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No. 1

From Madagascar to Russia . . .

ENTER THE NEW YEAR!

IN SPAIN, young couples face each other at midnight, each holding 12 grapes. Everytime the clock strikes, each will eat a grape. As the last sound fades away, all the grapes must be swallowed to assure luck for the coming year.

* * *

New Year's in the Soviet Union is a gift-giving occasion similar to our Christmas. Russians will decorate fir trees and exchange gifts during New Year's Eve parties.



"Sternen singer" (star singing) is a feature of the New Year's Eve celebration in Oberammergau, Germany. Groups of children, carrying stars, go from door-to-door wishing villagers a happy new Year with carol singing.

* * *

Moroccan girls smear a date with water, saffron and pounded roses, wrap it in calico and solemnly throw it down a well. This represents the formal disposal of the old year.

* * *

In Madagascar and Burma, most people pour water on their heads as symbol of a clean start for the new year.

* * *

Farmers in parts of Wales and Western England follow a custom called "wassailing the trees" in which they sprinkle fruit trees with cider. This is supposed to make them more productive. Hungarian farmers have a similar custom, using sauce from the day's meal instead of cider.

* * *

In Great Britain, couples form circles, cross their arms over their chests and take hold of hands on either side of them. As midnight strikes, they sing "Auld Lang Syne," their hands moving quickly in a rippling motion. When the song ends, all rush to the circle's center shouting "happy new year!"

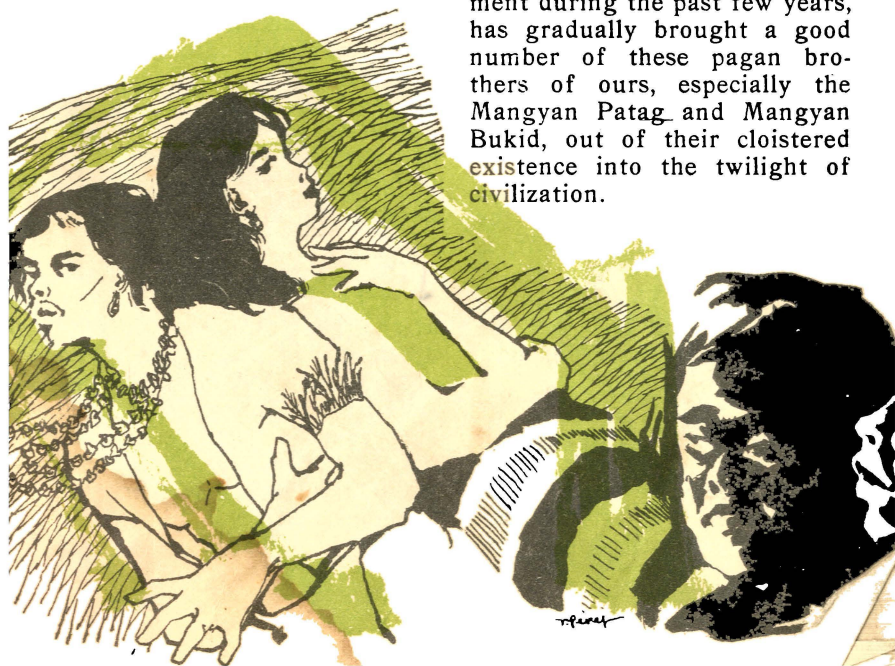
Courtship and Marriage Among the Mangyans

In a suggestive language

By Anacleto P. Yabyabin

IN the malaria-infested wilderness and mountain fastnesses of Mindoro, there exists a group of non-Christian Filipinos known as the Mangyans. History tells us that this tribe is a kindred of the Negritos found in the mountains of Zambales but with some peculiar dissimilarities in their physical features.

There was a time when the Mangyans were wild and very primitive—in fact some of them, especially those living in the hinterlands known as the Mangyan Bangon, are still in their savage state—but frequent contact with their civilized brothers, coupled with the aid extended by the government during the past few years, has gradually brought a good number of these pagan brothers of ours, especially the Mangyan Patag and Mangyan Bukid, out of their cloistered existence into the twilight of civilization.



Notwithstanding their low form of civilization, the Mangyans have a culture of their own. Their way of life is tempered by various tribal customs, mores and traditions handed down from one generation to another. To the civilized Filipino, these customs and traditions appear ridiculous, but we cannot gainsay the fact that a good number of these tribal practices have become part of our present culture.

Let us, for instance, consider courtship and marriage among them. A glance into this aspect of their life will reveal that present-day Filipinos have not advanced much ahead of their forbears. For, with but little variations, the courtship and marriage customs of the Mangyans are practiced today in many of our "so-called" civilized communities."

Courtship among the Mangyans is carried on by both sexes. The woman has as much right as the man to play the lover. What is significant is that wooing starts even at the age of puberty. This is undoubtedly due to the fact that the Mangyans mature earlier physically.

THE WAY the Mangyan girl courts is very simple. She does not call on the home of the boy of her dreams. Neither does she say the three little

words: "I love you." When a man catches her fancy — this usually happens during the hunting period or planting season when the whole tribe gather to work and hunt together with the aid of a friendly tribe— she approaches him and asks for **buyo** or betel nut.

The request is spoken in a suggestive language. Every man knows the meaning of this gesture, because it is not customary among unmarried Mangyan women to ask a young man for betel nut except to convey to him her love. The man replies "yes" or "no" by proffering or not proffering, as the case maybe, the **buyo** thus requested.

When the young woman's proposal is declined, she moves away, obviously disappointed and heart-broken; but when her proposal is accepted, she immediately goes home and tells her parents who, in turn, go to the home of the young man's parents to arrange the marriage.

The Mangyan swain, on the other hand, is a romantic character. He proposes to his dream-girl in love songs called **urukay** or **imbulong**. When seized by what may be termed as "romantic frenzy," he dons his best G-string or second-hand trappings that Christian Filipinos had given him in exchange for tobacco or bananas



and forest products or as payment for menial services.

He wears armlets of woven nito adorned with the plumes of wild chickens, and tucks in his headdress aromatic herbs and roots to serve as **pamanglo** perfume. In the presence of his dream-girl he walks in an affected manner, shaking his shoulders so that the plumes will undulate.

The **urukay** or **imbulong** is performed not less dramatically. As the young gallant nears the house of the girl, he covers himself with a shawl or blanket to conceal his identity. At the doorstep he sings a serenade, changing the tone of his voice, also to avoid recognition. When he is welcomed by the girl or her parents, he goes into the

house, uncovers himself, and lies with the girl in a back to back position on a mat of reed spread in the center of the room.

Presently he sings again, this time profusely pouring out all the love locked in his pagan heart, while the parents of the girl keep watch in a corner of the house. A false move on the part of the man is a signature to his death warrant. The girl responds in songs, too.

One significant incident may take place before the Mangyan swain is allowed to enter the girl's home. As he sings the preliminary part of his **urukay**, the lass confronts him with riddles expressed in songs. This is called the **Ambahan**, which is similar to the **balitaw**

of the Visayans and the **Sabalan** of the southern Tagalogs.

In the **ambahan**, the Mangyan girl stands at the doorstep and, by songs and gestures, propounds questions to the young man. The man must answer the interrogations or riddles before he can gain entrance. If not, he remains out in the cold, unless the girl takes pity on him and bids him in. Thereupon, the **imbulong** is resumed in the manner already described.

IT WILL BE noted that the **urukay** or **imbulong** is not just a serenade or a gesture of love-making. It is in itself a marriage proposal. Once the man's suit is accepted, his parents are called upon either to arrange the period for the young man has to render service to the young women's parents or to set the date of the marriage.

The service usually consists in working in the **kaingin** or helping the parents to hunt wild games or doing manual labor. This is similar to the **pag-sisilbi** among the Tagalogs.

The marriage ceremony is usually held on any day during the waxing of the moon, but never when it is on the wane. It is invariably held in the home of the girl. The chief of the tribe called **tanungan** performs the marital rites. The kith and kin of both the bride

and the groom, and the whole tribe itself are around during the exchanging of vows. It is a tribal festivity filled with jungle pomp and splendor, noise and recklessness.

The marriage ceremony is begun with a two-way procession. Two groups of participants are formed, one consisting of all relatives of the groom, with the bride as the central figure and the other composed of the relatives of the bride headed by the bride's parents and the young benedict.

The procession starts from the home of the bride's parents, one group going north and another taking the opposite direction.

The purpose of the procession is to determine whether the day is appropriate for the wedding. During the processional march, the parents look for signs during their trek into the forest. If the parties encounter signs of bad luck, such as dead animals or fowls or if they meet accidents on the way, the wedding is postponed for the next day; the postponement goes on and on, until the bad spell is broken.

When the parties see signs of good fortune such as ripe fruits, wild games or honey-laden beehives, they return, immediately, happy and triumphant, and the wedding rites is performed without delay.

THE **tanungan** officiates in the whole affair, assisted by other old men of the tribe. The bride, stunning in her best **tapis** or **patadyong** and decked all over with strings of beads and trinkets, and the groom, in his Sunday G-strings, **palawi** and all, stand side by side on a mat spread in the middle of the only room of the house with their relatives gathered around.

A prayer or **daniw**, is said by all.

Thereafter, the **tanungan** places a piece of iron on the heads of the principals; and a solemn voice shouts a prayer, invoking the help of Apo Iraya the Supreme Being, to bless the newly-weds, and beseeching that they be granted long life and prosperity during their marital life.—the Southern Star.

* * *

Man of the Year

NIKITA S. KHRUSHCHEV, *the now grim, now amiable, now reckless peasant who appears to have carved his way to the top spot in the Communist world, has claimed another distinction.*

He is the first leader of an Iron Curtain country to be named Man of the Year in the annual Associated Press poll of newspapers, radio and television editors.

The editors, reflecting the concern of the West over Khrushchev's rise to power, gave the burly, balding Kremlin leader nearly four times as many votes as his nearest rival, President Eisenhower.

Eisenhower was the winner in four of the last five years.

The Russian party boss attained preeminence in the Red world by apparently winning the long post-Stalin intraparty struggle for Russian power.

*

**Beginning a series
on Philippine folk
epics . . .**

By RONY V. DIAZ

THE OLDEST and best-known Filipino literary work is the Ilocano epic poem, **Biag ni Lam-ang** or The Life of Lam-ang. The authorship of this poem is obscure although some scholars have more or less agreed to attribute it to Pedro Bukaneg, an Ilocano epic poet, who, like Homer, was blind.

Bukaneg's life story began in 1592. He was a foundling who was rescued by a housewife from a small basket that she found floating among the reeds near the riverbank. She took pity on the ugly child and carried it to the convent at Bantay where an Agustinian monk, Fr. Geronimo Cavero, agreed to look after the baby. He was baptized Pedro Bukaneg, the surname being a contraction of **nabukaan na Itneg**, which means a Christianized pagan.

Bukaneg became a famous Catholic evangelist. He preached the gospel in Spanish, Ilocano and Tinguian. His work was so influential that his

name reached the ears of both Philip II and the Pope.

Bukaneg was then summoned by the Agustinian fathers in Manila to help compile and write the lexicon and grammar of the Ilocano language. Bukaneg wrote a number of poems, sermons and religious essays in Spanish and Ilocano that aroused the envy of his superiors. When he died, his writings were banned and were subsequently appropriated by fame-hungry but less talented Spanish friars. His poems, however, were preserved by his Ilocano admirers and transmitted orally from generation to generation.

Two scholars, H. Otley Beyer and Renward Brandstetter, contend that **Lam-ang** was not original with Bukaneg. They believe that the epic poem is pre-Spanish in origin and was only revived by Bukaneg.

There are five versions of **Biag ni Lam-ang**. One was written by Canuto Medina Ruiz, a popular writer of metrical romances; another was published



by Parayno Hermanos; another was serialized in the magazine, **La Lucha**; the fourth is a translation by Isabelo de los Reyes; and the most recent is a composite version done by Leopoldo Yabes, a U.P. professor of literature. The Yabes version is the longest of them all. All existing versions do not exceed three hundred stanzas, with six to twelve syllables a line. The Yabes translation is 305 stanzas.

IN HIS introduction to the poem, Yabes wrote: "In the very strict sense it cannot be called an epic because it lacks such important elements of the epic as profundity of theme and sublimity of thought and language...but the hero possesses the qualities of an epic hero: he is a prodigy of courage and strength, and his deeds are supernatural, incapable of achievement by an ordinary man. It is on the line between the epic and romance, to assign it in its proper place..."

The story of **Lam-ang** starts

LAM-ANG: *Ilocano Epic Hero*

with the marriage of Juan Panganiban and Namongan in the town of Malbuan somewhere in the Naguilian valley in La Union. The couple was rich. After a month, Namongan was pregnant. On the seventh month of her pregnancy, she asked her husband to prepare the **bali-tang**, the bamboo bed for childbirth.

Juan thereupon made a trip to the mountains of Kapariaan. There he asked the spirits of the mountain for permission to cut bamboos. After that he commanded the wind to blow. A clump of bamboos was uprooted by the wind. Juan then commanded the wind to carry the bamboos to his yard. Juan built the bed and prepared the aromatic shrubs, the jar, the stove, the pot and the other paraphernalia of maternity.

Then Juan left his wife for the black mountains of the tattooed Igorots. There he engaged the Igorots in combat. When the time of birth came, all the midwives of the village assisted. Namongan had a harrowing time.

The baby that was born was gifted with the power of speech. The baby asked that he be baptized Lam-ang; for his godfather, he chose the old man Guibaun. When Lam-ang was a few months old, he asked about his father. His mother

told him that he had gone to the black mountains of the Igorots.

NINE MONTHS later, Lam-ang was as big as a man. He prepared to search for his father. He took with him a number of magical stones. He rode the wind through the forests.

In due course, Lam-ang reached the territory of the Igorots. Here, he rested. He fell asleep and in his dream he saw the severed head of his father. The head had been impaled with a pole and the Igorots were dancing around it. He woke up in anguish.

He continued his journey, until he came to a village near Mamdili and Dagman. Here, he saw the same Igorots he saw in his dream gathered around the head of his father. Lam-ang asked the Igorots for an explanation. Instead, the Igorots sneered and jeered at Lam-ang and even mockingly suggested that he return to his village if he did not wish to suffer the fate of his father.

Their unseemly behavior aroused the ire of Lam-ang. Livid, he proclaimed that he was ready to fight all the Igorot tribes. The Igorots heard and armed themselves.

The Igorots gathered around Lam-ang and the battle began. More spears were hurled at Lam-ang than there are leaves

in the forest. But Lam-ang was unhurt. The Igorots had exhausted their supply of spears. Now it was Lam-ang's turn. He summoned the wind. Riding its crest, he slashed at the ranks of the hapless Igorots. They fell like banana stalks. The blood of the dead flowed like the very Abra river.

Lam-ang returned to his village. He sounded the gong and

all the girls of the village came. He asked them to help him take a bath. But first, they cleaned the palay in the barn that he might have straw with which to clean his hair. The girls carried the straw to the riverbank where it was burned. Lam-ang summoned the wind to fan the flames. When the straw was consumed, he summoned the rain to put out the fire. Lam-ang washed his hair with the ash.

After washing his hair, he swam the length of the river to fight the crocodile. They met and a terrible battle ensued. Lam-ang overcame the reptile with his bare hands. He distributed the teeth of the crocodile to the maidens of village. Lam-ang also paid the girls one peso for every step they took, until they reached his house.

Then he told his mother that he would journey to Kalanuan, for there lived a maiden called Ines Kannoyan, whom he wanted to marry. The mother gave her blessing and Lam-ang set forth.

On the way he met Sumarang, a man whose eyes are as big as plates and whose nose was the size of two feet put together. Sumarang was a suitor of Ines and when he discovered the mission of Lam-ang he tried to discourage him. But Lam-ang was undaunted. Sumarang then unleashed a poi-



soned arrow. Lam-ang caught the arrow and with the help of the wind, delivered the arrow with such force that Sumarang was carried nine hills away.

THE YARD of the house of Ines was crowded with suitors. Lam-ang walked to the center of the yard and commanded his white rooster to flap its wings. The house of Ines was blown down. Lam-ang then commanded his dog to growl, and miraculously the house came whole again.

These deeds so impressed the mother of Ines that plans for wedding were immediately made. Lam-ang prepared the dowry. It included two golden ships, quantities of precious stones and gold. The wedding was a grand affair.

A few weeks after the wedding, the young men of the village invited Lam-ang to go fishing for **rarang**. Before

Lam-ang left he had a premonition that he would be devoured by the **berbakan**, the shark.

The next day he went out to sea. He dived and a **berbakan** attacked him. The other fishermen informed Ines that Lam-ang was dead. Ines was beside herself with grief. She summoned Marcos, the diver, and asked him to search the sea for the remains of Lam-ang.

Marcos found the bones of Lam-ang. The bones were arranged on the beach and the dog of Lam-ang growled once. Miraculously, Lam-ang reappeared. Embracing his wife, he said: "How soundly I have slept, my dear. For days we have not been together, and I am eager to be on your side."

The fair Ines wept again and told Lam-ang that he had been swallowed by the **berbakan**. Marcos was richly rewarded. And here ends the story of that fabulous Ilocano hero, Lam-ang.

