

Walt Whitman

(from 20th Stanza)

Whitman
In *Leaves of Grass*

Fast and in a challenging way

ff Who goes there? Han-ker-ing, gross, mys - ti - cal and

ff l.h. **p**

f evenly, and with strong beats

nude; **ff** How is it I ex - tract

ff strength from the beef I eat? What is man, an - y - how?

We are happy to publish this song by Charles Ives, the noted American composer, honoring the memory of a great American poet, Walt Whitman, the 137th anniversary of whose birth is being celebrated May 31. Readers will find an evaluation of Ives'

What am I? What are you? All I mark as my own, — you shall

off - set it with your own; — Else it were time lost a-listening to
gradually faster, but no decrease in volume

me.....

accl. non decresc.

[1923]

work on page 28. The song is reprinted by permission of the copyright owner, from "Thirty-four Songs by Charles Ives," published by New Music Edition.

the *Antonis*. The captain leaned over the rail. He had stayed aboard alone. He swore at them, he consigned them to hell. He was still in command of his ship, he yelled.

It lashed them like a whip. The boats shot toward the wreck. They poured over the deck before the captain could fire. Perikles knocked the gun out of his hand, closed with him and heaved him overboard. He came to no harm, as the ship lay over on that side, and he rose to the surface again fast enough. No one took any notice of him. He swam to a wherry, climbed in, cut the hawser and rowed away. He was not unduly worried. The cruiser *Aspis* had picked up his appeals for help, and she would soon be there.

The peasants swarmed over the ship, shovelling the grain into baskets and boxes, sacks and pails and anything else that would hold it. They dragged it on deck and, as each tried to carry as much as he possibly could, wrestled and fought and yelled. The small boats were so overloaded that they threatened to sink on the spot. Only some of those who had invaded the wreck could return to the shore. After much tussling and swearing, they finally decided who should go and who should remain on the *Antonis* until the boats came back for them.

Those left behind searched the wreck but found only a couple of bottles of gin, which they drained to the captain's health. They stood around on deck. As they waited, they realized their danger. Beneath their feet, the water's hundred tongues licked and gurgled farther and farther into the hold. Impatiently their eyes followed the boats' slow and clumsy passage to the cove. Some of them spoke aloud what many of them were thinking: "We'll drown here while they're filling their bellies."

From the other side of the ship they heard a whistle. Perikles was pointing to a spit from behind which the smoking funnels of a warship suddenly emerged. They stiffened. They saw a motor launch put out from the cruiser and pick up a man from a tiny skiff—the captain of the *Antonis*.

ABOARD the warship, the captain discharged his fury. Beneath the quizzical, impertinent gaze of the elegant officers of the *Aspis*, he raged about piracy and robbery, criminals and gangsters. The *Aspis* bore down on the wreck. Her commander knew all about dealing with pirates, and he ordered



Jack Levine.

the forward gun turret to clear for action. It was a pleasant interruption of his perpetual boredom.

When he received no report that his orders had been carried out, he angrily sent his first officer to investigate. The officer returned, looking worried. He had had to witness the turret crew lounging around, hands in pockets, smoking, answering the deck officer's orders with passive resistance, he reported.

Meantime, the *Aspis* had semaphored the men on the *Antonis* a request to surrender and abandon the wreck at once. But the sailors on the cruiser waved to them, indicated they were friends.

On the bridge, the two captains stared at each other. The captain of the *Antonis* grinned contemptuously, infuriating the commander of the *Aspis*. He ordered a couple of officers to man the after turret with a reliable crew. The mutineers forward did not try to stop them. The barrels of the after turret veered and menacing muzzles stared at the wreck.

The men on the *Antonis* woke from their terrified paralysis at the appearance of the cruiser. They fell into a feverish and unmeaning activity. Some jumped into the sea and tried to swim ashore. Others got drunk. Others tried to beckon to the boats to come back and take them off. Others again dragged grain sacks on deck and cowered down behind them. The rest simply stared tensely at the *Aspis*, try-

ing to make out what was happening. Perikles, who had once been in the navy, answered the semaphore with an appeal to the sailors to help those on the wreck, and hope flared in those on the *Antonis* when they saw groups of sailors hurrying towards the after turret.

But the sailors had decided to storm it too late. Their move made up the captain's mind. He gave the order to fire. The first shell flew over the *Antonis*. But the second crashed in a hail of steel into the wreck and blew it to pieces. The fragments sank into the tossing water, along with a couple of thousand tons of grain and two score hungry peasants.

The mutineers on the *Aspis* were overpowered; the salvaged grain on the Vitica beach was confiscated by the gendarmes, who had now regained their courage. Weeks later, the women of Vitica came down to the shore to seek the bodies of their men. Metiza was with them, although her husband sat comfortably at home, for he had stayed over in Athens that terrible day. They did not find the body of Perikles. Among the villages along the Vitica coast there runs a tale that those who pass along the beach by night can see him there, leaning on his staff and gazing out to sea.

