

## INVISIBLE PASSING.

HAROLD BEGBIE HAS A CHAT WITH  
SIR OLIVER LODGE.Achievements of Physical Research—The  
Mighty Atom—The Election and How  
It Is Made Real to the Ordinary Man  
—The Great Misunderstood—The In-  
visible Is Passing to Modern Science.

I found myself at dinner the other night seated next to the man who first set Europe thinking of wireless telegraphy. Oliver Lodge is not merely a likeness, but he is the express image of Lord Salisbury twenty years ago; a huge, massive creature, with mountainous head, quiet, cautious, and watchful eyes under a great dome of brow; the same stoop of the head, as though under its own great weight, and the same curious effect of the hair growing outward from above the sloping neck and high, broad shoulders. If Sir Oliver cared to flour his iron-gray beard and to brush his hat the wrong way, I am convinced he might walk into the House of Lords and tell the peers that the British Constitution is not adapted for business purposes.

Our talk began about "electrons," those invisible charges of electricity which are said to be the ultimate subdivision of the atom—the last thing in matter, I asked for some kindergarten figure that would make the electron real to me.

## The Mighty Atom.

The professor stroked his beard. "Imagine," said he, speaking with incisiveness, as becomes the head of Birmingham's University, "a church 200 feet long, 80 feet wide, and 50 feet high, and scattered throughout the interior of this a thousand electric charges, each the size of the ordinary full-stop of a newspaper. That is how electrons feel inside the atom!"

"Room enough for each to expand into quite a handsome semi-colon," I said.

"Yes, there is plenty of room; but they occupy the atom, nevertheless, as soldiers occupy a country; they make it impenetrable by reason of the forces they exert. They are violently energetic."

"And this electron is really the last thing in matter?"

"So far as we know. Splendid work by J. J. Thomson of Cambridge and others has helped us to our present knowledge on the subject."

"You haven't got to the last thing in the spiritual kingdom at present?"

"I am not sure that we have got hold of the first."

I said how great and comforting a thing it was that physical research should be in the hands of such men as himself, Sir William Crookes, Mr. Arthur Balfour, Prof. Barratt, and the Bishop of Ripon.

"For the life of me," said Sir Oliver, "I cannot understand the man in the street's attitude toward the Physical Society. Why is it that the man of business and the man of hard-headed sense regard the physical investigator as a ghost-hunting crank? Are we to stick to the visible world, and leave the invisible out of account? Is the optic nerve to be the linch-pin of the wheel of progress? If so, let astronomy stick to the 6,000 stars visible to man's eye, and forget the 100,000,000 revealed to us by the telescope and the photographic film. Even our dear little friend the electron must go, and the sternest materialist will have to go into mourning for his atom—though lost to sight, to memory dear, with a vengeance."

The professor has a shrewd humor—another likeness to Lord Salisbury.

## The Great Misunderstood.

"No, a great deal of nonsense is talked about things invisible. Physical science has long been groping and stumbling in that world, and physical science is only following its example. The modern tendency of science is toward the invisible kingdom. The more we exhaust the physical world the fuller our hands become of ions and electrons, the more shall we find ourselves pushed into the other territory. Science is something like poor Jo—not my friend in Birmingham—to whom the policeman of progress is continually approaching with his order to move on."

"Science is not unlike poor Jo in other respects. It has had rather a rough time of it in the world. The Church did not go out of its way to be kind at the start, and it has never been a very enthusiastic godmother. And, mark—every branch of science has been ridiculed at its beginning, so that we must not expect physical science to appeal so forcibly to the popular imagination as a novel by Mr. Hall Caine or the servant problem. Nevertheless, I cannot see why the man in the street, the man in the omnibus, and that extraordinarily brilliant fellow, the man in the club, should dispose of the Physical Society in a single word as 'cranks.' If he would take the trouble to read our proceedings or get a talk with Alfred Russel Wallace, he would discover that there really are some things in the world which no fellow can understand."

"And, you see, the Physical Society has demolished more superstitions and laid more ghosts than any other body in the world! So it is a

little unfair of our good-natured friend, the man in the street, to rail and sneer and shrug his shoulders. He has got to recognize, sooner or later, that physical research—that is to say, inquiry into the occult phenomena of existence—is as much a science as surgery or botany."

"You think that the sympathy of the world is necessary?"