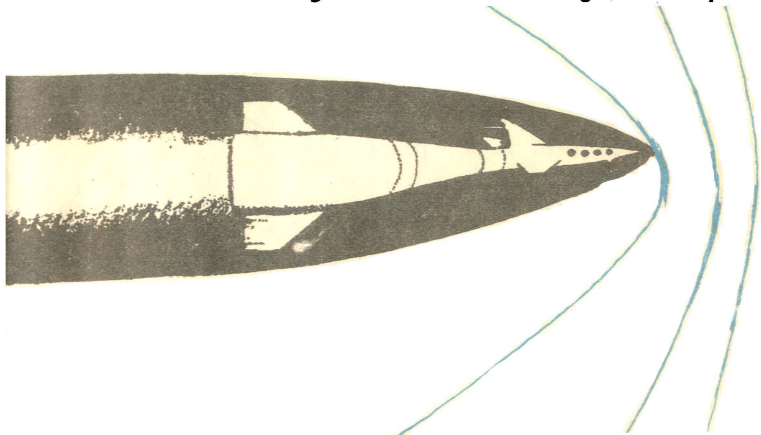
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Double Program

Showing at the Main Theater:

FEAR STRIKES OUT THE RAINMAKER

Born in Germany in 1913, the writer helped develop the famous V-2 missile during World War II, at the Missile Development Group at Peenemunde. The following article is based on existing scientific knowledge, not speculation.



An Authentic Trip to Mars

By Dr. Ernst Stuhlinger

THREE BRILLIANT men, almost at the same time some 30 years ago, recognized that travel through outer space is a real possibility with rocket-powered vehicles: Goddard, an American; Ziolkovsky, a Russian; and Oberth, a German. But only when the first large rocket-driven guided missiles were developed did we gain enough detailed technical knowledge and experience to make realistic design studies of space

vehicles. During the last few years, numerous articles and books on space travel have been published. By far the most realistic studies were made by Wernher von Braun, the developer of the V-2 rocket.

A ship suitable for a round trip to Mars would have about 1700 tons initial weight, with 35 tons of pay load. The propellants are nitric acid and hydrazine. Several ships of a similar design, each carrying a

crew of 6 to 8 men, would make the expedition. The travel time to Mars would be 260 days. The total time of the Mars expedition, however, includes a waiting period on Mars. This period is determined by the fact that the return trip must be accurately timed in order that the ship may meet the earth at a predetermined point on its ellipse around the sun. All told, the expedition would require a little more than 2.5 years.

The remarkable fact about von Braun's very detailed Mars project is that it is based entirely on the technical and scientific knowledge which we have today. Speculations concerning future discoveries are strictly avoided.

It would be hopeless to try to design a space ship that would take off from the surface of the earth, overcome the atmospheric drag and the earth's gravity, cover the long distance between the earth and Mars, make a safe and gentle landing on the uninhabited planet, and still be prepared and equipped to make the return trip to its home base. Fortunately, this complex transportation problem can be handled by subdividing the voyage into several phases. Thus, the first step to interplanetary travel will be the establishment of a space station, orbiting around the earth as a satellite at an alti-

tude of about 1000 miles above the surface.

Commuter traffic from the earth to this space satellite will be made with large, three-stage rockets. The winged nose section of these rockets, a sort of fourth stage, will be used for the return trip from the satellite to earth.

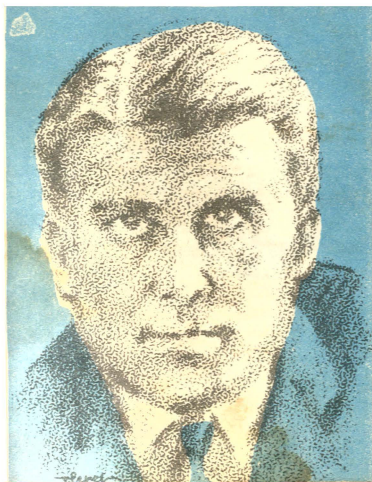
THE SECOND part of an interplanetary trip covers the long stretch from the satellite station to an orbit around Mars. The space ship, traveling from the earth satellite toward Mars, will not land on Mars but will end its voyage in a circular orbit about 600 miles above the surface of the planet.

For the third phase of the trip, a winged landing craft will be detached from the orbiting ship. It will reduce its orbiting speed by rocket power and will enter a downward trajectory. After a long glide through the Martian atmosphere, it will land either on skids, like a glider, or by parachute and counter-rockets.

At the end of the exploration period on Mars, the landing boat will take off from the planet by rocket power and return to the space ship, which will still be orbiting about the planet at an altitude of 800 miles. The crew will transfer back to the space ship and will make the return trip to the

earth satellite. The final hop, from the satellite to the earth, will be made by means of the winged fourth "stage" of one of the commuter rockets.

The longest part of the voyage will be that between the satellite orbit around the earth and the orbit around Mars. The space ship will be tailor-made for the conditions that will prevail during this voyage. Quarters for the crew will be sealed and provided with an artificial atmosphere. The ship will not be streamlined, since it will travel only through perfect vacuum. The thrust of the rocket motors need not lift the vehicle against the forces of gravity, because these forces are exactly balanced by centrifugal forces in any object that moves around the same orbit. Even a relatively low thrust will enable the ship to leave its original satellite orbit and to enter into a trajectory which finally approaches the Martian ellipse.



THE SPACE ship will be assembled in the satellite orbit close to the space station. All components of the ship, its equipment, and the fuel needed for the round trip must be carried into the satellite orbit by the three-stage commuter rockets. These carrier rockets must overcome the earth's gravity and atmospheric drag, and they must impart to their pay loads the orbital velocity of about 7 miles per second.

This earth-orbit operation will be the most costly part of the entire Mars expedition. For every pound of pay load, about 160 pounds of take-off weight must be invested in the commuter rockets.

The designer of the space ship will therefore make the greatest effort to keep his vehicle as light as possible. Furthermore, he will plan the expedition in such a way that any components which become unnecessary during the voyage, such as empty tanks, containers, supports, and even instrumentation, can be disposed of immediately. Ship and crew would finally arrive back in the earth-satellite orbit with a bare minimum of equipment and reserves.

By far the largest part of the take-off weight of such a space ship will be made up of the propellants. The attempt to reduce the mass of a space ship,

therefore, leads immediately to an investigation of its propulsion system. The basic rocket equations show that the performance of a rocket engine is mainly determined by the exhaust velocity of the gases from the combustion chamber.

Moreover, in rocket engines that are based on a chemical reaction between the propellants, the exhaust velocity is intimately related to the temperature inside the combustion chamber. The temperatures at which modern combustion chambers operate are close to the maximum temperatures which can be expected from chemical reactions. There is little reason to hope

that the performance of a chemical rocket motor can be improved much beyond the point at which we have arrived today.

It seems, however, that another type of reaction motor holds some promise for use in an interplanetary vehicle. If the velocity of the exhaust particles is produced, not by the heat energy of a chemical reaction, but by electric fields, much higher exhaust velocities can be obtained.

The amount of electric energy which can be imparted to a given mass of exhaust material is much greater than the energy which can be given to the same mass by a chemical



reaction. In addition, the electric field would direct the exhaust particles in such a way that they would not strike the walls of the thrust chamber. Hence, the wall-heating problem in an electric engine would be considerably less difficult than it would be in a chemical engine.

AN ELECTRIC propulsion system would require the ionization of a suitable propellant material. It would also require a primary power source, the conversion of the primary power into electric power, and a thrust chamber in which the electric power is applied to accelerate the ions.

A detailed study of the feasibility of an electric propulsion system has already been made. This study has proved that an electric system is feasible and that an electrically propelled space ship would be much lighter than a ship with a chemical propulsion system. The electric system would, however, be definitely restricted to space vehicles traveling between satellite orbits, because the thrust of an electric propulsion system would always be so small that it could never lift the vehicle from the surface of a planet against the gravity forces.

The propulsion system would operate continuously, first accelerating the ship and later de-

celerating it by reversal of the thrust direction. In the Mars trip, for instance, the ship's velocity would increase steadily up to the point of thrust reversal and would then decrease to a point where, upon the approach to Mars, the ship would be captured by the planet's gravitational field. The primary power source must generate power throughout the time the ship is traveling. The total length of travel time for a round trip to Mars will be about two years.

The basic assumptions that underlie the design of the electric space ship are a payload of 150 tons and an acceleration of at least $6 \times 10^{-5}g$. The payload includes the crew, with equipment and supplies of oxygen, water, and food; living quarters; observation instruments; and the landing craft, with equipment for the crew to subsist on Mars. The minimum acceleration must be great enough to make it possible to complete the round trip in a reasonable period of time and to allow for the unexpected corrective maneuvers during flight.

A nuclear reactor is chosen as a primary power source. For weight-saving reasons, it is a "fast" reactor containing about 12 tons of uranium. Its uranium-235 content is enriched to about 1.7 percent. The reactor heat is absorbed by a cooling

system that employs sodium-potassium as a coolant.

The reactor is located at a point about 250 feet away from the living quarters. It is shielded by a thick layer of beryllium and a sheet of boron, in order that the strong neutron and gamma radiations may be kept away from the living quarters. The heat energy that is contained in the sodium-potassium coolant is transferred to a working fluid (silicon oil) in the heat exchanger, drives a turbine which is coupled to an electric generator. The steam which leaves the turbine enters a large radiation cooler, where it condenses again. From there, the fluid is pumped back to the heat exchanger.

THE MATERIAL best suited for the propellant is one that can be ionized easily and has a high iodization yield. An alkaline metal such as rubidium or cesium will be chosen. The atoms of these metals are ionized with almost 100-percent efficiency when they strike a hot surface of platinum foil. A temperature of about 200°C is enough to produce sufficient vapor pressure of the alkaline element.

The vapor enters an ionization chamber that contains hot platinum grids, and the ions are extracted from the chamber by an electric field. This field ac-

celerates the ions in the thrust chamber to a velocity of about 50 miles per second. They leave the propulsion system in a steady flow, representing an electric current. The electric power, which is determined by this current and by the potential difference through which the ions pass in the thrust chamber, must be provided by the electric generator.

The maximum current density which can be obtained in the thrust chamber is limited by space-charge effects. These effects also influence the formation of the jet of ions, which extends from the thrust chamber into empty space. An unlimited beam of ions—even a beam of a noticeable length—would be impossible. The space charge would act back on the thrust chamber and would neutralize the accelerating field.

In order to produce and maintain a continuous flow of particles out of the propulsion system, the ions must be electrically neutralized soon after they leave the thrust chamber. Fortunately, this neutralization can be achieved rather easily. When the alkaline atoms come in contact with the heated platinum grid, one negative electron jumps off from every atom, leaving a positive ion behind. The electrons enter into the platinum foil.

These electrons must be expelled from the ship; otherwise, it would quickly assume a strong negative charge which would prevent any further expulsion of positive ions through the thrust chamber. The natural way to neutralize the ions is to expel the electrons in the immediate vicinity of the ion thrust chambers. The two beams mix at a short distance behind the end of the thrust chambers, and the electrons join the ions to form a neutral plasma. In this way, the strong space charge of the exhaust jet is avoided.

AN EXPULSION chamber for electrons consists of a hot filament which emits electrons, and a field of about 200 volts potential difference. One ion thrust chamber has a diameter of about 1 inch, and a total of many thousand thrust chambers will be needed to produce the thrust required for a space ship.

The ion chambers and the electron chambers are tightly packed, so that neutralization of the charges occurs at a distance not greater than about 1 inch behind the thrust chambers. It is assumed that the power plant and thrust chambers will be in operation during the entire trip, either accelerating or decelerating the vehicle.

The largest component of the propulsion system will be the radiation cooler. The optimum size of the cooler is one for which the total mass of the power-generating system is a minimum, based on a given electric power output and a given temperature of the hot steam. The figure that characterizes the specific power of the power plant, measured as kilowatt output divided by total mass, proves to be one of the decisive figures from which the design of an electric space ship must start. This figure was found to be about 0.1 kilowatt per kilogram. From this figure, an assumed initial acceleration of $6.7 \times 10^{-5} \text{ g}$, and a total payload of 150 tons, the design data for a space ship capable of going to Mars and back can be derived.

The detailed study shows that for any given set of the four parameters, payload, minimum acceleration, specific power, and destination, optimum values can be found for propellant mass, total power, and accelerating voltage. With these optimum values, the total initial mass of the space ship is a minimum. Values that differ from these optimum figures would result in a heavier ship.

The following design data were determined for the ship: total initial mass, 730 tons; propellant mass, 365 tons; total

electric power, 23 megawatts; accelerating voltage, 4880 volts; exhaust velocity, 50 miles per second; total thrust, 110 pounds.

The travel time to Mars for this ship would be a little more than 1 year; the time for the trip back, a little less than 1 year. The ratio of total initial weight to pay load is less than 5 to 1 — a very favorable figure for a rocket-propelled vehicle.

THE STRUCTURAL design of the ship will take into account the absence of atmospheric drag and appreciable acceleration forces. Structural elements will be very light. The ship is symmetrical around the longitudinal axis, with the reactor at one end and the living quarters at the other. As soon as turbine and generator start to turn, the entire ship revolves slowly in the opposite direction.

This rotation of the ship, which continues as long as the turbo-generator turns, is very desirable, because it makes the condensed fluid in the cooler flow to the outer rim, whence it can be conveniently pumped back to the heat exchanger. Moreover, the crew in the toroidal living quarters will feel at least a little "gravity," simulated by the centrifugal force. The thrust chamber, with propellant tanks, will be mounted in such a way that the thrust

force always goes through the center of gravity of the entire ship. The landing craft for Mars will be attached to the thrust chamber unit, with the thrust vector pointing through its center of gravity. The thrust vector will usually be parallel to the tangent of the trajectory.

The flight path of a space ship with an electric propulsion system differs from that of one powered by chemical rocket motors. The acceleration of an electric ship is only a small fraction of 1 g. The propellant consumption and mass ratio are smaller than they are in a chemically powered ship. The time of propulsion is much longer. As is mentioned in a preceding paragraph, the electric propulsion system operates during the entire trip, except for a few powerless periods of short duration which are needed for corrective maneuvers. The trajectory of the electrically powered ship will not be an elliptical path but segments of several spiral paths.

At first, the ship spirals around the earth, and its distance from the satellite station increases very slowly (after 2 hours, it will be not more than 20 miles away). After 100 days of steady spiraling, its distance from the earth will be 100,000 miles — about halfway to the moon — and it will have com-

pleted 376 revolutions around the earth.

A few days later, its speed and its distance from the earth will have become so great that the ship is no longer restrained by the earth's attractive force. Its trajectory will flatten out and make a transition to a large spiral around the sun. Its speed continues to increase, as does its distance from the sun.

ON THE 195th day, the thrust unit will be rotated through 180 degrees, and the ship will start to decelerate. If it did not, it could never be captured by the Martian gravitational field. The deceleration leads the ship gradually into an inward spiral about the sun.

On the 276th day, the thrust will be turned again to acceleration and this last maneuver carries the ship gently into the Martian ellipse. It arrives there on the 347th day. If the entire trip has been timed correctly, the ship will approach a point on the Martian ellipse where Mars is located at that time. If the ship should arrive too late or too soon, it will merely turn its thrust vector slowly toward the sun or away from the sun. By doing this, it manages, with overspeed or underspeed, to stay in the Martian ellipse. In the first case, it will approach Mars from the rear; in the second, it will be ap-

proached by Mars.

A few thrust maneuvers, which are indicated in the figure, will be necessary to direct the ship into a spiral around the planet. Otherwise, it would crash on Mars or pass the planet in a hyperbolic trajectory.

On the 402nd day, the ship will have descended on its spiral to an altitude of 600 miles above the surface of Mars. The crew shuts off the motor and prepares for the exploration of the planet.

The correct time to start the return trip will still be 472 days away. This long waiting period gives the crew ample time to observe Mars closely by telescope and rocket probes, to descend to its barren surface with a winged landing craft, to explore its landscape and study its mysteries, and, finally, to return to the orbiting space ship by means of the rocket-powered central part of the landing craft.

The trip back to earth will be similar to the earth-Mars trip. It will begin with 42 days of spiraling around the planet. A decelerating period follows, which puts the ship into an inward spiral around the sun. Subsequent acceleration adapts this spiral to the earth's ellipse. A few capture maneuvers follow, and a narrow spiral around the earth ends the long trip. After a total time of 3.25 years,

the crew arrives again in the orbit of the satellite station. A short shuttle trip takes them down to earth.

THE CONTINUOUS operation of the propulsion system makes the guidance of the space ship easy. At no time will there be a need for unusual accuracy of presettings or aiming. Corrections can be introduced at any time as soon as the trend toward a deviation becomes noticeable.

During the spiraling around the earth or Mars, for example, a period of powerless orbiting can be introduced in case a time delay should be needed. If the ship should be late, the crew can gain time during the spiraling phase by opening the throttle a little more.

Nor will navigation impose insurmountable problems. The ship will keep a constant watch of the earth, Mars, Venus, Jupiter, and the sun. The directions of these celestial bodies with respect to the direction of one of the fixed stars will be continually measured and recorded by automatic star trackers. The actual positions of the sun and the planets in a coordinate system that is fixed to the stars are accurately known from an astronomical almanac.

