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THE MYSTERY OF TIME
(OR, THE MAN WHO DID NOT KNOW WHAT TIME IS)

THE occasion of this essay is the remark of a student, which he made after a company of us had tried to assure him that if he knew how to answer such questions as: What time is it? and when were you born? and are you going soon? and were you always lazy? etc., then he would also know what time is. He protested, however, that though he certainly did know all these things, he still did not know what time is. Accordingly I want to study two cases of men who do not know what time is. The first is to be one which is exceedingly simple and which I want to use in order to exhibit a clear case of not knowing what time is. The second is a case which I have found baffling, and which is authentic. I think that I have succeeded in discovering in this case just what it is that the man who does not know what time is, does not know. In a middle part of this essay I have reviewed a small part of the language of time in order to show how rich this is in ramifications, which then one may, according to one's disposition, play in, as children do in a large and empty house, or which then one may lose oneself in, as older people also do. What, in certain aspects, makes this a playground is what also makes it a labyrinth.

I

Once upon a space there was a man who laid linoleum, a fantastical fellow, who did not believe in clocks. He would get up from the floor, his measuring foot in hand, and stare at the clock, laying down his measure in this direction and that, round about the clock. Sometimes he would move his hand through the air in the neighborhood of the clock as though he were trying to feel something, a current or stream. "Nothing there," he would mutter as he returned to his linoleum on the floor, patting the linoleum, pleased to rest his hand on something tangible. He'd go on taking measurements and at intervals he would caress his measuring stick and would talk to it. A few minutes later he would look up at the clock, almost angrily. The clock went on ticking. At times he'd clench his fist. Whole mornings he would pass in this way, making love to his foot-rule and fighting the clock. He would speak scornfully of everything pertaining to the clock, calling it an imposter.

"Time," he would say, "time, seconds, minutes, hours, days, knights and their ladies. Bah!" He was grim. Then he'd look at his ruler. "Tell me, tell me, how many inches in an hour?" And he'd look at the clock and come down hard on the next nail in the linoleum.

There have, of course, been other strange encounters with clocks and watches. In the inventory which the Lilliputians made of what they found in the pockets of Gulliver is the following note: "Out of the right fob hung a great silver chain, with a wonderful kind of engine at the bottom. We directed him to draw out whatever was fastened to that chain; which appeared to be a globe, half silver, and half some transparent metal: for on the transparent side we saw certain strange figures circularly drawn, and thought we could touch them, till we found our fingers stopped by that lucid substance. He put this engine to our ears, which made an incessant noise like that of a watermill, and we conjecture it is either some unknown animal, or the god that he worships; but we are more inclined to the latter opinion, because he assures us (if we understood him right, for he expressed himself very imperfectly) that he seldom does anything without consulting it: he called it his oracle, and said it pointed out the time for every action of his life." Later the Emperor "was amazed at the continual noise it made, and the motion of the minute hand, which he could easily discern; for their sight is much more acute than ours; and asked the opinions of his learned men about him, which were various and remote, as the reader may well imagine without my repeating; although indeed I could not very perfectly understand them." But my only point now is to point out that the man who laid linoleum is not the first to have been mystified by a watch or clock. Besides I'm not through telling about him.

Of course, this man was not simply curious. He was quite disturbed. It was no joke. All his life he had been familiar with clocks. They had had ever so many times together until this "antic disposition" took hold of him. And so it was on the day of which I was speaking. In the evening he visited his friend the clock-maker, seated in the midst of his clock-works, taking tictation and tightening short-hands. He entered the clock-shop, glanced hurriedly about with both ears, and sat down. Not much was said at first. This was a clock-shop and two hundred clocks stared down at him. Pendulumonium! At eight o'clock the whole clock-works began to move, bells rang out from tiny clock-steeples, roosters crowed on tiny perches, cuckoos clock-cooed from tiny balconies, and eight assorted insects flew past a waiting bird as she gobbled up the hours. On the face of one trick clock, the minute

hand was extended from the face of the clock, its fingers outspread with the end of the thumb resting on the tip of what seemed to be a nose raised in the center. Fortunately he did not see this. But he did see and hear too much. He could bear it no longer. Most absurd thing! "Ach," he cried, getting up from his chair, "Your clocks! Your clocks! What do they mean, your clocks?" and he gave a short kick in the direction of the case set in order with clocks before him. The clocks went on ticking, tick, tick, not heeding.

"Come," he said, with marvelous self-control, "I see your clocks. Now show me time, not ages, not aeons, but just one minute, and then I'll believe in your clocks." And he handed him his foot-rule. The clock-maker smiled, embarrassed, and glanced at his clocks. Plainly he felt responsible, but he returned the foot-rule. "I'm in earnest," his friend continued. "Today I fought your clock. I threw my hammer at it. And missed. Look!" And he got down on his hands and knees and measured the long side of the linoleum in the clock-maker's shop. "There," he said. "I measured the linoleum. Here's my foot-rule. You saw how I laid it down, laid it down, again and again, and counted to twelve. There are twelve feet on this side. You see the linoleum and you see the foot-rule. Now, then, as I have just shown you, so now you show me twelve minutes of time. Twelve feet of linoleum, twelve minutes of time! If, for instance, you got down on your knees with the clock in your hand and measured the linoleum, and counted thirty-six minutes of linoleum, then, I should understand how you were using the clock and what you were measuring. Or if you rolled your clock from one edge of the linoleum to the other, and you counted the rolls, that too would suit me. There might be circular foot-rules. But how do you manage to get down on your hands and knees or whatever you do, and so hold time down flat, and pull it straight so that you can get your measurement? Linoleum, five minutes flat."