"Not positively necessary; but the sympathy and thought of the world is a propelling energy, and the phenomena only occur to human beings, so they are an essential factor in the problem. If there was more of this sympathy at the back of learning, for instance, the Treasury would be empowered and controlled to do more for higher education. It is one of the big pitfalls of life that Englishmen do not devote a portion of their usual

ordinary lead for religious dissension and party politics to the unifying cause of knowledge. We ought to have grown out of hickories by this time; everything that splits the country or divides its energy is to be deplored. Unify; unify. We want an intellectual Bismarck in this country—a man to bind up all the disintegrating forces into one body pushing straight ahead for truth."

## Toward the Invisible.

"And the tendency of science itself is toward the invisible?"

"Yes, you call it the invisible, but you might equally call it the unsmellable. Our sense organs are very limited in their scope, and scientific study enables us to transcend them in all sorts of directions. I should call it the insensible—unless that is ambiguous; the insensible which is as much part and parcel of existence as the sensible."

"Astronomy, you see, is more and more studying the vast universe of invisible stars, and the invisible ether is now harnessed to the service of man. Why should we stop here? It isn't as if physical research went outside the world in quest of mysteries; the mysteries are here, all about us, as densely populated as the atom is with electrons. You may turn the blaze of the sun into a key for unlocking the mysteries of winds and waves, rain, hail, rivers, and all the manifold activities of the earth; but you will have to blow into that orifice till your cheeks crack before you will get it to turn in the lock of life. Science, so far, remember, cannot account for the life of the simplest cell barely visible under the microscope."

"And the search now is for the master key?"

"Well, we have examined the lock pretty thoroughly, and I think it is about time we cast about for the key."

"That is the tendency of modern science?"

"We are moving on."

"It would be well to hammer this fact upon the public consciousness; it helps to exalt life."

"Sympathy is a great force."—Harold Begbie in London Mail.

## THE HILL OF TARA.

For 300 Years the Centre and Heart of the Irish Monarchy.

Mr. Bryce, M.P., spoke recently before members of the Irish Literary Society on "The Hill of Tara." Tara, he said, for three hundred years had remained the centre and heart of the Irish monarchy, or what was understood as a monarchy. It was the scene of the triennial assemblies, like those at Delphi, where the poets sang, the lawyers argued, and the harpists harped, and also, as the poets had described, where everyone drank all the week. (Laughter.) Tara was about twenty-two miles northwest of Dublin, in County Meath. The top of the hill

was nearly 500 feet above sea level, and is raised about 200 feet above the surrounding country. Although there were places of interest to antiquarians, such as Stonehenge, Avebury, Penrith, and Orkney, which had a history later than that of Tara, there were no data concerning them. They knew more about Tara, for events of the second century were clearly indicated. Tara remained the centre of Irish Government down to 560 A.D. It was recorded that St. Patrick visited there in 433 A.D., and there succeeded in alienating the Gaelic people from their old belief. After that the place was cursed by the priests, and finally abandoned. The Kings of Ireland still, however, retained the name of Tara in their official designation. The hill was the capital of a kingdom which should make people realize the many-sided life of a primitive people, the home of the ecclesiastic, the legal, the political and festive life of a nation. He could not understand how it was an ignorant, spiteful, private owner should be allowed to spoil and destroy that which ought to be kept in reason and equity to the whole people.

## In the Sweet By and By.

"Professor," inquired the thoughtful member of the class, "don't you suppose there will come a time when all the coal and all the coal oil stored away in the earth will have become exhausted?"

"Certainly," said the instructor.

"What will we do then?"

"We shall be playing harps, I hope."

## The 8 Hour Day

Which the working man has fought for and succeeded in obtaining is something the wife has no share in. Her day begins before his and ends long after it, as a rule, and many a night her rest is broken by the baby's fretfulness. The healthiest woman must wear out under such a strain. What can be expected then of those women who are weakened by womanly diseases?



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## Not the Same.

"Come along," said Mr. Nupop, fresh from his interview with the janitor. "We'll have to look at flats elsewhere."

"But why can't we take this?" demanded Mrs. Nupop. "It's like heaven here, and—"

"Not much it isn't, and that's the trouble. They take children in heaven."

## Cheering Her Up.

Molly—I was so cross at the party last night! Kate Green had on a dress exactly like mine.

Polly—Yes, but how it must have disgusted her to see you with a dress like hers! That ought to make you happy, I should think.

## Serious.

The Burlesque Queen—Send for the police! I've been robbed!

Her Manager—Diamonds gone again?

The Queen—No, no! This is serious. Some one has stolen all my press notices.

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