

Letter from . . . Chicago

Year of the Monkey

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Like all the years of all the other animals the Year of the Monkey was welcomed with fireworks, dancing, feasting, and much merry-making. The astrologers predicted untold disasters and maintained their credibility as volcanos obligingly erupted, the economy went into a recession, and a protracted heatwave claimed the lives of more than 1000 people, mainly elderly, from heatstroke, exhaustion, and dehydration. The astronomers quibbled about the problems of the Gregorian system and stand ready to delete a whole day from the calendar at the end of the next 2900 years. But the women took the leap year less seriously, by wedding later or not at all, so that 40% are now single and nearly half in the group aged 20-24 have never married. For them the single state offers more freedom and opportunities but also less security and more of a tendency of going to extremes to find meaning to their lives. Yet even the widows, who now outnumber widowers by 5 to 1, are not necessarily unhappy. In fact a sprightly 73-year-old woman recently described her long years of marriage as sheer hell and confided to a reporter that "he did me the greatest favour of my life—he died."

For Chicago, this year's census disclosed a net loss of 644 000 people in a decade, so that with a population of 2.7 million the Second City now ranks third behind New York and Los Angeles. Yet the boundaries between the city proper and the suburbs are somewhat artificial, and the total population of greater Chicago, or Chicagoland as it is sometimes called, is estimated at 6.7 million. The city proper, we learn, has a surface area of 228 square miles (1104 sq km), being slightly smaller than the sheikdom of Bahrain, twice as big as Malta, and four times the size of Lichtenstein. It also boasts three of the world's five tallest buildings, the Sears Tower (1454 feet (436 m)), the Standard Oil Building (1136 feet (340 m)) and the John Hancock Building (1127 feet (339 m)). Its population is 47% white, 41% black, and about 12% Hispanic—with the latter growing so rapidly that Spanish is becoming our second language. Statistics also indicate that the city has 110 hotels, 100 cemeteries, 62 hospitals with a total of 20 324 beds, and one murder every ten hours, which accounts at least in part for the mean life expectancy being 68.8 years, four years lower than the national. In a year of economic difficulties it is also heartening to know that not only has the number of American millionaires increased by 10%, but also that the State of Illinois ranks third behind New York and California, claiming as its own 35 500 of the nation's 574 000 millionaires.

Among events that even the astrologers could not predict was the case of a 62-year-old man, blind for nine years after a car accident, who was struck by lightning and surprised everyone by crying out that he could see. Doctors confirmed the recovery but could offer no explanation, nor were they planning to adapt

this method of electrotherapy to other types of end-organ dysfunction. The surgeons, however, successfully operated on a middle-aged woman with congenital kyphosis and removed the hump by excising two and a half vertebrae and replacing them with an eight inch prosthesis, so that the woman now stands erect and four inches taller than before. In another successful operation a 440-pound (198-kg) man had the surgeons staple off most of his stomach and lost 236 pounds (106 kg) in ten months, his capacity for eating being so reduced that he can take in only two ounces (57g) of food at a time. By contrast, an 18-year-old New Jersey girl suffering from malabsorption must eat almost every hour to replace lost potassium and other essential nutrients. The family maintains two refrigerators with food for her benefit, and her weekly food bills amount to \$170 of her father's \$250 weekly earnings. A typical breakfast includes a dozen eggs, fried potatoes, and a whole can of spam; while for lunch she eats two steaks in addition to vegetables, potatoes, and milk.

