimed the mysteries of Nature long before Science was able to demonstrate them: the atomic theory, the theory of relativity and vibration—the maya and tattvams; they proclaimed telepathy long before the human brain was found to emit waves.

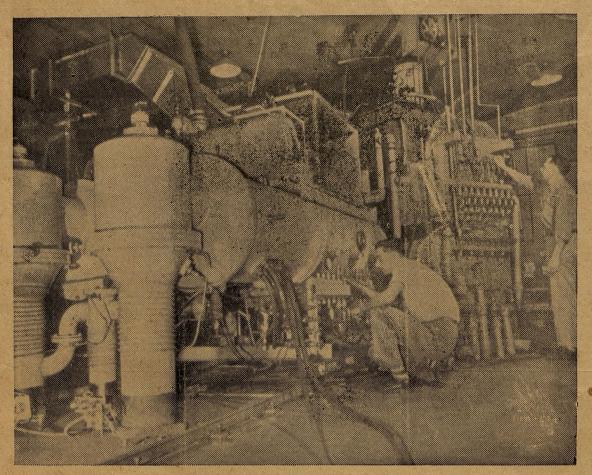
The Conscious-awakened mind must and can attune itself to the influence of the cosmos and can read the Book of life. It is part of Life itself, this individual focus of conscious existence; hence partaking of all its influences. And if it is endowed with the faculty of self-realisation and cognition with individual consciousness-truly there can be no limits to what human mind can achieve and know. Some of these marvellous mysteries of the Sab Conscious we see in certain prodigies and in the realm of hypnotism.

The pilgrims gather at a wayside shrine: "Have you ever heard of the Shining Ones, the snow men, and those who live beyond the Eternal snows?"

sentiment unconsciously expressed by every one when the word "Himalayas" is pronounced,—the abode of the Devas.



GRANDMOTHER and her grand-daughter—Types found in Lahul, the Himalayas.



ALLIED TO ATOM BOMB: This picture shows the cyclotron, a complicated apparatus for physical research, which looks more like a big industrial machine. Here a technician (kneeling) and an assistant make the final adjustments of the cyclotron before exposing the red phospohorus paste to deuteron rays to make it radioactive. The cyclotron was built in an underground room to protect passers-by from being inadvertently exposed to the harmful radiation

in 140 of ordinary uranium is U-235. Most of the rest is another isotope, U-238—which, instead of splitting like U-235, absorbs the new-born neutrons with the result that the atomic flame goes out like a match in wet excelsior.

Obviously, the remedy was to separate the active U-235 from natural uranium, getting rid of the U-238. It was simple in principle, like drying the water content out a sodden fuel. But the physicists shuddered when they finished their calculations. No chain reaction they found, could take place in a small bit 1 of U-235, but a large enough chunk would surely explode.

The problem, once they had the big chunk, might be to keep it from exploding whenever it was struck by any wandering neutron. The explosion, they calculated, would certainly be more violent than anything yet seen on earth.

Two New Elements

There was one more possibility. When natural uranium (one part U-235, 140 parts U-238) is bombarded with slow neutrons, more happens than the cracking of the U-235 particles. Some of the neutrons produced by these fissions are absorbed by the more phlegmatic U-238. This forms a new, unstable element, neptunium, which soon turns into plutonium.

Plutonium is a fairly stable element. Like the rare U-235, it is also "fissionable" it can be made to explode in a violent chain reaction. Furthermore, it is not an isotope of uranium, but an entirely different chemical element. Therefore it can be separated from uranium comparatively easily by chemical means while U-235 clings to U-238 with tenacious obstinacy.

The atomic reaction producing plutonium did not take place in nature as a chain reaction. Many of the neutrons form the splitting U-235 flashed right out of the material. Others were wasted on impurities. Only a very few changed U-238 into plutonium.

The scientists went to work to

change that. One measure: increasing the size of the active material to keep the neutrons from escaping so soon. Another: eliminating impurities. Another: slowing down the neutrons to keep them near the uranium until they could be absorbed.

This last could be done by imbedding small bits of uranium in a "moderator"—a substance which would slow the speed of the neutrons but not absorb them. The Germans may have tried heavy water for this job. The Manhattan District men decided on graphite which was easier to get. If they could produce plutonium at an orderly controlled rate, they would have a charge for the bomb that would change the world.