With these two sets of data, the position of the ship at any given moment can always be

found. In fact, the ship's coordinates are continuously computed from the star tracker readings and compared with the expected coordinates. If any deviation should occur, corrective measures will be taken immediately.

In spite of the fact that relatively simple techniques are available by which a space ship can be propelled, guided, and navigated through interplanetary space, a number of questions remain which appear far more difficult to solve.

Meteors and cosmic rays present a danger that is unknown to earth-bound men, who are well protected by the atmospheric shield. Maintenance of an artificial atmosphere, in order that human beings can live and work comfortably within the living quarters and in the space suits, sounds like a tremendous problem. A total travel time of two full years' duration spent in the monotonous seclusion of the ship's living quarters may seem to be an insuperable psychological obstacle.

But things are not as bad as they might seem. Small meteors, which are frequent, can be shielded off by an absorbing meteor bumper. This consists of a thin sheet of metal on the outside of the ship. Large meteors are very rare. If one of them should punch through the

wall of the ship, the doors of the damaged compartment would close automatically, and in most cases the damage could be repaired before a real disaster developed.

If a vital part of the ship's machinery should be destroyed, the crew would abandon that ship and board one of the others (there will be a total of about ten ships traveling together in one expedition). If a man should be hit—well, the probability of such an accident is comparable to the probability of a man's losing his life on this earth in some kind of accident.

WE STILL know little about the dangers of cosmic radiation in outer space. But we do know that these dangers are much less than was previously assumed to be the case, and we may be confident that ways and means of providing efficient protection will be available before the first trip to Mars begins. After all, the manned satellite station will represent an excellent research laboratory in which to study all the effects of outer space, including weightlessness, artificial atmosphere, and life in confined quarters.

By the time the first space ship leaves the satellite for Mars, its voyage will be much better prepared, in every respect and detail, than were many

famous and successful expeditions in the past. The probability of safe return will be greater for the space-farers than it was for many a daring and courageous team who set out in the past to discover new lands.

The crew on an interplanetary ship will have more comfort and more space in which to move around than the crew on a modern submarine. They will be in constant contact with the earth by means of radio and television. The men who are selected for the expedition must be in excellent health and must have great stability.

They will be persons of the scientific type who combine the love of adventure with the craving for scientific knowledge—men who can set aside their personal desires in favor of the idea of a great technical and scientific achievement. A man of this nature will not mind spending two quiet years traveling aboard a space ship.

In his normal life, such a man always carries with him a backlog of unfinished scientific work which he cannot find the time to complete. The prospect of being given the opportunity of two full years of undisturbed time in which to study and work on his pet projects will be for him one more dream come true when his space ship takes off for its long voyage to Mars. — *The Scientific Monthly*.

Are You Word Wise?

Most of the twenty words given below should be in your reading vocabulary. That is, you should be able to recognize them, although you may not be able to define or actually use them in writing. Select the proper definition for each, then turn to page 74 for the correct answers. Fifteen is passing.

1. *recluse*—(a) amendment; (b) detour; (c) hermit; (d) disbarment or prevention.
2. *disdain*—(a) scorn; (b) to bleach; (c) to insult; (d) to mislead.
3. *dwindle*—(a) to be idle; (b) to wait indefinitely; (c) to become smaller; (d) to increase in significance.
4. *criterion*—(a) a ceremonious call; (b) protest; (c) a gathering, as of people; (d) a standard of judgment.
5. *canard*—(a) male canary; (b) false story or rumor; (c) an elevated arena; (d) a hurricane.
6. *trounce*—(a) to punish; (b) to dash over; (c) to injure; (d) to deduct from.
7. *prude*—(a) a careful person; (b) an extremely modest or proper person; (c) a crank; (d) an over-religious person.
8. *hamper*—(a) to impose upon; (b) to belittle; (c) to limit in size; (d) to hinder.
9. *scald*—(a) to free from any problem; (b) to berate; (c) to burn with hot liquid; (d) to boil slowly.
10. *voluble*—(a) talkative or glib; (b) very large; (c) spacious; (d) hopeful.
11. *blatant*—(a) unsuspecting; (b) offensively noisy; (c) unashamed; (d) enormous or widespread.
12. *morbid*—(a) complicated; (b) unwholesomely gloomy; (c) disinterested; (d) injurious.
13. *petulant*—(a) luxurious; (b) provoking; (c) unreasonably demanding; (d) inclined to impatient irritation.
14. *oblige*—(a) to require, as a duty; (b) to please; (c) to cause to borrow; (d) to make up for.
15. *gloat*—(a) to feel superior; (b) to think about; (c) to gaze with satisfaction; (d) to puzzle with.
16. *skirmish*—(a) a heated debate; (b) a superficial comment; (c) a brisk encounter; (d) a military error.
17. *sag*—(a) to vanish; (b) to droop; (c) to ask; (d) to speak abruptly.
18. *frivolous*—(a) open-hearted; (b) gay; (c) extra nice or pleasant; (d) lacking seriousness.
19. *clamber*—(a) to climb with hands and feet; (b) to close up; (c) to jump over; (d) to hesitate.
20. *pallor*—(a) slight fever; (b) unnatural paleness; (c) morbid fear; (d) darkness.

We did have one!

The Navy of the Revolution



By Manuel Tiempo

THE PHILIPPINE revolutionary government had a small navy. This *escuadrilla*, as General Emilio Aguinaldo called it, was organized after the defeat of the Spanish squadron in the Battle of Manila Bay. It was composed of captured Spanish gun boats and confiscated steam launches.

This navy transported troops to places where the Spaniards still offered resistance. It also coordinated the work of the revolution by transmitting important orders from the headquarters based in Central Luzon to the troops stationed in the Northern and Southern provinces.

Frank D. Millet, special correspondent of **Harper's Weekly** and the **London Times**, re-

marked in his book, **The Expedition to the Philippines** that the Filipinos came to possess all private steam launches, except the *Cañacao*, which General Merritt, the first commander-in-chief of the American forces in the Philippines, used. It is apparent that the Americans did not prevent the organization of this navy.

John Foreman, a Britisher who lived in the Philippines during the Revolution, said that the formation of the navy was the start of the second phase of the revolution against Spain.

It was Manuel Satron, the author of **La Insurreccion en Filipinas**, who discussed the exploits of this navy in detail. According to him, the government's navy was composed of the following ships: *Compania*

de Filipinas, Taaleño, Balayan, Bulusan, Taal and Purisima Concepcion.

Besides these ships the revolutionary government also acquired the Spanish gunboat Isabel because its crew mutinied and joined the revolutionary forces and the Don Francisco which transported troops from Bauan, Batangas to Calapan, Mindoro.

THE SHIPS of the Philippine navy carried seven- and eight-centimeter guns removed from destroyed Spanish ships or seized from the Spanish arsenal in Cavite.

The ships of the revolutionary government were acquired through purchase, seizure and mutiny. Most of the Spanish gunboats in the Philippines were manned by Filipinos. During the last stages of the revolution, these Filipinos had a change of heart. They revolted against their Spanish officers, seized the boat for the Philippines and joined the Philippine navy. These Spanish-trained sailors became the nucleus of the first Philippine navy.

Satron narrated the mutiny of the crew of the *Compania de Filipinas* when it was ordered to escape to Formosa.

"The tragedy unfolded on board the *Compania de Filipinas* before it appeared in Ma-

nila Bay, was shocking: the company that owned said ship, to avoid capture, arranged its departure from Cagayan, where it was located, for Formosa, which was some 300 miles from the point mentioned.

"Two hours after the ship left Aparri, there broke out a revolt of the crew, which was led by the second engineer, a Cuban and staunch enemy of the Spaniards, notwithstanding his peninsular origin. Immediately, he proclaimed himself captain of the ship and began calling himself admiral of the Filipino squadron . . ."

Admiral Dewey, in his attempt to win the Filipinos to the American side, supported the Philippine navy in its skirmishes with the German fleet under Admiral von Diederichs.

Agualdo ordered the *Compania de Filipinas* to land troops at Olongapo and demand the surrender of the Spanish marines concentrated on the island of Malaquit. There were Spanish civilians and friars on this island. When the *Compania* was getting ready to bombard the island, the German warship, *Irene*, appeared. The German ordered the *Compania* to haul down the Filipino flag that it was flying. The *Compania* refused but it withdrew and sailed to Manila Bay where it was protected by the American fleet.

THE COMPANIA de Filipinas became the flagship of the Philippine navy. The Compania was responsible for the occupation of important sectors and the capture of many Spanish troops. Satron said:

"Aguinaldo ordered that said ship should go with the revolutionary forces to Olongapo, and later it undertook three expeditions, carrying Tagalog insurgents to occupy the whole Cagayan valley and also transport the expeditionary forces to Batanes where, after killing the politico-military governor of those islands, they established the power of the revolutionists in that northernmost region of the Archipelago."

It was also the Compania that transported the troops of Gen-

eral Daniel Tirona to the Ilocos provinces where a large number of Spanish civilians and friars were waiting for a Spanish ship to rescue them. All of them became prisoners of war.

The navy supplied the Filipino troops in Panay, Cebu and Samar. The Isabel carried 300 rifles, ammunition and the troops of Gen. Pablo Araneta to Panay.

However, when the navy occupied Corregidor, Admiral Dewey objected and the Filipinos had to withdraw.

On the whole, the work of the first Philippine navy was satisfactory but it is generally overlooked because it never had a chance to fight a really spectacular naval battle.

* * *

Can't Win

The infuriated man stood beside the large dent in his car, arguing with the woman driver who had caused it.

When a policeman finally broke up the verbal duel, the man was threatening to sue. The officer shook his head hopelessly.

"If I were you, fella, I'd just settle," he said. "After all, it's just your word against thousands of hers."

*

This Is My Program Of Government

By President Carlos P. Garcia

Based on the presidential inaugural address, this article outlines the Chief Executive's plans for the next four years

IN THE sober exercise of your constitutional prerogative as a free people, you have elected me President of the Philippines. With humility and deep gratitude, I accept your mandate, and God helping, I shall not fail you.

With my oath of office goes my solemn pledge of dedicated service to the nation. Invoking the guidance of Divine Providence and the memory of my illustrious predecessors, I take upon myself the tremendous responsibilities of national leadership with the courage and fervor inspired by the warm national unity in dedication and devotion to country. But I must confess in all candor that the best and the utmost I can give in the service of the people will avail us little unless I receive

the understanding, faith and support of my countrymen. In every momentous time of our history our people have given their full measure of support to our leaders. As I assume national leadership in answer to your summons on a day consecrated by the supreme sacrifice of Rizal, I pray for one gift—the heart of the Filipino people. In return I give you mine.

In the spirit, therefore, of that covenant of the hearts between the people and their chosen leader, I face the future aglow with hope and confidence. Together we will meet our common problems and difficulties. With the singleness of purpose together we will overcome them.

Self-Sufficiency in Food.—

As a people we prize highly the moral and spiritual values of life. But the realities of the moment have made us more preoccupied with economic problems chiefly concerning the material values of national life.

It is a strange paradox that while the basic articles in our fundamental economy are rice and fish, we are not self-sufficient in both from time immemorial. We have gone into extensive plans and schemes in industrialization, foreign trade, foreign exchange and similar matters, but we have not given sufficient thought or incentives, nor have we done enough to provide for the fundamental need of national life—food-stuff. In the midst of abundant natural resources for rice culture and fish production, we still have to import from abroad a substantial part of the supply to meet these absolute and irreducible necessities of life.

Thus, in case of a blockade as dramatically shown in the last world war, this can be a serious weakness in our national defense. What happened in the last world war with tragic consequences to our army and our people should spur us to the high resolve never again to neglect this essential side of our economy.

IT IS, therefore, imperative that we lose no time and spare no effort in reorienting our national economic policies towards doing first things first. We must first produce here, by and for ourselves, enough to provide for the fundamental needs of life—food, shelter and clothing. The country now has the natural resources, the means and the modern know-how to do it. Let us summon then from the spiritual reservoir of the nation the collective will and determination to make our country self-sufficient in foodstuffs, shelter and clothing.

Our freedom must be nourished from the wealth of our own soil and by the labor of our own manhood. This is the key policy of this administration in the field of economics. To this I give my heart and hand.

International Reserves. —

There has developed of late some apprehension arising out of the austerity measures adopted by the administration to arrest further deterioration of our international reserves. I hasten to tell the nation that while the present financial situation calls for sober and realistic reappraisal of our policies and actions, there is no real cause for alarm. There has been no dissipation of our dollar reserves. But in our over-eager-

ness and enthusiasm to push forward our industrialization program, we transgressed the eternal laws of measure and proportion.

As a retribution, reality now constrains us to restore the correct proportion between dollar reserves and industrialization and also between these reserves and bond issues and other forms of public borrowing.

To achieve this end, it behooves us to submit temporarily to measures of austerity, self-discipline and self-denial. We have to sacrifice for the larger good of the greatest number.

Agro-Industrial Economy.—

In the light of our experience it has been dramatically pointed out that a well-balanced agro-industrial economy is the best for the country. Rice is still the center of gravity of our agricultural economy as steel is of industrial economy. On these two basic factors, we build our agro-industrial economy. We have to step up the tempo of establishing the agricultural industries to utilize with the least delay the abundant natural resources which a bountiful Divine Providence has endowed us.

We have the land, the climate and other favorable natural conditions to produce ramie, cotton and other fibers to feed our textile industries

with raw materials. We have the land and natural conditions to produce raw rubber to provide steady supply of raw materials to our rubber and tire industries that minister to a nation on wheels. We have abundant flora and fauna for supplying the materials of drug and chemical industries.

AND NOW what resources have we for our industrial economy? We have some of the world's biggest iron deposits and abundant coal and manganese to provide the raw materials for the basic steel industry rightly called the mother of 101 other industries. To complement this, it is definitely known that the bosom of our earth contains unlimited mineral oil deposits to turn the wheels of industry and the propellers of prosperity. We have the natural hydro-electric resources which can be harnessed as a number of them already are, to supply cheap industrial power. The power-harnessing program will be kept up with increasing momentum to realize our desire for rural electrification.

With all these elements at our command, and with our youth rapidly acquiring the needed industrial technology and with the increasing demand for machineries and other steel products for our indus-

trialization, it has become imperative for us to build soonest the steel industry.

Mining Industry.— But fellow countrymen, iron is only one of our principal mineral resources. We have practically all minerals used by present civilization, ferrous, non-ferrous and mineral oils. The mining industry, therefore, has the potentiality of becoming the premier dollar-earning industry of the Philippines.

This administration commits itself to giving all possible incentives and support to private enterprises which may invest and work to make mining the biggest of industries.

This administration is fully aware of the difficulties in financing our ambitious industrialization program. We have realized that our dollar reserves can no longer continue with the double role of providing for the normal requirements of our foreign trade and the tremendous financing of our industrial and economic development.

The time has come to provide separate development funds to attend exclusively to the economic development and release our international reserves of this burden. I am fully convinced that we can generate development funds from sources other than taxes and the proceeds of our present exports.

Development loans can be liquidated by the same industries they are intended to sustain.

An essential aspect of the program I have outlined if we are to achieve optimum results is the role of scientific and industrial research. No industry of any importance in the world today can afford to exist without it. This is our serious deficiency that we must immediately correct through collaboration of government and private enterprise.

MY PREDECESSOR, the late President Magsaysay, opened not only the halls but the very heart of Malacañang to the people. To the common man, especially the needy, the forsaken and the victims of injustice, Malacañang symbolizes hope, faith and justice. Under my administration, Malacañang will remain such a symbol. This government will carry on dispensing social justice and protecting human rights. I expect every department to share in the great task of fortifying the faith of our people in terms of service and love.

Social Amelioration.— This administration will continue the vigorous prosecution of the social amelioration program. We give a higher premium to this social service masses that in freedom and by democratic

processes we can achieve peace, prosperity and happiness.

The Social Security Act for instance, which gives to non-government wage earners insurance protection against sickness, disability, old age, death and unemployment, will be fully implemented.

The individual economic security assured to the beneficiaries of this Act will buttress the collective economic security of the nation. The Social Security System is protection to labor and provision to capital.

The government will continue its low-cost housing projects and its land redistribution and resettlement program. We shall exert greater efforts so that more of our poor will eventually acquire homes and lands that they can call their very own.

We have a high stake in the health, strength and vitality of our people. So we shall pursue our health development activities especially in the barrios and other rural areas. Only a vigorous, healthy, educated and aspiring people can build a strong and enduring Republic.

I once more reaffirm the determination of this administration to preserve and enhance our historic relations of

friendship with the United States based on equality, mutuality of interests and community of ideals. Tested in the crucible of war no less than in the sacrifices for peace our partnership with the noble American people will long live vibrant in the hearts of our two peoples rather than in the pages of our treaties. Of course, it would be naive to assume that no differences will ever exist between the two peoples.

Differences do exist now and others may arise in the future. But in a spirit of fellowship and mutual understanding there can be none that cannot be adjusted on the basis of justice and equality to the satisfaction of each other's interests.

IN THE face of grave threats to world peace security, it is our solemn duty to strive with other free countries for strengthening the United Nations and make it a more effective instrumentality for peace. We have entered into a number of agreements with American, including a mutual defense treaty, and have associated with other freedom-loving states in the SEATO in an effort to meet those threats on regional level. We know that the United States, as recognized leader of the free world, is

resolved with all her might and resources to maintain peace and freedom and democracy.

