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Civilization

By ~~NICHOLAS ROERICH~~

How proud we are of our culture! In what lofty terms we praise our civilization! With what hopes we look forward into the future!

Meanwhile our reason assures us that Culture can exist provided it is founded on a widening of consciousness; that civilization can flourish provided it be based on certain healthy principles.

A better future must be based upon a renovation of life itself.

In the past, man's efforts seem to have evolved in two opposing directions. On the one hand he has striven to obtain mastery over the wonderful energy known as thought; on the other his efforts have ended in suffocation from poison gas and bombs, or poisoning from the fumes of furnaces and factories.

In some of his recent essays on atmospheric dangers V. Tatarsinov has called attention to the many ailments due to negligence on the part of those responsible for the public welfare.

Quite apart from the quality of their foods, which may be good or bad, city dwellers are being systematically poisoned and the danger would seem to come from the air itself.

All day long, whether in the house or in the street we are breathing that deadly gas carbon monoxide, the imperceptible and odorless character of which makes it all the more dangerous. It is the gas which emanates from our stoves, that which is often resorted to by suicides, and when formed in large quantities, it is responsible for mine explosions and the death of colliery men.

There is a whole series of industries—the chemical, metallurgical, glass etc. which suffer in this respect, and the danger exists in all industrial plants where carbon monoxide exceeds the ratio of 1 in 90,000.

Portable stoves, slow combustion stoves and the kerosene gas heaters of our bath rooms all constitute a danger and should be carefully regulated.

In the opinion of Prof. Piavo who has made a special study of this question, the central heating of all houses over 15 years ought to be carefully overhauled to see if any noxious gas is being given off.

Dr. Fesange describes two cases of a mysterious ailment in which the patient complained of headaches, fainting, and asthenia, and in which no treatment proved of any avail.

The doctor then, had an architect called in to repair the central heating, after which the patients quickly recovered.

The closed car, which is all the fashion today, is a real danger. However perfect its construction, it is impossible to prevent a leakage of gas and this is why women who are generally more sensitive than men often complain of dizziness, nausea, and fainting.

The danger however exists out of doors as much as within, since the smoke from the city chimneys mixes with the exhaust gases of the motor traffic, so that when the streets are narrow and the buildings lofty, the result is particularly harmful.

An analysis of the air in the busy quarters of New York shows that carbon monoxide is present in the proportion of 1 part in 10,000 that is, five times more than is admissible from the hygienic standpoint.

And what is the result of such a poisoning? The greatest danger resides in the fact that its evil effects are hard to trace. In the first place, it has a tendency to aggravate all the ailments or diseases from which an organism may suffer, even those which are latent. Those who suffer from dyspepsia begin to vomit. People troubled with insomnia soon find that their case has become chronic, and those afflicted with rheumatism that their pains are on the increase.

One of the most striking symptoms is a swelling of the stomach, which shows that the organism is striving to protect itself by the deposition of fat. The general effect then, is so varied and far reaching that we are apt to overlook the cause which, more often than not, emanates from a badly regulated stove.

Prolonged poisoning by carbon monoxide however, will produce very serious consequences such as general anemia and angina pectoris, cases of which have already been detected in France and Germany.

In December 1930, all Northwest Europe from Finland to the Danube, and from the Netherlands to central France was enveloped in a dense fog formed by the mingling of moist sea air with the cold low lying atmosphere of the Continent. Trains were behind time, radio was held up, and as the visibility did not exceed fifty meters, vessels were tied up in port.

In the happy valley of the Meuse, near to Liege, the situation was tragic. Farmers working in the fields beheld a dense wall of black fog bearing down on them, and many were soon seized with pains in the throat and violent coughing.

Terrified by the sight of this gigantic wall of fog, the people rushed for their houses and many died in violent pain as if they had been burnt alive.

The population, seized with panic, remained at home, the windows barricaded with cushions and mattresses. Medical relief services were organized, oxygen tanks placed in the houses and gas masks distributed.

