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# KEIR HARDIE

TO read about the period of history immediately preceding the first world war is today something like entering a world of dream. Things were different then, and human hopes seemed so much more realizable. This reflection is prompted by a reading of Emrys Hughes' *Keir Hardie*, the life of the British socialist, labor leader, and principal founder of the Independent Labour Party. Hardie was Britain's Debs, like Debs in his personal devotion to the fortunes of the working man, like Debs in his uncompromising opposition to war. We sent to England for a review copy of this book (published by Allen & Unwin), since it seemed inconsistent to have a great admiration for Debs and to remain ignorant of Keir Hardie.

We are no longer ignorant of Keir Hardie. In fact, having read his life, we are inclined to say that, during the years of his activity in British political life, both vision and integrity had incomparable representation in British affairs; that without this man, England would have been almost without a conscience to tell the truth to Englishmen.

Mr. Hughes' book need not be read only as the life of a political leader, although that is what Keir Hardie set out to be, and was. Political issues pass, political aspirations change, but the stature of a man of character remains forever admirable. Compromise was not in Keir Hardie. He knew only the language of his cause and served only its needs.

Not many of the things Keir Hardie fought for are issues today. Reforms and a season of labor government have seen to that. Socialism, at present, has a significance different from its meaning to Keir Hardie. And different, also, from what it meant to Gene Debs. There are a number of socialist and semi-socialist states in the world today. They are not, alas, very different from the capitalist states, and some of them are worse than the capitalist states, in respect to human freedom.

What destroyed the vision of the socialists? There were expectations, perhaps, that could not come true, but these are details alongside of the socialist compromise on war. World War I made a prison convict out of Gene Debs, it brought the assassination of Jean Jaures, and it broke Keir Hardie's heart. As a humanitarian movement, socialism has mattered for very little since.

Hardie was only fifty-eight when the war broke out, yet, as Fenner Brockway put it, he "seemed an old, old man, crumpled in body and broken in spirit." Ramsay MacDonald said:

> The war struck Hardie like a physical blow and a spiritual blight. He had had such faith that the international forces of the working class would resist it—and now in every country the Socialist leaders were voting war credits and urging their followers to fight. Hardie was utterly crushed by the tragedy of it.

Hardie's last long article in the *Labour Leader*, a weekly he had founded as a miners' journal twenty-eight years before, concerned the war. In the issue of March 25, 1915, he wrote:

> With a self-reliant working class, there could be no cunning foreign diplomacy; no arrogant militarism; no war and no stream of untold wealth pouring into the coffers of the rich over the seas. It is the worker who takes all the risks to life and health of raising minerals from the bowels of the earth; of working in a modern form of Gehenna to smelt them into iron and steel. It is his toil and skill which transfers these into mighty warships fitted with mechanical contrivances which amaze the beholder. . . .
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> And when a set of selfish and incompetent statesmen have plunged nations into shedding each other's blood, it is the worker who is called upon to line the trenches; to fill the horrid graves of war by tens of thousands; to murder his fellow worker with whom he has not, and never had, any quarrel; it is the worker who is commanded, under penalty of being branded a traitor, to carry woe and desolation into the hearts of womenfolk and children.
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> The present war is not being waged in "freedom's holy cause"; it is not meant to safeguard the "rights of small and weak nations"; it is not meant to put down oppression. If it had been for these objects, every Government in Europe would have opposed it to the death.

Even if the socialist explanation of war is over-simplified, this last sentence is luminously true.

Jeers and catcalls for his opposition to war followed Hardie almost to the grave. While the National Council of the ILP stood behind him, the Labour Party and the Trade Union Congress supported the Government and joined in Lord Kitchener's recruiting campaign. Emrys Hughes, author of *Keir Hardie,* was one of those who shared Hardie's views about the war. He spent three years in prison for his pacifism.

Hardie died that fall, in September of 1915, bringing from Bernard Shaw this comment:

> There is, I feel, a very general feeling of relief in the House of Commons and in the Labour Party now that Keir Hardie's body lies mouldering in the grave. I wish I could revive their dread of him by adding that his soul goes marching on: but I do not feel so sure about that; he seems for the moment to have taken it with him. . . .
>
> Now that Hardie is gone the lying will be the natural House of Commons type; placid, confident, dignified, the liar breathing an atmosphere of general approval and feeling nothing but an agreeable sensation of good taste.
>
> I really could not see what Hardie could do but die. Could we have expected him to hang on and sit there among the poor slaves who imagined themselves Socialists until the touchstone of war found them out and exposed them for what they are? What was in common between him and the men who are so heroically determined to resist conscription that they declared that nothing short of Lord Kitchener's telling them of its necessity will induce them to embrace it.
>
> He was too old to wait for a new generation. Better let them kill him and be a sort of Banquo's ghost on the Labour benches until his spiritual posterity comes to its own.