We will preserve our friendship with Spain and the Latin-American republics with whom we are tied by indissoluble cultural, spiritual and historical bonds. To our Asian friends we reiterate the good-neighbor policy which we wish would prove mutually fruitful and beneficial.

National Defense.—In nuclear age, we must realistically admit that the defense of small countries like ours to be effective at all must be linked with the common defense of the free world. Nevertheless, the primary responsibility for the defense and security of our country and territorial integrity is still ours. It behooves us, therefore, to bring up to modern standards, within the limits of our resources and, we hope, with the assistance of our friends and allies, the major services of our defense organization.

Peace Diplomacy.—But deeper and more enduring than our preparations for defense is our hope and desire for world peace—a just, honorable and lasting peace. The Philippines stands squarely behind every sincere plea and effort for a stop to the armaments race that is leading the nations of the world to material and moral bank-

ruptcy. World peace based on a "balance of terror" maintained by a relentless contest in the development of increasingly more devastating nuclear weapons is a danger-fraught situation only one spark away from a cataclysmic explosion leading inevitably to one end—the total destruction of civilization.

This administration will therefore tirelessly support any sincere effort towards the removal of all means to wage war through total disarmament of all nations and ultimately towards the removal of all tremendous resources now spent for destructive purposes to fighting misery, poverty, disease and criminality the world over and bring about the climate and moral regeneration for world peace.

THE EDUCATION of the youth, being essential to the progress of the nation and to the preservation of the freedom we have won, will receive increasing attention from this administration. I believe in preparing the youth of the land intellectually and morally for the responsibilities and leadership they have to assume later in life. Since our economic development is the center of our common effort at this juncture of our national life, the education of our youth should hence-

forth lay emphasis on science, industrial and agricultural technology.

But with all our preoccupation with the national well-being, we cannot afford to neglect the moral and spiritual aspects of our national life. Together with the increasing material abundance, we need to strengthen our moral fiber. Our spiritual virtues must be constantly fortified. A nation does not live by bread alone, and no profit is gained in strengthening its economy if in doing so it loses its soul.

The ruins of once mighty empires now buried under the dust of oblivion constantly remind us that material progress, unless based on a foundation of morality, eventually destroys itself. It is my firm conviction that the character of the nation anchored on the Rock of Ages is still our best answer to the challenge of communistic ideology.

In this connection, I serve notice that the war against graft and corruption will con-

tinue with unabated zeal without fear or favor. Dishonesty and inefficiency in public service will be dealt with firmly but justly. By the same token honesty and efficiency should be rewarded generously. In dealing with these things I intend to use preventive measures to minimize not abolish, punitive measures.

These are what I envision for our country during the next four years. For their realization, I invoke once again the united cooperation and support of the Filipino people. Again, I reverently invoke the aid of Divine Creator, Infinite Fountain of all blessings, that we may have unity where we have been divided, that we may have faith hand courage where we have faltered and weakened that we may be given light and vision where we have walked in darkness, that we may have love where we have been selfish, and that we may achieve lasting peace, prosperity and happiness for our people.

* * *

Risky Business

An enterprising young freshman stumped the librarian the other day by asking for a book written by that eminent French author Risque.

*

A City the Emperors Built



AS THE MIGHTY steeds of the Mogul conquerors swept down the mountain passes onto the plains of the subcontinent they paused at the site of the present-day city of Lahore. Here, the Mogul kings from Ghazni in Afghanistan built their headquarters from which their warriors went forth to raid and conquer the fertile plains to the south. This was as early as the 11th Century. In the 16th and 17th centuries, Lahore was the capital city of the Mogul emperors.

Today, Lahore, located 640 miles northeast of Karachi, is a thriving city of almost a million people. It is the second largest city in Pakistan and an important trade, manufacturing and communications center and the movie capital of Pakistan. Amid the city's modern buildings stand architectural landmarks and many of the old, non-

religious buildings now serve as government offices. Tall minarets, from which devout Moslems are called to worship, dominate the skyline and flowers abound along the tree-lined streets of the modern city.

Lahore's notable architectural landmarks, dating from the 16th and 17th centuries, are the Badshahi Masjid, said to be the world's largest mosque; the Moti Masjid or Pearl Mosque, built of white marble; the fort and the Shalamar Gardens with terraces, canals and fountains which constitute Pakistan's most outstanding botanical garden. Today only three sections of the Shalamar Gardens survive of the original seven which symbolized the divisions of the Islamic paradise.

An extensive expansion program is underway for the city's public transportation. The airport is being enlarged to handle

large, four-engine international airliners. From the Lahore airport, the Pakistan Air Lines fly the world's most dangerous air routes to supply the civilian and military needs of Pakistan's vast frontier areas.

FOR YEARS, Lahore has been the rail shipping center through which supplies needed in the frontier provinces are funneled. A large number of spur lines carry freight from Lahore to otherwise inaccessible areas. And also out of Lahore stream horse-drawn tongas laden with goods to supply the surrounding areas.

Similar horse-drawn tongas crowd the streets, particularly in the market areas and older sections of the city. Lahore has a variety of specialized markets such as bamboo, textile and brass which offer the customer a wide selection of merchandise. Automobiles, which freely traverse the newer sections of the

city, do not attempt to negotiate the narrow lanes of the old city.

Lahore is the site of Punjab University, founded in 1882, which has colleges of medicine, law and technical sciences. Also located in Lahore are a number of secondary, technical and special schools.

Lahore, which has grown tremendously within the last 30 years, continues to grow. New industries are appearing to supplement those already in operation. Handicrafts of cotton and silk cloth, metalware, pottery and leather goods for which the area has long been famous continue to flourish. But Lahore, despite the turmoil and bustling activity that of necessity surrounds a modern industrial city, has not lost the vestiges of the days when it was the capital of emperors and the cultural center of the sub-continent. — *Free World*.

* * *

Like Unbridled Horses

The passions are unruly cattle, and therefore you must keep them chained up, and under the government of reason and prudence. If thus kept under discipline, they are useful servants; but if you let them loose and give them head, they will be your masters, and unruly masters, and carry you, like wild and unbridled horses, into a thousand mischiefs and inconveniences.

*

DEATH THE SPIDER

*Patiently, patiently, Death the spider,
Waits, waits upon its webbed trap,
Whose silken filaments what eyes can see!
One hour or a day—does it matter?—
Until a fat fly dancing madly,
Or gold moth chasing a dream of blue sky,
Tangles the thin strands: pounces the killer—
How patient, how deadly!*

—Ricaredo Demetillo



By Percy A. Hill

*Looking back
centuries ago*

THE FABULOUS MADJAPAHIT EMPIRE

THE RUINS OF Madjapahit some fifty miles to the south of Surabaya in Java are still to be seen. Lofty temples, great portals, tombs, and traces of palaces cover a wide area, decorated with the gods of the Hindoo pantheon and built for the most part of brick so fine and laid with such exactness as to defy the elements of time and earthquake. The rulers of Madjapahit were Indo-malayans of the cult of Brahma, and the Philippines formed part of their empire for some centuries before the advent of the Castilians.

Java, about the size of Mindanao, is the most fertile of tropical islands. With its population now approaching fifty millions of Malays, it could have been only a few millions during the rule of Madjapahit.



The religion of the upper class at that time was Brahmanistic, until 1478 when the followers of Mohammed over-ran the realm, but the plane of civilization under its earlier rulers was not equalled by those professing the cult of Islam, consequently the cities, temples, and tombs reverted to jungle-covered ruins, until the Dutch took hold almost a century after the arrival of Magellan in Cebu. The remains of these ruins amidst Java's 38 volcanoes attest to the mutability of man and his dominations.

While the extent of the sway of Madjapahit is variously estimated, there is no question as to its domination of Java, Bali, Lombok, and Madura. The grandiose ruins cover a vast extent, even eliminating those of the Boro-budur which

are Buddhistic rather than Brahmanistic with its seventy-two towers and its three miles of Hindoo sculptures. Neither can we expect it to have been any Arcadia, as the "good old times" were not good at all except in retrospection. However, the following tale handed down about a Madjapahit ruler shows that he solved his problems with a wisdom and knowledge of human nature that brought results without exactions, for although, to be sure, like all Oriental rulers, he possessed the power of life and death over his subjects, he was possessed of that peaceable temperament characteristic of the Javanese to this day.

The main revenue of the realm consisted in rice — the food of high and low, and the possession of this, to primitive

peoples, is to be preferred to any other kind of wealth, for it means life and not luxury. This head-tax was paid annually after the harvest and was due from each man, woman, and child. As the measure was small at its inception and great in the aggregate, it was without doubt collected impartially, for the land was fertile and crops good, but the tax had naturally to pass through many hands before it reached the government store-houses.

This tax served to feed the ruler and his households, bodyguards, priests, soldiers, artisans. It was a direct and necessary tax, as most trade was by barter and no money was used in the transactions.

○NCE THE harvest was finished, the rough rice—palay—was gathered in pompones by the **pengulo** or village head. No doubt he had compassion on the poor and the sick, and passed over short measures and sometimes granted favors to his friends, besides deducting the share allotted him for collection, so that the sum total he delivered to the **waidono**, or next upper chieftain, was vastly short of what it should have been.

The waidono was allowed in turn a certain percentage to keep up his dignity, and lacking a system of checks and ba-

lances, the amounts the waidonos delivered to the **gustis** and **rajahs**, were also greatly diminished. When the entire tribute or tax arrived and was counted into the ruler's store-houses, it was found to be smaller every year.

Now the ruler of Madjapahit had no desire to increase the tribute, which was ample, nor to use stern methods in collecting it, but there was no census upon which to base an estimate of the amount to be expected, and naturally no budget of expenses, and he was handicapped in finding out just what was subtracted en route from producer to the store-houses.

When he rode out in state through his dominions he found that the people were all well-fed and happy, that the women sported a great wealth of personal ornaments, that the **kris**, the badge of rank amongst the chiefs, was always decorated with costly metals, sometimes with diamonds and emeralds. He surmised where the bulk of the tribute went to, but could not prove it.

The army of bureaucrats could point to a crop-failure in this district, a sickness in the other, or an agricultural calamity in some other region, and as he had no means of disputing their excuses, he was in a quandary as to how to make

collections balance expenditures, without using harsh measures.

If he demanded a census of the people, the chiefs would know the reason at once, and they would take precautions to see the numbers agreed exactly with the amounts delivered into the ruler's storehouses. He could rely upon no one, not even the priests who ate of his bounty but who also were the recipients of gifts, nor upon the gustis and princes who received an ample portion allowed them in addition to what they grafted. He knew the people paid the tax according to the age-old rules but was convinced the greater part was deflected or stolen outright, and naturally resented it.



HERE WAS A case for study—not in the loose way we use the word. He faced the problem alone, without help. All depended upon him and he could depend on no one. Neither magicians, soothsayers, or high priests could aid in the case, and, as we say, he did not want to use "direct action." He consumed plenty of betel-nut, the national chew, in pondering as to just what course he should take to obtain his just dues, to give each justice, and finally to make his chiefs like it. He neglected his family, the parades of his soldiers, the horse and cattle races, the cock-fights, the music of the gamelans, his troupes of dancers, and his harem, until he finally had thought out a plan of action, not a five- or ten-year plan, but one that promised almost immediate rectification.

From his palace at Prambanan he sent out an order requiring the attendance of all the gustis, rajahs, princes and waidonos to a conclave at **Chandi-Dewa** or Thousand Temples. He awaited this gathering at the temple of **Chandi Kali**, a kilometer distant, adorned with the grotesque sculptures dedicated to the Hindu mythology. The vast concourse of chieftains came with their retainers dressed in barbaric splendor and gathered before the throne. The ruler appeared grave and

stern, and all realized that something extraordinary was about to happen. He informed them that a spirit of melancholy had induced him to call on the Higher Spirit that dwelt on the summit of the Gunong Arjuna, and requested that every chieftain accompany him on a pilgrimage to the holy mountain with all the panoply and circumstance possible.

First their retainers and people were ordered to make a fine road to the summit facilitating the steep ascent. The road was completed in short order, for, next to war itself, the chieftains dearly loved parades and processions to show off their fine costumes, horses, and arms.

A great feast was made by the ruler as a preliminary to the ascent. Herds of cattle were killed, vast quantities of rice, fish, and fowl were prepared, and vegetables, spices, sanguir wine, and betle-nut, and huntsmen brought in game from the surrounding mountains, for not alone came the vast array of chiefs but also their bodyguards, kris-bearers, betel-nut carriers, and retainers, with healthy appetites, who encamped under the waringin trees, all in great expectation of some divine revelation to be made the ruler on the summit of Mount Arjuna.

THE REGAL procession started for the mountain, a trip of three days or more, the ruler leading in a great sedan borne of forty panting natives, followed by his kris-and betel-nut bearers, body-guards, and cooks. Then came the long line of princes, gustis, rajahs, waidonos and pengulos, each with his retainers all mounted on horses, and mealous of his rank.

While each including the ruler were barelegged to the knees, they wore costly vestments, embroidered jackets, and squares of cloth twisted to a point for turbans. They used no saddles but gay cloths, tassels, and streamers. Amid rude minstrelsy they marched along to the beating of drums and gongs, the blowing of conches, horns, and flutes, and the plaintive melodies of the gamelangs carried by perspiring gangs of natives, a barbaric pomp that appealed to and satisfied them all in the greatest measure.

For two days they passed along roads swept clean by subjects, who, as the ruler passed by, remained squatted on the ground in respect and veneration, until the cavalcade arrived at the foot of the holy mountain. Here the lesser chiefs were left in camp, supplied by the huntsmen with game.

At the next station those of the medium rank camped; half way up the gustis and rajahs; near the end of tree-growth the princes, which was as far as horses could go, and close to the region of rocks and thorny bushes. The ruler and a picked few toiled up the volcanic ashes of the higher scarps.

When close to the summit, enveloped in mists and volcanic smoke at times, he advanced with only his kris-and betel-nut bearers. Just below the high peak he told them to sit down facing the ascent and prevent any one from disturbing his interview with the great spirit of Arjuna. They were tired with the climb, the sun was warm and pleasant of that altitude, so they got behind a rock and fell asleep. The ruler advanced alone to the summit which that day was clear, and, as the sun was warm and pleasant, he also got behind a rock shielding him from the wind and also fell fast asleep.

Meanwhile all those waiting for tidings chewed betel-nut and passed the time in conjecture at the long conference of the Spirit with their ruler. Time passed and they grew uneasy, but at last they saw him descending with his two retainers who were rubbing their eyes as if from some great vision, being afraid to admit they had slept. The ruler looked grave

but said nothing, and the procession returned to the capital, augmented at each station, and all wondering at what message was to be disclosed. At any rate the, great concourse had something to talk about, for never before was there such an array of pomp and circumstance, of arms and panoplies, and such a gathering of chieftains from far off-places.

After three days they were all summoned to hear what the spirit had told the ruler on the bald mountain-top, and gathered about the temple of Chandi-Dewa. From his throne the ruler informed them that he had met the Spirit, clad in garments of fire and with a face like burnished gold, and that he had been given the following message: "O, Ruler of Madjapahit, great plagues of sickness are about to fall on the earth, on man and beast; but as you and your people have rendered a homage to me on my mountain, I will teach you a way to escape these calamities."

They all waited anxiously to hear how they were to be saved from such a fearful catastrophe. After a short silence, the ruler continued. He said that the Great Spirit had commanded 12 sacred krisses to be made, one for each district, including Bali and Lombok. To make these every man, woman, and child must contribute one nee-

die. These needles were to be delivered to him, and then he would send them to the holy pandays or smiths to be made into the miraculous krisses. When any disease affected the region one of the weapons would be sent there. If the correct number of needles had been sent, the sickness would disappear, but if the count had been inexact, the kris would have no virtue, whatsoever.

TO THE GUSTIS, rajahs, waidonos, and pengulos returned to their villages with the wonderful new of the message of the Spirit on Mount Arjuna to their ruler, of the feasts, the pilgrimage, and of what was needed to prevent sickness. All made haste to collect the required number of needles from each house, kampong, village, and town, with the greatest accuracy, for they feared that if one needle was lacking the whole village or district would suffer. One by one the chieftains brought in the bundles of needles, all correctly tabulated by the succession of chiefs and conveyed to the storehouses near the temple.

When the returns were complete and all accurately noted, the ruler then divided them equally into 12 parts, ordered the cleverest of his pandays and steel-workers to forge the sacred weapons under his eye,

and also of any who cared to come and see the forging. When finished after the style of the inventor of the kris, Inacarta of Jangolo, they were wrapped in new silk and placed in a camphorwood chest with harps and hinges of silver, until they might be required.

Now the pilgrimage to Mount Arjuna took place during the time of the east wind when little rain falls, and soon after the magic weapons were completed came the rice-harvest, when the chiefs collected the rice-tribute. To those who brought the full amount or a little less, the ruler said nothing, but those who brought a half or a third of what was due, were informed that the number of needles supplied for the sacred kris of that region



did not tally with the tribute, and were sent back to bring it.

The next year the tribute increased greatly, so that the ruler had no difficulty in feeding all, besides the feasts he was called on to supply, as they say in laws, "for other purposes." And the 12 krisses had great virtue. When disease appeared in a village, the pengulo, was sent for a kris, and sometimes the sickness disappeared; and

then the kris was returned with great honor and rejoicing at the wisdom of their ruler.

