Sophie's World

Jostien Gaarder

Reviews:

More praise for the international bestseller that has become "Europe's oddball literary sensation of the decade"

(New York Newsday)

"A page-turner." —Entertainment Weekly

"First, think of a beginner's guide to philosophy, written by a schoolteacher ... Next, imagine a fantasy novel— something like a modern-day version of Through the Looking Glass. Meld these disparate genres, and what do you get? Well, what you get is an improbable international bestseller ... a runaway hit... [a] tour deforce."

—Time

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"A comprehensive history of Western philosophy as recounted to a 14-year-old Norwegian schoolgirl... The book will serve as a first-rate introduction to anyone who never took an introductory philosophy course, and as a pleasant refresher for those who have and have forgotten most of it... [Sophie's mother] is a marvelous comic foil." —Newsweek

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"What is admirable in the novel is the utter unpretentious-ness of the philosophical lessons, the plain and workmanlike prose which manages to deliver Western philosophy in accounts that are crystal clear. It is heartening to know that a book subtitled

"'A Novel About the History of Philosophy' was not only a bestseller in France, but for a while Europe's hottest novel."

—The Washington Post Book World

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"An exciting trek into, the realm of thought, from the ancient philosophers' school of Athens to the Konigsberg of Kant... and a brilliant success." -Der Spiegel

"Intelligently written... an enchanting way to learn philosophy." —Baton Rouge Magazine

"Just as remarkable for its playful premise as it is for its accessibility ... The essential charm of Sophie's World lies in the innocent curiosity of the young character, and the clever narrative structure Gaarder designed to pique it."

—Columbus Dispatch

"An extraordinary writer." —Madeleine L'Engle

Sophie's World

A Novel About the History of Philosophy
JOSTEIN GAARDER

Translated by Paulette Miller

BERKLEY BOOKS, NEW YORK

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J.G.

He who cannot draw on three thousand years
Is living from hand to mouth
GOETHE

THE GARDEN OF EDEN

… at some point something must have come from nothing …

Sophie Amundsen was on her way home from school. She had walked the first part of the way with Joanna. They had been discussing robots. Joanna thought the human brain was like an advanced computer. Sophie was not certain she agreed. Surely a person was more than a piece of hardware?

When they got to the supermarket they went their separate ways. Sophie lived on the outskirts of a sprawling suburb and had almost twice as far to school as Joanna. There were no other houses beyond her garden, which made it seem as if her house lay at the end of the world. This was where the woods began.

She turned the corner into Clover Close. At the end of the road there was a sharp bend, known as Captain's Bend. People seldom went that way except on the weekend.

It was early May. In some of the gardens the fruit trees were encircled with dense clusters of daffodils. The birches were already in pale green leaf.

It was extraordinary how everything burst forth at this time of year! What made this great mass of green vegetation come welling up from the dead earth as soon as it got warm and the last traces of snow disappeared?

As Sophie opened her garden gate, she looked in the mailbox. There was usually a lot of junk mail and a few big envelopes for her mother, a pile to dump on the kitchen table before she went up to her room to start her homework.

From time to time there would be a few letters from the bank for her father, but then he was not a normal father. Sophie's father was the captain of a big oil tanker, and was away for most of the year. During the few weeks at a time when he was at home, he would shuffle around the house making it nice and cozy for Sophie and her mother. But when he was at sea he could seem very distant.

There was only one letter in the mailbox—and it was for Sophie. The white envelope read: "Sophie Amundsen, 3 Clover Close." That was all; it did not say who it was from. There was no stamp on it either.

As soon as Sophie had closed the gate behind her she opened the envelope. It contained only a slip of paper no bigger than the envelope. It read: *Who are you?*

Nothing else, only the three words, written by hand, and followed by a large question mark.

She looked at the envelope again. The letter was definitely for her. Who could have dropped it in the mailbox?

Sophie let herself quickly into the red house. As always, her cat Sherekan managed to slink out of the bushes, jump onto the front step, and slip in through the door before she closed it behind her.

Whenever Sophie's mother was in a bad mood, she would call the house they lived in a menagerie. A menagerie was a collection of animals. Sophie certainly had one and was quite happy with it. It had begun with the three goldfish, Goldtop, Red Ridinghood, and Black Jack. Next she got two budgerigars called Smitt and Smule, then Govinda the tortoise, and finally the marmalade cat Sherekan. They had all been given to her to make up for the fact that her mother never got home from work until late in the afternoon and her father was away so much, sailing all over the world.

Sophie slung her schoolbag on the floor and put a bowl of cat food out for Sherekan. Then she sat down on a kitchen stool with the mysterious letter in her hand.

Who are you?

She had no idea. She was Sophie Amundsen, of course, but who was that? She had not really figured that out—yet.

What if she had been given a different name? Anne Knutsen, for instance. Would she then have been someone else?

She suddenly remembered that Dad had originally wanted her to be called Lillemor. Sophie tried to imagine herself shaking hands and introducing herself as Lillemor Amundsen, but it seemed all wrong. It was someone else who kept introducing herself.

She jumped up and went into the bathroom with the strange letter in her hand. She stood in front of the mirror and stared into her own eyes.

"I am Sophie Amundsen," she said.

The girl in the mirror did not react with as much as a twitch. Whatever Sophie did, she did exactly the same. Sophie tried to beat her reflection to it with a lightning movement but the other girl was just as fast.

"Who are you?" Sophie asked.

She received no response to this either, but felt a momentary confusion as to whether it was she or her reflection who had asked the question.

Sophie pressed her index finger to the nose in the mirror and said, "You are me."

As she got no answer to this, she turned the sentence around and said, "I am you."

Sophie Amundsen was often dissatisfied with her appearance. She was frequently told that she had beautiful almond-shaped eyes, but that was probably just something people said because her nose was

too small and her mouth was a bit too big. And her ears were much too close to her eyes. Worst of all was her straight hair, which it was impossible to do anything with. Sometimes her father would stroke her hair and call her "the girl with the flaxen hair," after a piece of music by Claude Debussy. It was all right for him, he was not condemned to living with this straight dark hair. Neither mousse nor styling gel had the slightest effect on Sophie's hair. Sometimes she thought she was so ugly that she wondered if she was malformed at birth. Her mother always went on about her difficult labor. But was that really what determined how you looked?

Wasn't it odd that she didn't know who she was? And wasn't it unreasonable that she hadn't been allowed to have any say in what she would look like? Her looks had just been dumped on her. She could choose her own friends, but she certainly hadn't chosen herself. She had not even chosen to be a human being.

What was a human being?

Sophie looked up at the girl in the mirror again.

"I think I'll go upstairs and do my biology homework," she said, almost apologetically. Once she was out in the hall, she thought, No, I'd rather go out in the garden.

"Kitty, kitty, kitty!"

Sophie chased the cat out onto the doorstep and closed the front door behind her.