No Pilot Plants

So far nearly all the work had been on the level of theory. No chain reaction had been achieved; no appreciable quantity of U-235 had been isolated; no plutonium

had been produced. But on June 17, 1942, the various committees concerned sent their report to the President: let's make plutonium as well as U-235.

Full-scale plants, the committees urged, should be built at once. It was not known which processes were the best, so all the more promising ones should be started immediately. There was no time for failures, or even for pilot plants. The Nazis might be ahead in the race for Doomsday.

The President agreed, made money available. Theory had felt out the road to the goal. Now production would bulldoze it wide.

Men and Mountains

Like an ever-growing snowball the Manhattan District rolled around the nation, picking up men (125,000), money (\$2,000,000,000), mountains of materials, trainloads of equipment. It enlisted famed corporations—Webster, Union Carbide and Carbon, and others.

Professors, including many Nobel Prize winners, deserted their campuses to live in dusty deserts. Workers trekked in their trailers—careful New England craftsmen, burly Southern Negroes all the races and types of the great U.S. In general terms they were told the shouting urgency of the mighty thing they were doing, but few of them knew its extraordinary character.

Under the cover name of "The Metallurgical Laboratory," some of the most important discoveries were made at the University of Chicago directed by famed Dr. Arthur Holly Compton. His leading associate: Italian born Dr. Enrico Fermi, whom many consider the world's foremost nuclear physicist. But they were also scores of other laboratories where the work went on: Columbia, University of California, Iowa State, industrial research centres.

Processes and Places

There were many possible ways of separating U-235 from natural uranium. Two processes at least were found to work well. In first (mass spectrograph), uranit particles were electrically charge fired through a huge electromagn it sent into a curving course. The lighter U-235 swung more wide y on the curve. Traps were set it the end of the turn, U-235 was caught there, while U-238 was discarded.

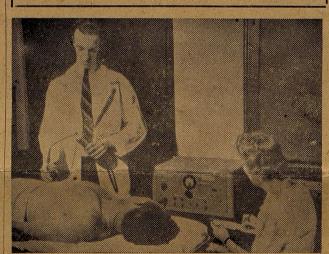
In the second, as incredibly delicate as the first, a gaseous uranium compound was pumped through the finest of sub-microscopic filters. The faintly more volatile U-235 passed through more easily. Result: a higher percentage of U-235 beyond the filters.

The experimental work of the electromagnetic method was done at the University of California under blond, boyish Dr. E. Lawrence; on diffusion, at Colbia under Dr. H. C. Urey. 1943, before the experiments were completed, vast plants to carry out both processes were being constructed at Oak Ridge, a sparsely inhabited region near Knoxville, Tennessee.

Into that brand-new city (called Dog-patch) flooded equipment: thousands of powerful, new-type pumps, gigantic electromagnets, innumerable other machines and instruments. Amid oceans of mud and battlefront confusion,

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THE HEALING ATOM



A DOCTOR of the Washington University Medical School uses a so-called Geiger counter to measure, from the outside and practically without touching the patient, the relative amount of radioactive phosphorus deposited in the patient's liver during the treatment for a disease of the bone marrow. Most of the phosphorus is deposited in the marrow but an accurate check is necessary to avoid its excess in other organs.



CLINICAL USE OF THE "ATOM SMASHER":
Here a physician of the Washington University
Medical School is shown administering puritied
redioactive sodium phosphate to a patient by an
intraveous injection. In this case, the salt is used
in the treatment of polycythemia, a disease of the
bone marrow characterized by an excess of cells,
particularly of red blood corpuscles.

Quietly flows the narrative, attentive are the faces. A new hope and understanding unite these accidental passing friends.

There is always some truth at the foundation of every legend, of

every apocryph.

The quest of the spirit-for ever it remains the supreme effort of mankind, the inborn aspiration to something beyond the apparent emptiness of everyday life. All great minds stopped to ponder over the mysteries of life and death, and they told us that this life here on earth, this short, evanescent existence is not a mere accident to come and to go snuffed out by death for some unknown purpose. This life is only the means for the spirit to gain experience and when the material existence has come to an end, the real man continues in a different state and sphere.