He was in dead earnest. The clock-maker rubbed the bristles on his chin and tried not to be afraid. He looked about him and looked into the faces of his clocks. There was no help there. In his desperation he picked up a clock and was about to get down on his knees with the clock in his measuring hand, when another of his clocks rang off and a cuckoo stepped out and cocked its little head in his direction. The clock-maker, crouched as he was on one knee, looked up and burst out laughing. He set the clock back on the shelf. The layer of linoleum did not smile. He looked grimly at the cuckoo still cocking its head and at the whole hickory-dickory-dock shebang. Dumb clocks! And he thought of that

man who had made the largest machine in the world, which could do nothing, which also could not measure linoleum. He frowned and he got the notion that clocks were designed to make fun of laying linoleum, as though laying linoleum consisted of nothing but raising two hands and counting up to twelve. He was getting angry. "Listen," said the clock-maker, "the clock isn't used in that way and time isn't like an edge of the linoleum. There are other forms of measure. You can't pour linoleum into a cup nor squeeze it out of an eye-dropper. Ten drops of linoleum! Trying to explain to someone what a twelve-foot length of linoleum is like, by showing him how an eye-dropper works—well, that won't do any good. You don't talk about pounds, ounces, and pence in giving a man change for a kilocycle. There are all sorts of measures." He paused. Then he brightened. "Did you ever read this line in Blake: 'Can wisdom be put in a silver-rod or love in a golden-bowl?' You just try it." He felt that he was doing pretty well. He was rising in his own estimation and began to feel airy. "And here is a line from such another: 'I have measured out my life in coffee-spoons.'" Then he switched. "Ah," he said. "I think I can explain clocks to you. Do you know the hour-glass and the sun dial?" But it was too late. His friend was not listening. Ever since the idea of pouring linoleum and the idea of the eye-dropper had been mentioned, he was pre-occupied. He was talking to himself, asking: What is time? and pausing, and then going on: What is water? He was trying to get the hang of his own question and when he thought of water he felt much better. If only he could meet time, as he could meet water, dipping his delighting fingers into it, then he might yet be a friend of clocks. He got up, musing, waved his hand to the clock-maker, and then, looking about him, he waved to the clock too. "Good," he said, "If I can manage to figure time in liters, I'll shake hands with all of you," and he made a gesture as though he were about to shake hands with a clock. They all ticked back at him, speeding up their tempo, and fidgeting with their hands. At least so it seemed to him. "Keep quiet," he shouted, and a chorus of clocks shouted back to him: "We keep time." He rushed out.

He walked. As he passed the town-hall, he looked up at the great wheel in the tower. It began striking the hour and boomed down at him. He winced at every stroke, covered his ears, and walked faster. He hurried on to his friend, an expert in water-meters. His friend saw him coming. "Good!" he said to himself. "We'll play a game of bridge," an excellent game, by the way, for people so much occupied with water. They greeted each other, but it was soon evident that there was to be no game of

bridge. His visitor began at once: "Listen, listen," he cried. "Will you show me the workings of your water-meter?" He gave no explanation and his friend asked no question. "Well," he said, and he showed him a model meter incased in glass, all its secrets open, its outsides transparent. His visitor studied it carefully, saw where the water runs into the water-meter and out again, and he read the chasing figures, 1, 2, 3, 4, . . ., and he saw that all was wet as it should be. It ticked like a clock and this especially pleased him. "Ah," he said, "I'm on the right track. I see the water and I see the measure-chamber, gulping and spilling measures of water, as the water flows. And there are the numbers." Satisfaction warmed his face. "Wonderful! Wonderful! Forty gallons, so many cubic feet of water, have run through the chamber while I watched the numbers goose-trot through the opening. Water plain as linoleum!" He felt thoroughly relaxed. This is what he wanted to see. Now for the clock. "If only I had a transparent clock, then I should see time flow as now I saw the water in this meter flow. Time meter! Time flows. Time like a river. 'Time, like an everflowing stream.'" The more he saw and the more he said, the more he felt assured.

The water-meter master watched his friend curiously, but understood neither his excitement nor his words. He realized that there was some concern about a clock and about time, and he glanced at the old grandfather pendu-slumbering in the corner. Nothing striking about that! He was glad in any case that his water-meter had been useful. "What's the matter?" he asked. "Has your clock stopped?" His friend looked at him troubled. "Clock stopped? Clock stopped? Was it going somewhere?" And he looked serious. "No, indeed. My foot-rule is clogged. Can't tell time on your water-meter." He sniffed. Obviously he was not going to explain. The other shook his head, slipped a cover over the water-meter, and drew out his watch. He handed it over to his friend, who looked at it, turning it over carefully, and then he glanced in the direction of the water-meter. Then he returned it without a word. A minute or two later he said: "I must be going." And he left.

So the friend of linoleum went home. He walked up the stairs, trying to make a noise like a clock, ticking, just to work up his sympathies, hoping in this way to understand the clock. When he got to his room, he walked straight to the clock and sat down on the bed to examine it. He turned it upside down, and turned it round and round. He shook it and he squeezed it. He noticed the knobs and keys on the back-side of it. He was taking time seriously, almost anxiously. He looked for an opening to dis-

cover where time comes in and he found one at the top just under the bell, and he held his hand over it, but the clock went on ticking and he felt no time on his hand. He shook the clock again, hoping to catch a few seconds seeping through the seams from the inside, but he saw only a fine spray of dust sifting down on the table. He was, however, in no mood to take time for that or that for time—though he was at first startled to see it, was for a moment hopeful. "Ah!" he exclaimed. But then he knew. Finally he decided to take the clock apart, to get a look inside. "Clocks keep time. Well, we'll see." And so, poor fellow, he undid the clock. He was not a bit surprised. The insides of the clock were not even wet. There was not a sparkle of temporal dew even in the spring. He sighed. He gathered the debris of his clock in his hands and laid it on a chair. And he could not imagine how time, had there really been some, could have escaped him. He had been so careful.

But this was not the end of his perplexity. He went on trying to puzzle out how the clock could be measuring something. In his most meticulous fashion he would say: "Well, perhaps the clock does measure something. Per hand from six to twelve is six units of the push of the turn of the index-thumb against the key that winds the spring that unwinds against the cog that moves with the wheel that goes tick." And then he would write this down and snuggle up to it, it was so reasonable. "So one o'clock is so much of the push of the index-thumb against the key spent in the progress of hand from some point in the circumference of the face to another point in the circumference of the same face, semi-ambi-dextrous to the center." And so too the hour-glass measures sand. On other days he would review what he had said before. "Is push time? But why, then, does a man, when he looks at his watch, run for a bus?" And he would hold his head. And then he would come up with another theory. "Time," he would say, "is invisible, an invisible water, and it flows through clocks and is gulped and spilled in upsy-downsy containers, ticken upwards and ticken downwards, as the invisible flows." And this is right too, for is not time invisible? What a comfort in comparison with time linoleum is, so simple—and visible, too! And water, too. But his speculation was not always so gentle. There were times when he suspected clock-makers of a grand conspiracy, obviously, for profit, imposing their machines upon all the people and teaching them a language to go with it, and calling their watches and clocks time-pieces. And the people had now been taken in for some generations, so that though people knew very well what the insides of a clock are like, one seldom heard of anyone doing as he had done, investigating

a clock to find out whether there was anything in it. "Time is an illusion, a mere appearance," he would say, "engineered by people who are giving us the works." He thought it un-American too.