Sometimes the disease refused to go away; and then everybody was convinced that a miscount had been made with the needles sent from the village. Therefore the sacred kris had no effect and was sorrowfully taken back again, but still with honor—for was not the fault their own?

* * *

France, Too

PARIS — *The French finance ministry has ordered banks to bring back to France 30 per cent of their dollar holdings from their branches abroad in a bid to overcome a dollar shortage while awaiting foreign loans.*

A Bank of France circular said the order applied to holdings held on October 31 this year, and gave the banks until December 20 to carry it out, a bank official said.

It is hoped that the effect of the transfer order will be to provide an immediate dollar inflow into the Bank of France's reserves, allowing the French government to pay its external debts and settle its trading deficits in the coming weeks. Normally, banks are allowed three months in which to repatriate foreign exchange earned abroad.

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WHEN grandmother repeated her command that I dress, I stood up from the sofa, pushing aside my cat who had been sleeping on my lap as I read **Downward Path To Wisdom**. I inserted the book-mark on Chapter 9, and reluctantly went to my room to dress.

I looked back at grandmother and saw her give out a sigh, before she left the living room. I could almost feel that she was angry. But just the same I felt like disobeying her commands this morning because she paid more attention to the coming of her daughter who was my mother.

My cat Maminka got in the way. I kicked her into the room. The cat gave out a cry, but I found it useless to regret having kicked him. Inside my room which was separated from grandmother's I looked at myself in the mirror. I picked up my red comb from the dresser and passed it once through my hair. Maminka kept rubbing his warm and hairy body against my bare legs. I did not shove him away this time.

It was almost three in the afternoon and grandmother had told me last night that we were to meet my mother at the airport. I had dreaded this moment. Mother was coming after living so many years in the city. Why does she show up

THE Stranger



By Margot F. Baterina

now, now that I don't need her anymore? I caught myself talking to the other face in the mirror. As I looked at myself, I saw again the picture of a disappointed girl on her graduation day who had waited for her mother in vain. I saw a glum face of the same girl on Christmas day, who did not get the new dress her mother promised her. That little girl's face was mine.

I AM waiting for you, Nina. Grandmother's words followed me in my room. Are you not ready yet? As I went out of the room I patted Maminka on the head. Be a good guard of our room little one, I said to him.

I was out of school for it was summer, and it was very pleasant to be idle once more. I would not be bothered with getting up early for my 7:30 class. I would be rid of the snickers of the older girls in class. Her mother is an old woman. They had said during one recess time when grandmother came to bring me my snack. Her father never comes home even during holidays, others would say at my back.

Grandmother had been my guardian for the last thirteen years; in fact she was more than a guardian to me. At nights she would cuddle me close to her and tell me bedtime stories un-

til I could no longer catch up on their details. I came to like one story which ended with the princess finding her real home. This story she would repeat again and again until I would fall asleep. Grandmother served as my dressmaker; she was very fond of sewing my dresses with self-belts attached to them. She always took great care in fastening the belt of my school dress before I leave for school. Grandmother was my first catechism teacher. She taught me how to pray every night and always emphasized on the sign of the cross so that I will not think and do evil things. I never learned to cross myself right nor prayed well. I remember her pinching me on the ear for crossing myself with my left hand. Every Sunday when we went to church grandmother had me always by her side. While waiting for her to finish her litany I would look around at the wooden statues. At times when I got tired looking around I would count the statues which had circles over their heads.

MAMINKA came to the house on my tenth birthday. I wanted to keep him for my own at that time he came around, but grandmother told me everybody belonged to somebody. After two weeks he kept coming to lunch and we

became friends. No one claimed him so I kept him for my pet.

At nights after grandmother was through with her prayers, she would join me in bed with Maminka at my feet. She hated Maminka's purring and told me to put him downstairs. I did not want to, so I insisted that I should have my own room and bed. Grandmother protested and dared me with ghost stories. I was not afraid. I went on my plans and grandmother cried because I was not obeying her anymore.

We arrived at the airport and I saw that people were standing at the railings. I thought: Maybe they are waiting for their daughters or mothers too. The plane was slowly circling above us. I could not stand the terrible noise it made; then it lowered itself finally and the people rushed to the gate once more. Grandmother who did not say a word to me the whole way from the house to the airport, tugged at my arms and motioned me to move nearer the gate. Unwillingly I followed her.

Soon the big door of the plane opened and a staircase lowered down. A very ugly fat man was the first to get down and successively people came out. There's your mother, grandmother shouted excitedly above the noise the people were

making. I was a regularly-built woman in red dress alight from the plane. Kiss her hands and receive her blessings. These were grandmother's last instructions. As a woman in red came nearer, grandmother met her with outstretched arms and both women embraced each other. I saw grandmother was crying. She was calling her...my child and sobbed words of welcome. I made no attempts to greet mother.

Grandmother released her embrace and grabbed my arms and pulled me to mother. Mother hardly noticed me and she just handed me her bag. I took the bag but dropped it down the moment we were inside the airport office. I was very impatient to return home and continue with my reading. I had an impulse to run and run. Nobody noticed my impatience. On the way home I snuggled myself protectively among the pieces of baggage and fell asleep. I only heard the two women talk about the men who had visited mother in her work and the offers of other jobs for her.

IT WAS SUNDAY. It was Mother's third day at home. I was still in bed visualizing the scene I created last night. Mother was sorting the presents she brought over from the city. I stayed in my room read-

ing the final chapters of the book. I did not go to help her. She had called me to get my share of the presents. I went out of my room and grabbed several boxes she was handing to me. I did not say thank you. Come near me, she said. I did not budge. I stared at my toes. She sprung at me and shook my shoulders. You stubborn devil, she said. It's time you changed while I am still here. Understand? I could feel Grandmother was peeping from the kitchen; I did not look her way. I did not answer mother. I looked away. I did not cry. I hate mother. Probably she's not used to you yet, grandmother said as she came towards us. I did

not look at grandmother. I hate her too. I do not need them. I hate everybody...except Maminka.

This Sunday I'll not join grandmother to church. Nor mother. I won't pray. I'll not look around for the wooden statues nor count the statues with circles on their heads. When I get tired, I'll stay with Maminka and play with him. I'll let him see his face in the mirror too.

Maminka was still napping at my feet. I got up and slowly and quietly I went to his side. I tickled his nose with my forefinger. He rolled on his side and continued sleeping. He did not mind me.

* * *

Unquotable Quotes

"Go West, young man, and do the East a favor."

* *

"I just love Beethoven."

"What's your favorite composition?"

"The moonlight Sinatra."

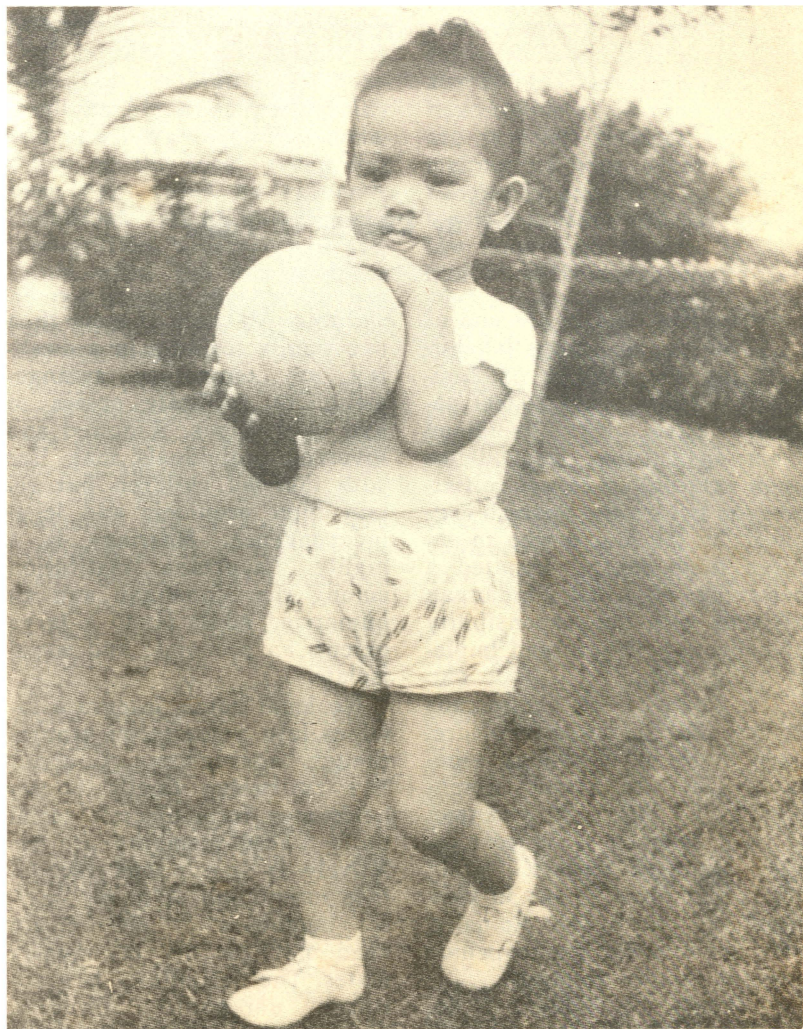
* *

"I suppose now that you have a baby, life is just one beautiful symphony?"

"Well, not exactly. It's more like a grand opera — full of marches, arias and loud calls for the author every night."

*

Panorama Peek



THE BASKETBALL SEASON is a long way off, but there's nothing like constant practice to keep in shape, says young Thelma of Diliman.

ZAMBOANGA'S SINDANGAN GROUP

By Charles O. Frake

THE SINDANGAN are one of the pagan groups inhabiting the interior of Zamboanga where some 20,000 pagans derive their livelihood from agriculture. Dependence upon external trade was initiated even before the Spanish conquest, by the Moros who to enforce their control instated a hierarchy of titled Sindangan officials with the responsibility of collecting tribute and implementing trade.

Dispersion of homesteads marks the Sindangan culture. Each house is invariably separated from its nearest neighbors by an intervening canyon or by a distance of at least several hundred meters. Rarely are two or three houses in view from any one house. Actually, they live in social groups which are not readily apparent.

A family, by Sindangan definition, contains only a man, his wives, and their unmarried

children. All cases of more than one family residing in a dwelling are temporary arrangements to facilitate access to new cultivations. Widowed and divorced individuals may live with married children but retain their economic and legal independence. Marriage is a highly important institution among the Sindangan and an unmarried adult is, to a large extent, an economic and social isolate.

No legal bonds integrate families into wider social groups, though aggregates of about five to twelve family households may form discrete social units whose members are relatively in continuous face-to-face interaction. A man's nearest neighbors or closest kin need not be his community mates. The community is a politically unorganized grouping of close neighbors who share in enough activities, and with

whom interaction is more frequent and ordered.

OVER LONG periods of time, however, the community has little continuity. Old communities break up periodically and new ones arise. This instability of the local group has been aggravated by economic conditions and by the Bisayan immigration, which place a premium upon the independence of the nuclear family. At one time however, the larger group was the unit of mobility.

Aside from the community, every Sindangan from time to time engages in activities with non-community members. Ties with such persons are based on proximity and/or kinship. The proximity group or region generally includes all households within one or two hours' walk of each other. Because of the difficult terrain and the requirements of social intercourse (especially drinking), households within a region are rarely much more than five kilometers apart.

Among the Sindangan there is also a relationship system whereby individuals are categorized for the purpose of linguistic designation. Distinction, at the widest level, must be made between those who are personally known to each other and those who are not. All within the former class can be term-

ed relatives (*mikilala*). This group is further divided into kin and non-kin. When travelling one can expect to receive food and shelter from kin in other communities. Kin ties provide a basis for demanding special services, as the making of wine yeast. A Sindangan is under the obligation to visit parents and parents-in-law from time to time if they live in different communities. Post-mortuary ceremonies, especially, provide occasion for the gathering of most of the deceased's personal kindred no matter how scattered they may be. And contractual agreements can often be dispensed with in transactions among kin, even when of different local groups. Collective title to properties, avoided whenever possible, often exist between kin.

A SYSTEM of legal activities cross-cuts informal groupings of neighbors and kin and establishes a network of formal duties and rights among independent nuclear families. In this system trials are held, decisions made and fines assessed without formal delegation of jural authority or explicit sanctions of force to uphold decisions.

The principal categories for fineable behavior are personal affronts, violations of contract, real or construed breaches of

custom. Major crimes as murder and theft, which are rare, are ordinarily turned over to the coastal police. Any adult male with sufficient verbal role regardless of his descent, wealth or supernatural powers. These legal authorities represent no social group and may practice their specialty on a region-wide basis. Anyone who participates in settling a case receives a share of the fine.

Disputes are considered as affairs between individuals and do not involve opposing social-group alliances. Legal authorities try cases and decide but do not represent either party. They are under no obligation to take the side of the community mates or kin. Litigation furnishes one of the chief grounds for interaction with non-community members.—*Philippine Sociological Review*.

* * *

Concrete Roofing Tiles

A NEW type of fully automatic plant to make concrete roofing tiles has been developed in Britain. The firm has been manufacturing concrete tile-making machinery for thirty years. These plants, compact and worked largely by unskilled labour, are now turning out millions of roofing tiles a day in colourful concrete.

The concrete roof tile made on a commercial scale on hand operated machines for over a hundred years has already proved its durability. In Britain and elsewhere it is guaranteed to last for thirty or fifty years against any kind of mechanical deterioration, and is impervious to frost and completely waterproof. An automatic plant worked by ten men can turn out 17,000 to 18,000 tiles a day. A two-line plant turns out twice that number, but with less than twice the labour because of operations common to both lines.

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Southern Renaissance*

By LEONARD CASPER

IN AMERICA today no other region can speak of its intelligentsia so fittingly as can the South. New England's prominence was a nineteenth century phenomenon, now vanished; the writers of the Middle West are no longer homogeneous. But the roster of modern American literature is, by and large, the record of those who gave their first allegiance to some locality in Mississippi, Kentucky, or Louisiana: Faulkner, Warren, Welty, Porter, Tate, Ransom, Brooks, Wolfe... To some extent, the clannishness which this roster indicates has been enforced by the outcome of the Civil War and subsequent ostracism or attempted infiltration by the North; but history allows that it was at least as much the cause, as the effect, of such events. The sins of the **fathers** often have their counterpart in virtues: and the descent of the two comes in a complex manner which the symbolic imagination perhaps best apprehends.

According to Robert B. Heilman, in his contribution to this collection of studies, the Vanderbilt group particularly—Ransom, Tate and Warren—have reversed the normal order of thinking by insisting that the concept of progress, however allied with science and city industry, is abstract and needs to be redeemed by non-material, that is religious values embodied in historical myths which, by their constancy and inclusiveness, demonstrate their closeness to tangible truths.

Faulkner's occasional chapter-long sentences, for example, the spiraling rhetoric of such novels as **Absalom, Absalom!**

* *Southern Renaissance*, edited by Louis D. Rubin, Jr. and Robert D. Jacobs (Baltimore: Johns Hopkins, 1953).

are employed to view experience as inclusively as possible, thus expressing the Southern sense of totality (which also accounts for the sensitivity of these writers to the symbolic), as well as the immanence of the past in the present. For the same reason, Robert Penn Warren's enveloping mind is scarcely capable of the short story's restricting form. Heilman typifies Southern writing as a literature of protest—against capitalistic giantism and Marxist collectivism; against abstract conformities of the nationalistic spirit; against the oversimplification of previous schools of literary criticism. In each case, the protest derives from a desire to reconstitute man in his wholeness, not as a mere function in some minor way of staying alive.

Ward Donahoe's essay credits Allen Tate with the best statement about the two conflicting worlds: "... the provincial world of the present, which sees in material welfare and legal justice the whole solution to the human problem; and the classical-Christian world, based upon the regional consciousness, which held that honor, truth, imagination, human dignity, and limited acquisitiveness, could alone justify a social order however rich and folk-regional ideals which kept Faulkner from being an expatriate in the 1920's when Hemingway, Dos Passos, and others fropped for codes of behavior in the brawling boulevards of post-war Europe.

Warren, in all of his novels, and Faulkner especially in the Quentin Compson episode of **The Sound and the Fury**, have explored the tragedy of isolation in modern man, the innumerable means invented to evade the "awful responsibility of Time." Without adhering to any orthodox pieties and, in fact, with a mounting criticism of the spiritual ineffectuality and worldliness of Southern Protestantism, nevertheless such men have characterized human guilt as more than psychological or temporary, and have viewed man's pilgrimage in the world with almost Calvinistic scrupulosity.

With them, slavery becomes a symbol for all men's sin, the exploitation of human resource, the degrading of creatures already injured in man's common First Fall; and the surrender at Appomattox of the Confederate troops, a valuable distinction since it remained a portion of mankind of their vulnerability and humbled them in God's eye again. Defeat became a means to victory over the self, once the self was realized and its distance from divinity measured, like the "fortunate fall"

as Milton calls Original Sin; while victory for the North merely encouraged investment of more faith and effort in the means of production and centralization of authority which had made that victory possible but which yearly was to add to the dehumanization of all who revelled in finance capitalism.