Could one logically accept or believe that the products of the human mind, systems, philosophies, reat works of art and all manifesations of human genius to survive or centuries and millenia, are the roducts of a finite mind, and the creator, the cause of all these manifestations, has disappeared and exists no more?

Chinese Record

Beyond all conflagrations and strife, beyond all destruction and violence stands the eternal con-

cept of spirit.

Mightily stand the Himalayas, their ramparts drawn towards Heaven. Along the winding valleys and gorges Guru Charaka gathered his precious, healing herbs. Hieun-Tsiang, that amazing Chinese traveller thirteen centuries ago, described the medicinal plants found on the Himalayas. The Pandavas came here to rest, wearied by the great struggle, and the Tibetan poet, Saint Milarepa, listened to the echoes of nature

and voices from beyond. What memories lie concealed in the mighty folds of these ranges! The great Gautama in search of the salvation of mankind, Rishi Vyas, Rishi Narada, Rishi Agastya, innumerable are the noble souls to find their best inspirations in the shadows of these lowering peaks and to carry them down again to struggling humanity caught in the coils of ignorance and selfishness. The great Pythagoras, Appolonius of Tiana, they have certainly contacted these illuminated men, when treading the soil of India in search of Wisdom.

The Lama says: "I must go, my teacher calls me His pilgrimage on Earth is coming to an end." "But where does he live, your

teacher?" He is now at Kailas and it will take me months to reach Him

"Homeward Bound" (left) "Snake Charmer" (below) are the titles of these two paintings by Svetoslav Roerich



Thus speaks a Lama Hermit, having heard the voice of his Guru a thousand miles away.

Mysteries still live along the slopes of the Himalayas. They are ever present for him, who searches for them with an open heart, not for the sake of curiosity or for derision.

New Meaning

Let us then look with an unprejudiced mind for the real understanding of life. We shall find it all around us, and it will regenerate our outlook and our habits. How wonderfully rich life becomes once we contact these eternal values! Everything assumes a different meaning and purpose! And it is precisely now in these days of Armageddon that we must think of these sublime Truths, Real and Eternal beyond every conflict and destruction.

Beyond the ravages of strife the Spirit of the Himalayas distils its influence throughout the world. We find it in the lofty philosophies, we find it in arts, in poetry, in music, in painting, sculpture and architecture.

The outline of the great temple of Kailas at Ellora, was designed after the holy summits of Kailas to inspire and remind those, who were far from the mighty Ranges, of those profiles and masses that meant so much to the builders.

How unforgettably beautiful are these majestic ranges!

of form and Through the Every variety colour is theirs. narrow, winding gorges, mighty rivers carry the message of the snows into the distant plains-the three sacred life-givers of toiling millions—the Ganges, the Brahma-putra and the Indus! Waterfalls break into a thousand rainbows and relentless glaciers rub against the crags and cliffs and carry them down to some gaping precipice. The ever present and all pervading presence of life scattering, pulversing rocks and growing glistening crystals. The Eternal Proteus Life in its infinite manfestations combining and recombining forms, dissolving them in order to bring them again into objectivity under a fresh impulse and in new combinations. One can truly say such riches of natural beauty as are found in the Himalayas are not to be seen anywhere here on this earth.

Gates to Heaven

Kanchenjunga, the guardian of the Five Treasures is like a priceless necklace of shimmering pinkish pearls floating above the hazy valleys and hills, the transcendental vision of another world of sublime beauty to draw our spirit upwards.

I always think of the words of a orld traveller, who said: "If world traveller, who said: the Grand Canyon of Arizona is the entrance to Hell, the Himalayas are the Gates to Heaven.

Himavat! thou birthplace of the greatest thought, the loftiest concepts hover over thy mighty peaks. Shambhala, the Holy Grail, the Heavenly Jerusalem, symbols of the interlinked aspirations and visions of so many different ages, the eager and earnest hope of weary mankind and the eternal affirmation of the great philosophies.

Himavat, the beautiful, Thou hast given us our greatest treasures and for ever, Thou shalt remain the Guardian of the Greatest Mystery—the Holy Marriage of Heaven and Earth!

O DROPS WILL BRING FRESH



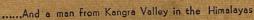
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