II

In the preceding section, I have, as I indicated earlier, presented the simple case of a man who does not know what time is. It is obvious enough that he approaches the clock with the foot-rule, expecting to discover something vaguely like linoleum, and that later he approaches it with the expectation that it, the clock, works like a water-meter, and that something vaguely like water runs through the clock. Knowing what time is would in this case be something like feeling the drift of time against the surface or against the edge of one's foot-rule or like feeling something soft as a baby's breath in the palm of one's hand as one shakes the clock over it. Time tipping the edge of a foot-rule, time on one's hands! The explanation is, I think, also obvious. This man knows to begin with that we measure linoleum, water, and time. How much linoleum? How much water? How much time? He also knows how to measure linoleum, and discovers how to measure water. He understands the use of the foot-rule and also the use of the water-meter. Now, then, he tries to understand the clock and the use of the clock in terms of the foot-rule and the water-meter and their use. It is this comparison which leads to the idea of something like linoleum, and something like water, and it is something like linoleum and something like water that he looks for in the neighborhood of the clock. Finding nothing, he is troubled and says that he does not know what time is.

I have noticed in this explanation that we measure linoleum, water, and time. This means that there is an extensive parallel in the language of these. We use numbers in respect to each, and, of course, there are units. In measuring we do some things that are similar. We read off numbers on the foot-rule, on the face of the clock, on the face of the water-meter, and, of course, we add, subtract, etc. Naturally it doesn't follow that one can answer such questions as: How many square feet of linoleum in one hour? or how much water in five minutes? If someone insisted that he did not know what an hour is because he could not say how many square feet of linoleum there are in an hour, then, in any case, you would see what it was that he did not know. And so with how much water in five minutes. Now what I have noticed here is a relatively uninteresting illustration of the way in which the language of time is intertwined with the language of quite different contexts. This

intertwining of the language gives rise to something like the experience one may have when a familiar street in one neighborhood leads one without one's being aware into a neighborhood which is of a quite different character. From the village into the Italian section, from this busy square into a street of quiet houses and gardens. A different world! This may be entertaining. It may also be quite confusing and distressing. "I'm lost. Where am I?" So too with the language of time. Stepping, as it were, on one word and pressing it hard, loosing it from its present context, one may suddenly find oneself stepping along in a different context, scarcely knowing where one is, and then thoroughly confusing neighborhoods. In the city the view of one bit of street by which one came into the different neighborhood may mislead one into supposing he hasn't left the other neighborhood at all and so he may continue to try to find his way within this neighborhood as he well might in the other. This is dizzying. It may be like trying to find your way in a strange house, in the middle of the night, when you are not enough awake to realize you are not at home. So you blink and bump your head.

In what immediately follows I am going to present an heterogeneous grouping of fragments of the intertwining of the language of time with the language or languages of other things. There will be nothing systematic about this. There will be fragments, sentences or phrases, which will be like short streets connecting neighborhoods. There will be others in which I enter the adjacent neighborhood. The point of this will be to provide further illustration of that aspect of language which, when taken in a certain absent-minded way, may give one's head a permanent whirl, or when taken in a certain well-lit mindedness, may give one a ride not unlike that one gets in a fun-house.

Notice the variety and color: Once upon a time. He's behind time but four steps ahead of Jones. A long time ago. There's been a mix-up in time. A time interval. Can you tell time? I wouldn't if I could. Time is mean. Mean-time. The clock is striking the hour. Savagery in the belfry. Time passed. So did the milk-man. The time is up. Night fell. No wonder, it's so dark! In a twinkling. In the shake of a lamb's tail. Shorter than the shake of a puppy's tail. The turn of the century. The turn of the screw. The turn of a phrase. It will soon be time. What was it before? A month of Sundays. Five minutes late. Which five minutes? Times overlap. It seams so. He lives in the past. He dies in the future. Time is money. What's money? Money is groceries. Time is groceries. Right now. Wrong hereafter. Relativity of time and morals. On the hour. Shove over

about five minutes. The crowded years. Squeeze in a little time. Time slips away. Between the hours of four and six. Ah! There you are! A stitch in time. A gap in the years. Time heals all things. Remove the stitches. The fulness of time. The fulness of skirts. Time takes its toll. Toll pays for highways. "Time hath a wallet at her back." Nevermore. Nevertheless. Always the same. The day is shot. "Who killed cock-robin?" Not yet? No, yet. Pause for a second. The second is late. No duel without a second. No duo without a second. Take your time. Why does he get a larger piece? Down the corridors of time. Electric light and running water for the first fifty years. "Looking backwards." A time capsule. For chronic diseases. To counter-act the acids of modernity. Chrono-Belcher. A secure tomorrow. Yesterday teetering on the verge of 12 p.m. The future "in a retrospective arrangement." The past teaches us. The lessons of the past. "There, that will teach you to keep your hands out of the fire." The past teaching all hands present to mind future fires. The best time of the year. The dancing hours. Compline hour. The hour of decision. Tossed coin. All heads saying, "Tails." Time to eat. Chronic gluttony. Stuffing yourself, gobbler. Fat as a tick. Spare me a tidbit, just a tasty interval. Time consuming. Just a minute for desert. Time to turn over a new leaf. From the palm in my hand to the tree taking leaf in the spring.