The socialists, alas, have won practically every battle but the last and most important one— the battle against war. The vision of the great leaders—Jaures, Hardie, and Debs—was absolutely against the war. Yet the socialists, most of them, went off to war, betraying everything good that they stood for, and reinforcing everything that was wrong.

This is the reason—or one of the reasons—why the present seems as far away from the days before 1914 as it is from the Middle Ages. The socialist dream exists no more. So long as war is contemplated as an instrument to bring about the Good Society—so long as it is believed that any Good Society can prosecute a war, for *any* reason—the plans and programs are but adolescent maunderings and baby talk.

Keir Hardie was a Scottish miner who could read and write. That is how he began. He knew from his childhood the lot of the hungry and the unemployed. When he was ten years old, the sole support of a family of five, he lost his job as delivery boy for a Glasgow baker because he was fifteen minutes late to work, having been up most of the night caring for a sick brother. That night another baby was born in his family.

In the same year the family moved to Lanarkshire and Keir became a miner, starting work at six in the morning and going home at 5:30 in the evening. There were days in the winter when he never saw the sun. He had to work four hours on Sundays, too. He worked in the Lanarkshire pits until he was twenty-three, learning to read and write at home, with his mother's help. Burns and Carlyle were his inspiration. Because of his step-father's drunkenness, Hardie was a strong temperance man. He became a socialist when he was twenty-one, and a Sermon-on-the-Mount Christian two years later.

Hardie's literacy caused him to be chosen as the secretary of the miners' union. The day after the election, he was fired from the pit and the blacklist kept him from work in any of the Lanarkshire mines. After a reduction in the miners' wages, Hardie helped the miners to strike. His reputation as a leader brought him the job of organizing the miners of the region into a stronger union. He won a strike, but the union funds were exhausted and he had to find other work. He became a reporter for some years and eventually the miners asked him to represent them again. In 1887, he started a sixteen-page magazine called *The Miner,* in which he fought for "reform in every direction which promises to bring relief to the toiling millions."

Now began Hardie's struggle with the "moderates" of the Liberal Party, who compromised on every important issue. Visiting the House of Commons, he

"remembered the story of how Carlyle had brought Emerson to the gallery and after listening for half an hour to the proceedings had whispered to the American, 'Do you no believe in the Devil now?' "

Under the leadership of Keir Hardie, the radical movement in Britain took on dignity, stature, and power. He entered politics and campaigned for a seat in the House of Commons. He lost in his first attempt, but won in his second, becoming representative of South West Ham in 1892. Keir Hardie was now thirty-six years old.

Being a Member of Parliament did not go to Hardie's head. He won the respect of the House with his sober argument, his reliance on principle, and his fearless fight against injustice. He carefully engineered the birth of the Labour Party, born through the joint efforts of members of the Trade Union Congress and the ILP. By 1900 he was the best-known labor leader in Britain. On Jan. 1 of that year, a New York *Times* reporter asked him what he thought was the chief danger confronting the new century. Hardie answered:

> Militarism! It distracts attention from social questions, subordinates the rights of the civilian to the imperious rule of the soldier, increases taxes, interferes with trade and commerce and glorifies war, which in all its aspects is a reversal to barbarism. It is, besides, a menace to political freedom, and, in essence and fact, a contradiction of the principles of Christianity.

Hardie had become a socialist as much from his pacifism as from any other reason. He was in Parliament during the Boer War, which he opposed with all his moral force. Because of the wartime tax on sugar, he took his tea without sweetening. As he said, "I didn't want to pay for the Boer War." Of Socialism, he said: "I see no other chance for redeeming the world from poverty and sin and war and lust and all manner of uncleanliness."

After the war, he wrote:

> The saturation of blood riot in which the nation indulged over the murdering of two freedom-cherishing Republics in South Africa has, during I902, brought forth after its kind. Gaunt hunger stalks like a grim spectre through the land and the black despair of the workless man is heavy enough to make itself felt in every heart. Crime, drunkenness, and pauperism are on the increase and forty-five years of effort in seeking to humanise the life of the nation have been swept away by war.

The social and reform legislation for which Hardy and the ILP were responsible may be long remembered, but it was his simple love for his fellow men, undiluted and inexhaustible, which ineffaceably printed the image of Keir Hardie on the hearts of Englishmen who knew and worked with him, many of whom are still alive.

There are many pictures of Hardie in this book, but Hardie's face, unfortunately, cannot be reproduced in this review. It is a noble face, marked by suffering, courage, and compassion. These are the qualities he brought to the labor movement in Britain, which, so far as he was concerned, was a movement for mankind. Hardie was right in many things, and he was most right in his opposition to war. It is a pity that the socialists could not recognize it until it was too late.