As she stood outside on the gravel path with the mysterious letter in her hand, the strangest feeling came over her. She felt like a doll that had suddenly been brought to life by the wave of a magic wand.

Wasn't it extraordinary to be in the world right now, wandering around in a wonderful adventure!

Sherekan sprang lightly across the gravel and slid into a dense clump of red-currant bushes. A live cat, vibrant with energy from its white whiskers to the twitching tail at the end of its sleek body. It was here in the garden too, but hardly aware of it in the same way as Sophie.

As Sophie started to think about being alive, she began to realize that she would not be alive forever. I am in the world now, she thought, but one day I shall be gone.

Was there a life after death? This was another question the cat was blissfully unaware of.

It was not long since Sophie's grandmother had died. For more than six months Sophie had missed her every single day. How unfair that life had to end!

Sophie stood on the gravel path, thinking. She tried to think extra hard about being alive so as to forget that she would not be alive forever. But it was impossible. As soon as she concentrated on being alive now, the thought of dying also came into her mind. The same thing happened the other way around: only by conjuring up an intense feeling of one day being dead could she appreciate how terribly good it was to be alive. It was like two sides of a coin that she kept turning over and over. And the bigger and clearer one side of the coin became, the bigger and clearer the other side became too.

You can't experience being alive without realizing that you have to die, she thought. But it's just as impossible to realize you have to die without thinking how incredibly amazing it is to be alive.

Sophie remembered Granny saying something like that the day the doctor told her she was ill. "I never realized how rich life was until now," she said.

How tragic that most people had to get ill before they understood what a gift it was to be alive. Or else they had to find a mysterious letter in the mailbox!

Perhaps she should go and see if any more letters had arrived. Sophie hurried to the gate and looked inside the green mailbox. She was startled to find that it contained another white envelope, exactly like the first. But the mailbox had definitely been empty when she took the first envelope! This envelope had her name on it as well. She tore it open and fished out a note the same size as the first one.

Where does the world come from? it said.

I don't know, Sophie thought. Surely nobody really knows. And yet—Sophie thought it was a fair question. For the first time in her life she felt it wasn't right to live in the world without at least inquiring where it came from.

The mysterious letters had made Sophie's head spin. She decided to go and sit in the den.

The den was Sophie's top secret hiding place. It was where she went when she was terribly angry, terribly miserable, or terribly happy. Today she was simply confused.

* * *

The red house was surrounded by a large garden with lots of flowerbeds, fruit bushes, fruit trees of different kinds, a spacious lawn with a glider and a little gazebo that Granddad had built for Granny when she lost their first child a few weeks after it was born. The child's name was Marie. On her gravestone were the words: "Little Marie to us came, greeted us, and left again."

Down in a corner of the garden behind all the raspberry bushes was a dense thicket where neither flowers nor berries would grow. Actually, it was an old hedge that had once marked the boundary to the woods, but because nobody had trimmed it for the last twenty years it had grown into a tangled and impenetrable mass. Granny used to say the hedge made it harder for the foxes to take the chickens during the war, when the chickens had free range of the garden.

To everyone but Sophie, the old hedge was just as useless as the rabbit hutches at the other end of the garden. But that was only because they hadn't discovered Sophie's secret.

Sophie had known about the little hole in the hedge for as long as she could remember. When she crawled through it she came into a large cavity between the bushes. It was like a little house. She knew nobody would find her there.

Clutching the two envelopes in her hand, Sophie ran through the garden, crouched down on all fours, and wormed her way through the hedge. The den was almost high enough for her to stand upright, but today she sat down on a clump of gnarled roots. From there she could look out through tiny peepholes between the twigs and leaves. Although none of the holes was bigger than a small coin, she had a good view of the whole garden. When she was little she used to think it was fun to watch her mother and father searching for her among the trees.

Sophie had always thought the garden was a world of its own. Each time she heard about the Garden of Eden in the Bible it reminded her of sitting here in the den, surveying her own little paradise.

Where does the world come from?

She hadn't the faintest idea. Sophie knew that the world was only a small planet in space. But where did space come from?

It was possible that space had always existed, in which case she would not also need to figure out where it came from. But could anything have always existed? Something deep down inside her protested at the idea. Surely everything that exists must have had a beginning? So space must sometime have been created out of something else.

But if space had come from something else, then that something else must also have come from something. Sophie felt she was only deferring the problem. At some point, something must have come from nothing. But was that possible? Wasn't that just as impossible as the idea that the world had always existed?

They had learned at school that God created the world. Sophie tried to console herself with the thought that this was probably the best solution to the whole problem. But then she started to think again. She could accept that God had created space, but what about God himself? Had he created himself out of nothing? Again there was something deep down inside her that protested. Even though God could create all kinds of things, he could hardly create himself before he had a "self" to create with. So there was only one possibility left: God had always existed. But she had already rejected that possibility! Everything that existed had to have a beginning.

Oh, drat!

She opened the two envelopes again.

Who are you?
Where does the world come from?

What annoying questions! And anyway where did the letters come from? That was just as mysterious, almost.

Who had jolted Sophie out of her everyday existence and suddenly brought her face to face with the great riddles of the universe?

For the third time Sophie went to the mailbox. The mailman had just delivered the day's mail. Sophie fished out a bulky pile of junk mail, periodicals, and a couple of letters for her mother. There was also a postcard of a tropical beach. She turned the card over. It had a Norwegian stamp on it and was postmarked "UN Battalion." Could it be from Dad? But wasn't he in a completely different place? It wasn't his handwriting either.

Sophie felt her pulse quicken a little as she saw who the postcard was addressed to: "Hilde Moller Knag, c/o Sophie Amundsen, 3 Clover Close ..." The rest of the address was correct. The card read:

Dear Hilde, Happy 15th birthday! As I'm sure you'll understand, I want to give you a present that will help you grow. Forgive me for sending the card c/o Sophie. It was the easiest way. Love from Dad.

Sophie raced back to the house and into the kitchen. Her mind was in a turmoil. Who was this "Hilde," whose fifteenth birthday was just a month before her own?

Sophie got out the telephone book. There were a lot of people called Moller, and quite a few called Knag. But there was nobody in the entire directory called Moller Knag.

She examined the mysterious card again. It certainly seemed genuine enough; it had a stamp and a postmark.

Why would a father send a birthday card to Sophie's address when it was quite obviously intended to go somewhere else? What kind of father would cheat his own daughter of a birthday card by purposely sending it astray? How could it be "the easiest way"? And above all, how was she supposed to trace this Hilde person?

So now Sophie had another problem to worry about. She tried to get her thoughts in order:

This afternoon, in the space of two short hours, she had been presented with three problems. The first problem was who had put the two white envelopes in her mailbox. The second was the difficult questions these letters contained. The third problem was who Hilde Moller Knag could be, and why Sophie had been sent her birthday card. She was sure that the three problems were interconnected in some way. They had to be, because until today she had lived a perfectly ordinary life.