And now I should like to nimble-numble at a few of these. *"Once upon a time."* Indeed! Twice below a certain space we met. In the subway. You said: "Have you the time?" And I said: "I have fifty years." You pouted. It was about time you, a pout about. *"He's behind time."* What a pity! He can never catch up. Time cannot be overtaken. No overtaking. And he with his future always just a jiffey ahead of him, and he crying, "Halt! Halt!" *"A long time ago."* A far country. Go back in time some place, and live in those other people's presents. Go to bed in 1953 and get up in time to buy corn from Joseph in Egypt. "Is your name Benjamin?" "No, no, sir. I did not steal your silver-cup. I have just dreamed in from the U.S.A." He would not understand. "You are under arrest. You are an anachromist. When do you come from? How did you get out of your century?" Meeting Caesar there too, asking Joseph for a few husks and a bucket of ashes to celebrate the Ides of Kislev. "What language do you speak?" "Dico the Roman language," he says in his very best Egyptian which is English. "It was once going to be the most up-to-date, by jabberers, before the future returned." Joseph goes on filling sacks as though time had been renewed and tomorrow was still to come. *"There's been a mix-up in time."* Tangles in

tense. A tense wood. Was issing and will and soon wassing. Ex post factos ante factoring. Eternal recurrence in a jumble. What are your whenabouts? *"The clock is striking the hour."* A careless hour, loitering on the way to ten o'clock. Came in with chiming morning face, like snail, unwillingly to gong. Ten strokes on his pendulum. Doing time.

There are good times, corking good times, uncorking good times. ("A barrel of fun," "a barrel of monkeys.") There are bad times, perfect times, dandy times, nice times, high old times, hard times, grand times, gay times, sad times, rotten times, times that are out of joint. There's railroad time, Greenwich time, five-o'clock shadow on the sun-dial, exact time. We have, we make, we spend, we gain, we buy, we save, we sell, we put in, we waste, we while away ("wit a whittle whittle stick"). We give, we fill, we take out, we steal, we shorten, we squeeze out, we spare, we stretch, we lengthen, we cut, we halve, we keep, we hoard, we get, we take, we seize, we use, we watch, we pick up, we lack, we find, we need, we divide, we lose, we fritter away, we kill, we beat, we invest. What? Time. Time is money. Put time in the bank. Invest weekly. He, taking up his gun, said: "I'm going out to kill time." She shuddered. Expert marksman. Catching time on the wing. But time flies. Time runs, time flows, time creeps ("Tomorrow and tomorrow and tomorrow . . . to the last syllable . . ."), time never stops, time marches on (clopperty, clopperty, clop). Time waits for no man always at the same speed, twenty-four hours every so many minutes.

Time is pressing. With a mangle, alas! ("And at my back I always hear.") Time withers. (Wrong. "Time cannot wither nor custom stale.") Time corrupts. The prey of time, the ravages of time. The prisoners of time. ("Stone walls . . . nor iron bars . . ." but. . . .) One solid hour. Packed with thrills. Room for only one more bubble. Time is a blabber. Time will tell. A lost week-end. Found in the middle of no-when, a tiny island surrounded by something like water. Free time. "The gift of another day." The space of one week. How to compute the area of one week with two unknowables. My time is yours. I have a second. Let's split. A split second. Sounds like a cocoa-nut. Nothing inside. A light-year. A dark hour. Signs of the times: Neon, jitters, robins, whirring, falling leaves, squirrels hiding nuts. Working against time. ("Give me a lever long enough and a fulcrum strong enough . . ." and I'll stop everything.) Time hangs heavy. Ripe bananas. Seize the moment. By the scruff of the nick of time. A time-piece. "Slab of eternity." A chip off the old block universe. Times without number. Times with num-

ber: Three times three. In a trice. In a tricecycle, over and over and over. He came in on time. Time is faster than a horse.

The time is coming. (Have you had word? Travel plans.) The time is near. ("I can hear the whistle blowing.") The time is here. (Bring out the red carpet.) The time is going. (All aboard!) The time is gone. (Disappearing in the shadows.) Yesterday is but a shadow of its former self. You'd scarcely know it was the same day. So changed. Been through something. Do you remember the time? Indeed. I'd recognize it anywhere. Is it long since? My last haircut. Travel by memory. Make it in no time at all. See the world from a how-dah decked out by your own "imagienation." A week's work. Six working days, everybody else sitting around. Five-day week. Seventy-some in a year. The first day of the week fell on a Sunday. That's why Sunday walks bowed. Many happy returns of the day. Recurrence to suit wishes. Same day last year this year. Eat the same cake, burn the same candle at the other end. In one year and out of the other. A full day, brimming over, spilled. My time is exhausted. Breathless. Can't stand the pace. A blue Monday, a white Christmas, a black day in our history, "the violet hour," "rosy-fingered dawn," a golden age, the faded past, a green morning, dark ages, the mauve decade, a gray day, a pretty soon, a handsome present, a bright future. Time in assorted colors. Velvet night. What color is Tuesday? Tuesday is fat and florid.

There's no time like the present. There are no apples like the apples of my eye. There's no space like here. "There's no place like home." Never postpone today. Postpone tomorrow. When? Tomorrow. But I may not have the time. That's just the time to postpone. A sentence of five years. Parse it. An exercise for logicians who live a thousand years. A compound proposition. Forever and a day. A baker's dozen. A billion years. The story of the rocks. "Once upon a glacial morning, before the sun rose; there was no sun. . . ." The crucible of time. Hot. Rag-time.

A man on his way lost time. His watch also lost time. A double loss! Time lost cannot be recovered. Like spilled milk. Sop it up. Ten minutes in a wet towel. "Little Sheba." Another man found time, but not the time the other man lost. Ten minutes as good as new, unused, second-hand. Second-hand time goes faster. He also found one dime and he found some things impossible. When he said that he had found some things impossible, people would not believe him. They said no one could find things impossible, that there are no impossible things. Time, they allowed, was possible, and when they asked him where he found time, he said time was up and wouldn't say another word. They figured

that what is up must come down and so they waited. Time would find them out. They winced at the thought. Then the man who found time turned, elbowing his way through time, he was virtually in time, and said to the man who had lost time, "My time is yours," and so finder shared with loser, the ten minutes he had found, breaking it into two four-minute time-pieces. They tick-talked to one another until time ran out on them. Surprised, they both exclaimed, "Where has the time gone?" One answered, "South, for the winter," but the other answered: "No, time is up again. It was high time, you know. It went past like that." And he pretended that he was a bird. "Of course," said the other, "Time flies, have you never heard of the mosquito fleet? but will time return?" "No," said the other, "Time is no homing pigeon." And they were very sad, as they both stood, looking up, watching time flapping its wings in the avisphere.