Meanwhile, in this Olympic year, a 51-year-old man with heatstroke established a possible world record by having a temperature of 116.7°F (47°C), this after being packed in ice for 15 minutes. Within two hours of gastric lavage with ice water his temperature dropped to 100°F (38°C), and he gradually emerged from his coma, but the extent of permanent brain damage remains unknown. Possibly another record was established by the physician to the late Elvis Presley, who lost his licence when it came to light that in the 20 months before the singer's death he had prescribed a total of 10 000 psychoactive pills. Then there was a report of a case of paralytic poliomyelitis in Chicago; and a patient with multiple sclerosis in Kentucky was so unfortunate as to have his iron lung stolen. On the surgical side was the news that two young boys, Bryan and Ryan, were the victims of a mix-up in the operating room and underwent each other's tonsilectomy and bladder repair; while in Philadelphia two women accidentally swapped a cervical laminectomy for a parathyroidectomy. On Long Island, there was the bizarre case of a woman with four children fathered by different men filing a paternity suit against one of them, only to discover from the tests that the infant was neither his or hers. In Nashville a woman was awarded \$2000 damages for persistently dreaming that giant soft-drink bottles were chasing her, a form of "post-traumatic stress neurosis," the psychiatrists said, precipitated by a coca-cola bottle exploding in her hand. And an Illinois antique shop owner, who paid \$450 for an old casket in an auction, found in it a 100-year-old skeleton. At first he thought of exhibiting the open casket and its contents with a sign "People are dying to get in here," but his publicity scheme had to be cancelled when the coroner confiscated the find.

In February the Food and Drug Administration (FDA) announced that one-third of the 278 million radiographs taken each year were unnecessary and cost the "consumer" \$2 billion. The report suggested that people had too many radiographs of the skull after trauma, too many dental films, and too many pre-employment, routine, or obstetric radiographs as well as

mammography in the under 50s. Radiography technicians added to the excess radiation by overexposing the films and by repeating 5-10% of radiographs because of poor quality. The FDA astrologers further predicted that cutting down the number of radiographs by one-third would prevent 1000 cancers a year; and, always in the forefront of attacking the medical profession, they blamed the doctors and dentists, accusing them of ignorance. Their cries were only too readily taken up by the press with headlines such as "The zapping of America: millions get unnecessary x-rays." The American College of Radiologists strongly disagreed with the FDA findings, but later a Congressional report also found excessive use of radiation, focusing on poorly performed examinations but also noting that too many radiographs were ordered. Doctors no doubt mused that it is easier not to order a radiograph than to order one, wondering who will protect them from more malpractice suits. But the bureaucrats merely fell back on their usual standby of more and more education, for doctors and technologists and of course for the consumers—who, *mirabile dictu*, should not demand a radiograph and not even decide that they need one.

Talking apes

In September came the news that Beta, a lowland gorilla at the Chicago Zoo, had given birth to the first baby ever conceived by artificial insemination—an encouraging event because gorillas are now an endangered species. On a more negative note was the news about Nim Chimpsky, whose surname suggests a Slavonian connection but who in fact was born in rural Oklahoma. Moving to New York at an early age, he grew up in a large house with private grounds, where he enjoyed the benefits of an excellent education. He was driven to school three to five times a week, and during his four years in New York he was taught by 60 instructors. Yet despite these advantages Nim made unsatisfactory progress. He never quite learnt the principles of syntax, and despite having acquired a vocabulary of 125 words he failed to combine them into proper sentences, but mostly imitated what his teachers had just signalled. Unable to grasp the niceties of conversation, he constantly interrupted his instructors with strings of nonsense words. Yet he rarely initiated spontaneous conversation, except when expecting to be fed, hugged, or tickled, and even then only when simply grabbing did not evoke the desired reward. Unlike his Georgian confrères, Sherman and Austin, who seem to communicate through a keyboard of geometric symbols, Nim hardly ever signalled to other monkeys who might have understood him, unless the teachers were present. His linguistic output remained at the level of three-sign combinations that usually included "Nim," leading psychologists to conclude that he could learn only isolated symbols and that he never progressed beyond the understanding of a trained dog. At last, a shortage of teachers and baby-sitters resulted in his being shipped home to the backwoods of Oklahoma.

