

THE DERAILMENT OF EINSTEIN

by

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INTRODUCTION

Since a drastic renewal of both scientific research and the teaching of science in Australian schools has assumed a high priority in our Marian Academy, I had composed in the early nineties a systematic analysis of the teachings of Pope PIUS XII on science teaching and research, and it occurred to us to see how Einstein's relativity theories would stack up against these papal teachings.

These teachings of Pope PIUS XII on both the study and teaching of science span a period of 9 years, from 1948 to 1957, and are contained in one encyclical, "*Humani Generis*" of 1950 and in 9 addresses, one before the encyclical, in 1948, and eight since its appearance. The Pope died in 1958.

The names and dates of the papal addresses are:

1. "*The Natural Law and the Divine Government of the World*". Feb. 8, 1948.
2. "*Proofs of the Existence of God in the Light of Modern Natural Science*". Nov. 22, 1951.
3. "*The Technical Age*". Christmas Message, Dec. 25, 1952.
4. "*The Technician*". Oct. 9, 1953.
5. "*Television*". Jan. 1, 1954.
6. "*Modern Science needs Philosophy*". Apr. 24, 1955.
7. "*Space*". Sep. 21, 1956.
8. "*Astronomy*". May, 1957(1).
9. "*Automation*". Jun 7, 1957(2).

From these documents we are to gather, not only the mind of an individual Holy Father, but also the mind-set of the *Pope*, that is, the mind-set of *Peter*, the mind-set of the *Papacy as such*, expressing the mind of the Catholic Church, thereby guarded by "the Spirit of all Truth".

As regards the author of these addresses, they reveal an individual who is truly a Holy *Father*, with a great personal love for scientists and an almost unbounded interest in their daily occupation, their science and technology. They reveal the thorough grasp this fatherly individual has on scientific matters, enabling him to give to this love and admiration the solid foundation they deserve. At the same time the 1950 encyclical and each of these 9 addresses also reveal the *limits* by which this same *fatherly* figure as *Pope* curbs the personal enthusiasm of this particular Holy *Father*. And by this loving but at the same time artful inclusion of himself within the boundaries of their shared enthusiasm, the Holy *Father* softens the necessity that, as *Pope*, it is his duty as Christ's personal Vicar of His Church, to point out to his friends the scientists the limitations of their science. But he assures them that, within these boundaries and limitations, he remains with them all the way....

The reason for the divine choice of this particular Pope to head the Holy Catholic Church at this particular moment in time becomes clear if we compare the *tone* of the 1950 encyclical "*Humani Generis*" with that of the 9 addresses.

In 1950 *Pope Pius XII* was forced to condemn and utterly reject a *pseudo science* called ‘teihardian evolution’, which was in the process of corrupting not only Catholicism but also true scientific endeavours. The tone is uncompromisingly strong because the corruption came from within! In the subsequent addresses, as the Holy *Father*, when there was no immediate reason to condemn, but only to caution and guide, Pope Pius XII seems to go out of his way to make sure that no one had any reason to accuse him or the Catholic Church of the terrible falsehood: that “*Humani Generis*” was addressed against *all* science. The tone in these addresses is warm, fatherly, inclusive and encouraging. He knew that in only *one* serious way could this fatherly warmth be twisted, misused and misinterpreted: to hold it up as a kind of back-handed, papal approval for any sort of evolutionary ‘science’. But that path had been securely blocked in his 1950 encyclical. What ever other necessary curbs and pruning had to be made are found there, and they lie sprinkled over all the other major addresses and speeches.

This is the end of the **Introduction**. But before Einstein’s theories can be held up against the detailed teachings contained in “*Humani Generis*” and its 9 corollaries, it is necessary, in Section I, to gather together in an orderly overview the ingredients used for the compilation of this document.

SECTION I

This overview consists of four main sub-sections: i.e., what Pope Pius XII has taught about **Scientists, Science, Applied Science and Pseudo-Science**. It is the intention to hold up in the next section, Section II, Einstein’s approach against the contents of those four sub-sections.

A. SCIENTISTS.

1. Science must lead the scientist to God and to belief in a Personal Being. [HG, 1950].
2. Scientists must consider Nature as the Book of God and themselves as privileged to read it. [1948, 1955].
3. The Book of Nature is composed of letters and footprints of God which are the *facts* that disclose the *work* of God. [1948, 1955].
4. Scientists must read and discover in this Book of Nature God's *intentions*. [1955].
5. The laws and order discovered in Nature must lead scientists to the acceptance of a Divine Law, of God's central law with Nature and to the Natural Law. [HG; 1948]
6. A law of Nature is not imposed on Nature and is not to be imposed on Nature. [1948].
7. ‘Statistical laws’ (i.e. mathematical calculations) must not be confused by scientists with ‘laws in nature’. The former are not ‘real’. [1948 in 3 places].
8. In searching out the *facts* in science (Nature), scientists have the intellectual problem of submitting their insights to God's transcending Truth. [1957].
9. Apart from intellectual problems, even pure scientists (astronomers) have a moral problem. [1957(1) in two places; see also ‘*conscience*’ in 1956].