These are "the fragments I have shored" in order to prepare myself for what I propose to do in the next section. These fragments, you may remember, I intended as further illustration of the intertwining of the language of time with the language or languages of other things. Obviously this intertwining may be exploited sportingly. My interest is in the fact that there is this intertwining. And my interest comes about in this way. There are cases in which this intertwining has serious consequences, and in which it is difficult to see both what the intertwining in a particular case is, and that the serious consequences do arise from such intertwining. The serious consequence I have in mind is that a man should say, "I do not know what time is."

III

In this section I want to study a second case of the man who does not know what time is, this case a bona-fide one, a case with which I have wrestled. The case is expressed in the following long sentence: "The great mystery of Time, were there no other; the illimitable, silent, never-resting thing called Time, rolling, rushing on, swift, silent, like an all-embracing ocean-tide, on which we and all the universe swim like exhalations, like apparitions which are and then are not; this is forever very literally a miracle; a thing to strike us dumb,—for we have no word to speak about it." "The great mystery of Time." I propose now to try to understand just what it is that is the mystery of time by way of certain other mysteries. Time is not the only mystery. There is the mystery of the sea and there is the mystery of the sky and stars. There are, of course, minor mysteries such as the mystery

of caves and of deep places. And man too, it is said, is a mystery, the greatest mystery of all. For the present I wish to consider the mystery of the sea and that of the sky and stars. I am no doubt led to these in particular by the language in which the mystery of time is expressed. I turn first to the mystery of the sea.

Consider, then, some thoughtful man in the days of Columbus or some days before Columbus, as he looks out to the west from some high rock on the shore of the great ocean. He ponders that endless expanse of water, water, water, and more water, on and on, water, wave upon wave, never-ending. Is there another shore? A shoreless sea! His eyes find no relief. There is only water. He stomps with his foot on the rock, with a relish for terra firma. He turns his gaze upon the hills behind him, his eyes resting there, a refuge from the terrors of endlessness. "Are there hills like these there?" and he fixes his eyes steadily on the west. He imagines himself winged like a bird, in flight over the water, arriving at another shore, strange peoples, palm trees, rich meadows, a better land, who knows? "Giants, perhaps, with walrus mustaches. And clusters of grapes borne between two upon a staff." This is not the first time he has stood upon this rock and mused upon the lands that are far away, washed by the water at his feet. There has been talk too, hushed and wonder-full, with friends, and even some levity. "Come, let's get into my little boat and we'll find the other shore." All for smile's sake. They knew and he knew that they would not venture out in any boat, big or little. Another shore? Might not their boat suddenly be carried by the strong waters, tumbling into the abyss, far away from mama and the kitchen stove? Leviathan is no house-cat. And even were the sea set in a saucer and all were well in quiet weather, might not some storm carry them all over the edge like spilled coffee to spatter the floor of the fundament? And so the sea teased them but they did not dare to attempt to pluck out the heart of its mystery. "Three wise men of Gotham!" One man did, of course. And, whether in unquiet desperation (furious at the infinite) or in quiet confidence, he set sail to set his eyes to rest upon that other who-knows-whether shore. On Columbus day! "There is another shore." And he looked back, following the line of the wake of his boat, and he thought of that rock on that other other shore.

Here, then, is a simple case of mystery. Is there another shore? Are there people there? (Is Mars inhabited? No, not yet. But there is a little clover growing out of the rocks.) There are questions, and wistfulness, and a certain helplessness. "We'll never find out." (What's at the end of the rainbow?) And then some brave sailor dares to face the terrors, and returns with a few gay

feathers and an olive leaf and a piece of wampum. And that is the end of the mystery.

This is, however, by no means all of the mystery of the sea. Imagine the sea under a pale moon with clouds. Mystery has its own sky. "I should never have made the sun, but I should have made the moon. The sun is too bright." The moon is for vague and sweet wonder, the sea and waves in soft light and shadow. And things under the sea! The lost Atlantis, the submerged cathedral, Davy Jones' locker, lost ships, mermaids, and pirates' gold. "So is this great and wide sea, wherein are things creeping, innumerable, both small and great beasts." The sea is deep and is dark and wide, and swarms with tiny lights, the lanterns of little fishes. Oh! for a walk in that dark deep on the ocean floor to see the strange creatures like living gold and silver, treasures of the sea. The whale's home. "As we have seen, God came upon him in the whale, and swallowed him down to the living gulfs of doom, and with swift slantings tore him along 'into the midst of the seas,' where the eddying depths sucked him ten fathoms down, and 'the weeds were wrapped about his head' and all the watery world of woe bowled over him." "Ten thousand feet down . . . the watery world of woe." And there are storms at sea and darkness and fog and rain and a thousand ships tossing under the stars. The Ancient Mariner, The Flying Dutchman, the man without a country, Captain Carlson on the broken ship!

And now notice this echo of the sentence which I quoted above: "The great mystery of the Sea, were there no other: the illimitable, noisy, never-resting thing we call The Sea, rolling, rushing on, swift, noisy, an all-embracing ocean, on which we and all the earth swim like exhalations, like apparitions which are and then are not; this is, forever, literally a miracle; a thing to strike us dumb,—for we have no word to speak about it."

This, I think, will not do. But I should like to notice the divergence in the following elaboration, engaging still the language in which the original sentence goes on about time. Imagine this meditation: "The great mystery of the sea, were there no other," and he, the man on the rock, shakes his head slowly, sighs, and looks out upon the water. And he thinks of the stars. "The illimitable." He begins counting the waves for as far as he can see. He gives up, and looks out beyond the last wave he counted. "Noisy." The waves break upon the shore. "Listen! You hear the grating roar." "Never-resting thing we call the sea." "Sophocles long ago heard it on the Aegean." Not one drop of water in all this expanse is still, nor has ever been. "Endlessly rocking," as waterfalls rise, and water-rises fall, rocking water. "Rolling,

rushing on, swift." His eyes catch one line of surf cresting one high wave and they follow its rising tumult, faster, faster, as it pursues the wave before it, swifter, swifter, till it dashes in foam upon the shore. He shouts "Stay! Stay!" and braces himself as with his eyes to halt the wild sea-horses, which rise and leap over his command. Testing his power! (King Canute went home pretty well soaked.) Tide waits and waves wait for no man, nor for any man's word or eye. "An all-embracing ocean." Three-fourths of the earth's surface is water and all the land is an island, floating on that all-encompassing sea. "On which" we and all that is on the earth and all the land, swim like flotsam and then some, like "mire and dirt" cast up by the troubled sea. Our land rests at anchor at the mercy of impervious, reckless water, sustained and shaken by an incontinent sea into whose depths, at the stir of one wild shudder, any windy day, it may fall down, down, down, whales scampering, itself to be dissolved, water to water. "This is forever very literally a miracle; a thing to strike us dumb, for we have no word to speak about it."