The Top Hat

… the only thing we require to be good philosophers is the faculty of wonder...

Sophie was sure she would hear from the anonymous letter writer again. She decided not to tell anyone about the letters for the time being.

At school she had trouble concentrating on what the teachers said. They seemed to talk only about unimportant things. Why couldn't they talk about what a human being is—or about what the world is and how it came into being?

For the first time she began to feel that at school as well as everywhere else people were only concerned with trivialities. There were major problems that needed to be solved.

Did anybody have answers to these questions? Sophie felt that thinking about them was more important than memorizing irregular verbs.

When the bell rang after the last class, she left the school so fast that Joanna had to run to catch up with her.

After a while Joanna said, "Do you want to play cards this evening?"

Sophie shrugged her shoulders.

"I'm not that interested in card games any more."

Joanna looked surprised.

"You're not? Let's play badminton then."

Sophie stared down at the pavement—then up at her friend.

"I don't think I'm that interested in badminton either."

"You're kidding!"

Sophie noticed the touch of bitterness in Joanna's tone.

"Do you mind telling me what's suddenly so important?"

Sophie just shook her head. "It's ... it's a secret."

"Yuck! You're probably in love!"

The two girls walked on for a while without saying anything. When they got to the soccer field Joanna said, "I'm going across the field."

Across the field! It was the quickest way for Joanna, but she only went that way when she had to hurry home in time for visitors or a dental appointment.

Sophie regretted having been mean to her. But what else could she have said? That she had suddenly become so engrossed in who she was and where the world came from that she had no time to play badminton? Would Joanna have understood?

Why was it so difficult to be absorbed in the most vital and, in a way, the most natural of all questions?

She felt her heart beating faster as she opened the mailbox. At first she found only a letter from the bank and some big brown envelopes for her mother. Darn! Sophie had been looking forward to getting another letter from the unknown sender.

As she closed the gate behind her she noticed her own name on one of the big envelopes. Turning it over, she saw written on the back: "Course in Philosophy. Handle with care."

Sophie ran up the gravel path and flung her schoolbag onto the step. Stuffing the other letters under the doormat, she ran around into the back garden and sought refuge in the den. This was the only place to open the big letter.

Sherekan came jumping after her but Sophie had to put up with that. She knew the cat would not give her away.

Inside the envelope there were three typewritten pages held together with a paper clip. Sophie began to read.

WHAT IS PHILOSOPHY?

Dear Sophie,

Lots of people have hobbies. Some people collect old coins or foreign stamps, some do needlework, others spend most of their spare time on a particular sport.

A lot of people enjoy reading. But reading tastes differ widely. Some people only read newspapers or comics, some like reading novels, while others prefer books on astronomy, wildlife, or technological discoveries.

If I happen to be interested in horses or precious stones, I cannot expect everyone else to share my enthusiasm. If I watch all the sports programs on TV with great pleasure, I must put up with the fact that other people find sports boring.

Is there nothing that interests us all? Is there nothing that concerns everyone—no matter who they are or where they live in the world? Yes, dear Sophie, there are questions that certainly should interest everyone. They are precisely the questions this course is about.

What is the most important thing in life? If we ask someone living on the edge of starvation, the answer is food. If we ask someone dying of cold, the answer is warmth. If we put the same question to someone who feels lonely and isolated, the answer will probably be the company of other people.

But when these basic needs have been satisfied—will there still be something that everybody needs? Philosophers think so. They believe that man cannot live by bread alone. Of course everyone needs food. And everyone needs love and care. But there is something else—apart from that—which everyone needs, and that is to figure out who we are and why we are here.

Being interested in why we are here is not a "casual" interest like collecting stamps. People who ask such questions are taking part in a debate that has gone on as long as man

has lived on this planet. How the universe, the earth, and life came into being is a bigger and more important question than who won the most gold medals in the last Olympics.

The best way of approaching philosophy is to ask a few philosophical questions:

How was the world created? Is there any will or meaning behind what happens? Is there a life after death? How can we answer these questions? And most important, how ought we to live? People have been asking these questions throughout the ages. We know of no culture which has not concerned itself with what man is and where the world came from.

Basically there are not many philosophical questions to ask. We have already asked some of the most important ones. But history presents us with many different answers to each question. So it is easier to ask philosophical questions than to answer them.

Today as well each individual has to discover his own answer to these same questions. You cannot find out whether there is a God or whether there is life after death by looking in an encyclopedia. Nor does the encyclopedia tell us how we ought to live. However, reading what other people have believed can help us formulate our own view of life.

Philosophers' search for the truth resembles a detective story. Some think Andersen was the murderer, others think it was Nielsen or Jensen. The police are sometimes able to solve a real crime. But it is equally possible that they never get to the bottom of it, although there is a solution somewhere. So even if it is difficult to answer a question, there may be one—and only one—right answer. Either there is a kind of existence after death—or there is not.

A lot of age-old enigmas have now been explained by science. What the dark side of the moon looks like was once shrouded in mystery. It was not the kind of thing that could be solved by discussion, it was left to the imagination of the individual. But today we know exactly what the dark side of the moon looks like, and no one can "believe" any longer in the Man in the Moon, or that the moon is made of green cheese.

A Greek philosopher who lived more than two thousand years ago believed that philosophy had its origin in man's sense of wonder. Man thought it was so astonishing to be alive that philosophical questions arose of their own accord.

It is like watching a magic trick. We cannot understand how it is done. So we ask: how can the magician change a couple of white silk scarves into a live rabbit?

A lot of people experience the world with the same incredulity as when a magician suddenly pulls a rabbit out of a hat which has just been shown to them empty.

In the case of the rabbit, we know the magician has tricked us. What we would like to know is just how he did it. But when it comes to the world it's somewhat different. We know that the world is not all sleight of hand and deception because here we are in it, we are part of it. Actually, we are the white rabbit being pulled out of the hat. The only difference between us and the white rabbit is that the rabbit does not realize it is taking part in a magic trick. Unlike us. We feel we are part of something mysterious and we would like to know how it all works.

P.S. As far as the white rabbit is concerned, it might be better to compare it with the whole universe. We who live here are microscopic insects existing deep down in the rabbit's fur. But philosophers are always trying to climb up the fine hairs of the fur in order to stare right into the magician's eyes.

Are you still there, Sophie? To be continued . . .

Sophie was completely exhausted. Still there? She could not even remember if she had taken the time to breathe while she read.

Who had brought this letter? It couldn't be the same person who had sent the birthday card to Hilde Moller Knag because that card had both a stamp and a postmark. The brown envelope had been delivered by hand to the mailbox exactly like the two white ones.

Sophie looked at her watch. It was a quarter to three. Her mother would not be home from work for over two hours.

Sophie crawled out into the garden again and ran to the mailbox. Perhaps there was another letter.

She found one more brown envelope with her name on it. This time she looked all around but

there was nobody in sight. Sophie ran to the edge of the woods and looked down the path.