# *REVIEW*
## MR. STEINBECK'S MINOR OPUS

WHETHER or not the Book of the Month Club automatically chooses any Steinbeck book—yes, *The Short Reign of Pippin IV* was so honored—our private opinion is that Mr. Steinbeck always has something worth saying. Though this "fabrication" or "fantasy" is not intended to be serious literature, and while the tale does not abound in dramatic moments or heavy-weight profundities, the Steinbeck of today shows that he cannot write even lightly without pointing up some of the peculiar paradoxes of our time.

The story of *Pippin IV* begins in an undisclosed year of the not too distant future, at a time when France finds itself without a government. Due to custom, the seat of power is sought by many ambitious aspirants, and although the old political denominations have become so diluted as to produce such parties as "The Conservative Radicals," "The Radical Conservatives," "The Christian Atheists," and "The Christian Communists," the tradition of political dispute is dutifully pursued. This time bickering among the contestants finally leads to a startling solution—a restoration of monarchy. A retiring—and retired—amateur astronomer is found to be a lineal descendant of Charlemagne and, despite his protesting modesty, Pippin Heristal is duly crowned.

Steinbeck now has opportunity to satirize much of what passes today for "world diplomacy." The following, for example, is his account of the new monarchy's anticipations of American and Russian attitudes:

> The meeting of all parties called to determine procedure constituted itself, at Pippin's request, a deliberative body. A troubling question was introduced by the king very early in the discussion. What would the American government think of the change, and would the American State Department be likely to continue to recommend the same financial aid to the Kingdom as it had to the Republic of France?
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> M. Flosse, representing both Right and Left Centrists, was able to put any such doubts at rest. "It is the nature of American foreign policy to distrust liberal governments and strongly to favor the more authoritarian, which it considers the more responsible."
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> M. Flosse named Venezuela, Portugal, Saudi Arabia, Trans-Jordan, Egypt, Spain, and Monaco as examples of this American peculiarity. He went even further, proving that the People's Republics of the USSR, plus Poland, Czechoslovakia, Bulgaria, China, and North Korea, also had in the past shown a strong preference for dictatorships and absolute monarchies over democratically elected governments.
>
> It was not necessary to inquire into the reasons for these preferences, said M. Flosse. Indeed, it might even be embarrassing.
>
> M. Flosse suggested that the king's first official act should be to request a subsidy for his government from America for the purpose of making France strong against Communism, and an equal subsidy from the Communist nations in the interests of world peace.
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> The enthusiastic response from both the United States and the Union of Soviet Socialist Republics is proof enough that M. Fosse had properly assessed the situation. It is history by now that the American Congress advanced more money than was requested.

By way of romance between Pippin's flamboyant young daughter and the son of an American millionaire, Mr. Steinbeck delves into the peculiar paradoxes of American economic and political institutions. Since Pippin is eager to learn all he can about the operation of the economic system of the United States, he manages some private chats with young Tod. To understand American affairs, he must grasp the fact that two different kinds of government "overlap" in the determination of both the foreign and the domestic policy of the United States. The official government, Tod explains, is either Democrat or Republican, "it doesn't make much difference." But there is also "corporation government." This is a little confusing to Pippin. He wants to know more about "corporation government" and whether the corporation government and the official government "get along together." Tod's

little lecture on American "civics" is a high point of the book:

> "Sometimes," said Tod. "I don't understand it myself. You see, the elected government pretends to be democratic, and actually it is autocratic. The corporation governments pretend to be autocratic and they're all the time accusing the others of socialism. They hate socialism."
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> "So I have heard," said Pippin.
>
> "Well, here's the funny thing, sir. You take a big corporation in America, say like General Motors or Du Pont or US Steel. The thing they're most afraid of is socialism, and at the same time they themselves are socialist states."
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> The king sat bolt upright. "Please?" he said.
>
> "Well, just look at it, sir. They've got medical care for employees and their families and accident insurance and retirement pensions, paid vacations—even vacation places—and they're beginning to get guaranteed pay over the year. The employees have representation in pretty nearly everything, even the color they paint the factories. As a matter of fact, they've got socialism that makes the USSR look silly. Our corporations make the US Government seem like an absolute monarchy. Why, if the US government tried to do one-tenth of what General Motors does, General Motors would go into armed revolt. It's what you might call a paradox, sir.
>
> "It's just that some of them have found out they can produce and sell more goods that way. They used to fight the employees. That's expensive. And sick workers are expensive. Do you think my father likes to feed his chickens vitamins and cod-liver oil and minerals and keep them warm and dry and happy? Hell, no! They lay more eggs that way. Oh, it wasn't quick and it's far from finished, but isn't it strange, sir, that out of the most autocratic system in the world the only really workable socialism seems to be growing?"

