

An Introduction to Magna Theory

Preamble

Many fundamental scientific theories are based on the concept of ‘fields’ that facilitate the transmission of forces, energy, waveforms, magnetism, electric charge and the like. Such fields exist as non-material mediums with certain mathematical properties but no physical reality or fixed positions in space.

Numerous attempts have been made to detect a physical existence of such a medium, in particular, for the ‘electromagnetic field’ but all have failed. It was argued that if a physical medium existed then the solar system as a whole must necessarily be either stationary or moving relative to the medium. In either case, because the Earth moves relative to the sun, there must be times when the Earth moves relative to such a medium. This *drift* (formerly referred to as *ether-drift*) should be measurable using light interference methods and thereby establish the existence of a medium. The best of many experiments to measure such drift was carried out in 1887 by Michelson & Morley. Exhaustive tests resulted in the *failure to detect any drift*. Many experiments since have also confirmed these negative results. The conclusion drawn from these experiments by the scientific establishment has resulted in a belief that *therefore no physical medium exists*.

Introduction

This paper starts with the acceptance that the many attempts to detect an electromagnetic medium have established **the scientific fact that no medium-drift exists** (or, at best, it must be immeasurably small). However, this paper will put forward the following propositions:

- (a) That the *conclusion* that if no medium-**drift** exists therefore proves that no **medium** exists, is not logically or scientifically sustainable.
- (b) That a more logical and, with the benefit of hindsight, more obvious result can include a physical medium.
- (c) That the existence of a physical, electromagnetic medium can be proven by experiment.
- (d) That, assuming certain physical properties of this medium, it can resolve in physical terms many scientific problems which presently rely solely on mathematical constructs.

While this paper is limited to the theoretical and practical establishment of an electromagnetic medium with physical properties, it will point out the many consequences that can follow which may eventually lead to a unifying theory.

The establishment of a physical electromagnetic medium

Any physical medium that can carry electromagnetic waves must necessarily be an elastic fluid, similar to atmospheric air but with a particle size much smaller than even the smallest atom. Electromagnetic radiations cover a wide spectrum. They range from radio waves (wavelengths $10^3\text{m} \sim 1\text{m}$), microwaves ($\sim 10^{-2}\text{m}$), light waves ($\sim 10^{-7}\text{m}$), x-rays ($\sim 10^{-10}\text{m}$) and all the way down to gamma rays ($\sim 10^{-14}\text{m}$). In order to carry such waves, it is estimated that the particle size of such a medium needs to be of the order of 10^{-30}m or less. Such a small particle size is also consistent with the transmission of energy at the speed of light ($\sim 3 \times 10^8\text{m/s}$). This physical medium will be referred to as **magna** in this paper and its constituent particles as **magna particles**. The only other necessary property of magna particles is to assume some elasticity that enables them to vibrate and pass energy to neighbouring particles.

The results of the Michelson & Morley experiments are based on the assumption that any existing medium would be **fixed in space and totally unaffected by the movement of stars and planets** as they move through it. This seems an extraordinary assumption!

The sun is a very large object with a diameter of more than a million kilometres. It is a hundred times bigger than the Earth and a million times more massive. The sun rotates continuously about its axis making one complete revolution in about 25 days. The sun is so enormously large so that even at such a slow rotational speed, the surface of the sun at its equator is moving at more than 7000 km/hour or about 2km per second. With the benefit of hindsight, it seems illogical to assume that such a large rotating mass would have absolutely no effect on any surrounding gas-like medium. With the benefit of hindsight, it seems obvious that the **rotation of the sun will stir the adjacent magna** and, over a period of five billion years or so, will create a giant vortex of magna in its equatorial plane of rotation. Such a vortex will eventually extend into the far reaches of the solar system. Similar vortex movements would also occur in other star systems of the universe (provided that each star rotates on its axis).

The movement of a vortex of magna can be illustrated by the velocity vectors in Fig.1. Magna particles will be stirred into circular orbits around the sun at velocities inversely dependent on the distance from the sun.