Now I should like to comment on this. I tried in the first place to represent the mystery of the sea, its overwhelming extent, its depths and darkness, the lore of history and story, the great beasts and shining little fishes, strange, unknown to man. The sea is full of mystery. My intention was to see whether I could, having had a glimpse of the mystery of the sea, write about that mystery in the words in which the sentence goes on about the mystery of time. Time is illimitable. Well, so is the sea of overwhelming extent. For the purposes of wonder it is large enough. "Silent?" No, not silent, but, then, perhaps noise has its own mystery. "Never-resting?" Indeed! the sea never rests. "Rolling, rushing, swift?" Yes, sometimes more spectacularly even than time. "An all-embracing ocean-tide?" You could say so. There's water all around us. And we and the universe exhalations, apparitions, swimming? No. And this in any case does not enter into the mystery of the sea. And now if we say that time like the sea is very big and very restless, "mighty like a whale," is time's mystery further like the mystery of the sea? The sentence takes no account of the light of the moon shining pale on time, no account of lost cities, lost ships, lore of history and story, submerged in time. Where are they now? At the bottom of the sea of time. It takes no account of "things creeping, innumerable," "of small and great beasts" hidden in the folds of time, time stretched out like a curtain. So far, then, I think we can say that comparing the mystery of time to the mystery of the sea helps on the whole chiefly to see that they are not similar, that one cannot understand the

mystery of time in this way. Tentatively, let us say that both time and the sea are of marvelous extent and that both are restless.

There is another mystery, the mystery of sky and stars. Mystery is, of course, bound up with the unknown, with wonder. The mystery of the sea is articulate, but the mystery of sky and stars is relatively inarticulate. There are no such questions as: Is there another shore? If I go straight up, will I bump my head? The question, in any case, hasn't the right tone. The sky is not strewn with lost ships, with pirates' gold, with a lost Atlantis. If on occasion a great church were suddenly whirled off the earth into space and we saw it disappearing in the direction of a far star, intact, not a brick out of place, and if men now and then were caught in a draught, waved good-bye from a cloud, and we saw them ride off for a spree among the stars, or if we now and then saw or thought we saw in faintest outline the inter-stellar caravans moving swiftly, red and green lights flashing, before and after landing, then we should have something more like the mystery of the sea. Even such a question as: Is Mars inhabited? hasn't the right atmosphere, is generally unconnected with the mystery of the sky and stars. Wonder in this case is vague wonder. The sky and stars are too far away, and they have not swallowed, and have not hidden in their depths, treasure and the burnished lore of history and story. So our wonder has little substance. We do not look steadfastly at some star and ask: And are they singing a hymn in that church, high notes bouncing off the points of neighboring stars? Will Jonathan, who flew away yesterday, sift down a spray of star-dust to show Stella he hasn't forgotten?

Still, there is wonder.

Consider the verses:

> Twinkle, twinkle, little star!
> How I wonder what you are!
> Up above the world so high
> Like a diamond in the sky.

Little stars are cherished shining in the wonder of children and children's wonder twinkles in the winkles of the star.

And now this from a man who did not write nursery rhymes: "Two things there are fill the mind with ever new and increasing admiration and awe, the oftener and more steadily we reflect on them: the starry heavens above and the moral law within." "The more steadily we reflect on them!" Did Kant on his walk one day look into the sky and at one bright star and say: "How I wonder what you are!" I suppose not. He looked into "The starry heavens above," and reflected. And what were his words?

Did he say: "And behold the height of the stars, how high they are," or "When I consider thy heavens, the work of thy fingers, the moon and stars which thou hast ordained, what is man that thou art mindful of him?" Only, I take it, as we connect the stars with man, for instance, or with God, is there any richness in this mystery of the stars. St. Augustine's feeling, not only towards the heavens, but also towards the earth and sea is expressed in the following passage:

> And what is this? I asked the earth; and it answered, "I am not He." And whatsoever are therein made the same confession. I asked the sea and the deeps, and the creeping things that lived and they replied, "We are not thy God; seek higher than we." I asked the breezy air, and the universal air with its inhabitants answered, "Anaximenes was deceived, I am not God." I asked the heavens, sun, moon, and stars: "Neither," say they, "are we the God whom thou seekest." And I answered unto all those things which stand about the door of my flesh: "Ye have told me concerning my God that ye are not He; tell me something about Him." And with a loud voice they exclaimed, "He made us." My questioning was my observing of them; and their beauty was their reply.

The mystery of the stars is, I take it, something special, bathed in a religious light. There are descriptions of the heavens which are, however, quite different. Notice:

> This most excellent canopy, the air, look you; this brave o'erhanging firmament, this majestical roof fretted with golden fire—why it appears no other thing to me than a foul and pestilent congregation of vapors.

And this:

> And that inverted bowl they call the sky
> Whereunder crawling cooped we live and die,
> Lift not your hands to It for help for it
> As impotently moves as you and I.

And this:

> A wise man
> Watching the stars pass across the sky,
> Remarked:
> In the upper air the fireflies move more slowly.
>
> AMY LOWELL

And in these the note of mystery is gone.