Pippin's reign is short because, while he is a little man of unimposing mien, he is nevertheless a little man of integrity. After traveling incognito through France on a motor scooter, he decides that, threat of the guillotine notwithstanding, he will, by God, be a King as long as they call him one. He "orders and decrees" new codes which key wages to profits and makes them "move up and down with the cost of living," while taxes are to be kept as low as possible and collected from all. Also, the great landholdings of famous families are to be broken up for the benefit of the total economy. Well, this was hardly preserving "the status quo" so admired by all the rival parties; Pippin was stepping far outside his role of figurehead. So Pippin's government trembled, fumed, and collapsed, and Pippin retired unobtrusively on his motor scooter to the secluded home from which he had been snatched.

Come to think of it, most of Mr. Steinbeck's books are about little men of integrity. Always in a Steinbeck story there is someone who combines honesty with understanding, who rises above hate and partisanship. Pippin's attempt to live up to his responsibility is done in his own way and in his own time, and is manifestly the sort of attempt Mr. Steinbeck would like to feel he could make himself if placed in any comparable position.

Incidentally, we confess to some puzzlement at most of the reviews we have seen of *The Short Reign of Pippin 1V*. They report the book as little more than Steinbeck having a good time with his typewriter. Why not note that the human relationships of Pippin's family and his acquaintances are all prototypal in their revelation of human frailty? And they are *not* cynical, for John Steinbeck is an idealist and an optimist of extraordinary resiliency. He always locates a golden needle in the haystack of confused emotions and ambitions which develop in both personal and national life.

# *COMMENTARY*
## HELP FOR KOINONIA

IT is time for another report on Koinonia, the inter-racial community of Americus, Georgia, where members of both the Negro and white races share the responsibilities and the opportunities of a communal life together. Founded fifteen years ago by two Georgia Christians determined to bring the spirit of the New Testament to agricultural life in the deep South, Koinonia now stands before the United States and the world as an example of Christian pacifist and interracial brotherhood. Dynamited, machine-gunned, boycotted, threatened and visited with every conceivable economic sanction, the community remains staunchly committed to its social and religious ideals, and the members have no intention of quitting. (For a firsthand impression of Koinonia, the voice of Clarence Jordan, one of its founders, may be heard on the long-playing record issued by "Friends of Koinonia," 901 Findlay St., Cincinnati 14, Ohio, available by mail at $3.)

Earlier this year, Koinonia suffered cancellation of all its insurance policies. In order to meet this economic assault, the members asked for help from friends in the form of promissory notes which would become payable in the event of a loss by fire or from accident. Individual pledges were to be for $50. The goal of 2000 pledges has now been reached, giving the community complete insurance coverage.

However, as a result of the boycott by both buyers and sellers, Koinonia is now in the position of having lost three of its major sources of income. It can no longer sell its eggs and irrigated crops, while the roadside market was destroyed by bombing. To meet this emergency, a new plan for income has been evolved. Koinonia Newsletter No. 15 reports:

> After thorough investigation of many possibilities, we have decided upon the processing and shelling of pecans. To us this seems the least vulnerable to boycott of anything we might go into for three reasons: (1) The market is almost entirely outside of Georgia; (2) the supply of pecans, abundant in this area, can be readily obtained from the large auction markets which are operated by the state and therefore cannot boycott us; (3) the shellers are powered by electricity which comes to us through REA lines. Another advantage is that the busy season for shelling comes in the late fall and winter, which is the slack season for farming.

The Koinonia people aim to get into this business by fall, hoping to become completely self-supporting once again by this means. They ask for help in the form of investment by their friends:

> The whole amount needed [for expensive equipment and plant, costing about $50,000] could be raised by finding 2000 people who would lend $25 each. We would issue notes which would bear 4% interest, or $1.00 each, per year. For example, at the end of 5 years a $25 note would be worth $30. We would arrange to repay these notes over a 10-year period, having 200 of them come due each year. As much as possible, we would give preferences to those wishing to become due in any given year. Otherwise we would arrange the due dates in the order in which the notes were made. . . . But we must hurry. The pecan season begins Oct. 1.

Koinonia is a courageous venture in total desegregation. It deserves support from those who are able to help. Something great for mankind will have been accomplished if Koinonia can survive and grow during these days of racial resentment and bitter prejudice in the South. Address Koinonia at Rural Route 2, Americus, Georgia.

Incidentally, the New Jersey "branch" of Koinonia, started earlier this year, now has twenty members. For income, they are making leather sandals to order (and to size) in any one of five or six designs. For illustrations and prices, write Koinonia Community, Neshanic Station, N.J.

# CHILDREN
## . . . and Ourselves

[Now, after last week's sample, we reprint another of Carl Ewald's dialogues from *My Little Boy*. Readers who fret under the necessity of exposing their children to the "group training" institutions of a public schoolroom will be doubly appreciative of the sentiments expressed. In any case, and whatever one's sentiments regarding the virtues of home-training for the young, Mr. Ewald's charm is undeniable.]