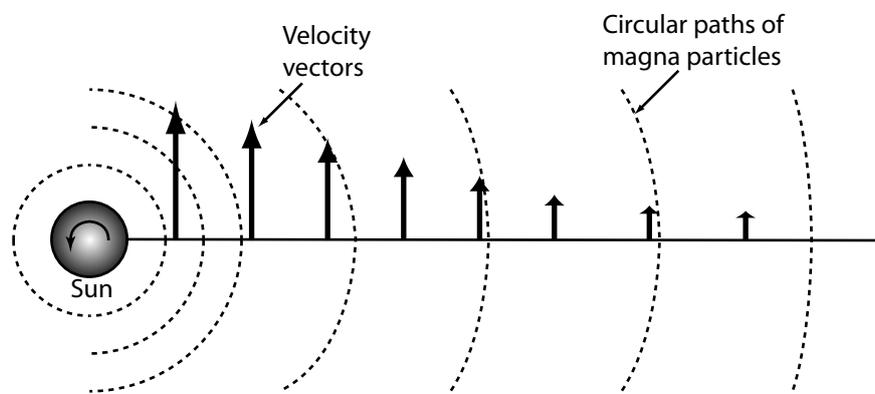


Fig 1. Velocity vectors for the magna vortex created by the sun's rotation

The effect of stirring the magna into a vortex is similar to stirring an expanse of water which also forms a vortex and, importantly, carries any floating objects around with it. In the same way, the vortex of magna can be expected to carry the planets in orbits around the sun. **This vortex of magna is assumed to be the primary cause of planetary orbital motion.** After orbital motions are established, the law of universal gravitation can be invoked to balance the centrifugal forces between each planet and the sun. Gravity alone cannot explain the initial impetus to start the process in the first place. Neither can gravity alone account for the stable equilibrium between these forces. Nor can gravity explain the absolute ideal conditions that would be required to maintain such perpetual motion in the absence of any medium.

Planets carried around the sun by a vortex of magna can result in elliptical orbits as well as circular ones due to the elastic nature of magna. And, of course, if there is any inclination of the plane of the orbit relative to the sun's equatorial plane, the orbit will also be elliptical.

The movement of magna within a vortex can also explain the rotation of a planet about its own axis. Fig.2 shows the flow of magna through and around a typical planet. The distribution of this flow is biased towards the side of the planet facing away from the sun tending to rotate the planet in an anticlockwise direction (assuming that Fig.2 is looking down on its north pole). **Such differential distribution of magna is assumed to be the primary cause of each planet's rotation on its own axis.** The law of universal gravitation has no explanation for such rotations. The Newtonian laws of motion can be invoked to maintain the rotation after it is established but only on the assumption that there is nothing to stop it i.e. absolute ideal conditions producing perpetual motion.

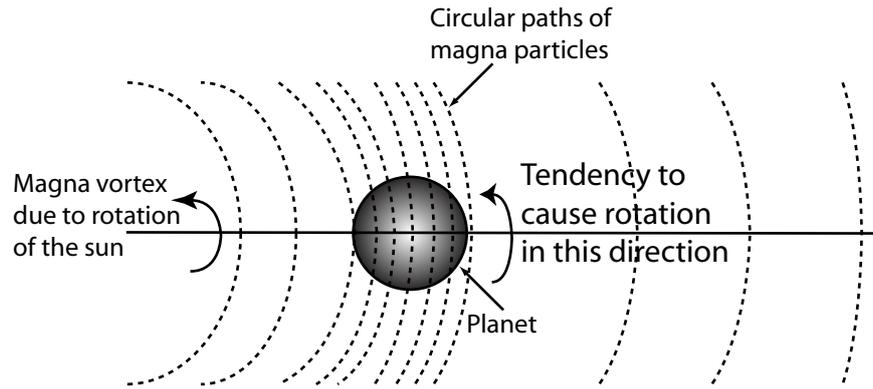


Fig 2. Flow of magna around a planet causing rotation

There are other factors that may affect the rotation of a planet including internal energy effects such as volcanoes and redistribution of mass due to atmospheric weather systems (e.g. the build up of ice in the polar regions) but discussion of such factors is outside the scope of this paper.