B. SCIENCE

10. 'True' science does exist. [1951].
11. Its methods are well known: [1951; 1957].
 - to verify theory by new observations;
 - to correct theory when necessary;
 - to replace theory by another that is more perfect;
 - taking account of acquired data.
12. True science is objective. [1948 in 6 places].
13. True science will not treat its abstractions as objective. [1948].
14. 'Evolution' as a fact is not found in real science. [HG].
15. 'Polygenism' is no scientific fact and so is outside science. [HG].
16. 'Uniformitarianism' is no scientific fact and is outside science.[HG].
17. True science will establish the fact of a universal Flood. [HG].
18. True science will not clash with Genesis. [1951].
19. True science will accept the *corrections* from Sacred Scripture. [1958.].
20. The foundation of all science lies in Philosophy and so outside science itself. ...[1955].
21. But true science is a foundation for philosophical argument. [1951].
22. The unifying concept (the Synthesis, the 'One Design') amongst the various sciences
 - (a) exists in reality, [1948; 1955],
 - (b) but outside this multiformity, [1951, 1955].
 - (c) "*making science fruitful by letting culture beget an organic doctrine*" [1955].

C. APPLIED SCIENCES

23. True science is never applied ('imposed') in an impersonal manner. [1952].
24. It supports the State as a community of responsible citizens. [1952].
25. It never locks itself in a circular argument between *end* and *method*. [1952].
26. It never goes beyond the barriers inherent in matter. [1953]
27. It will not call 'real' "*the partial projection of life on reality*" of pseudo-science ("the spirit of technology"). [1953].
28. It accepts the dictates of an individual and social moral conscience in all the applications of its findings. [1956].

D. PSEUDO-SCIENCE.

29. Will not accept the characteristics of True Science outlined above [10- 22].
30. Does not admit the existence of a Superior Being. [1948].
31. Will not accept an Absolute Order or a Grand Design in Nature. [1948].
32. It confuses 'subjective' with 'objective'. [1948].
33. It will not be able to handle the ensuing fragmentation (which will be further compounded when it enforces *facts* to suit the *theory*). [as above].
34. It will neither admit nor obey the '*barriers of matter*'. [1953].

35. It puts man into a frame of mind *unfavourable* for searching for and finding supernatural Truth. [1953].
36. It interferes with the sound *sense of judgement*. [1953].
37. It arrests the *intellectual life*. [1953].
38. The ‘distorted vision’ it offers contains a ‘basic falsehood’. [1953].
39. It accepts as ‘real’ its *‘partial projection of life on reality’* [1953].
40. It is bound to make the dividing line between ‘science’ and ‘philosophy’ indistinguishable, turning its own (faulty) scientific outlook into the only brand of philosophy it will acknowledge. [1955].
41. It rejects the idea of a *‘scientific conscience’*. [1956].
42. Believing itself *‘self-sufficient’*, it becomes a *‘snare’* in its rejection of being subjected to a *‘moral universe which transcends it’* [1957].
43. Its other tenets are condemned in ‘The Syllabus of Errors’.
44. Its *‘arrogance’* and *‘delusion’* are branded by Pope LEO XIII.
45. It will impose its own ‘laws of Nature’ on Nature. [1948].
46. It will *not* accept that the ‘reasons for and against’ its observations and conclusions ‘must be weighed and adjudged with all seriousness, fairness and restraint’. [HG].
47. It is bound to be *‘uniformitarian’*. [HG].

SECTION II

Pius XII v. Einstein

How Einstein’s contributions to Science stand up in the light of these papal pronouncements.

We are truck by some candid assessments made by a modern-day adherent of relativity (Clifford M. Will of the University of Washington) and by two of its early critics (the Astronomer Charles Lane Poor of Columbia University, 1920; and the mathematician Arthur Lynch, 1932). Their assessments, together with some quotes from Einstein’s popular book on his General and Special Theories of Relativity, will be listed hereafter as Propositions. After each Proposition a comment about the Proposition will be made.

PROPOSITION 1.

“Yet despite its great influence on scientific thought, general relativity was supported initially by very meagre empirical evidence. For nearly forty five years, the validity of the theory was confirmed by data that, by today’s standards, would be considered qualitative at best.” [Will]

COMMENT.

This assertion speaks for itself, and coming from a relativist it carries considerable weight. It denies that true observations and experiments lie at the foundation of Einstein’s relativity. In this Will is in total agreement with Pope Pius XII who taught that true science can be recognised by its painstaking observations and experiments for the verification of the validity of its foundation, and the validity of its deductions. In his 1951 and 1957 addresses (see Section I, B10 and B11), Pope Pius XII explained that true science exists and that its methods are well-known.