No one was there. Suddenly she thought she heard a twig snap deep in the woods. But she was not completely sure, and anyway it would be pointless to chase after someone who was determined to get away.

Sophie let herself into the house. She ran upstairs to her room and took out a big cookie tin full of pretty stones. She emptied the stones onto the floor and put both large envelopes into the tin. Then she hurried out into the garden again, holding the tin securely with both hands. Before she went she put some food out for Sherekan.

"Kitty, kitty, kitty!"

Once back in the den she opened the second brown envelope and drew out the new typewritten pages. She began to read.

A STRANGE CREATURE

Hello again! As you see, this short course in philosophy will come in handy-sized portions. Here are a few more introductory remarks:

Did I say that the only thing we require to be good philosophers is the faculty of wonder? If I did not, I say it now: THE ONLY THING WE REQUIRE TO BE GOOD PHILOSOPHERS IS THE FACULTY OF WONDER.

Babies have this faculty. That is not surprising. After a few short months in the womb they slip out into a brand-new reality. But as they grow up the faculty of wonder seems to diminish. Why is this? Do you know?

If a newborn baby could talk, it would probably say something about what an extraordinary world it had come into. We see how it looks around and reaches out in curiosity to everything it sees.

As words are gradually acquired, the child looks up and says "Bow-wow" every time it sees a dog. It jumps up and down in its stroller, waving its arms: "Bow-wow! Bow-wow!" We who are older and wiser may feel somewhat exhausted by the child's enthusiasm. "All right, all right, it's a bow-wow," we say, unimpressed. "Please sit still." We are not enthralled. We have seen a dog before.

This rapturous performance may repeat itself hundreds of times before the child learns to pass a dog without going crazy. Or an elephant, or a hippopotamus. But long before the child learns to talk properly—and Ion before it learns to think philosophically—the world we have become a habit.

A pity, if you ask me.

My concern is that you do not grow up to be one of those people who take the world for granted, Sophie dear. So just to make sure, we are going to do a couple of experiments in thought before we begin on the course itself.

Imagine that one day you are out for a walk in the woods. Suddenly you see a small spaceship on the path in front of you. A tiny Martian climbs out of the spaceship and stands on the ground looking up at you . . .

What would you think? Never mind, it's not important. But have you ever given any thought to the fact that you are a Martian yourself?

It is obviously unlikely that you will ever stumble upon a creature from another planet. We do not even know that there is life on other planets. But you might stumble upon yourself one day. You might suddenly stop short and see yourself in a completely new light. On just such a walk in the woods.

I am an extraordinary being, you think. I am a mysterious creature.

You feel as if you are waking from an enchanted slumber. Who am I? you ask. You know that you are stumbling around on a planet in the universe. But what is the universe?

If you discover yourself in this manner you will have discovered something as mysterious

as the Martian we just mentioned. You will not only have seen a being from outer space. You will feel deep down that you are yourself an extraordinary being.

Do you follow me, Sophie? Let's do another experiment in thought:

One morning, Mom, Dad, and little Thomas, aged two or three, are having breakfast in the kitchen. After a while Mom gets up and goes over to the kitchen sink, and Dad—yes, Dad—flies up and floats around under the ceiling while Thomas sits watching. What do you think Thomas says? Perhaps he points up at his father and says: "Daddy's flying!" Thomas will certainly be astonished, but then he very often is. Dad does so many strange things that this business of a little flight over the breakfast table makes no difference to him. Every day Dad shaves with a funny machine, sometimes he climbs onto the roof and turns the TV aerial—or else he sticks his head under the hood of the car and comes up black in the face.

Now it's Mom's turn. She hears what Thomas says and turns around abruptly. How do you think she reacts to the sight of Dad floating nonchalantly over the kitchen table?

She drops the jam jar on the floor and screams with fright. She may even need medical attention once Dad has returned respectably to his chair. (He should have learned better table manners by now!) Why do you think Thomas and his mother react so differently?

It all has to do with habit. (Note this!) Mom has learned that people cannot fly. Thomas has not. He still isn't certain what you can and cannot do in this world.

But what about the world itself, Sophie? Do you think it can do what it does? The world is also floating in space.

Sadly it is not only the force of gravity we get used to as we grow up. The world itself becomes a habit in no time at all. It seems as if in the process of growing up we lose the ability to wonder about the world. And in doing so, we lose something central—something philosophers try to restore. For somewhere inside ourselves, something tells us that life is a huge mystery. This is something we once experienced, long before we learned to think the thought.

To be more precise: Although philosophical questions concern us all, we do not all become philosophers. For various reasons most people get so caught up in everyday affairs that their astonishment at the world gets pushed into the background. (They crawl deep into the rabbit's fur, snuggle down comfortably, and stay there for the rest of their lives.)

To children, the world and everything in it is new, something that gives rise to astonishment. It is not like that for adults. Most adults accept the world as a matter of course.

This is precisely where philosophers are a notable exception. A philosopher never gets quite used to the world. To him or her, the world continues to seem a bit unreasonable—bewildering, even enigmatic. Philosophers and small children thus have an important faculty in common. You might say that throughout his life a philosopher remains as thin-skinned as a child.

So now you must choose, Sophie. Are you a child who has not yet become world-weary? Or are you a philosopher who will vow never to become so?

If you just shake your head, not recognizing yourself as either a child or a philosopher, then you have gotten so used to the world that it no longer astonishes you. Watch out! You are on thin ice. And this is why you are receiving this course in philosophy, just in case. I will not allow you, of all people, to join the ranks of the apathetic and the indifferent. I want you to have an inquiring mind.

The whole course is free of charge, so you get no money back if you do not complete it. If you choose to break off the course you are free to do so. In that case you must leave a message for me in the mailbox. A live frog would be eminently suitable. Something green, at least, otherwise the mailman might get scared.

To summarize briefly: A white rabbit is pulled out of a top hat. Because it is an extremely large rabbit, the trick takes many billions of years. All mortals are born at the very tip of the rabbit's fine hairs, where they are in a position to wonder at the impossibility of the trick. But as

they grow older they work themselves ever deeper into the fur. And there they stay. They become so comfortable they never risk crawling back up the fragile hairs again. Only philosophers embark on this perilous expedition to the outermost reaches of language and existence. Some of them fall off, but others cling on desperately and yell at the people nestling deep in the snug softness, stuffing themselves with delicious food and drink.

"Ladies and gentlemen," they yell, "we are floating in space!" But none of the people down there care.

"What a bunch of troublemakers!" they say. And they keep on chatting: Would you pass the butter, please? How much have our stocks risen today? What is the price of tomatoes? Have you heard that Princess Di is expecting again?

When Sophie's mother got home later that afternoon, Sophie was practically in shock. The tin containing the letters from the mysterious philosopher was safely hidden in the den. Sophie had tried to start her homework but could only sit thinking about what she had read.

