TEKTIME

Santo Armenia

Historical reflections of Physics:

From Archimedes, ..., Einstein till present.

Preface by
Carmelo Vindigni

Translated by
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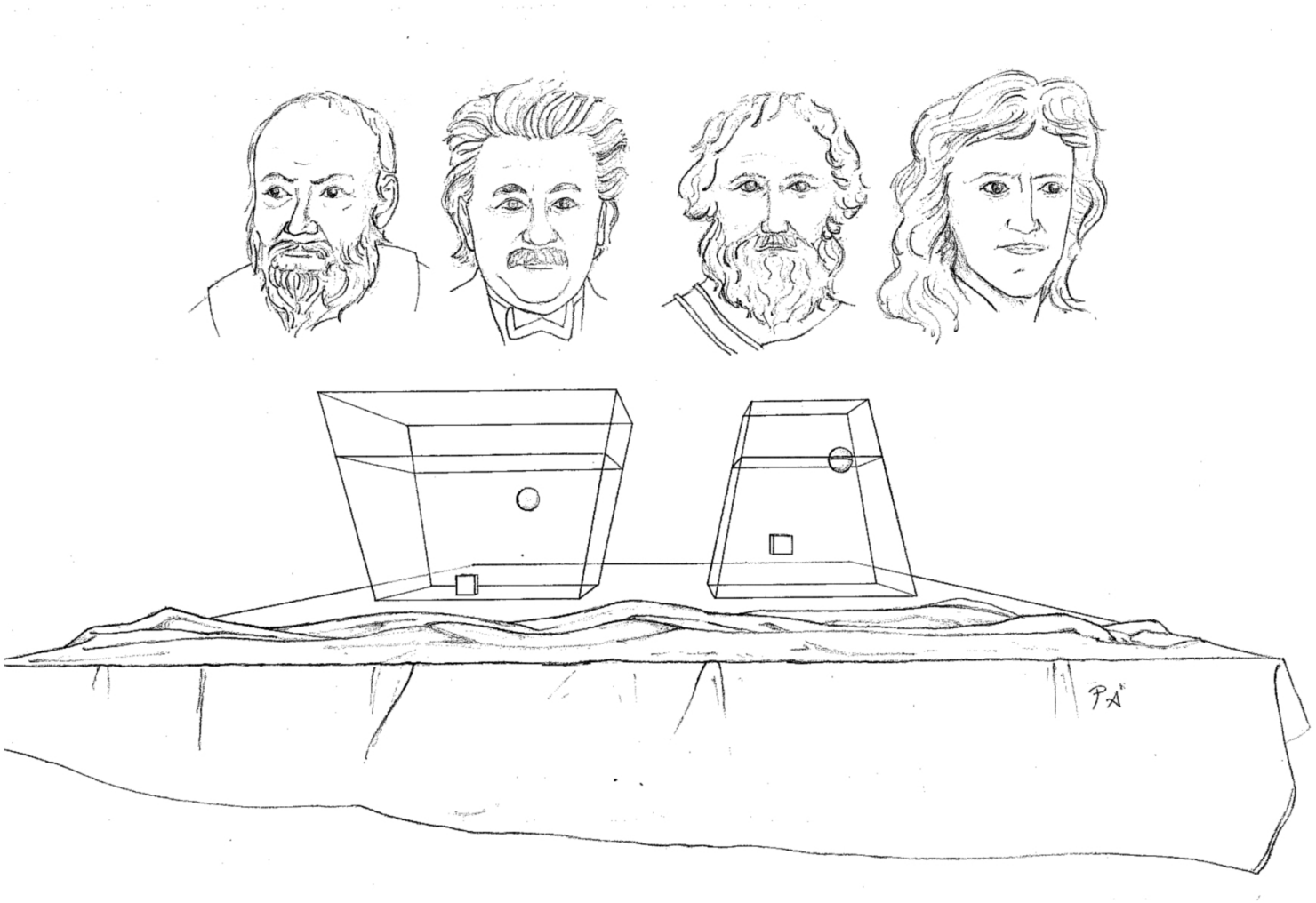

Santo Armenia

Historical Reflections Of Physics: From Archimedes, ..., Einstein Till Present

«Tektime S.r.l.s.»

Armenia S.