My little boy is to go to school.

We can't keep him at home any longer, says his mother. He himself is glad to go, of course, because he does not know what school is.

I know what it is and I know that there is no escape for him, that he must go. But I am sick at heart. All that is good within me revolts against the inevitable.

So we go for our last morning walk, along the road where something wonderful has always happened to us. It looks to me as if the trees have crepe wound round their tops and the birds sing in a minor key and the people stare at me with earnest and sympathetic eyes.

But my little boy sees nothing. He is only excited at the prospect. He talks and asks questions without stopping.

We sit down by the edge of our usual ditch—alas, that ditch!

And suddenly my heart triumphs over my understanding. The voice of my clear conscience penetrates through the whole well-trained and harmonious choir which is to give the concert; and it sings its solo in the ears of my little boy:

"I just want to tell you that school is a horrid place," I say. "You can have no conception of what you will have to put up with there. They will tell you that two and two are four. . . ."

"Mother has taught me that already," says he, blithely.

"Yes, but that is wrong, you poor wretch!" I cry. "Two and two are never four, or only very seldom. And that's not all. They will try to make you believe that Teheran is the capitol of Persia and that Mont Blanc is 15,781 feet high and you will take them at their word. But I tell you that both Teheran and Persia are nothing at all, an empty sound, a stupid joke. And Mont Blanc is not half as big as the mound in the tallow-chandler's back garden. And listen: you will never have any more time to play in the courtyard with Einar. When he shouts to you to come out, you'll have to sit and read about a lot of horrible old kings who have been dead for hundreds and hundreds of years, if they ever existed at all, which I, for my part; simply don't believe."

My little boy does not understand me. But he sees that I am sad and puts his hand in mine:

"Mother says that you must go to school to become a clever boy," he says. "Mother says that Einar is ever so much too small and stupid to go to school."

I bow my head and nod and say nothing.

That is past.

And I take him to school and see how he storms up the steps without so much as turning his head to look back at me.

Here ends this book about my little boy.

What more can there be to tell?

He is no longer mine. I have handed him over to society. Hr. Petersen, candidate in letters, Hr. Nielsen, student of theology, and Froken Hansen, certified teacher, will now set their distinguished example before him for five hours daily. He will form himself in their likeness. Their spirit hovers over him at school: he brings it home with him, it overshadows him when he is learning the lessons which they zealously mete out to him.

I don't know these people. But I pay them.

I, who have had a hard fight to keep my thoughts free and my limbs unrestrained and who have not retired from the fight without deep wounds of which I am reminded when the weather changes, I have, of my own free will, brought him to the institution for maiming human beings. I, who at times have soared to peaks that were my own, because the other birds dared not follow me, have myself brought him to the place

where wings are clipped for flying respectably, with the flock.

"There was nothing else to be done," says the mother of my little boy.

"Really?" I reply, bitterly. "Was there nothing else to be done? But suppose that I had put by some money, so that I could have saved Messrs. Petersen and Nielsen and Froken Hansen their trouble and employed my day in myself opening out lands for that little traveller whom I myself have brought into the land? Suppose that I had looked round the world for people with small boys who think as I do and that we had taken upon us to bring up these young animals so that they kept sight of horns and tails and fairytales?

"Yes," she says.

"Small boys have a bad time of it, you know."

"They had a worse time of it in the old days."

"That is poor comfort. And it can become worse again. The world is full of parents and teachers who shake their foolish heads and turn up their old eyes and cross their flat chests with horror at the depravity of youth: children are so disobedient, so naughty, so self-willed and talk so disrespectfully to their elders! . . . And what do we do, we who know better?"

"We do what we can."

But I walk about the room, more and more indignant and ashamed of the pitiful part which I am playing:

"Do you remember, a little while ago, he came to me and said that he longed so for the country and asked if we couldn't go there for a little? There were horses and cows and green fields to be read in his eyes. Well, I couldn't leave my work. And I couldn't afford it. So I treated him to a shabby and high-class sermon about the tailor to whom I owed money. Don't you understand that I let my little boy do *my* work, that I let him pay *my* debt? . . ." I bend down over her and say earnestly, "You must know; do please tell me—God help me, I do not know—if I ought not rather to have paid my debt to the boy and cheated the other?

"You know quite well," she says.

She says it in such a way and looks at me with two such sensible eyes and is so strong and so true that I suddenly think things look quite well for our little boy; and I become restful and cheerful like herself:

"Let Petersen and Nielsen and Hansen look out!" I say. "My little boy, for what I care, may take from them all the English and geography and history that he can. But they shall throw no dust in his eyes. I shall keep him awake and we shall have great fun and find them out."