She had never thought so hard before! She was no longer a child—but she wasn't really grown up either. Sophie realized that she had already begun to crawl down into the cozy rabbit's fur, the very same rabbit that had been pulled from the top hat of the universe. But the philosopher had stopped her. He—or was it a she?—had grabbed her by the back of the neck and pulled her up again to the tip of the fur where she had played as a child. And there, on the outermost tips of the fine hairs, she was once again seeing the world as if for the very first time.

The philosopher had rescued her. No doubt about it. The unknown letter writer had saved her from the triviality of everyday existence.

When Mom got home at five o'clock, Sophie dragged her into the living room and pushed her into an armchair.

"Mom—don't you think it's astonishing to be alive?" she began.

Her mother was so surprised that she didn't answer at first. Sophie was usually doing her homework when she got home.

"I suppose I do—sometimes," she said.

"Sometimes? Yes, but—don't you think it's astonishing that the world exists at all?"

"Now look, Sophie. Stop talking like that."

"Why? Perhaps you think the world is quite normal?"

"Well, isn't it? More or less, anyway."

Sophie saw that the philosopher was right. Grownups took the world for granted. They had let themselves be lulled into the enchanted sleep of their humdrum existence once and for all.

"You've just grown so used to the world that nothing surprises you any more."

"What on earth are you talking about?"

"I'm talking about you getting so used to everything. Totally dim, in other words."

"I will not be spoken to like that, Sophie!"

"All right, I'll put it another way. You've made yourself comfortable deep down in the fur of a white rabbit that is being pulled out of the universe's top hat right now. And in a minute you'll put the potatoes on. Then you'll read the paper and after half an hour's nap you'll watch the news on TV!"

An anxious expression came over her mother's face. She did indeed go into the kitchen and put the potatoes on. After a while she came back into the living room, and this time it was she who pushed Sophie into an armchair.

"There's something I must talk to you about," she began. Sophie could tell by her voice that it was something serious.

"You haven't gotten yourself mixed up with drugs, have you, dear?"

Sophie was just about to laugh, but she understood why the question was being brought up now.

"Are you nuts?" she said. "That only makes you duller'."

No more was said that evening about either drugs or white rabbits.

The Myths

... a precarious balance between the forces of good and evil …

There was no letter for Sophie the next morning. All through the interminable day at school she was bored stiff. She took care to be extra nice to Joanna during the breaks. On the way home they talked about going camping as soon as the woods were dry enough.

After what seemed an eternity she was once again at the mailbox. First she opened a letter postmarked in Mexico. It was from her father. He wrote about how much he was longing for home and how for the first time he had managed to beat the Chief Officer at chess. Apart from that he had almost finished the pile of books he had brought aboard with him after his winter leave.

And then, there it was—a brown envelope with her name on it! Leaving her schoolbag and the rest of the mail in the house, Sophie ran to the den. She pulled out the new typewritten pages and began to read:

THE MYTHOLOGICAL WORLD PICTURE

Hello there, Sophie! We have a lot to do, so we'll get started without delay.

By philosophy we mean the completely new way of thinking that evolved in Greece about six hundred years before the birth of Christ. Until that time people had found answers to all their questions in various religions. These religious explanations were handed down from generation to generation in the form of myths. A myth is a story about the gods which sets out to explain why life is as it is.

Over the millennia a wild profusion of mythological explanations of philosophical questions spread across the world. The Greek philosophers attempted to prove that these explanations were not to be trusted.

In order to understand how the early philosophers thought, we have to understand what it was like to have a mythological picture of the world. We can take some Nordic myths as examples. (There is no need to carry coals to Newcastle.)

You have probably heard of Thor and his hammer. Before Christianity came to Norway, people believed that Thor rode across the sky in a chariot drawn by two goats. When he swung his hammer it made thunder and lightning. The word "thunder" in Norwegian—"Thor-d0n"—means Thor's roar. In Swedish, the word for thunder is "aska," originally "as-aka," which means "god's journey" over the heavens.

When there is thunder and lightning there is also rain, which was vital to the Viking farmers. So Thor was worshipped as the god of fertility.

The mythological explanation for rain was therefore that Thor was swinging his hammer. And when it rained the corn germinated and thrived in the fields.

How the plants of the field could grow and yield crops was not understood. But it was clearly somehow connected with the rain. And since everybody believed that the rain had something to do with Thor, he was one of the most important of the Norse gods.

There was another reason why Thor was important, a reason related to the entire world order.

The Vikings believed that the inhabited world was an island under constant threat from outside dangers. They called this part of the world Midgard, which means the kingdom in the middle. Within Midgard lay Asgard, the domain of the gods.

Outside Midgard was the kingdom of Utgard, the domain of the treacherous giants, who resorted to all kinds of cunning tricks to try and destroy the world. Evil monsters like these are often referred to as the "forces of chaos." Not only in Norse mythology but in almost all other cultures, people found that there was a precarious balance between the forces of good and evil.

One of the ways in which the giants could destroy Midgard was by abducting Freyja, the goddess of fertility. If they could do this, nothing would grow in the fields and the women would no longer have children. So it was vital to hold these giants in check.

Thor was a central figure in this battle with the giants. His hammer could do more than make rain; it was a key weapon in the struggle against the dangerous forces of chaos. It gave him almost unlimited power. For example, he could hurl it at the giants and slay them. And he never had to worry about losing it because it always came back to him, just like a boomerang.

This was the mythological explanation for how the balance of nature was maintained and why there was a constant struggle between good and evil. And this was precisely the kind of explanation that the philosophers rejected.

But it was not a question of explanations alone.

Mortals could not just sit idly by and wait for the gods to intervene while catastrophes such as drought or plague loomed. They had to act for themselves in the struggle against evil. This they did by performing various religious ceremonies, or rites.

The most significant religious ceremony in Norse times was the offering. Making an offering to a god had the effect of increasing that god's power. For example, mortals had to make offerings to the gods to give them the strength to conquer the forces of chaos. They could do this by sacrificing an animal to the god. The offering to Thor was usually a goat. Offerings to Odin sometimes took the form of human sacrifices.

The myth that is best known in the Nordic countries comes from the Eddie poem "The Lay of Thrym." It tells how Thor, rising from sleep, finds that his hammer is gone. This makes him so angry that his hands tremble and his beard shakes. Accompanied by his henchman Loki he goes to Freyja to ask if Loki may borrow her wings so that he can fly to Jotunheim, the land of the giants, and find out if they are the ones who have stolen Thor's hammer.

At Jotunheim Loki meets Thrym, the king of the giants, who sure enough begins to boast that he has hidden the hammer seven leagues under the earth. And he adds that the gods will not get the hammer back until Thrym is given Freyja as his bride.