After the fog had gone, trained specialists, with the help of local magistrates, began their investigations. Similar phenomena had already occurred near Liege in 1911 and 1913 when some of the more aged among the miners and many domestic animals succumbed.

On a cloudless spring day in 1925, in the district of Wipperfurth, in the Rhineland, a dense black fog appeared, temperature suddenly dropped and an odor of sulphur and chlorine filled the air. Scores of people suffered from spasms, and two men, who had been gassed in the war, succumbed. Many birds died and thousands of fish floated to the surface of the rivers.

All sorts of theories arose to account for this "fog asthma". Some considered it to be an inflammation of the lungs although such an epidemic was unknown; others held that it was due to malignant bronchial diseases, brought on by dust from the Sahara; while there were many who imagined it arose from poison gas which had been let loose by malevolence.

Whatever be its density or temperature, fog, in itself, is never likely to cause death, but, in this particular case it had mixed with the poisonous miasmas rising from hundreds of metallurgical and chemical factories in the Meuse valley.

As a rule, such gases are volatile and disperse in the atmosphere. On this occasion however, a sharp fall in temperature caused them to precipitate and the dense fog which prevented the zinc oxide and sulphur anhydride from evaporating proved fatal to those who breathed it. One should remember that sulphur anhydride, mixed with moisture, can precipitate sulphuric acid on the earth.

The discharge of poisonous fumes from the Meuse valley is no worse than that of the London industrial zone, but in London the atmosphere is usually warmer so that the warm currents carry off the poisonous gases.

The case of the Meuse valley is, of course, exceptional, but, unfortunately, the dwellers in all our great cities live in the very worst conditions which, if not so fatal as those of the Meuse valley, are, all the same highly pernicious.

"Danger from the air" is, as a matter of fact, a very real danger. Sunspots are not so much to blame as the spots on man's conscience. The experienced teacher will tell you not to give dangerous playthings to children and, the same may be said of the gases and energies which we handle so irresponsibly.

These warnings are not issued by conservative and reactionary minds, but by those who consider that the only progress is that which promotes the health of humanity.

Whole cities are being destroyed to-day without any declaration of war. As Eden has recently remarked, the time is approaching when people will seek refuge like troglodytes in their caves. They now propose to safeguard museums and churches with sand bags which, in addition to sand, will also contain the disillusionments of humanity.

People often speak of hiding art treasures underground and in primitive times we find the same tendency to bury treasures.

Despite all our modern progress it is astonishing that we have to revert to the condition of cave dwellers and the days of buried treasure.

What is likely to happen to civilization? and why be indignant for the crimes of the past when such revolting practices are going on today?

"Danger from the air" there is no doubt about that! "Danger from hearts of stone" there is much in that too. But where is our Lady of Civilization? Why does she keep silence, why does she tolerate all such horror and destruction?

We should not blame the sun spots, for those on man's conscience are much more dangerous.

"Quicker, quicker"—per aspera and astra—to the gateways of Culture."

One of our gifted collaborators writes "Generally speaking I should like to see everything grievous and difficult for humanity which lies ahead take place more rapidly, so that the united spirit can clear the way for greater speed and enable us to progress to the utmost of our forces. There is so much terror around us, so many signs of evil that I am urged to exclaim 'quicker'. More and more the impatient spirit is dissatisfied, although I am not sure whether this is good or not."

His wide outlook allows him to detect all those accumulations which are beginning to stifle mankind and he wishes to accelerate things.

He tells us that "Diseases are reported to be on the increase and dentists are surprised at the number of cases of inflammation. Snow fell in Paris at the end of May, and in Tokio there were hailstones of the size of a two shilling piece. A simple peasant some time ago told a friend of mine 'to go abroad', his instinct told him that it was necessary to get away".