Not all Southerners are admitted to the membership of such holders of vision. This is an honest book. And the renaissance it pictures is too real to need defense by exaggeration. The failures and limitations of Erskine Caldwell, Stark Young, James Branch Cabell, Ellen Glasgow and Thomas Wolfe are acknowledged. But the effort of even such as these has its share of interest when seen in the context of the unquestionable achievement of the other. Unfortunately, the influence of the way of thinking of these few has been greatest in the liberal areas of the North. A region does not necessarily understand its finest spokesmen.

* * *

Science for Peace

ABOVE all, let me say for all to hear that, so far as we are concerned, the amassing of military might never has been—and never will be—devoted to any other end than defense and the preservation of a just peace.

What the world needs today even more than a giant leap into outer space, is a giant step toward peace. Time and again we have demonstrated our eagerness to take such a step. As a start in this direction, I urge the Soviets now to align themselves with the practical and workable disarmament proposals, approved recently by a large majority in the United Nations.

Never shall we cease to hope and work for the coming of the day when enduring peace will take these military burdens from the back of mankind, and when the scientists can give his full attention, not to human destruction, but to human happiness and betterment. —President Eisenhower.

*

Gabriela Mistral: Life Consul

SENORITA MISTRAL was noted throughout the world as a college professor, newspaper editor and statesman. She won the Nobel Prize for three "Sonetos de la Muerte" ("Sonnets on Death"), which were first published in Chile in 1922 and later appeared in translation in other countries. Although she rarely discussed personal matters, her biographers said these verses sprang from a tragic love affair.

Senorita Mistral, whose real name was Lucila Godoy y Alcayaga, was born on April 7, 1889, in Vicuna, a small town in the valley of Elqui, in northern Chile. Her father was a village school teacher, well known as a "pallador" or minstrel, who composed verses for festivals.

She formed her pen name from the names of two eminent poets, Gabriel d'Annunzio, the Italian, and Frederic Mistral, the Frenchman who was also a Nobel Prize winner.

Immediate popularity and public adulation was bestowed on her throughout Latin America. In the early Nineteen Twenties she was asked by the Mexican Government to assist in the organization and development of Mexico's libraries and rural schools.

Her years in Mexico were followed by European travel. On her return to Chile she was showered with official honors and she later served her country in consular and other posts. She was named Chile's delegate to the League of Nations Institute of Intellectual Cooperation.

CONSULAR assignments took her to Palermo, Italy, Madrid, Lisbon, Rio de Janeiro, Nice, France and Los Angeles. In 1931 she went to the United States to teach Spanish history and civilization at Middlebury and Barnard Colleges.

For twenty years Senorita Mistral had been her country's

only "life consul," commissioned by a specially enacted law of the Chilean Congress. Her consulate was "wherever she finds a suitable climate for her health and a pleasant atmosphere to pursue her studies."

At various times she preferred to absent herself from Chile when unsympathetic to the political administration. But in the words of her compatriot, Clarence Finlayson, "So great is her reputation that each successive government feels honored to have Gabriela as its representative abroad." In 1946 Senorita Mistral resigned from the United Nations Subcommittee on the Status of Women, denouncing the organization as too militant.

From 1946 to 1948 she lived in Santa Barbara, California. Then at the invitation of President Miguel Aleman of Mexico, she moved to that country for two years. In 1951 and 1952 she served as Chilean consul in Naples. In August she revisited Chile at the invitation of its Government. Thousands turned out to greet her on her first visit to the country in sixteen years.

Besides "Sonetos de la Muerte," her better-known works included "Desolacion" published in New York in 1922; "Ternura," a volume of verse for children published in Madrid two years later; and "Tala" ("Havoc"), poems attacking political authoritarianism. The last was published in Buenos Aires in 1938.

One critic has written, "Her style is direct and personal, her imagery rich and earthy, and her words simple and vigorous."

SENORITA MISTRAL was a tall woman with the strong features, straight hair, dark complexion and ready smile that characterize the Basque type of Chilean. Though she never married she showed her fondness for children in a prose poem entitled "To the Children"; "Many years hence, when I am a little heap of silent dust, play with me, with the earth of my heart and of my bones."

Gabriela Mistral, Chilean poet who won the Nobel Prize for Literature in 1945, died at the age of sixty-seven in early 1957. Chilean President Carlos Ibañez decreed three days of national mourning for Senorita Mistral.

* * *

The Thunder of Strauss



Volcanoes often die young

By Joseph Tribble

ESTABLISHED composers seem to have a habit of popping up at concerts where other and newer composers conduct their own works, and they always seem to feel no compulsion to remain in the background. A share in the limelight is always agreeable, and despite the fact their actions sometimes point to the contrary, composers are definitely human. Therefore Igor Stravinsky was not excessively surprised when, after finishing conducting a performance of *L'Oiseau de feu* in Berlin, a small, dapper figure joined him on the stage amid deafening applause.

When he introduced himself as Richard Strauss, and expressed great interest in the Russian composer's music, Stravinsky was pleasantly surprised. But Strauss made a comment here which proved very amusing and enlightening to Stravinsky, and gives us

a great insight into the Straussian philosophy: "You make a mistake in beginning your piece *pianissimo*; the public will not listen. You should astonish them by a sudden crash at the very start. After that they will follow you, and you can do whatever you like."

Even today it is not hard to find the influence of Strauss's words in his own music. He wanted to hold the listener in the palm of his hand, to stare him in the eye, to force to cringe before the force of his musical utterance. It is almost as if he made use of that old maxim: "Hit him first, and hit him hard." And throw the first punch Strauss did.

The wildly sensuous opening measures of *Don Juan*, the magnificent brass and percussion prelude of *Also Sprach Zarathustra*, and the mighty

stringed song of the hero in **Ein Heldenleben** all bear eloquent testimony to his desire to seize the listener and reduce him to a trembling pulp before the massed architectonics of his genius.

IT WAS the winter of 1912-13 that Strauss made the above statement. At that time he was at the height of his powers; he had produced the six tone-poems that rocked the world, the songs that ranked him with Schubert and Schumann, and the three operas that are among the greatest of the twentieth century. But after writing **Der Rosenkavalier**, his last great work, Strauss faded slowly into obscurity.

It was not a willing exile, as was Rossini's some years before; Strauss continued to write work after work over the last forty years of his life, but he never recaptured the inspiration of genius which was his in his earlier works.

In the field of the tone-poem, he is generally considered to be without equal. He followed in the footsteps of Liszt and Wagner, taking from the former the experimental form of the tone-poem, and from the latter the concept of a musical drama conveying philosophical thoughts and ideas as well as beauty. But he gave the form a breadth and depth and feeling

that Liszt never even hoped for, and he molded the philosophical concept of music-drama into a vehicle which, despite Wagner's thoughts to the contrary, expressed these philosophical ideas without the benefit of either words or scenery.

Thus in Strauss we come to the absolute in program-music. It is program-music not content in merely drawing a sketch of a character; it must delineate his every feature, his every thought, his very philosophy of being. Tchaikovsky, in his **Romeo and Juliet** Fantasy-Overture, is content to picture Friar Laurence for us with a simple, solemn chant. Strauss, on the other hands portrays his **Don Juan** with themes and variations which, combined with the elaborate, varying harmonics of the full orchestra, show us every aspect of the Don's personality.

There are six of these tone-poems. **Don Juan**, the first to explode upon the world, was inspired by a poem of Nicholas Lenau, concerning the immortal Don who pursued a phantom, and lost. Strauss himself has said that his Don was no hot-blooded rake eternally pursuing women, but an idealist who was to him incarnate womanhood, and to enjoy in her all the women of earth; he could not find her, and after

reeling from one to another, finally gave in to his disgust and yielded up his life. Other than this brief description, Strauss gives no program. But the music plainly seeks to portray his passionate spirit, his loves and longings, his disillusionment and disgust, and finally his weary, resigned death.

DON JUAN was followed one year year later by **Tod und Verklarung** (Death and Transfiguration). Its program is that of a poem by Alexander Ritter, written oddly enough after the publication of the music. Basically it concerns the portrait of a sick man's struggle with death, his delirious dreams of his youth, and his ultimate death and deliverance from the world.

There was a pause of five years between **Tod und Verklarung** and **Till Eulenspiegels Lustige Streiche** (Till Eulenspiegel's merry Pranks). This tone-poem gives us Strauss at his wittiest; his biting sarcasm and humor present an almost complete reversal from the lofty sentiments of **Tod und Verklarung**. The inspiration for this work was found in the famous old Scandinavian legend about the incorrigible rogue who merrily disrupts the market place, impersonates a priest, makes love to an un-

willing Fraulein, mocks a group of Philistines, and in general, raises hell. In the legend, Till escapes; in the tone-poem, Strauss ruthlessly sentences him to the gallows, amid the discordant blaring of trumpets and trombones. The spirit of Till is not quenched, however, and the epilogue tells us that he and his kind will live on forever.

With **Also Sprach Zarathustra** (Thus Spoke Zarathustra), Strauss once more turns at a complete right angle to anything he has done before. It is the most paradoxical of his works, and one around which has centered a never-ending controversy. For it is here that the figure of Nietzsche, the famous German philosopher, enters the field of music. Strauss explained that he did not intend to write philosophical music, or to portray Nietzsche's famous work (from which the title comes) musically.

He only intended to convey by means of music an idea of the development of the human race through the various phrases of evolution up to Nietzsche's idea of the Superman, and to show the conflict between man's nature as it is and man's metaphysical attempts to lay hold of his nature with his intelligence.

Thus far Strauss had toyed with Sex, Death, Humor, and Philosophy. Next he turned again to Humor, but this time with a compassion and understanding as great as any found in music. **Don Quixote**, an adaptation of Cervantes' famous masterpiece, is subtitled "fantastic variations on a knightly theme." And fantastic they are. Here Strauss has reached the sublime—or the ridiculous.

It is the apotheosis of the tone-poem, of program music in general. To present not only the character of Don Quixote but his adventures as well, Strauss exhausts every technical faculty of the orchestra, and when even that is not enough, he calls for a wind machine.

He portrays the creaking of the windmills, the rush of the storm, the bleating of sheep with music that not only tries to be indicative of the things it represents, but tries to actually imitate their natural sounds. The tone-poem has gone as far as it possibly can; the pathway has been flung at the twentieth century. Strauss has taken the tone-poem as far as Wagner has the opera.

ONLY ONE tone-poem remained to come. As can be well imagined, the controversy over all of Strauss' previous works had been immense,

but it was nothing compared to the furor that arose after his last great tone-poem. **Ein Heldenleben** is exactly what its title claims: a portrait of the life of a hero. And the hero is Strauss. Of that there is no doubt. **Heldenleben's** pages contain some of the most inspired work of Strauss: the grandiloquent battle section and the magnificent paean to victory reduce Liszt's **Les Preludes** orchestrally to insignificance; the magnificent closing chord surpasses in intensity even Wagner's C chord in the prelude to **Lohengrin**. Strauss has freed himself here of most of the orchestral quackery that dominates **Don Quixote**, but he ruins this progress by his evident aim to present himself as the hero. He degrades himself by portraying his critics as a group of yapping, yammering reeds. And, under the section entitled "Hero's Works," he presents excerpts from twenty-four of his previous works, a step taken with more audacity than wit.

Strauss succeeded in many of his aims, but he failed in his attempt to inculcate philosophy into music. He gives us a clear-cut view of his own philosophy in **Ein Heldenleben**: his self worship needs no further elucidation. But when he tried to express the multifaceted philosophy of Nietzsche,

he was bound to fail. It was a concept that would have staggered even Beethoven; Strauss is to be commended for even attempting it, although his choice of Nietzsche's doctrine of the German Superman is open to debate. Philosophy as philosophy is almost impossible to portray in purely orchestral music.

In his quest to obtain a complete delineation of the human character Strauss was much more successful. His portraits of Don Juan, Don Quixote, and Till Eulenspiegel were done with the most exhaustive detail ever shown in orchestral music up to that time. Even his portrait of himself is a success, although not in the way Strauss had imagined it would be: by studying the manner of man he wishes us to believe he was, we can gain a complete insight into his character. Strauss' introspection was blind, wrapped and twisted; our inspection of his introspection gives us the true man.

THE SAME is true for **Ein Heldenleben**. To enjoy the love music, know that it portrays tender, coquettish, passionate moods; know that the battle music with its ugliness and discord interspersed with moments of peace and quiet portrays true human conflict; know that the peace movement portrays man's achievements.

But don't get mired in the controversy over the orgy of self-worship that prevails, or in the thematic manipulation of philosophical details, for once you do, then all the beauty and majesty can be lost in a minute. As music, **Heldenleben** is a masterpiece; as philosophy, it is a cesspool.

It is difficult, if not impossible, to find a parallel to Strauss' strange career in all musical history. No composer before or after him ever erupted with such fury, and died so quickly. All his great work was done before he was forty-four, and the remaining forty years were a frigid desert where Strauss, his savaged inspiration gone, turned to portraying such artistically stimulating themes as the running of water in the bathtub. How haunting it is now to read the accounts of his contemporaries and admirers in the early years of this century, and see how trustingly they prophesied that soon he would produce a work combining the high purpose of **Tod und Verklarung**, the brilliant eruptiveness of **Don Juan**, and the sweep and grandeur of **Ein Heldenleben**, a work which truly would have been placed along with the greatest masterpieces of Beethoven and Mozart.

It was never to come. Volcanoes often die young.

★ ★
★ The NATO in Trouble
★ ★

By F. C. Sta. Maria

RUSSIA'S EARTH-CIRCLING sputniks continued to cast their shadows on the political and diplomatic field last month. In the Western capitals there was a general feeling of discouragement, aggravated by new Mideast problems which tended to broaden the rift among the NATO countries.

This rift started with the Suez invasion by Britain and France in 1956. Unable to find any justification for the attack on Egyptian territory, the United States refused to support her allies. Instead she worked through the United Nations to nullify whatever gains the invaders had made. Subsequently, French and British troops were also forced to withdraw from the area. A tentative peace, which was generally unfavorable to French and British imperialistic ambitions, obtained in the region, but only after the United States had incurred the collective ire of her two European partners.

Efforts were of course made

to patch up the "family quarrel" before it could accrue to Russia's advantage. But the blow had been struck at Big Three unity, and French-American friendship in particular reeled at the impact. The Frenchmen somehow could not forgive the Yankees for having given comfort to an arch enemy—Egypt's nationalist Gamal Abdel Nasser.

In the cross-purposes of various protagonists in the muddled Middle East drama, it was often difficult to define the real issues. Nationalism was one of them, to be sure. What was more obvious though was Moscow's pleasure at seeing the misunderstanding deepen among the traditional allies. In contrast, communist proffers of friendship for the uncommitted Arab peoples seemed to glow with sincerity. The expensive Khrushchev could say with utter candor: "Look who's grabbing whose land!"

The hapless Suez adventure dented Western unity but didn't break it. This was proved by subsequent efforts of the Big Three to put aside their differences in order to fight a common front in the cold war.

But the issue of anti-colonialism, like an old sore, reappeared to plague the union. In Cyprus Great Britain fought an unpopular war to maintain a colonial government. Dutch claims over Western New Guinea, stoutly contested by Indonesia, spurred greater anti-West feelings among the Afro-Asian countries. A desperate France tried to save Algeria from aggressive rebels freshly inspired by Nasser's nationalistic sallies.

All these further strained the NATO countries' post-Suez unity and threatened to disintegrate the group.

SOVIET RUSSIA's recent successes in the missiles field however served to draw the allies back together. The reason is of course obvious: the common danger which made them band into a protective union once more loomed large before their eyes. With her possession of the ultimate weapon—the intercontinental ballistic missile—Russia was in a definitely superior position, and she wasted no time to drive home that stunning fact.

Again Khrushchev, fortified by the sputniks, boasted: "The Americans do not seem to understand that their navy is now obsolete." With the push of a button, he explained, a hydrogen bomb-equipped missile could be sent hurtling down on ships and bases, obliterating both man and machine. Confidently, he added that the U.S. is not in possession of a similar missile, and won't be in the near future.

Thus did a dreadful Red achievement serve to renew Allied unity, if only temporarily. Suggesting a mutual sharing of scientific secrets, America convinced Britain that the best way to overtake the communist lead is to put their heads together. There was no time to lose.

Apparently left out in this entente cordiale, the third power, France, recently gave cause for another headache. This latest episode began a few months ago when President Habib Bourguiba of Tunisia, trying to keep his newly independent household in order, asked U.S. and Britain for arms. The French-Algerian guerrilla fighting was spilling over into Bourguiba's borders and he wanted protection. In no uncertain terms, the Tunisian president also made it plain that he would turn to the Soviet Union for arms should the West fail him.

The U.S. and Britain acceded to the Tunisian wish. Last November they started shipping a limited number of arms (the Tunisian arm has only 6,000 troops) and some ammunition.

France immediately lodged a protest, sending Foreign Minister Christian Pineau personally to the United States to argue with Secretary of State Dulles. The French position was clear, although untenable: she herself would supply Tunisia with arms, provided (1) such arms would not fall into Algerian rebels' hands; (2) Tunisia would not receive arms from any other country.

It was impossible that Tunisia would agree—as she didn't—because she is clearly in sympathy with the rebels. Having won her freedom just recently under similar circumstances (she is still with the French Union), Tunisia does not mind a few rifles slipping "occasionally" into the rebels' hands. Maybe the more often the better.