Can you picture it, Sophie? Suddenly the good gods find themselves in the midst of a full-blown hostage incident. The giants have seized the gods' most vital defensive weapon. This is an utterly unacceptable situation. As long as the giants have Thor's hammer, they have total control over the world of gods and mortals. In exchange for the hammer they are demanding Freyja. But this is equally unacceptable. If the gods have to give up their goddess of fertility—she who protects all life—the grass will disappear from the fields and all gods and mortals will die. The situation is deadlocked.

Loki returns to Asgard, so the myth goes, and tells Freyja to put on her wedding attire for she is (alas!) to wed the king of the giants. Freyja is furious, and says people will think she is absolutely man-crazy if she agrees to marry a giant.

Then the god Heimdall has an idea. He suggests that Thor dress up as a bride. With his hair up and two stones under his tunic he will look like a woman. Understandably, Thor is not wildly enthusiastic about the idea, but he finally accepts that this is the only way he will ever get his hammer back.

So Thor allows himself to be attired in bridal costume, with Loki as his bridesmaid.

To put it in present-day terms, Thor and Loki are the gods' "anti-terrorist squad." Disguised as women, their mission is to breach the giants' stronghold and recapture Thor's hammer.

When the gods arrive at Jotunheim, the giants begin to prepare the wedding feast. But during the feast, the bride—Thor, that is—devours an entire ox and eight salmon. He also drinks three barrels of beer. This astonishes Thrym. The true identity of the "commandos" is very nearly revealed. But Loki manages to avert the danger by explaining that Freyja has been looking forward to coming to jotunheim so much that she has not eaten for a week.

When Thrym lifts the bridal veil to kiss the bride, he is startled to find himself looking into

Thor's burning eyes. Once again Loki saves the situation by explaining that the bride has not slept for a week because she is so excited about the wedding. At this, Thrym commands that the hammer be brought forth and laid in the bride's lap during the wedding ceremony.

Thor roars with laughter when he is given the hammer. First he kills Thrym with it, and then he wipes out the giants and all their kin. And thus the gruesome hostage affair has a happy ending. Thor—the Batman or James Bond of the gods—has once again conquered the forces of evil.

So much for the myth itself, Sophie. But what is the real meaning behind it? It wasn't made up just for entertainment. The myth also tries to explain something. Here is one possible interpretation:

When a drought occurred, people sought an explanation of why there was no rain. Could it be that the giants had stolen Thor's hammer?

Perhaps the myth was an attempt to explain the changing seasons of the year: in the winter Nature dies because Thor's hammer is in jotunheim. But in the spring he succeeds in winning it back. So the myth tried to give people an explanation for something they could not understand.

But a myth was not only an explanation. People also carried out religious ceremonies related to the myths. We can imagine how people's response to drought or crop failure would be to enact a drama about the events in the myth. Perhaps a man from the village would dress up as a bride—with stones for breasts—in order to steal the hammer back from the giants. By doing this, people were taking some action to make it rain so the crops would grow in their fields.

There are a great many examples from other parts of the world of the way people dramatized their myths of the seasons in order to speed up the processes of nature.

So far we have only taken a brief glimpse at the world of Norse mythology. But there were countless myths about Thor and Odin, Freyr and Frey a, Hoder and Balder and many other gods. Mythologica notions of this kind flourished all over the world until philosophers began to tamper with them.

A mythological world picture also existed in Greece when the first philosophy was evolving. The stories of the Greek gods had been handed down from generation to generation for centuries. In Greece the gods were called Zeus and Apollo, Hera and Athene, Dionysos and Ascle-pios, Heracles and Hephaestos, to mention only a few of them.

Around 700 B.C., much of the Greek mythology was written down by Homer and Hesiod. This created a whole new situation. Now that the myths existed in written form, it was possible to discuss them.

The earliest Greek philosophers criticized Homer's mythology because the gods resembled mortals too much and were just as egoistic and treacherous. For the first time it was said that the myths were nothing but human notions.

One exponent of this view was the philosopher Xe-nophanes, who lived from about 570 B.C. Men have created the gods in their own image, he said. They believe the gods were born and have bodies and clothes and language just as we have. Ethiopians believe that the gods are black and flat-nosed, Thracians imagine them to be blue-eyed and fair-haired. If oxen, horses, and lions could draw, they would depict gods that looked like oxen, horses, and lions!

During that period the Greeks founded many city-states, both in Greece itself and in the Greek colonies in Southern Italy and Asia Minor, where all manual work was done by slaves, leaving the citizens free to devote all their time to politics and culture.

In these city environments people began to think in a completely new way. Purely on his own behalf, any citizen could question the way society ought to be organized. Individuals could thus also ask philosophical questions without recourse to ancient myths.

We call this the development from a mythological mode of thought to one based on experience and reason. The aim of the early Greek philosophers was to find natural, rather

than supernatural, explanations for natural processes.

Sophie left the den and wandered about in the large garden. She tried to forget what she had learned at school, especially in science classes.

If she had grown up in this garden without knowing anything at all about nature, how would she feel about the spring?

Would she try to invent some kind of explanation for why it suddenly started to rain one day? Would she work out some fantasy to explain where the snow went and why the sun rose in the morning?

Yes, she definitely would. She began to make up a story:

Winter held the land in its icy grip because the evil Muriat had imprisoned the beautiful Princess Sikita in a cold prison. But one morning the brave Prince Bravato came and rescued her. Sikita was so happy that she began to dance over the meadows, singing a song she had composed inside the dank prison. The earth and the trees were so moved that all the snow turned into tears. But then the sun came out and dried all the tears away. The birds imitated Sikita's song, and when the beautiful princess let down her golden tresses, a few locks of her hair fell onto the earth and turned into the lilies of the field ...

Sophie liked her beautiful story. If she had not known any other explanation for the changing seasons, she felt sure she would have come to believe her own story in the end.

She understood that people had always felt a need to explain the processes of nature. Perhaps they could not live without such explanations. And that they made up all those myths in the time before there was anything called science.

The Natural Philosophers

… nothing can come from nothing …

When her mother got home from work that afternoon Sophie was sitting in the glider, pondering the possible connection between the philosophy course and Hilde Moller Knag, who would not be getting a birthday card from her father.

Her mother called from the other end of the garden, "Sophie! There's a letter for you!"

She caught her breath. She had already emptied the mailbox, so the letter had to be from the philosopher. What on earth would she say to her mother?

"There's no stamp on it. It's probably a love letter!"

Sophie took the letter.

"Aren't you going to open it?"

She had to find an excuse.

"Have you ever heard of anyone opening a love letter with her mother looking over her shoulder?"

Let her mother think it was a love letter. Although it was embarrassing enough, it would be even worse if her mother found out that she was doing a correspondence course with a complete stranger, a philosopher who was playing hide-and-seek with her.

It was one of the little white envelopes. When Sophie got upstairs to her room, she found three new questions:

Is there a basic substance that everything else is made of?

Can water turn into wine?

How can earth and water produce a live frog!

Sophie found the questions pretty stupid, but nevertheless they kept buzzing around in her head all evening. She was still thinking about them at school the next day, examining them one by one.