"And I shall help him with his English and geography and history," says she.

Reading recommendations for young people: Among recent volumes we have liked is Jean Latham's *Carry On Mr. Bowditch,* a story of gentle psychological instruction as well as adventure, focusing on the life of Salem, Mass., in the days of sailing ships.

Of somewhat specialized interest is a current library recommendation, *Wildlife Cameraman,* by Jim Kjelgaard. The Junior Literary Guild chose *Wildlife Cameraman* as an outstanding book for teenagers, and while it has little claim to literary merit, this book successfully glamorizes the substitution of a camera for a gun in woodland adventures. Kjelgaard is himself a cameraman and nature-lover, and for youngsters who are interested in the technicalities of picture-making, this book is most instructive. Details regarding camera equipment are provided, so that the child who inclines toward this hobby is supplied with practical suggestions.

# *FRONTIERS*

## The "Cholesterol" Puzzle

FOR MANAS, investigation of this "puzzle" began with the reading of an article in the Los Angeles *Mirror-News* for Feb. 20 of this year—an article by Omar Garrison, the paper's science editor, which reported on the condition of the arteries of 300 young Americans who died in the Korean war.

Seventy-seven per cent of these soldiers—called by Garrison "a fair cross-section of America's young manhood, whose average age was 22"—were found by autopsy to have coronary arteries typical of men of sixty and over. These boys, in other words, "showed gross evidence of coronary atherosclerosis—partial obstruction of the heart's own arteries, which could lead to heart attack."

What is atherosclerosis? It is a disease of the arteries, caused by the deposit of large fat molecules along the inner walls of the vessels which carry the blood from the heart to other parts of the body. As a result of these deposits, which tend to seek out damaged areas of the lining of the arteries, acid crystals are formed which build up obstructions to the flow of blood. As the openings in the arteries become smaller, the danger of a clot plugging the channel and stopping the flow of blood becomes greater and greater. Atherosclerosis, when not arrested, and allowed to lead to complete occlusion of the arteries, ends in heart attack and death.

Atherosclerosis is sometimes identified with arteriosclerosis, or "hardening of the arteries," but there is a difference between the two. Arteriosclerosis results from a calcification of the middle walls of the arteries, while atherosclerosis, in the words of one physician, "is the disease in which fatty or atheromatous plaques are laid down in the intima of the arteries." Dr. Hyman Engelberg, member of the American Society for the Study of Arteriosclerosis, has written of atherosclerosis:

> It is the greatest killer in the United States today. Coronary atherosclerosis is the cause of 85-90% of all heart attacks and alone annually takes a toll nearly as large as all malignant tumors. . . . Until the past few years research in this field was held back by the dogma that arteriosclerosis was the inevitable result of physiologic aging. However, aged persons may be almost free of atherosclerosis at autopsy and young people may have widespread disease, thus clearly demonstrating that senescence and atherogenesis are two distinct processes which may or may not be interrelated. The understanding that atherosclerosis is a disease, and therefore susceptible to investigation and perhaps therapy, constitutes, per se, a most important advance. (*Journal of Applied Nutrition*, Winter, 1957 [Vol. 10].)

The big question, of course, is what causes atherosclerosis? Where do the cholesterol plaques come from and why do they get deposited on the walls of the arteries?

After you wade through a dozen or so of articles on the subject in both popular and professional journals, you reach the simple conclusion that cholesterol comes from what you eat and from what the body does or fails to do to it after you have eaten it. The causes of atherosclerosis, therefore, are bad diet and bad metabolism. There are two approaches to the problem. One is the study of comparisons between the gross figures on heart attack and the diet of large populations. The other is the study of body chemistry, to discover why some people who eat large amounts of cholesterol-producing food do not get atherosclerosis.

A good summary of the statistical relation between diet and atherosclerosis (or the heart attacks it brings) is provided by Selig Greenberg in the July *Progressive:*

> There appears to be a consistent relationship between the character of a country's diet and the extent to which it is plagued by heart disease. On the face of it, it is hard to explain away the apparent connection between the high incidence of heart disease in the United States and the high ratio of fat in our diet.
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> Nutritional authorities say that the American diet is the fattest in the world. They report that in the

past 30 years of increasing heart disease the proportion of fat in our diet has risen from 31 to 41 per cent, and there has been an even bigger jump in the consumption of the kind of fats believed to be harmful.

