

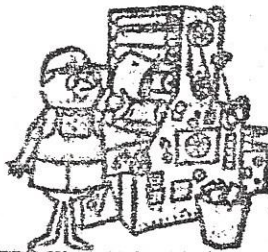
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Edited and Printed by the members of
Vaucluse Boys' High School, Kindness Club.

THE PHYSICS AND CHEMISTRY OF KINDNESS

by C.K. Bliss, B.Sc., of Sydney.

Dear Girls and Boys of the Kindness Club,

I am glad and I am thankful to Mrs. Senta Jerabek for opening this wonderful journal of yours to my own thoughts. I remember how I felt as a little boy, then as a big boy, and then as a young man. And therefore I know how you all feel looking bewildered into a world of war and vengeance and hatred and murder, a world in which kindness seems to have no place. And so I am going to tell you something of the physics and chemistry of kindness.



Already as a little boy I was attracted to the natural sciences. My father was an optician and electro-mechanic, and I played in his workshop with lenses and electric cells and bells. When I went to high school I became the best boy in physics and chemistry. At home I built a physical and chemical laboratory, and my mother didn't mind the mess, and the smell, and the explosions which shook the neighbourhood. She was happy to see that I was able to go to the university. And so I became an industrial research chemist. Naturally, I was fascinated by all the amazing natural phenomena of our world.

The phenomenon which governs every move of all dead matter and of all living things is gravitation. Bodies attract each other. It was Isaac Newton, one of the greatest geniuses who ever lived, who realized that the stars and planets, the earth and all there is in it, are governed by this universal law of attraction.

The second great phenomenon is electro-magnetism. We know that the earth is a great electro-magnet, and that electro-magnetism is used in our homes and in the whole world, helping us to a better and happier and healthier life. But scientifically, there is a basic difference between gravitation and electro-magnetism. In gravitation there is only attraction. In electro-magnetism there is attraction and repulsion between bodies of positive and negative charges.

Einstein tried to improve on Newton's findings, and he tried to find the 'Great Universal Law' which unifies both forces of gravitation and electro-magnetism. But alas, he could never



explain why a gravitational field attracts only, whereas an electro-magnetic field attracts and repulses. His "Unified Field Theory" remained a failure.

But neither Newton nor Einstein, nor almost all other scientists ever maintained that there is a third natural universal force in the universe which interacts with the forces of gravitation and electro-magnetism. And no scientist ever tried to find that "Greater Universal Law" which unifies all three forces.

That third force also shows attraction and repulsion, but in various degrees, depending on the specific bodies interacting with each other. What is the basic difference between the two forces of gravitation and electro-magnetism, and the third force?

The third force acts only on atoms and molecules which compose living matter, whereas the first two forces act also on the atoms and molecules of dead matter. Let me explain this fantastic, mysterious and miraculous working of the third force.

Take a hammer and chisel and carve a cut in a piece of rock. The cut will remain for centuries to come. Make a cut in a table, and the cut will remain as long as the dead timber of that table will remain on earth. But make a cut in the living timber of a tree, and what will happen? The atoms and molecules which form the living cells of that tree will come to the rescue of their injured brother and sister cells. After a while the cut may heal and be grown over, leaving a scar only.

The same fantastic physics and chemistry will occur in the cells of your own body. If you cut yourself, the healthy cells of your own body will come to the rescue of the injured cells and will repair the broken bone, the broken muscle, the broken skin, until health and happiness will again pervade your body. And this mysterious physics and chemistry of kind help occurs in the living cells of all living creatures, plants, flowers, trees, insects, bees, butterflies, fishes, birds and animals.

How should we name that third force? Nobody has ever been able to explain it, and a lot of names have been suggested. If we think that the healthy cells of the injured body show some sort of compassion and kindness for their injured brothers and sisters, we may call this third force "the force of kindness." Indeed, when the cells of your body and brain feel kindness towards other creatures, be they humans or animals, you are acting under the influence of the physics and chemistry of that third force, the "force of kindness".



THE PHYSICS AND CHEMISTRY OF KINDNESS

An article for a highschool journal by C.K. Bliss which appeared in the journal
THE KINDNESS CLUB edited and printed by the Vaocluse High School, Sydney on October
1966.

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Already as a little boy I was attracted to the natural sciences. My father was an optician and electro-mechanic, and I played in his workshop with lenses and electric cells and bells. When I went to high school I became the best boy in physics and chemistry. At home I built a physical and chemical laboratory, and my mother didn't mind the mess, and the smell, and the explosions which shook the neighbourhood. She was happy to see that I was able to go to the university. And so I became an industrial research chemist. Naturally, I was fascinated by all the amazing natural phenomena of our world.

The phenomenon which governs every move of all dead matter and of all living things is gravitation. Bodies attract each other. It was Isaac Newton, one of the greatest geniuses who ever lived, who realized that the stars and planets, the earth and all there is in it, are governed by this universal law of attraction.

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I am glad and I am thankful to Mrs. Emma Jordan for opening this wonderful journal of yours to my own thoughts. I remember how I felt as a little boy, when as a big boy, and then as a young man. And therefore I know how you all feel looking back over a world of war and vengeance and hatred and murder, a world in which kindness seems to have no place. And so I am going to tell you something of the physics and chemistry of kindness.

Almost as a little boy I was attracted to the natural sciences. My father was an engineer and electrician, and I played in his workshop with lenses and electrical coils and bells. When I went to high school I found the best boy in physics and chemistry. At home I built a physical and chemical laboratory, and my mother didn't mind the mess, and the smell, and the explosions which about the neighborhood. She was happy to see that I was able to go to the university. And so I became an industrial research chemist. Naturally, I was fascinated by all the amazing natural phenomena of our world.

The phenomenon which governs every one of all these things and of all living things is gravitation. Nothing attracts more than this. It was Isaac Newton, one of the greatest geniuses who ever lived, who realized that the stars and planets, the earth and all there is in it, are governed by this universal law of attraction.

The second force, magnetism, is another mysterious force. We say that the earth is a great electric magnet, and that electric magnetism is what holds us in our homes and in the whole world, holding us in a better and happier and healthier life. But actually, there is a basic difference between gravitation and electric-magnetism. In gravitation there is only attraction. In electric-magnetism there is attraction and repulsion between bodies of positive and negative charges.

Newton tried to improve on Newton's gravitation and tried to find the "third force" which unifies both forces of gravitation and electric-magnetism. But also, he could never explain why a gravitational field attracts only, whereas an electromagnetic field attracts and repels. His "Unified Field Theory" remained a failure.

Our modern theory of Einstein, now almost all other scientists ever mentioned, the theory of a third natural universal force in the universe which unifies with the forces of gravitation and electric-magnetism, and no scientist even tried to find this "Universal Law" which unifies all three forces.

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The third force acts only on atoms and molecules which compose living matter. Whereas the first two forces act also on the atoms and molecules of dead matter, it acts only on the electric, magnetic and molecular workings of the living force.

Take a piece of chalk and carve a cut in a piece of rock. The cut will heal. Take a piece of wood and carve a cut in a corner, and the cut will heal. Take a piece of iron and carve a cut in a corner, and the cut will heal. But take a cut in the living tissue of a tree, and what will happen? The tissue and molecules which form the living cells of that tree will come to the scene of their injured brother and sister cells. They will surround the cut and heal it, and a green shoot, leaving a scar, will grow.

The same healing physics and chemistry will occur in the cells of your body. If you cut yourself, the healthy cells of your own body will come to the scene of the injured cells and will repair the wound. The physics and chemistry of the healthy cells will again produce new body cells. This restoration physics and chemistry of kind help create in the living world.