WITH SUCH a background of ill-will, and in the face of audible grumblings from the rest of the 15-nation group, the permanent council of the Atlantic alliance met in Paris recently. Reports said that the Tunisian problem was discussed in the meet—to what extent or toward what solution, it was not

disclosed. Another important topic was the forthcoming NATO conference scheduled on December 16.

What are the member nations grumbling about? It is not certain, but there are signs that they are beginning to feel the inadequacy of Allied protection. In case of an East-West war, they are afraid they would bear the initial brunt of a Soviet nuclear attack. And they are probably right. With Russia's present (if temporary) advantage in arms, these NATO countries would be only so much fodder for the Soviet advance in Western Europe.

In fact the presence of American bases and atomic weapons in these places may only serve to draw Moscow's fire. It's an old argument, but nevertheless plausible. The newest American proposal, which is to arm the NATO members with intermediate range ballistic missiles (IRBMs), would aggravate the danger.

These are presumably some of the problems which will be threshed out in the forthcoming NATO summit meeting, where heads of state are expected to attend. Others are: (1) the question of "updating" the alliance, in the face of political developments in the past eight years; (2) the problem of modernizing weapons, including the stockpiling of rocket

bombs; (3) possible exchange of scientific data; and (4) a reassessment of the U.S. position of leadership in the alliance. Above all, there will be efforts made to smooth out any kinks which may have developed in the system.

The North Atlantic Treaty Organization was formed three or four years after the end of World War II, when the sudden resurgence of Soviet might threatened Free Europe. At that time, to prevent further communist penetration, a wall of democratic nations, ready to fight in common defense, had to be hastily built up along the Soviet front. The NATO served this purpose creditably; Russian westward aggression stopped at the satellite countries (which might have been saved by an earlier NATO).

IN THE PAST eight or nine years of its existence, however, the Atlantic Alliance has had to contend with varying Soviet tactics, some of which were quite unexpected. The rise to power of Khrushchev starting two years ago saw the increasing Soviet emphasis on peaceful subversion. A campaign of smiles and good will tours, calculated to win over the neutral countries, was launched by the Red leaders. Followed a liberal policy of lending or giving out economic assistance, in the style of the United States. For

a while, too, Khrushchev championed "collective leadership," as against Stalin's one-man dictatorship. The fad did not last long, mainly because in relaxing its grip on the Soviet satellites, Moscow encouraged rebellion. Abruptly, Khrushchev tightened the reins again.

Observers point to these developments in appraising the role of the NATO.

It would seem that two steps must be taken right away by the Western powers in order to really revitalize the European alliance. One is to demonstrate convincingly (propaganda alone won't do it) that they can equal, if not excel, the Soviet Union in the ballistics race. The other is to liquidate their colonies everywhere in the world.

Only then could the Big Three face the Soviet challenge squarely—and with a clean conscience. Common sense dictates that as long as France and England, for example, impose their rule on colonial peoples, they cannot tell the communists to liberate the satellite nations. While keeping above board may not necessarily induce the Soviet Union to change heart, it is the only correct start. Moral leadership must first be established by the West.

From this distance it looks

like the NATO alliance is doomed. Missile superiority is only one of Soviet Russia's present advantages; it could be over-

come. But Allied disunity on the colonial question appears to be more formidable.—**Philippine Journal of Education.**

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With Due Credit, But . . .

THE Soviet launching of earth satellites is an achievement of the first importance, and the scientists who brought it about deserve full credit and recognition. Already, useful new facts on outer space have been produced, and more are on the way, as new satellites with added instruments are launched.

Earth satellites, in themselves, have no direct present effect upon the nation's security. However, there is real military significance to these launchings, as I have previously mentioned publicly. Their current military significance lies in the advanced techniques and the competence in military technology they imply. For example, the powerful propulsion equipment necessarily used.

But in the main, the Soviets continue to concentrate on the development of war-making weapons and supporting industries. This, as well as their political attitude in all international affairs, serves to warn us that Soviet expansionist aims have not changed. The world has not forgotten the Soviet military invasion of such countries as Finland and Poland, their support of the war in Korea, or their use of force in their ruthless suppression of Hungarian freedom. — President Eisenhower.

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Monopoly on Turtle Eggs

SARAWAK now has a turtle trust, a turtle board, and a turtle clerk under a new turtle trust ordinance—all for the sake of collecting the eggs and studying the habits of the edible, or green, turtle.

The turtle industry centers in three small islands off the extreme western end of the British the crown colony on the island of Borneo.

According to the Sarawak Museum Journal for nearly a century Malays have collected the eggs of the green turtle. In 1941, the last Rajah of Sarawak bought out the Malay interests and established a trust to dispose of the profit of the industry for Malay charitable and religious purposes.

This arrangement was revived after World War II. The membership of the board, which has a monopoly of the right to take turtles and their eggs on the islands, has been increased from three to five. There will also be an executive officer to carry out the board's orders.

The female turtle lays her eggs at night. Tom H. Harrisson, curator of the Sarawak Museum, said that "over an acre or less, a hundred or more full-scale female turtles may stagger, crawl, trample and dig during one night."

The turtle will continue laying no matter what interruption comes along, as Mr. Harrisson found when he fixed metal tags to forward flippers to chart the turtles' habits and movements.

When the turtle has laid perhaps 100 eggs she shovels the sand back over them with her back flippers and drags herself back into the sea. Last year about 9,000,000 eggs were laid on the three islands. When the female turtle is laying, glutinous-like tears run from her eyes almost as if she knows that should her young hatch and survive it is possible that they will appear as soup on a banqueting table.



Panorama Quiz

One mark of an educated man is the possession of a reasonable fund of general information. The highly specialized individual, often dubbed an "expert," frequently knows little or nothing outside his own line. Try yourself on the following questions, then turn to the next page for the correct answers.

1. Referred to as "the future benedict," your friend: **A. will join the holy orders;** B. will soon get married; C. intends to stay a bachelor; D. will soon have a son.

2. Greenwich, from where nearly all nations of the world count their longitude and base their time, is located at: **A. London;** B. Essex; C. Ireland; D. Scotland.

3. Norma Talmadge, who died recently, will be remembered by the older folk as: **A. a great opera star of the 20's;** B. a silent picture star; C. founder of the Salvation Army; D. heroine of the Spanish-American War.

4. Rocket experts say that for a missile to be able to escape the earth's gravitational pull, it must have the speed of: **A. sound;** B. light; C. seven miles a second; D. ten miles a second.

5. Rudy Cardoso is a young Filipino who has been making a name in international circles as a: **A. tennis player;** B. concert pianist; C. chess player; D. tenor.

6. Except for one, all of the following Filipino names are associated with music. Which one? **A. Kalaw;** B. Santiago; C. Velez; D. Abelardo.

7. Chosen the 1957 'Man of the Year' by leading American magazines is: **A. President Dwight Eisenhower;** B. Vice-President Richard Nixon; C. Red China's Mao Tse-tung; D. Russia's Nikita Khrushchev.

8. The Biblical episode of Ruth and Naomi illustrates, above everything, the virtue of: **A. thrift;** B. loyalty; C. truthfulness; D. patience.

9. Fashion enthusiasts of course know that the latest in women's styles is the: **A. empire waistline;** B. side slit; C. sack dress; D. above-the-knee hemline.

10. "Cannon," a well-known brand of American towels, is also the name of a famous: **A. German race car;** B. microscope; C. Italian scooter; D. Japanese camera.

**ARE YOU WORD WISE?
ANSWERS**

1. (c) hermit
2. (a) to scorn
3. (c) to become smaller
4. (d) a standard of judgment
5. (b) false rumor or story
6. (a) to punish
7. (b) an extremely modest or proper person
8. (d) to hinder
9. (a) to burn with hot liquid
10. (a) talkative or glib
11. (b) offensively noisy
12. (b) unwholesomely gloomy
13. (d) inclined to impatient irritation
14. (a) to require, as a duty
15. (c) to gaze with satisfaction

**PANORAMA QUIZ
ANSWERS**

1. B. will soon get married
 2. A. London
 3. B. a silent picture star
 4. C. seven miles a second
 5. C. chess player
 6. A. Kalaw
 7. D. Russia's Nikita Khrushchev
 8. B. loyalty
 9. C. sack dress
 10. D. Japanese camera
-
16. (c) a brisk encounter
 17. (b) to droop
 18. (d) lacking seriousness
 19. (a) to climb with hands and feet
 20. (b) unnatural paleness

* * *

Plastic Bus Bodies

TIME and money is being saved by Edinburgh Transport Department by the use of plastics instead of metal bus bodies. Since the conversion from trams a large part of the fleet has been made up of vehicles with a standard body and all panels in these bodies are now being made of plastics. One great advantage is saving in weight. A metal radiator grill for a Leyland bus, for instance, weighs 46 pounds; the same grill moulded in plastic weighs only 16 pounds.

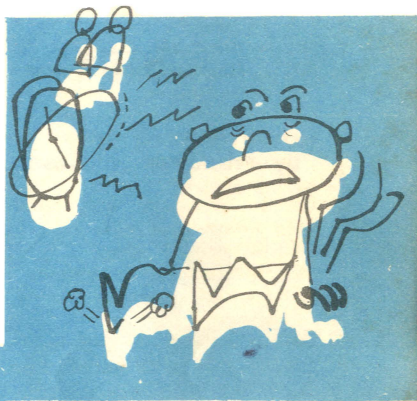
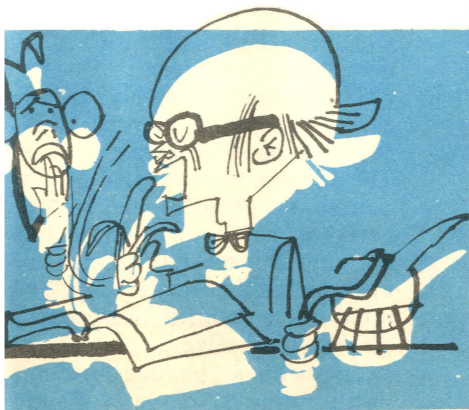
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In the Beginning. . .

CLOCK

(a device for measuring time)

From the Old French and Middle Latin *klok*, meaning "bell" or "gong," comes this modern word to describe a timepiece, whether with an alarm or not to jolt you.



BANANA

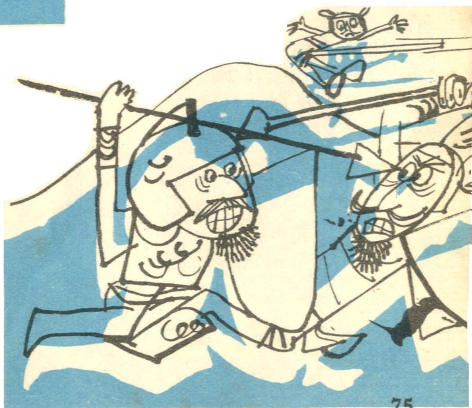
(a tropical fruit)

The Latin scientific name *Musa sapientum* literally means "food for the wise"—although that doesn't stop a moron from partaking of this delicious fruit.

WAR

(an armed conflict between states)

An old plague of human society, the term war comes from the Anglo-Saxon *werre* (meaning "scandal") and the Old high German *werren* meaning "to confound" or "mix".



What Should We Do With the Chinese?

By Francisco M. Joson



THE CHINESE problem is not a new one in the Philippines. It started with the Sangleys (from the Chinese word "Sangliu" which means "to trade") who settled in Manila 350 years ago. The Chinese rapidly made themselves indispensable.

For example, in 1590 the bishop of Manila, in a report to the King, revealed that the Chinese in the Parian had become such expert artisans that they were duplicating all sorts of goods made in Spain, to the consternation of Spanish merchants and officials.

There are, according to the latest estimate, 100,000 Chinese in the Philippines today. The biggest concentration is of course in Manila where they carry on as if that section had become Chinese territory. They operate their own schools. As much as possible, they marry among themselves.

They have banded to put down Filipino competitors and help one another. Their transients have consistently defied the authority of our government and many of them have gone as far as to corrupt our officials with bribes. The politicians refuse to touch them because they are a reliable source of money for campaign purposes. In brief, the Chinese seem to be slowly strangling the Philippines.

PANORAMA

The earliest records show that as early as the 6th century, Chinese had begun their immigration to the Philippines. From Amoy, they came via Siam during the Sui dynasty.

A year before Legaspi reached Luzon, he encountered a Chinese junk off Mindoro. There was a brief skirmish. This was the first recorded battle between the Spaniards and the Chinese. The first serious encounter with the Chinese occurred during the term of Governor Lavezares when the pirate Limahong invaded and captured the city of Manila. Only the timely arrival of Salcedo from Vigan saved the city from Chinese domination but then Limahong was able to escape.

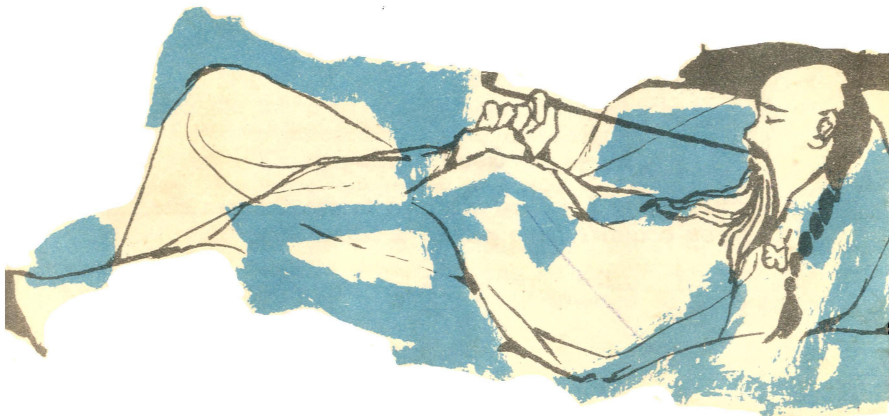
IN 1571, one year after Legaspi founded Manila, the number of Chinese in the city had increased from 50 to 150.

The commercial expansion of the country was accompanied by increased immigration of Chinese so that 15 years later there were 10,000 Sangleys in the country. By 1600, more than 15,000 of them were in the Parian. By 1740 there were at least "20,000 who constantly resided." At the end of the Spanish rule, the country was host to 40,000 Chinese.

The growth of the Chinese population during the Spanish regime was partly controlled by periodic massacres and mass deportations. The persecution of the Chinese during the Spanish regime was motivated by fear rather than by economic reasons. The effect of Limahong's invasion had not disappeared completely.

A typical massacre occurred during the eve of the feast of St. Francis in 1603. Three mandarins arrived in Manila looking for a "mountain of

The Sino problem is deeply rooted in Philippine history



gold". They carried on suspiciously and a state of tension was created. The Chinese struck first. More than 10,000 of them attacked during the celebration of the feast. They were able to kill 100 Spaniards. Reprisals followed immediately and 23,000 Chinese were slaughtered.

The second Chinese revolt occurred in 1693 and lasted four months. At least 22,000 Chinese were killed.

In 1662 another revolt and massacre was barely averted. Koxinga, the Chinese pirate, was threatening the country. The Chinese in the Philippines thought that the Spaniards were preparing another blood-bath. They fled the city. Only the presence of mind of the governor, however, averted another revolt. He urged the Chinese to return to the Parian and those who refused would be considered fugitives. The leaders of the flight were tracked down and hanged undoubtedly to underscore the point.

Mass deportations of Chinese occurred in 1596, 1744, 1755 and 1769. In spite of these repressive measures, the number of Chinese in the country increased. Their refusal to be assimilated by the prevailing social order is a possible reason for their strength.

THE COMING of the Americans removed the repressive policy against the Chinese but strict immigration laws were enforced. Now that the country is independent, the people are becoming more and more conscious of their national identity. Several laws have been passed and approved that are meant to help the Filipino businessmen in his fight against the Chinese.

The recent refusal of several hundred Chinese to leave the country has generated a great deal of bad feeling among the Filipinos. It is hoped that the government will have enough foresight to avert any serious breach of amity by handling in a decisive manner the Chinese problem of the Philippines.

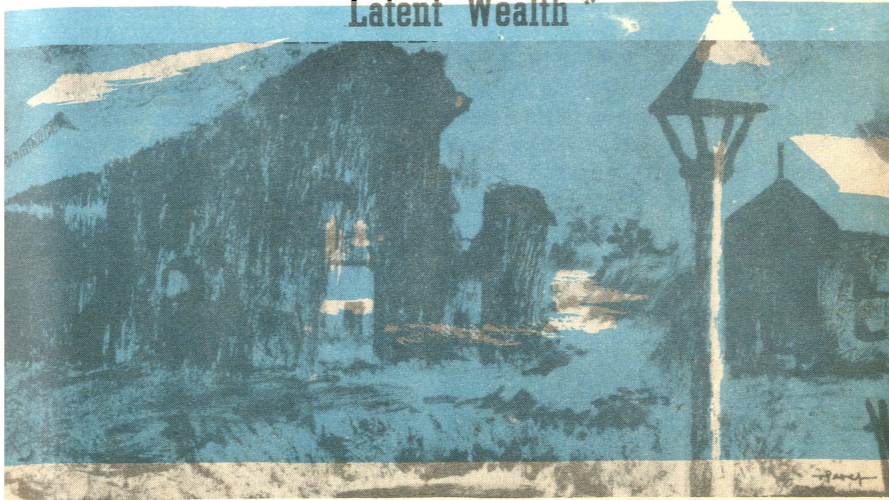
* * *

Good Timing

*"Yesterday I got up at dawn to see the sun rise."
"You couldn't have picked a better time."*

*

CAGAYAN VALLEY: Latent Wealth *



CAGAYAN, according to the natives of the place, derived its name from a kind of tree locally called "tagay" that grows in abundance around the mouth of the Cagayan river. The story goes that when Juan de Salcedo explored northern Luzon in 1572 he found himself at Buguey, a sitio fed by a tributary of the Cagayan river. He asked one of the natives the name of the place and he is remembered to have answered "Catagayan!" which means the place where the "tagay" grows.