Nim's brother Ally displayed equally poor scholastic ability; and the failure of the Chimpsky brothers casts a shadow on the earlier students who had so handsomely rewarded the efforts of their pedagogues. For had not the famous Washoe mastered hundreds of signs and even called swans "waterbirds" and watermelons "drink fruit"? Had not the brilliant Lane signalled in Yerkish that cucumbers were "green bananas" and oranges "orange apples"? And had not the intelligent Koko surpassed the achievements of Washoe and Lana and Sarah by learning 400 signs, by making up clever little rhymes, and by being filmed while chattering with her pretty instructor in a new version of *The Beauty and the Beast*? But now all this monkey business about apes talking is back to square one; the ape trainers are at each other's throats; and the very basic concepts of language are being challenged. So that while Koko's mentor now believes that "language is no longer the exclusive domain of man," reflecting the "age-old burning desire of mankind to take up language contact with animals," others are not so sure.

Tempers were running high at this year's meetings of the ape-language experts, where the word fraud was whispered, motives were questioned, and harsh words were uttered. Sceptics pointed out that before talking apes there had been talking dolphins, cats, dogs, and horses. It was suggested that some of the results might be explained by self-deception or involuntary cueing, the so-called Clever Hans effect. And it was recalled that Clever Hans, a famous circus horse, was thought capable of solving mathematical problems by tapping out numbers with his hoof, until a psychologist discovered that he was responding to the involuntary nodding of the trainer's head, being able to detect head movements of less than one millimetre.

The linguists also disagreed about the methods used in the studies and about the appropriateness of comparing chimpanzees with young children. Some pointed out that infants were also prone to interruptions, repetitions, imitations, redundancies, and the stringing up of nonsense words. Might not chimpanzees be capable of further progress if allowed longer periods of training? Beyond this, there was much debate about the nature of words and sentences, about different types of communication, and about symbolic and representational language. Clearly, the last word about the talking apes has not yet been written.

Happy endings

There were also two other items of interest this year, both with happy endings. A 26-year-old man, who had sustained a car accident in 1976, remained for three months in a deep coma. His fiancée, ignoring the advice of her friends and doctors, gave up her job and devoted herself entirely to nursing him. Eventually the man recovered, though still walking and talking with some difficulty. In 1978 the pair married and this year they became the proud parents of a baby girl. The other story is about a young man who raised snakes at his house and who stood by helplessly as his favourite krait wasted away from a chronic disease, not having eaten for two months. At last he tried to feed him, but the krait bit him on the hand. Rushed to hospital already unable to see, his hand was paralysed, and skin tests indicated hypersensitivity to horse serum. Fortunately a doctor remembered that closeby lived another snake collector, who had immunised himself against 26 different types of venom, who had meticulously kept up his active immunity, and who had been bitten three times before by kraits. The man was found and willingly donated a pint of blood—a favourable outcome that could not have been foreseen even by the soothsayers in this Year of the Monkey.

What is your expert's advice on negative ion air fresheners?

Ions (electrically charged atoms) in the air arise from cosmic radiation and the radioactive decay of materials in the earth's crust, this latter particularly contributing to the ionisation of indoor air from the building materials, which produces about 10 pairs of ions per cc per second. This can be raised artificially, notably by radioactive ion generators. Positively ionised air has been claimed to decrease ciliary activity and dry the respiratory mucosa, in addition to liberating serotonin. More careful studies, however, fail to confirm these effects on the ciliary movement in both in-vitro and in-vivo studies. In the present state of knowledge, therefore, it appears that careful scientific investigation has failed to show any effects of any experimental basis for applying ion conditioning in homes, places of work, etc. Furthermore, it would be technically difficult to produce an appreciable increase of the ion concentration in room air due to the rapid decay of ions. Earlier studies claiming physiological effects on the airways from ions do not appear to have controlled adequately other variables, temperature and humidity. There seems to be no scientific basis for this treatment.

Andersen I. *Mucociliary function in trachea exposed to ionized and non-ionized air.* Aarhus, Denmark: Akademisk Boghandel, 1971.