Coronary mortality is lowest in countries where people get a much smaller proportion of their calories from fats and seems to go up as the fat content of the diet rises. In the southern part of Italy, for instance, fat makes up only about 20 per cent of food consumption, and the heart disease death rate for men is only one-fourth of that in the United States. In Japan, which has an even lower consumption of dietary fat, the incidence of heart disease is only one-tenth ours. Studies recently conducted in Capetown, South Africa, showed that the native Bantus, who eat very little fat, have a much lower rate of coronary illness than both European South Africans and American Negroes with their much richer diet. Frequently cited in support of the theory that the incidence of heart disease is a matter of food habits and not of race is the experience of Norway and Finland during World War II. Wartime food shortages in these countries forced a reduction in dietary fats, but led to a sharp drop in coronary deaths. The heart disease mortality rates rose again to the pre-war levels with the return to peace-time diets.

This is plain enough. Practically every nutritionist agrees that Americans should eat less fats. But the radical cut-back in fats-consumption advocated by some experts naturally led to further questions. Are there differences in fats? Are some fats "worse" than others?

Animal fats are in general strong cholesterol producers. However, *Let's Live,* a West Coast health magazine, in June, 1954, reported an experiment conducted at the Highland Alameda County Hospital, in Oakland, Calif., which brought qualifying factors to light:

Vegetable fat was used to replace animal fat in high-protein, high-fat diabetic diets. This resulted in rapid decreases in plasma cholesterol levels in five diabetic patients and in one patient with an hereditary presence of cholesterol in the blood. The effect of the vegetable fat diet was not attributed to low cholesterol intake, since a gradual but substantial fall in fat-like substances in the blood occurred in a diabetic patient given vegetable fat in *addition* to a diet high in animal fat.

The point, here, is that while animal fats produce more cholesterol than vegetable fats, there are natural dietary elements (lipotrophic factors) which may help the body to deal with the cholesterol. Among these, the *Let's Live* article lists choline and inositol (vitamins of the B-complex factor). Choline is present in lecithin, which occurs naturally in egg yolk, butter and soy bean. Lecithin seems to have "the power to prevent the accumulation of fat in the liver, and on the inside walls of the arteries." (The liver, incidentally, manufactures cholesterol, so that food is not its only source. )

Other antidotes for excessive cholesterol are said to be Vitamins B-12 and B-15 (which contribute to the metabolism of fats), beef pancreas and yeast, and chlorophyll (found in greens, especially alfalfa, spinach, beet-tops, and lettuce).

Nutritionists make an important distinction between types of fats. The kind of fat which makes the most trouble for the body is known as a *saturated* fat—a fat whose molecule has as many hydrogen atoms as it can hold. An *unsaturated* fat is a fat which can still take on hydrogen atoms. In general, animal fats are more saturated than vegetable fats. Unsaturated fats are commonly those which are available as *oils* (cold-pressed vegetable oils), while the saturated fats are stiff or "hard." Vegetable fats which have been made stiff in order to facilitate handling in the kitchen are fats which have been hydrogenated by food processors, and are therefore *saturated* with hydrogen ions. Familiar forms of such fats are some of the shortenings sold in the markets, which can be spread instead of having to be poured. Unsaturated fats are usually available at health food stores in the form of vegetable oils such as saf-flower oil, sunflower seed oil, soy oil, rice-bran oil, corn oil, and sesame oil.

The point, here, is that the liver can make constructive disposition of unsaturated fats, since

the metabolic processes which go on in relation to fats in the liver involve the addition to the fats of hydrogen ions. *The liver finds it difficult to add hydrogen ions to saturated fats,* which already have ail the hydrogen they can take on. There is general agreement that foods fried in deep fat, such as french-fried potatoes and doughnuts, are real villains in cholesterol production, especially when the fat used for the frying is a saturated fat.

A useful summary of the opinions of leading nutritionists appeared in the July *Chopletter,* house-organ of a vegetarian food manufacturer:

> The American College of Physicians was told at the Boston meeting in April of this year that a fat-rich diet is to blame for 90 per cent of heart ills; and Dr. Ancel Keys, one of the nation's top experts on relationship of diet to heart disease, said that people get these fats from meat, eggs, and dairy products.
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> Dr. Norman Jolliffe, director, Bureau of Nutrition, New York City Department of Health, said recently that a cut in fat consumption to under 30 per cent of the total caloric intake with a larger percentage coming from unsaturated fats can save at least 50,000 lives a year among men from 45 to 65.
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> World Health Day, April 7, featured an attack on problems of fats. "One part of the world is still suffering from hunger and malnutrition while another part literally eats itself to death," Dr. Jean Mayer, associate professor of nutrition, Harvard School of Public Health, stated. "Recent work," Dr. Mayer said, "suggests that death from heart disease is closely linked to the over-eating of fats, particularly hard fats."

An article in the *Drug Trade News* for July 1, by Dr. Hugh Sinclair, of the Laboratory of Human Nutrition, Oxford University, contains some interesting things about the hydrogenation of vegetable oils, which takes place, for example, in the making of margarine. Dr. Sinclair maintains that hydrogenation renders the fatty acids essential to human metabolism ineffectual or even antagonistic. He says:

> As foods for man and feeding stuffs for lower animals are processed more and more to make them more stable (that is, to avoid rancidity which is the result of the oxidation of the double bonds of unsaturated fats) our diets become increasingly deficient in essential fatty acids. Increased consumption of cow's milk, butter, and margarine, and of white bread, intensifies such deficiency.