Metiza does not believe the story. She has been to look.

Translated from the German by Alma Uhse.

THE MAKING OF SCIENCE

A discussion of Engels' "Dialectics of Nature." Marxism offers a full theory of progress emphasizing the creative character of man.

By DIRK J. STRUIK

MARX and Engels were always deeply interested in the progress of science and its relation to philosophy. Marx's earliest work, his doctor's thesis of 1841, written at a time when the young Hegel pupil was still busy finding his way from idealism to materialism, analyzed the differences in the teachings of Democritus and Epicurus, the leading atomists of antiquity. As early as 1851 we find Marx in correspondence with Engels on the application of electricity to agriculture. Both Marx's and Engels' books, as well as their correspondence, abound with references to natural science, its history, its application, its meaning; and even in November 1882, on the eve of his death, Marx reveals his excitement because of Deprez' experiments demonstrating the possibility of long-distance transmission of electricity.

It was Engels who, in the division of labor tacitly accepted by the two friends, found himself specially assigned to the domain of natural science and its philosophy. He was not impelled into this field by a pure desire for knowledge alone. His responsibilities in the Manchester branch of the textile firm of Ermen and Engels had increased considerably about 1858. In this period, the chemistry of dyes was rapidly advancing, mainly through the work of Justus Liebig in Germany. A pupil of Liebig, A. W. Hoffmann, had founded a chemical institute in London, where several young men had followed him, among them Karl Schorlemmer. With Schorlemmer, Engels established a lasting friendship, based not only on a common love for chemistry, but also on a common outlook on life. Schorlemmer "only had to learn from us the economic foundation of a conviction acquired a long time before," wrote Engels after Schorlemmer's death in 1892. The influence of this man, who should be better remembered among socially-minded scientists, is seen in the ease with which Engels manipulated his chemical terminology.

This turn to the study of natural science was accompanied by a renewed interest in Hegel's dialectics. In 1858, preparing the *Critique of Political Economy* with its famous preface on historical materialism, Marx wrote to Engels that the method of his work had been substantially influenced by a renewed scanning of Hegel's *Logic*. His words found Engels in a receptive mood: "Do send me Hegel's *Philosophy of Nature* as you promised," he answered. "I am now doing some physiology and shall combine it with comparative anatomy. There are some highly speculative things here, all of which, however, have only recently been discovered. I am very eager to see if the old man did not scent something of them. This much is certain: if he had a philosophy of nature to write today the facts would fly into his hands from every side."

The conclusions to which Engels' study led him are mentioned in his *Ludwig Feuerbach*, in his *Anti-Duhring* and in his *Dialectics of Nature*, all works of a later period. "The old metaphysics," he wrote, "which accepted things as finished objects arose from a natural science which investigated dead and living things as finished objects. While natural science up to the end of the last century was predominantly a *collecting* science, a science of finished things, in our century it is essentially a *classifying* science, a science of the processes, of the origin and development of these things and of the interconnection which binds all these natural processes into one great whole. Physiology, which investigates the processes occurring in plant and animal organisms; embryology, which deals with the development of individual organisms from germ to maturity; geology, which investigates the gradual formation of the earth's surface—all these are the offspring of our century." We may add that it is hardly correct to call our present-day science still a "classifying" science, though much

classifying and even collecting takes place all the time. Twentieth century science is a *dynamic* science, with the emphasis not on classifying, but on *creating* processes, a trend which Engels clearly foresaw.

The great discoveries of the nineteenth century, such as the law of transformation of energy, the principle of evolution, or the discovery of the cell, were not only of paramount importance for the future application of science to human welfare, but they also established new possibilities to broaden the outlook of science. Engels pointed out how these discoveries established new and fundamental relations between fields hitherto separated. Plants and animals, formerly considered as divided into isolated species, now were found to have a common physiological structure in the cell, and a historical and genetic relation in their evolution. Heat, mechanical motion, electricity, light, magnetism, formerly conceived as separated phenomena of nature, now were found to be related to each other to such an extent that under proper conditions one form of energy could be transformed into the other. Isolation was being replaced by relation, simple affinity replaced by multiple relationship, and the manifold group of different scientific fields were shown to be different aspects of one objective and inexhaustible reality. The point of view of isolation, the metaphysical point of view, had more and more become impossible.

THUS was the materialist dialectics of nature established as an analysis of the significant trends in nineteenth century science. Hegel had foreshadowed it, though he saw dialectics only in the human mind. Marx and Engels saw the relationship of the varied forms of science as reflections of objective relationships in a world outside of man, and demonstrated before our eyes in the laboratories and the scientific treatises. This allowed them to grasp the