Historical Reflections Of Physics: From Archimedes, ..., Einstein Till Present / S. Armenia — «Tektime S.r.l.s.»,

This is the fourth work of a tetralogy which gives birth to the pursuit of the Truth: the first work is ”Galileo and Einstein”, the second work is ”Archimedes”, the third work is ”Archimedes - Galileo - Newton - Einstein”. This fourth work aims to underline the perpetuating millennial mistake which consists of considering the weight unalterable and unchanging compared to the shape of the body itself. Together with this mistake, it is underlined how two mistakes of the Scientific Community, made in the last forty years, are added. The first consists in deciding to use the same scales used previously to measure the body weight to measure the body mass. The second, starting from the 20th May 2019 when redefining the fundamental physical quantities, is related to the kg mass for which it hasn’t been fixed a standard sample, nor the fabric or the sizeable shape.

Содержание

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Historical reflections of Physics:
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Einstein till present.
Preface by
Carmelo Vindigni
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To my family: to my daughter Gabriella, to my son Pietro, to my daughter Marta, who is not a child anymore, and to my wife Marinella.

To Carmelo Vindigni.

1st edition: September 2019

Preface

By CARMELO VINDIGNI

For this forth book, which you as well present as “This is the fourth work of a tetralogy, right now demanded, which gives birth to the pursuit of the Truth”, you sked me to be the author of the Preface once again.

It is with renewed strength and pride that I pursue the task you gave me.

Ausculting your shell, Odysseus, you embarked on your historical adventure to Knowledge. You observed and saw that despite the progress, as a matter of fact, the mistake made by Archimedes, by Stevin and by Galileo due to the lack of instinctive understanding, has been afterwards kept and exacerbated by others: Newton, Lagrange, Einstein and The Scientific Community.

From your ceaseless rowing and digging, culminating in your “*new salt march*”, may a new scientific confrontation begin and lead to the path of Knowledge, ultimately transcending the millennial mistake of *considering the weight of the bodies unalterable.*

You have already announced your fifth work, focused on new fronts, and not satisfied with sailing and digging, now you desire to fly, too?

May Dedalus and Prometheus be your companions.

Author's presentation

This is the fourth work of a tetralogy, right now demanded, which gives birth to the pursuit of the Truth.

The first work is:

GALILEO AND EINSTEIN

Reflections on the general relativity theory

The free fall of bodies

The shape of solid bodies

The second work is:

Archimedes

Reflections on buoyant bodies

The shape of solid bodies

The third work is:

ARCHIMEDES – GALILEO – NEWTON – EINSTEIN

The shape of solid bodies

The shape of fluid-filled containers

Unveiling – Epiphany

The experiments thus present are to be watched on YouTube: Armenia Santo or through the web site www.armeniasanto.it

Introduction

Since the down of time philosophers considered the weight of bodies unalterable.

Euclid based his geometry on the fundamental entities (point, line and plane) and on postulates. One above all: between two points passes one and only one straight line. Geometry is a human construction, non-existing in the natural world.

Archimedes developed his studies in two fields:

1 geometry;
2 nature.

The geometry field includes the evaluation of the perimeter of flat shapes, the evaluation of the surface of flat shapes, the evaluation of the volume of solid shapes, the assessment of the barycentre of flat and solid shapes, etc.

The natural field includes the balance of bodies, the study of the buoyancy phenomenon etc.

Archimedes, confident of the sufficient reason principle or due to a spontaneous knowledge, developed his studies on nature basing it on postulates.

Modern and contemporary Physics (classical, relativistic and quantum), from Galileo till present, despite the definition of being experimental, are still built on postulates based on which theory after theory is constructed.

In this study the millennial mistake will be underline, an error derived from the postulate of considering the weight of bodies unalterable, even though it was outdated by Newton's universal law of gravity, based on which the weight of bodies changes with their position (variation of distance from the centre of the earth), as a matter of fact it persists and with the passing of time it exacerbates.

This millennial mistake includes at present three of them:

1 - Newton himself considered the weight of bodies unchangeable with their shape;

2 - about forty years ago the Scientific Community established that scales (with equal arms, analogues and digital) do not measure the weight but the mass of bodies;

3 - from the 20th May 2019 the Scientific Community, looking to redefine the fundamental physical quantities, hasn't established the standard sample nor the fabric or the sizeable shape for the kg mass.