In 1583, when the province

was created, Cagayan encompassed the entire Cagayan Valley. Out of that huge slice of land, two other provinces were created, Nueva Vizcaya in 1839 and Isabela in 1856.

The entire valley is traversed by the Cagayan river which is roughly 450 kilometers long. Most of the important towns in the Cagayan valley are situated near the river. The river begins somewhere near Echague in Isabela and ends at Aparri in the north.

It is believed that a long time ago the great river, just before reaching the sea at Aparri, took a long course toward the east that terminated at Mission. It

* See "Cagayan Valley's Unfulfilled Promise," *Panorama*, Sept., 1957.

was at this old river mouth where Salcedo landed in 1572. The river had since then straightened its course and now empties its waters into sea at Aparri, leaving a "rio muerto" or lagoon at Buguey. This lagoon is some ten kilometers long and a kilometer wide and teems with fish, crayfish, crabs and lobsters.

The province of Cagayan occupies the lower basin of the Cagayan river. The eastern coast is high and mountainous. The side adjoining Apayao is low and swampy. The northern coast, where the river meets the sea, are rich deltas. Between the mountains are large valleys that are fertilized by alluvial soil deposited by the river every year. This is the area that is best adapted to tobacco production.

THE CHIEF crops of the Cagayan valley are tobacco, coconuts and rice. Recently large cattle ranges have been opened. The Cagayan river is a large natural highway that makes accessible even the remotest part of the valley. Along the coast, the main industry is fishing. Cagayan is inhabited by the Ilocanos and Ibanags.

The exploration of Cagayan began during the administration of Guido de Lavezares (1572-1575). The first explorer was Juan de Salcedo. In 1581,

Captain Juan P. Carreon led an expedition to the Valley for the purpose of driving away the Japanese pirate Tayfusa but before Carreon left the place he founded the town of Nueva Segovia. A decade later, Luis Perez Dasmariñas also explored the territory. He sailed up the eastern coast of Luzon from Binangunan de Lampon and visited the towns of Aparri, Abulug, and Pamplona.

In spite of its isolation, the Cagayan region is peculiarly sensitive to the events in the more populous centers of the Philippines. The rebellion which Malong started in 1660 in Pangasinan extended to the northern coast of Cagayan. The Silang rebellion in Ilocos in 1763 was felt and imitated in Tuguegarao, Cabagan and Ilagan. The injustices of the tobacco monopoly were very acutely felt in this region.

As constituted in the early days, the province of Cagayan included all the territory east of the Cordillera central mountains and north of the Caraballos del Sur. New provinces and **commandancias** were later carved out of this extensive territory.

THE GATEWAY to the land of tobacco is Nueva Viscaya. This is also the granary of the Cagayan valley. The climate of Nueva Viscaya is rivalled only

by Baguio. It is also a place of numerous and natural wonders.

As created in 1839, Nueva Vizcaya comprised a rather extensive province that included the present subprovince of Ifugao and a great deal of what is now Isabela. But when Isabela was created in 1856, Nueva Vizcaya gave up to the new province most of its northeastern territory including Camarag, its capital. The capital of Nueva Vizcaya was transferred to Bayombong.

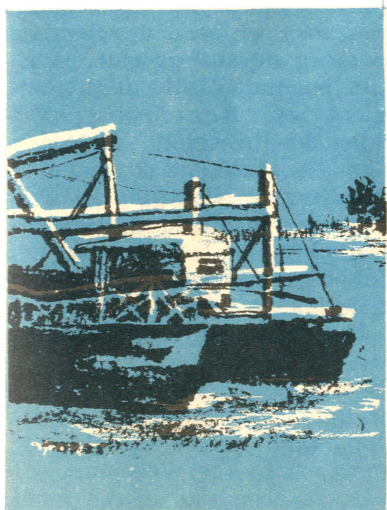
The province of Isabela possesses vast resources and is the chief tobacco region of the Cagayan valley. The land is well-drained by the Cagayan river and two of its main tributaries, the Magat and the Abuluan. Practically all the towns of Isa-

bela, with the exception of Palanan, are located along the Cagayan, Magat, and Abuluan rivers. Ilagan, the capital, lies between the junction of the Cagayan and Abuluan rivers. The inhabitants are principally Ibanags but on the plains there are many Ilocanos.

Like other important provinces of the country, Isabela played a major role in the Philippine revolution. In 1763, taking the cue from Diego Silang, the people of Isabela revolted, led by Dabo and Juan Morayac. Again in 1785, another revolt broke out. This time the rebellion was led by Labutao and Baladon. The chief reason for these uprisings is the tobacco monopoly.

ISABELA, however, is remembered in the history of the Philippine revolution chiefly because of Palanan. It was here that General Emilio Aguinaldo maintained his headquarters until his capture in March, 1901.

The Cagayan valley still remains one of the richest regions of the Philippines. Aside from its prosperous tobacco farms, growing cattle ranches, geologists and mineralogists are searching its bowels for vital minerals. Several oil companies hold leases to drill in its lush plains. Cagayan continues to promise more wealth for the nation.





Architect of the **HYDROGEN BOMB**

SIX YEARS ago last June Dr. Edward Teller provided the scientific break-through that paved the way for the first hydrogen bomb in the world. Recently President Eisenhower said that Dr. Teller and two other physicists had told him that they saw the possibility of smaller hydrogen bombs with essentially no radioactive fallout. When Dr. Teller made his discovery six years ago the United States was in serious trouble. On Sept. 1, 1949, years before it had been expected to happen, the Soviet Union exploded an atomic bomb. That explosion shattered the cornerstone on which the security of the United States was based.

To counter the new Soviet threat President Truman had given a delayed go-ahead on a

program to develop the "super bomb" — the thermonuclear fusion weapon.

But by June, 1951, a crisis was at hand. Little progress was being made and a sense of despondency had crept over the inner core of skilled scientists working on the project.

A meeting of the high command of the scientists was called at Princeton by Gordon Dean, at that time chairman of the Atomic Energy Commission. In the midst of the general gloom at the meeting Dr. Teller got to his feet and quietly walked to the blackboard.

In describing the incident, Mr. Dean said:

"Out of his own head he brought to the meeting something that was an entirely new approach to the thermonuclear weapon. Everyone in the room

was convinced that we had something for the first time that looked feasible in the way of ideas."

Within a year of Dr. Teller's walk to the blackboard at Princeton the United States had its hydrogen bomb. Within eighteen months the weapon had been exploded with a force of 5,000,000 tons of TNT.

DR. TELLER, usually described as the chief architect of the hydrogen bomb, has said often that the development of the weapon was a cooperative venture of great magnitude and that no man should be singled out and credited with the achievement.

Nevertheless, a review of the facts reveals that Dr. Teller's scientific brilliance, his persistence, his devotion, his obsession played a decisive role in the development of the weapon. Without him, an expert body of opinion believes, the United States might not have the bomb in deliverable form even today.

Dr. Teller is a physically active man. His face is animated. His eyes twinkle. He is witty and laughs loudly at his own jokes. He loves to play chess, the piano, poker and table tennis. He composes rhymes and he likes to hike.

Except for a slight limp, one would not guess that the scientist had lost a foot when he

slipped under a streetcar at the age of 20. He was a student in Munich when the accident occurred.

The youth had come to Munich from Budapest, Hungary, where he was born and where he had lived under the Communism of Bela Kun and the fascism of Admiral Nicholas Horthy. He had felt the sting of anti-Semitism. He knew at an early age that to get ahead he would have to excel.

Dr. Teller studied in Germany in Karlsruhe, then Munich. He received his Ph.D. in Leipzig. He studied in Denmark under Niels Bohr, Danish physicist.

The rise of Hitler meant there was no room for Dr. Teller in Germany and so, in 1935, at the age of 27, he came to the United States.

Dr. Teller was a theorist with a restless mind. He was interested in everything. He sought out other scientists, and ideas on one subject and then another were discussed. The young physicist, unlike many of his colleagues, preferred to work with others than alone.

ALTHOUGH he became interested in the theoretical aspects of the release of energy by nuclear fission, Dr. Teller hesitated a long time before he joined the atomic-bomb project. He wondered if it was morally

right to create such a monstrous weapon.

The physicist finally joined the Manhattan project. But he was far more interested in the advanced concept of thermonuclear fusion than the atomic bomb. He was assigned to do the theoretical work and was not disappointed when the project was discontinued at the end of World War II.

When the United States decided to develop the hydrogen bomb, Dr. Teller plunged back into his work — the work that resulted in that important walk to the blackboard at Princeton in 1951.

Now Dr. Teller is living in Berkeley, Calif., with his wife, the former Augusta Harkanyi, he married in 1934, a son, Paul, and a daughter, Susan Wendi.

* * *

First Local Flourmill

A CONTRACT valued at nearly one million dollars has been placed with a United Kingdom firm by Republic Flourmills Incorporated, a newlyformed company in the Philippines. Achieved in the face of world-wide competition, the contract covers the design and equipment of the first flourmill to be erected in the Philippines. When completed it will be the most modern plant of its type in the world.

Located on the Pasig River, the mill will be capable of handling some 240 tons of wheat in 24 hours, the wheat being supplied by barges loaded from freighters moored in Manila Harbour. The wheat will be washed on machinery of the most modern design before being sent to the mill for grinding. The flourmill itself has been designed to produce flour and other products of the highest quality. Bulk storage and complete warehousing machinery will be installed for the speedy and efficient handling of all products.

Although the wheat will be imported, it is hoped that the establishment of the mill will stimulate wheat growing in the Philippines.

*

Fun-Orama by Elmer



THAT MAN CLAUDIO



By Ben Revilla

AMONG THE first Filipinos to volunteer for service in the Allied army during the first world war was Tomas Claudio. He was also the first Filipino to die in Europe "to save the world for democracy." He is a hero both to the Filipinos and the Americans.

Claudio was born in Morong, Rizal on May 7, 1892. As a child, Tomas was pretty wild. He liked violence and the sports that he enjoyed had more than the usual margin of danger. He was not a model schoolboy. He flaunted openly the authority of both his parents and teachers. He also was inclined to be intolerant. But he displayed qualities of leadership and courage that were later put to good use.

The first time he ran away from home was after he received a beating from his grandfather. He was employed as an ordinary hand by the railroad company. Having saved a few pesos, he quit the job and went to Manila. He spent his time roaming the streets until his money ran out. He was forced to return to his hometown. The escapade earned him a severe reprimand from his parents and relatives.

After his father's death, Tomas quit school. He found employment in the Bureau of Prisons as a guard. There he discovered that he had a natural talent for firearms. But he was

a laggard and after sometime the director fired him.

In 1911, he sailed for Hawaii without so much as a word of goodbye to his parents and friends. He was only 17 years old then.

In Hawaii, he found work in a sugar plantation. Here he saved enough money for a boat ticket to Alaska where he tried his luck in the salmon canneries. The work bored him and the Alaskan climate sapped his health. Fed up, Tomas quit and next he found himself in Nevada where he was promptly employed as a clerk in the Reno post office. He enrolled at the Clark Healds Business College where he finished business administration.

TOMAS HAD a way with the girls. He had a long list of girl friends in Morong and later in Manila. In Hawaii, he tangled with a Portuguese girl. However, he was quite fickle and he never married.

When the United States went to war in 1917, Claudio promptly enlisted. At first, the U.S. Army refused to accept him. But because he was so persistent, the draft officer finally yielded and signed up Claudio.

He served under several

companies but when his contingent was finally shipped overseas, Claudio found himself a member of Company "K" of the 164 Infantry, 41st Division. He was twenty-four years old at this time.

He saw action in France. He was convalescing in a hospital when the Battle of Meuse Argonne began. He went back to the front lines and was killed on June 29, 1918.

His remains were brought back to the United States from France and then shipped to the Philippines where he was given a hero's funeral. He was buried at the Cemeterio del Norte.

His hometown paid tribute to the gallant young man by naming a school after him and putting up a monument. His name is also immortalized in the Nevada Golden Stars, a memorial volume of those who died in the first world war.

An American general, in a commentary to the memorial volume, wrote of Tomas Claudio:

"His name will remain fresh in the hearts of his friends and comrades. The record of his honorable service will be preserved in the archives of the American Expeditionary Forces."

* * *



Long before the Spaniards set foot on Philippine soil, the natives had played many interesting games to while away the idle hours. Some of such games survived the colonizers' influence; others have come down to the present day bearing the unmistakable marks of foreign domination. In this issue *Panorama* presents the fourth of a series. All have been derived from a *Mobilways* article.

LIKE THE bagbagto, luksong tinik is played outdoors, but it's played only by children, especially girls up to the age of twelve or thereabouts. Boys may play it only at the risk of

LUKSONG TINIK

being branded sissies. As the game involves jumping over a progressively rising obstacle, girls who are beginning to be self-conscious of their movements do not play **luksong tinik**, especially if there are boys around.

Luksong tinik means "hurdling thorns." At least three players are required. Six may play the game if they divided themselves equally into teams.

After a process of elimination (which may be a counting-out rhyme or picking the shortest sticks, straws or blades of grass), two of the players — temporarily immobilized — sit on the ground facing each other. Each one puts out a foot in front, the soles touching each other. The third player (or the other players, if more than three are playing) then jumps over the stretched feet of the two. Usually there's no difficulty here, as the hurdle is only about six inches high.

The first hurdle being negotiated, one of the two seated players next places a hand on her foot, with the thumb and the little finger fully extended. The hurdle is now higher by another six inches. In clearing the hurdle, the jumper must avoid touching the obstacle. The other seated player next places her hand on top of the hand of the other, to make the obstacle still higher.

If the hurdle is successful, the first seated player places her other hand on top of the other's. The hurdle now looks forbidding and necessitates a longer take-off and some real jumping. If only three girls are playing, the supreme test is jumping over an obstacle composed of one foot and four hands, placed

on top of each other. This may be about three feet high.

To be a fair game, **luksong tinik** must be played by children of about equal height. Obviously a long-legged girl would have an advantage over shorter ones. Sometimes an extra hand is placed over the four hands of the seated players. This extra hand comes from the third member of the team, who stands behind one of the seated players.

Once the jumper allows her foot (or even her dress) to touch the obstacle, her turn at hurdling is finished and, with her team-mate she now has to provide the hurdle. Violating the no-touch rule or losing the whole game usually does not result in some definite form of penalty for the violator or the loser; being "immobilized" and holding a difficult position while the opponent is doing all the jumping, is enough punishment in itself.

The game is played over and over until the players get tired, or the consistent loser, irked by continuous "immobilization," suddenly remembers that she has some work to do at home. She hurries away from the game amidst accusations of **Magdaraya!** (cheat). — *Armando J. Malay.*

* * *

An Eyeful of Cures

THE ancient Egyptians, Greeks and Romans had some ideas about eyesight that in this modern age of eye care seem so peculiar as to be almost incredible, the Better Vision Institute observes.

Among the remedies for eye ailments prescribed by the ancient Egyptians, for example, were swamp water and ebony shavings. The Egyptians also believed that the brain of a tortoise mixed with honey, lizard blood and bat blood helped to cure eye disorders.

Hippocrates blamed certain eye troubles on the weather. He explained that a dry winter with much north wind followed by a rainy spring with south wind would produce many eye ailments. He recommended sneezing powders and hot gargles to draw noxious fluids away from the eyes.

The early Romans believed that bread and honey were effective applications for eye disorders. A household remedy among Roman families for sties consisted of wads of soft, hot dough from freshly baked bread applied to the swelling.

Pliny, the noted Roman naturalist, wrote that "diseases in the eyes of certain beasts of burden increase and diminish according to the age of the moon."

Another Roman, a science writer named Aetius, considered the bell-mouth brandy glass effective for the cure of bad vision. He also recommended that "the pure white of egg, warmed, should be poured under the eyelid" to cure some eyesight troubles.

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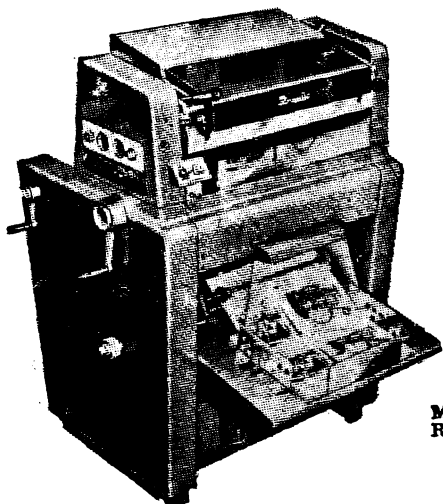
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