Everywhere to-day there is confusion. And not only dentists but eye, throat and lung specialists speak of the increasing number of inflammatory diseases, and cases of heart trouble and tension are common enough.

Our collaborator asks if we have received a book on the Apocalypse. We have not seen it, but all that is taking place to-day is highly suggestive of the Apocalypse.

We have but to read the articles in our daily papers to meet with Apocalyptic signs.

Only those who are blind or deaf are unable to realise the intense nature of the times so that even a simple peasant is urged to emigrate.

All those who are conscious of this not only wish to be on the move but are urged to increase their efforts for the general welfare, to go quicker.

They realize that without extreme measures abscesses cannot be cured, otherwise the infection will only grow all the more serious and finally infect the whole organism.

The experienced surgeon, when he finds that an organism is dangerously infected, wishes to hasten with the operation since he knows that the decomposition that has set in ought to be dealt with immediately.

If the simple-minded are urged to abandon civilization, you may be certain that the same sort of depression is present in others.

Many are ready to let everything go, but our collaborator, whose character is naturally constructive, is not willing to lose all, and his desire is to go on with the work of renovation as fast as possible. Let the operation be over and done with so that we can think of the future and strive towards it with strength renewed by danger.

People, when confronted with danger, generally fall into two categories. Some are afraid of thunder and lightning. They stop their ears and after drawing the blinds hide themselves from the magnificent spectacle. Others are too exhilarated and enraptured by the beauty of the storm to care whether the lightning strike them or not, whereas all who hide themselves away are no doubt concerned about their 'precious life'.

Imagine these sort of people in battle and you will find the same evasiveness.

They will shelter themselves behind all sorts of considerations, they will be unwilling to advance, not having had time to decide whether it is really necessary for them to expose themselves to danger. They are never up to time and, in fact, will always discover reasons for being late, and for evading great achievements.

Tortuous are the ways of evading what is good, and the most sacred principles will not be spared. Just as a madman will show

extraordinary resourcefulness and endurance and a lunatic be able to cross an abyss on a narrow plank, so will fear drive people to acquire fresh resourcefulness.

Such people are hardly those who cry 'quicker, quicker', on the contrary they will seek all sorts of pretexts for delay.

They never, as a matter of fact, recognize their own true motives, but invent all sorts of excuses and are even ready to abuse those who call out 'quicker', all those who are not afraid of lightning.

With such people, this may be due to their natural character, or is the result of their remote past; or again, it is the outcome of what weak-willed people have experienced during their lifetime. Perhaps their parents were afraid of thunder and lightning or the child may have seen others struck down with terror.

From childhood such nightmares must have been making their way into the innermost folds of the spirit, and if there are no examples of courage, valour and fairness to counterbalance these tendencies, then the spirit succumbs to what is negative.

All this is nothing but the formation of bad habits.

Education should, before all else, aim at eradicating bad habits, and for this, there is nothing like personal examples. Sometimes insignificant bad habits result from serious mistakes, but daily example can drive out these seeds of decadence and even an ailing organism can be cured.

In his later years Pushkin remembered with gratitude his old nurse for the fairy tales she had taught him. Such tales are wonderfully stimulating because they carry with them an air of adventure and wonder which extends the bounds of the possible.

When you are told "Do not regret delay" it means that what seemed a delay to you was not so in reality. There can be no harm, however, in wishing to accelerate everything that tends to the general good, but we must remember we are not the only ones who have difficulties, and that constant vigilance should be our devise, since vigilance alone gives that sense of joy which overcomes all the dark ways of life.

When someone exclaims "quicker, quicker" then it means that despite all difficulties ahead of him, he is devoted to the general good.

His cry is not one of despair, it is not one of the sheep who sees the knife held over him, rather is it the lion-like roar of achievement. It is the song of songs, the aspirant cry of 'quicker, quicker' the song of the heart, which, on earth, as in heaven, responds to the same august call of daring.