Could there be a "basic substance" that everything was made of? If there was some such substance, how could it suddenly turn into a flower or an elephant?

The same objection applied to the question of whether water could turn into wine. Sophie knew the parable of how Jesus turned water into wine, but she had never taken it literally. And if Jesus really had turned water into wine, it was because it was a miracle, something that could not be done normally. Sophie knew there was a lot of water, not only in wine but in all other growing things. But even if a cucumber was 95 percent water, there must be something else in it as well, because a cucumber was a cucumber, not water.

And then there was the question about the frog. Her philosophy teacher had this really weird thing about frogs.

Sophie could possibly accept that a frog consisted of earth and water, in which case the earth must consist of more than one kind of substance. If the earth consisted of a lot of different substances, it was obviously possible that earth and water together could produce a frog. That is, if the earth and the water went via frog spawn and tadpoles. Because a frog could not just grow out of a cabbage patch, however much you watered it.

When she got home from school that day there was a fat envelope waiting for her in the mailbox. Sophie hid in the den just as she had done the other days.

THE PHILOSOPHERS' PROJECT

Here we are again! We'll go directly to today's lesson without detours around white rabbits and the like.

I'll outline very broadly the way people have thought about philosophy, from the ancient Greeks right up to our own day. But we'll take things in their correct order.

Since some philosophers lived in a different age—and perhaps in a completely different culture from ours—it is a good idea to try and see what each philosopher's project is. By this I mean that we must try to grasp precisely what it is that each particular philosopher is especially concerned with finding out. One philosopher might want to know how plants and animals came into being. Another might want to know whether there is a God or whether man has an immortal soul.

Once we have determined what a particular philosopher's project is, it is easier to follow his line of thought, since no one philosopher concerns himself with the whole of philosophy.

I said his line of thought—referring to the philosopher, because this is also a story of men. Women of the past were subjugated both as females and as thinking beings, which is sad because a great deal of very important experience was lost as a result. It was not until this century that women really made their mark on the history of philosophy.

I do not intend to give you any homework—no difficult math questions, or anything like that, and conjugating English verbs is outside my sphere of interest. However, from time to time I'll give you a short assignment.

If you accept these conditions, we'll begin.

THE NATURAL PHILOSOPHERS

The earliest Greek philosophers are sometimes called natural philosophers because they were mainly concerned with the natural world and its processes.

We have already asked ourselves where everything comes from. Nowadays a lot of people imagine that at some time something must have come from nothing. This idea was not so widespread among the Greeks. For one reason or another, they assumed that "something" had always existed.

How everything could come from nothing was therefore not the all-important question. On the other hand the Greeks marveled at how live fish could come from water, and huge trees and brilliantly colored flowers could come from the dead earth. Not to mention how a baby could come from its mother's womb!

The philosophers observed with their own eyes that nature was in a constant state of transformation. But how could such transformations occur?

How could something change from being substance to being a living thing, for example?

All the earliest philosophers shared the belief that there had to be a certain basic substance at the root of all change. How they arrived at this idea is hard to say. We only know that the notion gradually evolved that there must be a basic substance that was the hidden cause of all changes in nature. There had to be "something" that all things came from and returned to.

For us, the most interesting part is actually not what solutions these earliest philosophers arrived at, but which questions they asked and what type of answer they were looking for. We are more interested in how they thought than in exactly what they thought.

We know that they posed questions relating to the transformations they could observe in the physical world. They were looking for the underlying laws of nature. They wanted to understand what was happening around them without having to turn to the ancient myths. And most important, they wanted to understand the actual processes by studying nature itself. This was quite different from explaining thunder and lightning or winter and spring by telling stories about the gods.

So philosophy gradually liberated itself from religion. We could say that the natural philosophers took the first step in the direction of scientific reasoning, thereby becoming the precursors of what was to become science.

Only fragments have survived of what the natural philosophers said and wrote. What little we know is found in the writings of Aristotle, who lived two centuries later. He refers only to the conclusions the philosophers reached. So we do not always know by what paths they reached these conclusions. But what we do know enables us to establish that the earliest Greek philosophers' project concerned the question of a basic constituent substance and the changes in nature.

THREE PHILOSOPHERS FROM MILETUS

The first philosopher we know of is Thales, who came from Miletus, a Greek colony in Asia Minor. He traveled in many countries, including Egypt, where he is said to have calculated the height of a pyramid by measuring its shadow at the precise moment when the length of his own shadow was equal to his height. He is also said to have accurately predicted a solar eclipse in the year 585 B.C.

Thales thought that the source of all things was water. We do not know exactly what he meant by that, he may have believed that all life originated from water—and that all life returns to water again when it dissolves.

During his travels in Egypt he must have observed how the crops began to grow as soon as the floods of the Nile receded from the land areas in the Nile Delta. Perhaps he also noticed that frogs and worms appeared wherever it had just been raining.

It is likely that Thales thought about the way water turns to ice or vapor—and then turns back into water again.

Thales is also supposed to have said that "all things are full of gods." What he meant by that we can only surmise. Perhaps, seeing how the black earth was the source of everything from flowers and crops to insects and cockroaches, he imagined that the earth was filled with tiny invisible "life-germs." One thing is certain—he was not talking about Homer's gods.

The next philosopher we hear of is Anaximander, who also lived in Miletus at about the same time as Thales. He thought that our world was only one of a myriad of worlds that evolve and dissolve in something he called the boundless. It is not so easy to explain what he meant by the boundless, but it seems clear that he was not thinking of a known substance in the way that Thales had envisaged. Perhaps he meant that the substance which is the source of all

things had to be something other than the things created. Because all created things are limited, that which comes before and after them must be "boundless." It is clear that this basic stuff could not be anything as ordinary as water.

A third philosopher from Miletus was Anaximenes (c. 570—526 B.C.). He thought that the source of all things must be "air" or "vapor." Anaximenes was of course familiar with Tholes' theory of water. But where does water come from? Anaximenes thought that water was condensed air. We observe that when it rains, water is pressed from the air. When water is pressed even more, it becomes earth, he thought. He may have seen how earth and sand were pressed out of melting ice. He also thought that fire was rarefied air. According to Anaximenes, air was therefore the origin of earth, water, and fire.

It is not a far cry from water to the fruit of the earth. Perhaps Anaximenes thought that earth, air, and fire were all necessary to the creation of life, but that the source of all things was air or vapor. So, like Thales, he thought that there must be an underlying substance that is the source of all natural change.

Nothing Can Come from Nothing

These three Milesian philosophers all believed in the existence of a single basic substance as the source of all things. But how could one substance suddenly change into something else? We can call this the problem of change.

From about 500 B.C., there was a group of philosophers in the Greek colony of Elea in Southern Italy. These "Eleatics" were interested in this question.