Apart from the religious overtones, however, some men have spoken of the mystery of the heavens in a different vein, almost literally of that mystery as a form of consternation. It comes, I think, to something like this. There are forms of picture-puzzle arrangements of black dots for instance, on a white background, and the puzzler is invited to make out the picture of an old man

brushing his shoes or of a bear with his head in a jar. If he cannot make it out, then, of course, the arrangement remains a mystery. Now, then, it is supposed that if the stars were arranged all over the blue himmels in a network of squares, then there would be no mystery. No one would then be fascinated by the stars. It might in that case be very monotonous and anyone who suggested that the stars should be redistributed as if scattered out of a pepper-pot might be acclaimed as a fine architect of the new heavens. Nevertheless this deep-seated hankering for a pattern has this consequence, that when men now do look into the star-lit skies they are overwhelmed and baffled as by a puzzle which exceeds their capacities. They do, of course, find what relief they can in the big and little dipper and the lady in a chair, the arrow and the little fox and so on. The aim however is one picture and it is the frustration involved here which is expressed in the idea of the mystery. The fascination remains, even after one has given up. A variant of this idea is that when one looks into the sky he is tempted straightway to count them, this, perhaps, being one way of arranging them. But he cannot. Hence, the following comment of Burke:

> The number is certainly the cause. The apparent disorder augments the grandeur, for the appearance of care is highly contrary to our idea of magnificence. Besides the stars lie in such apparent confusion as makes it impossible on ordinary occasions to reckon them. This gives them the advantage of a certain infinity.

So it is in various ways the overspreading "heaven-tree of stars," the everlasting chandelier in the ceiling of the world feeds our wonder.

And now reflect: "The great mystery of the Heavens, were there no other; the illimitable, silent, never-resting thing called the Heavens, rolling, rushing on, swift, silent, like an all-embracing ocean-tide on which we and all the universe swim like exhalations, like apparitions which are and then are not; this is forever very literally a miracle; a thing to strike us dumb,—for we have no word to speak about it." Will this do?

I am trying to understand "the mystery of Time," meaning by this that I am trying to understand the man who speaks of such a mystery. The clues to understanding him may be such other mysteries as we are acquainted with, and, of course, what he goes on to say. It is in this way that I came to remind myself of the mysteries of sea and sky. The language in which the author of the sentence writes of the mystery certainly encourages this. We have already seen that this may throw some light upon the mystery. Time is "an all-embracing ocean-tide." Strange sea! If one

could paddle with one's feet on the bank of time as one can paddle on the bank of the sea, then, surely, a part of the mystery of time would be laid. As it is, we know that we do paddle with our feet in the stream of time, but we cannot feel it. No one stubs his toe there against the current. As for what I have noted of the mystery of the heavens and stars, there is even less that is useful in understanding "the mystery of time." There is nevertheless something else which may be described as the mystery of the heavens which may be useful and which is analogous to the idea of "the strange sea." I should like to return to this, but before I do so, I want to study more closely the "description" of time in the sentence about the mystery.

It is clear that no one has come to think of time as like the sea or like the sky, by having seen both time and the sea or sky, as one might have come to think of the sky as like the sea. For we do see both sea and sky. But, then, the question is as to how we do come to think of time as like the sea. The answer is, I take it, simple enough. The same types of sentence which serve us in discussing time or in remarks about (?) time, serve us also in describing the sea. It is this similarity which gives rise to the illusion that time is a sea.

The sentences that I want to notice are these:

Time is illimitable.
Time is silent.
Time never rests.
Time rolls, rushes on.
Time is all-embracing.

I propose with respect to each of these sentences, first of all to explain briefly the use of the sentence, and then to go on to show how by assimilating the meaning of the sentence to somewhat parallel sentences about the sea, we come up with the stirring meta-mystery of time. My explanation of the use of these sentences will very likely be incomplete and may be incorrect. My intention, however, is to exhibit the character of that use, sufficiently to distinguish its use from the analogous sentences about the sea.

Time is illimitable. What does this mean? Briefly, this means that for such expressions as "the first hour," "the last hour," "the beginning of time," "the end of time," we have, save in certain contexts such as "the first hour of the day," "during the last hour," etc., no use. This involves further that we also have no use for such sentences as "there is no first hour" and "there is no last hour." We may all recollect how St. Augustine wrestled with this.

The temptation, however, to try to understand this in a different way is exceedingly strong. "If the roving thought of anyone should wander through the images of by-gone times," then one may go on as follows. Beyond the present moment, there is a next, and a next and a next. Tomorrow is coming, and next week, and January and 1955. And then? Then another decade, another century. And the same thing will be the case if you look behind you over this present moment's shoulder. There is the moment before and so on and on. There is yesterday and last week and September and 1953. And then? Then the forties, and 1900. And, of course, you can go on indefinitely, tearing the leaves off old calendars and making new ones. A shoreless sea! Isn't this how it is at sea when you stand high and look over the water, the sea before you, wave upon wave, dimming into the waters of tomorrow and the waters of yesterday? Is not every man a Flying Dutchman until the sea of time swallows him? There is no shore, no harbor. Time is illimitable.

Time is silent. This is a remarkable detail, and is emphasized by repetition in the sentence quoted at the beginning of this part of the essay. Consider. Time passes. Listen! You could hear a pin drop. "Like a thief in the night." (Time is a thief. It steals your youth away. "Gather ye rose-buds while ye may." "Time, you old gypsy man!") Time passes. There's not a squeak. Helmholtz could not have heard it. The highest fidelity cannot capture it. On cat's paws! Keep your ear to space, catch an echo as time bangs against the earth's axis, a faint throbbing. The sea is not silent. As the waves pound one another, they roar; but time hasn't even a tiny cry. It is also true, of course, that time is not blue, does not smell of fish, and tastes neither salty nor of lemon-ade. Why, then, is a special point made of this, that time is silent? Well, I take it that if one has already got an impression of time as like the sea, and one has in mind too its restlessness and its rolling, then the silence of such a sea intensifies the mystery. Imagine a sea, a turbulent sea, silent as a picture. Is not that a strange sea?

I need, perhaps, not remark that, apart from conversations between two men, neither of whom knows what time is, the sentence: "Time is silent," has no point. Neither is space sour.