Once the detailed knowledge of Kebble's Scale (used to redefine the kg per mass) will be spread publicly, it will be known if there is or there isn't a forth mistake, depending on the regular or the irregular shape of the system (the regular shape is achieved as a mere coincidence and not as a willing choice).

The historical era is divided into three periods:

1 - ancient, from Archimedes to Galileo;

2 - modern, from Newton to Loràn Eötvös;

3 - contemporary, from Einstein till present.

From the historical research on the present study, news insights emerged:

a) the study of buoyant bodies;

b) the study of hanging/rolling bodies.

Chapter I. General Ideas

.1 **Body Weight, gravity weight, mass, gravity law**

The concepts of mass and of gravitational pull didn't exist before Newton. Therefore, from Archimedes to Galileo the so-called bodies, also called weights, have a given quantity of physical matter and a peculiar body weight equal to the weight gravity (heaviness); from experience, this body weight is considered unaltered, unchanging, constant.

Newton introduced the idea of mass and formulated the universal law of gravitation. Moreover, he defined the weight of a body as the gravitational force that the Earth exerts on a body with a certain mass (there is no distinction between inertial mass and gravitational mass). The gravitational pull exerted between two bodies is inversely proportional to the square root of their distance. Thus, from Newton on a body has a certain mass and a correspondent weight. Each body consist of a certain mass which is unalterable, while its weight changes with its geographical coordinates: latitude, longitude and altitude. If a body was taken from the Earth to the Moon, or the other way around, its mass wouldn't change, it's its weight which changes, instead.

After comparing the recalled ideas, we have:

a) the term weight, within the meaning used before Archimedes till the present day, refers to two different concepts; the first one is the amount of substance (unchanging), the second one is the gravity pull (changing);

b) the ancient term weight gravity (once considered unalterable) is linked to the gravitational pull (afterwards considered variable);

c) the ancient term weight gravity, which was used by Galileo in the meaning of gravity but was considered unalterable; from now on in this book I will only use the term weight gravity referring to the scientists prior to Newton.

1.2 Barycentre, Centre of weight gravity, centre of gravity, centre of mass

The barycentre is one among the many centre points of a geometric figure; this is valid at any point of history.

The centre of a falling body, when we refer to ancient times (from Archimedes to Galileo), its definition is slightly different for each author (Archimedes, Pappus, Stevin), is the centre point such that if a body was hanging from it, the body wouldn't lose balance.

The centre of weight gravity, when we refer to modern and contemporary ages, is the point where the gravitational force (weight) is applied; it is also called barycentre.

The centre of mass, during modern and contemporary times, is the point in which the static moment of every axis passing through it is zero. In this peculiar case in which the distribution of the mass is uniform, the centre of mass corresponds to the geometrical barycentre of the figure considered; thus, the reference axis is called barycentric axis.

During the ancient time, since the weight of bodies was considered unalterable, the centre of weight gravity used to match the geometrical barycentre.

In the peculiar case of uniform mass distribution, it is underlined that the centre of mass matches with what was called centre of weight gravity during ancient times.

During modern and contemporary times, even if it was known that the gravity force (weight) of a body was alterable, how could they name it centre of gravity or "barycentre"? Moreover, how could they believe that the centre of mass corresponded to the centre of gravity?

The centre of mass corresponds to the geometrical barycentre exclusively when the mass distribution is uniform.

If we treat the simple case of uniform mass distribution, also when there is a symmetry, the centre of gravity never matches with the centre of mass. The classical example is the circle in which

the centre of mass corresponds to the centre of the circle, but the centre of gravity lies beneath it and therefore cannot be the barycentre.

The rate of distance between the centre of gravity and the centre of mass peaks on the earth's surface, diminishing with altitude. Moreover, it increases with:

a) mass growth;

b) density reduction;

c) shape, growing from the sphere to the cylinder to the cube.

All of this is the consequence of my scientific discovery: "*The shape of solid bodies".*

"*The love for the Pursuit of the Truth and Knowledge", regardless of "The shape of solid bodies",* has led me to new insights about:

a) buoyant bodies;

b) hanging/rotating bodies.

Конец ознакомительного фрагмента.