CIVILISATION

BY NICHOLAS ROERICH

WHAT pride is displayed on account of culture! What high-flown words about civilization! What hopes looking into the future!

Meanwhile the voice of reason reiterates that culture is possible through the broadened consciousness and that civilization can flourish upon sane and healthful principles; a better future requires a renovation of life.

Man's quests have been proceeding in two diverse directions. On the one side is the admirable mastery of the energies of thought; on the other, suffocation not only by the gases of ruinous bombs but also by the fumes of his own furnaces, motors, and factories.

In his recent essay upon atmospheric dangers, V. Tatarinov rightly calls attention to the many afflictions caused by carelessness and lack of leadership of civilization.

City Poisons

Every day city dwellers are subjected to a systematic poisoning; our food, whether good or bad, is of no concern here, for the peril comes from the air itself. Each day we breathe the deadly gas, carbon monoxide, both at home and in the city streets, and this poisoning goes on regularly but imperceptibly for the reason that this gas is odourless. It is that same gas which is resorted to by suicides who employ stoves for the purpose, that gas which is formed in enormous quantities in mine explosions and conflagrations and from which perish the colliers who happen to be in the mine at the time, to whose help rush rescue parties.

There is a whole order of occupations which constitutes real danger in this connection, chemical, metallurgical, glass-working; such danger exists in every sort of industrial plant where the carbon monoxide content in the air exceeds the proportion of 1 part in 90,000.

All sorts of portable stoves of the slow-cum-bustion type and those burning kerosene, gas heaters for bathrooms, etc., all these are capable of constituting no small danger and they should be watched and regulated very carefully. In the opinion of Professor Piavo, who has made a special study of this question, in all houses more than fifteen years old the heating facilities should be thoroughly inspected to see that noxious gases are not being given off anywhere within the dwelling. Dr. Fesange describes two cases of a mysterious ailment, when the patients complained of constant migraines, vertigo, and asthenia, and no treatment proved effective. At the physician's suggestion an architect put the heating plant to rights and the sufferers quickly recovered.

Closed Cars

Likewise the closed automobile, so fashionable currently, constitutes a menace in this respect. No matter how perfect its construction, it is impossible to prevent leakage of gases which collect in the small enclosed body of the automobile, and women, more sensitive than men, often complain of dizziness, attacks of nausea and fainting.

But the danger lies in wait for us not only in closed compartments but also out of doors, where the smoke arising from chimneys mingles with the exhaust gases of automobiles. In cities where the buildings are lofty and the streets comparatively narrow, motor traffic multiplies and the resultant effects can be extremely serious. Analysis of the air in the busy traffic arteries of New York has shown a carbon monoxide content of 1 part in 10,000, that is, five times greater than the amount admissible from the viewpoint of hygiene.

What will be the consequences of such protracted poisoning by carbon monoxide? The great harm is in the fact that with the exception of pronounced cases, these effects make their appearance in such a way as to make it extremely difficult to diagnose their cause. Such empoisonment by gas first of all promotes in its own way the activation of all maladies already existing in the organism, either evidently or latently. With people suffering from poor digestion, this is still further aggravated, far exceeding their former attacks of nausea. With people afflicted with sleeplessness, their insomnia becomes a chronic state of affairs; with rheumatics, their pains increase in frequency and strength, and so on. One of the curious signs of gas poisoning is abdominal obesity—the organism is striving to protect itself against the poison by the deposition of fat.

All these symptoms are so uncharacteristic that one is not always likely to suspect that their cause is a poorly functioning stove. But prolonged systematic poisoning by carbon monoxide draws after it still more serious consequences—general anaemia and even angina pectoris. Several cases of the latter, unquestionably caused by such poisoning, have been described in France and Germany.

A Lethal Fog

In December, 1930, all North western Europe, from Finland to the Danubian lowlands and from the Netherlands to the central plateau of France, was covered with dense fog formed from the mingling of moist sea air with the cold lower layers of the continental atmosphere. During those days trains ran behind schedule, radio communication was interrupted, and even steamships chose to remain tied up in port, since visibility from shore did not exceed fifty metres.