Time never rests. It's never an hour for more than sixty minutes. That's how it is with now, too. Now always comes in at the same time, now, that is, and moves on. Guests may stay on, but four o'clock leaves on schedule. Tomorrow is coming, moves in, moves on, is gone, joins yesterday. It will never come by this way again. Time does not stand still. Nor does tomorrow come

in, move out, and then rest. It keeps on going and every day it's farther away. There is no siesta, no rest, for time. Time marches on. Time waits for nobody. "Sun, stand thou still upon Gibeon; and thou moon, in the valley of Ajalon," was not spoken to Time. Time goes on, unwearied, what endurance! unwearying, without a break. Perpetual motion. Nothing can keep time back. Time is irresistible. Put your foot out on the last of Monday to halt Tuesday, and Tuesday runs, subtly rilling, over and through your foot. Get your foot wedged in between 4:59 and 5:01 and see it carried away, disappearing in the mists of last week. King Canute, throwing time back, buckets full of today hitting him full in the face as he tries to make tomorrow stand still. Too much pressure. Build a wall to keep the future out of this year. Make a lunge, telescoping time, jamming 4000 years into a 1000-year space. The engineering feat of the milleniums. The latest advances in Chrono-damnamics. Working against time. Hopeless! Time rolls, rushes on, pushed on by the wave of the future. Against the sea you can build a wall. The sea has a bed. It does not rest but can rest. But time has no bed. Its waves are dashed against no shore. There is no shore. The past recedes every day another day. The future advances every day another day. This is, shall we say, an eternal fact, as old as calendars.

So, in this case, there never will be a Columbus who will set sail to explore and to discover the shore from which the future starts out. The future, no matter how far into tomorroworroworrow he will have advanced, will already be on its way. Time will not be caught napping.

Time is all-embracing. Everything is in time. When is four o'clock? In time. When did Socrates live? In time. When will you keep still? In time. How can time hold so much? Time is very big. The fishes are in the water. The ships are in the sea. The stars are in the sky. The birds are in the air. And all things, fishes and water, and birds and air, and stars and sky are in time. Time is immense. Without water fish cannot swim. Without air birds cannot fly. Without sky the stars cannot shine. The water carries the fish, the air carries the birds. The sky carries the stars. Water, air, and sky are buoyant. And water and air and sky are themselves buoyant, buoyed, in buoyantest time. Time is all-embracing, all-embuoyant. And if, now, everything is in time, is time also in all things? Are not all things time-embracing? Mutual love! It is so. Time permeates all things. Lift the tiny scales of little fishes, time is there. Examine the entrails of birds, time is there. Tiresias knew. And in the hottest regions of the stars, time is there. In the drop of water, in the breath of air, in

a patch of sky, time is there. Time permeates all things. And now we can also understand the words: "on which we and all the universe swim." For as fish swim in the water and birds swim in the air and the stars swim in the sky, so all swimming in the water and all swimming in the air and all swimming in the sky are swimmings in time, the sea, air, sky, of time. Time is a sea, an air, a sky.

And now, I think that we are near to plucking out the heart of the mystery of time. But we are still to explain the rest of that part of the sentence which begins: "on which we and all the universe swim." It goes on: "like exhalations, like apparitions which are and then are not." Time's exhalation, apparitions of time! For this purpose I should like to quote the following sentences from Sir Isaac Newton, from which it will, I think, be clear that the mystery of time is twin to the mystery of the aether.

> But to proceed to the hypothesis: It is to be supposed therein, that there is an aetherial medium, much of the same constitution with air, but far rarer, subtler, and more strongly elastic. . . . But it is not to be supposed that this medium is one uniform matter, but composed partly of the main phlegmatic body of aether, partly of other various aetherial spirits, much after the manner that air is compounded of the phlegmatic body of air, intermixed with various vapours and exhalations. For the electric and magnetic effluvia, and the gravitating principle seem to argue such variety. Perhaps the whole frame of nature may be nothing but various contextures of some certain aetherial spirits or vapours, condensed as it were by precipitation, much after that manner that vapours are condensed into water, or exhalations into grosser substances, though not so easily condensable; and after condensation wrought into various forms, at first by the immediate hand of the creator, and ever since by the power of nature, which by virtue of the command, increase and multiply, became a complete imitation of the copy set by the Protoplast. Thus perhaps, may things be originated from aether.

So the aether too is an all-embracing sea or atmosphere, a medium like air, and to it are related "vapours and exhalations," as to time are related exhalations and apparitions. "Thus, perhaps, may all things be originated from aether," as on time, "we and all the universe swim, like exhalations, like apparitions." And now as there is a mystery of the aether so too there is a mystery of time. For the aether, though much like air, is "rarer, subtler, and more strongly elastic," and whereas one can paddle in the water with one's feet, and one can hold out one's hand in a breeze, the aether goes right through one's foot and hand. One can catch neither touch nor sight of it. Besides it is silent. Also there are the mysteries of vapors and exhalations, of precipitation and condensation. And so the mystery of time is analogous. Is not time also "rarer, subtler" and perhaps "more strongly elastic"

than air, and, perhaps, even than aether? It is difficult, perhaps, to say whether the mystery of time in the sentence quoted is the same as the mystery of aether or whether it is the mystery of a medium even rarer and subtler than aether of which the aether itself is an exhalation, a gross form. On the latter assumption there is this order of media: water, air, aether, time. In any case, the following sentence is not an unreasonable parody: "The great mystery of Aether, were there no other; the illimitable, silent, never-resting thing called aether" (notwithstanding its phlegmatism), "rolling, rushing on, swift" (these words show the traces of the analogy with the sea, but wind also rushes), "silent, like an all-embracing ocean-tide, on which we and all the universe swim like exhalations, like apparitions which are and then are not; this is forever literally a miracle; a thing to strike us dumb, for we have no word to speak about it."

So we can understand this case of a man who does not know what time is, as like that of the man who does not know what aether is. He is like one who breathes deeply to take one big breath of time, hoping to get wind of it in this way. And he would like to know how out of so much time and a trowel to make a star.

There, now I think I know what it is that this man who does not know what time is, does not know. He also did not get the drift.

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BOOK REVIEW

Selected Philosophical Writings. DIDEROT. Edited by John Lough. Cambridge University Press, 1953. viii, 223 pp. $3.00.

Recent years have witnessed so steady a growth of Diderot's fame that for many scholars he has already outranked, in both the originality and the durability of his thought, such contemporaries as Voltaire and Rousseau who may still, however, enjoy greater public acclaim. Besides numerous studies on the multiple aspects of Diderot's activities as philosopher, encyclopedist, and artist, critical editions have lately appeared of three of his works related, more particularly, to the history of philosophy: the *Pensées philosophiques,* the *Lettre sur les aveugles,* and the *Rêve de D'Alembert.* Mr. Lough's volume of selections is designed, therefore, to meet the demands of this resurgence of interest in Diderot. As such, it sim-