The rotation of a planet on its own axis will create its own local vortex of magna which then carries moons and other satellites around the planet. It can be seen from this scenario that, as the planet rotates, the local magna rotates with it in close synchronism. This explains how Michelson & Morley and others failed to detect any medium-drift, because **there is no drift**. Magna at the Earth's surface moves with it in its own local vortex (created by the differential distribution of the sun's magna vortex).

The motions of the planets around the sun are entirely consistent with being carried by a vortex of magna centred on the sun. This can be seen from Fig.3 which plots actual orbital velocities of each of our planets, against its distance from the sun.

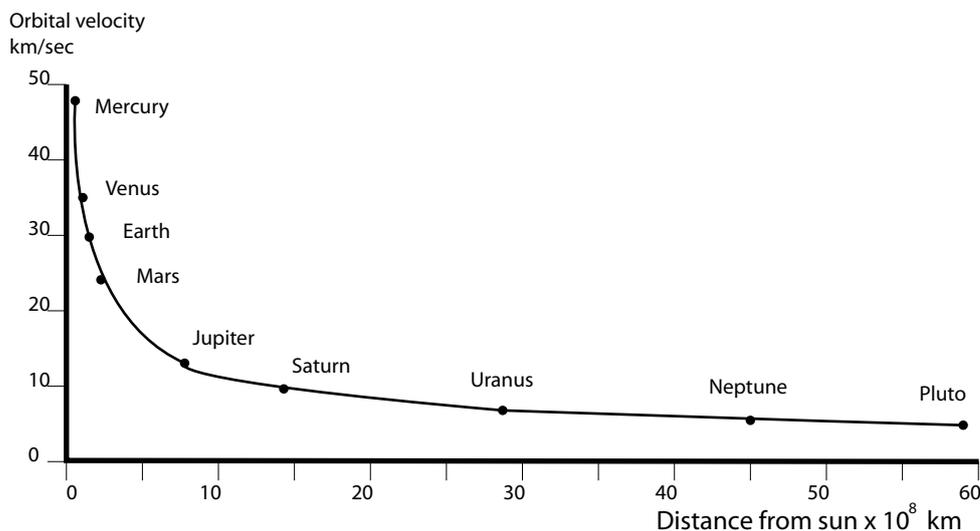


Fig 3. Orbital velocities of planets against distance from sun

Without magna it must be assumed that at some time in prehistory each planet was given a push of exactly the right magnitude, at precisely the right moment, in precisely the right direction to set the astronomical clockwork into motion. Furthermore it requires a belief in absolute ideal conditions resulting in perpetual motion to keep the planets in orbits for the next five billion years or more.

Experimental evidence to establish the existence of magna

The reason for the failure of experiments such as those of Michelson & Morley to detect a medium have been explained as being due to **the Earth's surface and the medium of magna rotating together** in exactly the same way as the Earth's atmosphere rotates together with its surface. Consequently no medium-drift can be expected.

In order to establish the existence of magna, it is necessary to make measurements in locations where medium-drift exists or where it can be arranged. Such locations can be accessed most readily by the use of spacecraft. To ensure that a spacecraft travels *through the magna*, it will be necessary to launch it in a direction *opposite* to the direction of the rotation of the Earth. All previous spacecraft have been launched in the same direction as the Earth's rotation, thereby assisting with take-off (and ultimately travelling to some degree with the flow of magna). It would be better still to choose an orbit around the *sun* in the *direction opposite to the Earth's orbit*. In this case greater differential velocity between the spacecraft and magna can be achieved.

Light speed measurements of the Michelson/Morley type out in space will then produce interference patterns indicating the presence of medium-shift and hence indicate the existence of magna. It may also be possible to simplify such measurements because our ability to accurately measure small time intervals has vastly improved since 1887. It should be possible to measure the speed of light directly over relatively short distances and confirm that it changes depending on the velocity relative to that of the medium of magna.