Dr. Sinclair is persuaded that fatty acid deficiency is connected with not only excessive cholesterol in the blood, but also plays a part in a long catalog of degenerative diseases such as pulmonary embolism, bronchial asthma, nephrosis, rheumatoid arthritis, and duodenal ulcers. He concludes his article with the exclamation: "It is amazing in view of these possibilities that so much attention is paid to the feeding of lower animals and negligible research is done on the nutrition of man."

In a forum on blood cholesterol, published in the *Journal of the American Academy of Applied Nutrition* for 1952 (Vol. 5), Dr. Francis M. Pottenger, Jr., of Monrovia, Calif., presented evidence to show that a diet rich in cholesterol-bearing foods need not necessarily be feared when sufficient lecithin is included. Long a student of fat metabolism, Dr. Pottenger expressed the view that disturbed cholesterol metabolism is the primary problem. Speaking of experiences with patients, he said:

> One of our questions is: "Do you like fats?" "If so, how much fat do you consume?" "If so, in what form do you like your fats?" "What would you do with the fat about a steak?" "How much of it would you eat?" "Would you eat a rare lamb chop with all the fat on it?" Most patients with hypercholesterolemia will tell you that they either like their meats over-cooked, or trim off the fat, or do not eat fat meats. Frequently, . . . most of their fats consumed is of the saturated fatty acid type. Among highest cholersterol levels that we have encountered among our patients are those with histories of non-fat consumption, over-cooked foods, or hydrogenated fat consumption. This has been almost universal. Hydrogenated fats and oxidized fats apparently do not afford substances for the proper metabolism of cholesterol.

What can the ordinary person do about the vulnerability of Americans to atherosclerosis? Obviously, he can accept the warnings in the statistics of national diets in connection with heart disease and cut down on his fat intake; he can

accept the warning of a number of well-informed nutritionists and consume less saturated fats and switch to unsaturated fats. This he can do without any special knowledge or any special risk that he will make a mistake. If he wants to do something more, he will probably find it necessary to become a full-fledged biochemist himself, since the experts are by no means all in agreement.

The problem is of course complicated by the fact that the food-processing industry is very much concerned about the threat in nutritionist opinion to sales of fatty foods and in particular preparations containing saturated or hydrogenated fats. The trade magazine, *Food Processing*, has printed a series of articles on the general subject of fat-containing foods, endeavoring to alert the industry to the possibility of a "full-scale nutritional storm." The opening editorial of this series declared:

> The results of recent studies on the subject are bound to spell trouble, at least for the short term of perhaps two to five years, for a long list of food products. This doesn't mean only fats as such—attention is bound to focus also on such fat-containing foods as pies, both dessert and meat types; prepared frozen and canned foods; poultry products, especially when fried; salad dressings; bakery mixes and bakery products; and of course margarine, butter, and shortening themselves.
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> As consumers shy away from the saturated types of fats, they will surely swing toward the unsaturated types—corn oil, cottonseed oil, and peanut oil (all non-hydrogenated). (Fish and marine animals also contain the desirable unsaturated fats.)
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> Considerably more research is needed before all the answers on the cholesterol-unsaturated fats questions are resolved, . . . but the information is certainly not in the "diet fad" category (at least yet) because the evidence is too well documented by responsible individuals and groups.

*Food Processing* counsels its readers to feature a nonhydrogenated, "favorable fats" theme, "providing, of course, that the public shows a positive reaction to the meaning behind the present research" . . . !

For a conclusion to this somewhat extended "review," we present the observations of Dr. Engelberg concerning diet and fats, in his article in the *Journal of Applied Nutrition* (Winter, 1957):

> The relative harmful potentialities of different dietary fats is attracting widespread attention. At first vegetable fats were believed to be less harmful than animal fats. However, further work apparently questioned this conclusion, only to be in turn negated by more recent studies. This subject is extremely complicated because of the varying composition of different animal and vegetable fats. Fats differ in their fatty acid components, in the percentage of unsaturated and saturated fatty acids, in the degree of hydrogenation, etc. We know very little about metabolic differences, either in the serum transport or the cellular phase of fat metabolism, in the body when different fats are eaten. On the basis of the present evidence, subject to many possible changes, it would seem wiser to reduce markedly animal fats (which contain high proportion of saturated fatty acids) and to substitute small amounts of vegetable fats (chiefly unsaturated fatty acids) in the preparation of meals. It should be remembered that a high protein intake is nutritionally desirable in the later years.