In the picturesque valley of the Meuse, in the vicinity of Liege, this fog caused real catastrophe. Farmers working in their fields suddenly saw rolling down upon them the dense dark wall of mist and experienced sharp pain in their throats, accompanied by stifling coughing. Terrified not only at these painful manifestations but also at the menacing wall of fog, people rushed into their homes. For several hours scores overtaken by the mist expired in horrible torment, crying out that it was as if they were being burned alive.

Panic mastered the populace, none dared emerge from their houses, the windows and doors of which were barricaded with cushions, mattresses, and chests of drawers. Incoming medical authorities organised medical relief services, placed oxygen tanks in the houses, and issued gas masks. When the fog had dissipated, trained specialists and local magistrates began investigation.

Analogous manifestations were already known in the neighbourhood of Liege in 1911 and 1913; at that time several elderly miners and a great number of domestic animals were victims of the fog. In 1925 in the Rhineland, in the district of Wipperfurth, amid a cloudless spring day, there suddenly formed a dense black mist, the temperature dropped sharply, and in the air there was the odour of chlorine and sulphur. Some scores of people experienced spasms of suffocation and two men who had suffered from gas attacks in the war perished. Many birds were destroyed and thousands of dead fish came floating to the surface of the streams.

A multitude of hypotheses were advanced to account for this "fog asthma"; some predicated an epidemic of inflammation of the lungs, though such an epidemic was un-

precedented; others an epidemic of malignant bronchial grippe, a dust-borne plague brought by winds from the Sahara and having a pernicious effect upon the lungs; unidentified poison gases loosed by persons unknown, and so on.

Whatever its density and temperature, fog in itself constitutes no danger and cannot occasion death; but in the Meuse valley it mingled with poisonous vapours arising from the chimneys of countless metallurgical and chemical plants. Ordinarily these gases, because of their volatility, are dispersed in the atmosphere, but in the case cited, due to the sharp lowering of temperature, they began to cool and condense, and the dense mist did not permit the dissipation of zinc oxide and the fumes of sulphur anhydride; both these could prove deadly to the respiration. It is enough to point out that sulphur anhydride, mixed with droplets of moisture, would precipitate sulphuric acid upon the earth.

The discharge from the factory chimneys in the Meuse valley is no more noxious than that of the London industries area, but in London the air is warm, and its warm rising currents ventilate the atmosphere and carry off the poisonous gases.

The case in the Meuse valley is indeed exceptional, but unfortunately for the dwellers in large cities, they are obliged to live in conditions which, though not so exceptional, are no less pernicious for our respiratory tracts.

Where Lies the Fault?

"Danger from the air" is in

reality an imminent forewarning. Sunspots are not to blame, but spots on man's conscience. The experienced pedagogue counsels: "Do not give children dangerous playthings." The same must be said about gases and energies lightmindedly drawn out of space. In reality such warnings are not at all issued by retrogressors who deny everything new. On the contrary, those who seek the new should see to it that it promotes the health of humanity.

Even without declaration of war entire cities are being destroyed. As Eden rightly remarks, the time is approaching when people, like troglodytes, will seek refuge in caves. They safeguard museums and churches by surrounding them with sand-bags. Besides sand, these sacks also contain the disillusionment of humanity. People speak about concealing artistic treasures underground. They thought likewise in remote antiquity, when they buried their valuables under the earth.

Is it not truly strange that, despite all the contemporary discoveries, thought must revert to cave-dwelling troglodytes and buried hoards? What then will become of civilization? And why wax indignant over some vandalisms in times past, when without any vandals one can enumerate most revolting destructions going on right now?

"Danger from the air"—this is true. "Danger from heart of stone"—this likewise, and timely. But where then is Lady Civilization? Why does she keep silent and give shelter to everything horrible and