Some consequences of the establishment of an electromagnetic medium

The existence of the medium of magna has many far-reaching consequences for the understanding of the physical processes involved in the transmission of the fundamental forces of nature. Magna can provide a link between all the various *field* theories which presently rely on mathematical constructs to represent the medium. Magna can be used to model the physical processes that presently can be understood only in terms of mathematics and often produce puzzling paradoxes. The following gives a very brief summary of the main consequences of the existence of magna:

- (a) If the *medium of magna* is substituted for the concept of the **gravitational field**, then the interaction between vibrating magna particles and the much larger atoms which constitute mass, will result in an increased mobility of magna particles and a balancing reactive force directed inwards towards the mass. This provides a mechanism for the generation of **gravitational force**, shows how its maximum effect is at the surface of the mass and confirms the inverse square law effect as the spherical distribution of change of mobility decreases with distance (squared).
- (b) If the *medium of magna* is substituted for the concept of the **electromagnetic field**, then the transmission of energy from vibrating atoms will be carried as transverse wave motion in the medium. Such waves are presently known as **electromagnetic radiation**. The spherical distribution of this energy confirms the inverse square law for electromagnetic transmission. The nature of the waveform – electric and magnetic oscillations superimposed at right angles – is also confirmed by the modelling of magnetic and electric forces in terms of magna as described next.
- (c) **Magnetic force** can be physically represented by *co-linear streams of magna particles*. These can be produced in certain (magnetic) materials by alignment of the axes of vibration of their atoms. Such streams of magna particles can also be produced more directly by the action of an electric current. Magnetic force as streams of magna particles can fully represent Faraday's *lines of magnetic force* or Maxwell's *magnetic vectors* as well as the more vague concept of a **magnetic field**.

- (d) **Electric force** (voltage) can be physically represented by *pressure variation in the medium of magna*. This can be achieved in various ways; more usually by mechanical movement of electrical conductors through streams of magna (magnetic field) but also by chemical and other means. Electric force acts to move electrons and thus produce electric current. Also pressure variations of magna (voltage) in one direction will produce movement of magna (magnetic force) in a direction at right angles resulting in electromagnetic energy being transmitted at right angles to both (as mentioned in (b)).
- (e) If **electrons** are regarded as *small vortexes of magna particles* rather than solid spheres with strange properties such as ‘charge’ then many of the problems involving atomic structure and inter-atomic reactions can be explained in simple physical terms. The existence of these **vortex electrons** can be explained by the natural creation of a vortex of magna on the surface of a vibrating atomic particle (neutron or proton) in the surrounding magna. Vortex electrons can account for the behaviour of electrons under various electrical and magnetic forces. The same concept can explain the physical forces that hold atoms together; can explain chemical reactions and much more.
- (f) If the medium of magna is substituted for **space-time-continuum** of the theory of relativity, then *magna will constitute the frame of reference for all observers*. Those moving relative to the magna will make different observations not because movement produces changes in length, mass and time, but simply because the observers are moving relative to a common frame of reference. Their *apparent observations* will still be as predicted by Einstein.
- (g) If the *medium of magna* is taken into consideration in reviewing some of the strange results of **quantum theory experiments**, then much simpler, physical explanations can evolve. In the absence of a medium, projecting particles one at a time through one of two adjacent slits should logically never produce an interference pattern. However, **if a medium of magna is present**, and the slits are close enough together, then the disturbance of the medium at one slot as the particle passes through, will inevitably produce a disturbance of the medium at the other slit. The two disturbances can produce interference patterns. And, of course, the projection of ‘charged’ particles may require the movement or stressing of the medium itself.

There are many other aspects of scientific theory which can be reinterpreted, revised and simplified by taking into account the existence of the medium of magna. Such items include the big bang, dark matter, expansion of the universe, atomic structure, sub-atomic particles, multi-dimensional multi-universes, and much more.

A more comprehensive, non-mathematical description of magna theory is contained in the book, *The Mindfield*¹

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Reference

- 1 Goodman, Hans, *The Mindfield: Reinventing Science*, Ibis Books, Australia 2009 ISBN 9780957734265