The most important of these philosophers was Parmenides (c. 540-480 B.C.). Parmenides thought that everything that exists had always existed. This idea was not alien to the Greeks. They took it more or less for granted that everything that existed in the world was everlasting. Nothing can come out of nothing, thought Parmenides. And nothing that exists can become nothing.

But Parmenides took the idea further. He thought that there was no such thing as actual change. Nothing could become anything other than it was.

Parmenides realized, of course, that nature is in a constant state of flux. He perceived with his senses that things changed. But he could not equate this with what his reason told him. When forced to choose between relying either on his senses or his reason, he chose reason.

You know the expression "I'll believe it when I see it." But Parmenides didn't even believe things when he saw them. He believed that our senses give us an incorrect picture of the world, a picture that does not tally with our reason. As a philosopher, he saw it as his task to expose all forms of perceptual illusion.

This unshakable faith in human reason is called rationalism. A rationalist is someone who believes that human reason is the primary source of our knowledge of the world.

All Things Flow

A contemporary of Parmenides was Heraditus (c. 540-480 B.C.), who was from Ephesus in Asia Minor. He thought that constant change, or flow, was in fact the mosf basic characteristic of nature. We could perhaps say that Heraclitus had more faith in what he could perceive than Parmenides did.

"Everything flows," said Heraclitus. Everything is in constant flux and movement, nothing is abiding. Therefore we "cannot step twice into the same river." When I step into the river for the second time, neither I nor the river are the same.

Heraclitus pointed out that the world is characterized by opposites. If we were never ill, we would not know what it was to be well. If we never knew hunger, we would take no pleasure in being full. If there were never any war, we would not appreciate peace. And if there

were no winter, we would never see the spring.

Both good and bad have their inevitable place in the order of things, Heraclitus believed. Without this constant interplay of opposites the world would cease to exist.

"God is day and night, winter and summer, war and peace, hunger and satiety," he said. He used the term "God," but he was clearly not referring to the gods of the mythology. To Heraclitus, God—or the Deity—was something that embraced the whole world. Indeed, God can be seen most clearly in the constant transformations and contrasts of nature.

Instead of the term "God," Heraclitus often used the Greek word logos, meaning reason. Although we humans do not always think alike or have the same degree of reason, Heraclitus believed that there must be a kind of "universal reason" guiding everything that happens in nature.

This "universal reason" or "universal law" is something common to us all, and something that everybody is guided by. And yet most people live by their individual reason, thought Heraclitus. In general, he despised his fellow beings. "The opinions of most people," he said, "are like the playthings of infants."

So in the midst of all nature's constant flux and oppo-sites, Heraclitus saw an Entity or one-ness. This "something," which was the source of everything, he called God or logos.

Four Basic Elements

In one way, Parmenides and Heraclitus were the direct opposite of each other. Parmenides' reason made it clear that nothing could change. Heraclitus' sense perceptions made it equally clear that nature was in a constant state of change. Which of them was right? Should we let reason dictate or should we rely on our senses?

Parmenides and Heraclitus both say two things:

Parmenides says:

a) that nothing can change, and

b) that our sensory perceptions must therefore be unreliable. Heraclitus, on the other hand, says:

a) that everything changes ("all things flow"), and

b) that our sensory perceptions are reliable.

* * *

Philosophers could hardly disagree more than that! But who was right? It fell to Empedocles (c. 490-430 B.C.) from Sicily to lead the way out of the tangle they had gotten themselves into.

He thought they were both right in one of their assertions but wrong in the other.

Empedocles found that the cause of their basic disagreement was that both philosophers had assumed the presence of only one element. If this were true, the gap between what reason dictates and what "we can see with our own eyes" would be unbridgeable.

Water obviously cannot turn into a fish or a butterfly. In fact, water cannot change. Pure water will continue to be pure water. So Parmenides was right in holding that "nothing changes."

But at the same time Empedocles agreed with Heraclitus that we must trust the evidence of our senses. We must believe what we see, and what we see is precisely that nature changes.

Empedocles concluded that it was the idea of a single basic substance that had to be rejected. Neither water nor air alone can change into a rosebush or a butterfly. The source of nature cannot possibly be one single "element."

Empedocles believed that all in all, nature consisted of four elements, or "roots" as he

termed them. These four roots were earth, air, fire, and wafer.

All natural processes were due to the coming together and separating of these four elements. For all things were a mixture of earth, air, fire, and water, but in varying proportions. When a flower or an animal dies, he said, the four elements separate again. We can register these changes with the naked eye. But earth and air, fire and water remain everlasting, "untouched" by all the compounds of which they are part. So it is not correct to say that "everything" changes. Basically, nothing changes. What happens is that the four elements are combined and separated—only to be combined again.

We can make a comparison to painting. If a painter only has one color—red, for instance—he cannot paint green trees. But if he has yellow, red, blue, and black, he can paint in hundreds of different colors because he can mix them in varying proportions.

An example from the kitchen illustrates the same thing. If I only have flour, I have to be a wizard to bake a cake. But if I have eggs, flour, milk, and sugar, then I can make any number of different cakes.

It was not purely by chance that Empedocles chose earth, air, fire, and water as nature's "roots." Other philosophers before him had tried to show that the primordial substance had to be either water, air, or fire. Thales and Anaximenes had pointed out that both water and air were essential elements in the physical world. The Greeks believed that fire was also essential. They observed, for example, the importance of the sun to all living things, and they also knew that both animals and humans have body heat.

Empedocles might have watched a piece of wood burning. Something disintegrates. We hear it crackle and splutter. That is "water." Something goes up in smoke. That is "air." The "fire" we can see. Something also remains when the fire is extinguished. That is the ashes—or "earth."

After Empedocles' clarification of nature's transformations as the combination and dissolution of the four "roots," something still remained to be explained. What makes these elements combine so that new life can occur? And what makes the "mixture" of, say, a flower dissolve again?

Empedocles believed that there were two different forces at work in nature. He called them love and strife. Love binds things together, and strife separates them.

He distinguishes between "substance" and "force." This is worth noting. Even today, scientists distinguish between elements and natural forces. Modern science holds that all natural processes can be explained as the interaction between different elements and various natural forces.

Empedocles also raised the question of what happens when we perceive something. How can I "see" a flower, for example? What is it that happens? Have you ever thought about it, Sophie?

Empedocles believed that the eyes consist of earth, air, fire, and water, just like everything else in nature. So the "earth" in my eye perceives what is of the earth in my surroundings, the "air" perceives what is of the air, the "fire" perceives what is of fire, and the "water" what is of water. Had my eyes lacked any of the four substances, I would not have seen all of nature.

Something of Everything in Everything

Anaxagoras (500-428 B.C.) was another philosopher who could not agree that one particular basic substance—water, for instance—might be transformed into everything we see in the natural world. Nor could he accept that earth, air, fire, and water can be transformed into blood and bone.

Anaxagoras held that nature is built up of an infinite number of minute particles invisible to the eye. Moreover, everything can be divided into even smaller parts, but even in the