*The pertinent facts of the natural sciences (qualified by the Pope as being merely empirical facts) to which We have referred **are awaiting still further research and confirmation**, and the **theories founded on them are in need of further development and proof** before they can provide a sure foundation for arguments*

which, of themselves, are outside the proper sphere of the natural sciences.
(1951)

Tireless to seek exact facts, to elaborate theories in order to explain them, to verify theory by new observation, to correct theory when necessary, to replace theory by another that is more perfect, taking account of acquired data, such is the unceasing work of the astronomer, work that seems gigantic even to those outside this field (1957)

With these words from Pope Pius XII to guide us, we will examine the statements of other scientists critical of Einstein, as well as the pronouncements made by Einstein himself.

PROPOSITION 2.

*“Three ‘classical’ tests formed the backbone of general relativity: the excess perihelion shift of Mercury, in agreement with the theory’s predictions, but attributable at least in part to other possible causes; the deflection of light by the Sun, measured to be anywhere between one half and twice its predicted value; and the gravitational red shift, observed in spectral lines of white dwarfs again to be anywhere between one half and twice its pre-dicted value, and moreover **suspected to be not a true test of general relativity any-way.** [Will]*

COMMENT.

What a bullet from a relativist! As for papal reflection on this observation, we must refer to the same quotes given above.

PROPOSITION 3.

“The astronomical observations are the ones relied upon, mainly, as furnishing proof of the Einstein theories ...It was the announcement of the results of these observations that caused the widespread, popular interest in Einstein and the relativity theory. These astronomical observations are fully explained and discussed in the following pages.” [Poor]

COMMENT

This statement from a first class astronomer indicates that the acceptance of Einstein’s theories was done rather uncritically, at least as far as the man in the street was concerned. A more thorough examination of the alleged empirical evidence for Einstein’s theories was needed. Poor continues as follows:

PROPOSITION 4.

“It is the main purpose of this book to present to the jury of the thinking world the concrete astronomical evidence cited by Einstein and the relativists as proof of the Generalised Theory of Relativity, and to subject that evidence to a critical examination. Many a well built up case has completely collapsed under a searching examination of the evidence and a cross examination of its chief witnesses” [Poor]

COMMENT.

This is vintage Pope Pius XII, who, in dealing with the positive sciences in *Humani Generis*, laid down the following principle: “... the reasons for and against either view must be weighed and adjudged with all seriousness, fairness and restraint ...”.

In line with Pius XII, Poor is here stressing true scientific methodology and is so far implying that this is absent in relativity.

It is our task to show that Einstein's methodology is at variance with true scientific method; and through this break with true scientific method to show that the foundations of relativity, its structure, and its conclusions are suspect.

PROPOSITION 5.

“The physical experiments, or observations, on the other hand, have so far yielded little evidence for or against the theories of Einstein, and are, therefore, but briefly treated. Sufficient outlines of the experiments, however, are given to enable the reader to form a judgement as to the character of the evidence and of the methods of reasoning adopted by the relativist.” [Poor]

COMMENT.

Poor is here elaborating on his previous statement, and we can attach to it the comment we made immediately above.

PROPOSITION 6.

“...up to the present [1920] we have been able to find only a few deductions from the general theory of relativity which are capable of investigation, and to which the physics of pre-relativity days does not also lead, and this despite the profound difference in the fundamental assumptions of the two theories.” [Einstein]

COMMENT.

Here Einstein is casting doubt on his own theory, and (surprisingly) is agreeing with the observation made by Will as quoted above. We point out that Einstein here speaks of “deductions from the general theory of relativity” as if the foundations and structure of the theory were already firmly established. The correct procedure, as outlined in the 1957 address of Pope Pius XII (see above), is glossed over by Einstein because of his admittance that the observations he claimed in support of his own theory are entwined with the physics of pre-relativity days. The correct procedure (not followed by Einstein) is, in the words of Pius XII, “to verify theory by new observations”. [See SECTION I – B 11]

PROPOSITION 7.

“For the sun, the displacement towards the red predicted by the theory amounts to about two millionths of the wave length. A trustworthy calculation is not possible in the case of the stars, because in general neither the mass nor the radius are known. ... It is an open question whether or not this effect exists, and at the present time (1920) astronomers are working with great zeal towards the solution. Owing to the smallness of the effect in the case of the sun, it is difficult to form an opinion as to its existence. ... At all events, a definite decision will be reached during the next few years. If the displacement of lines towards the red by the gravitational potential does not exist, then the general theory of relativity will be untenable.” [Einstein]

COMMENT.

Again we draw attention to three facts.

Firstly, that Einstein is again talking about deductions (“predictions”) from his theories while disregarding the question of foundation and structure.

Secondly, that he is uncertain about the empirical verification of one of these “predictions”; namely, the existence of the red shift of light coming from the stars.

Thirdly, by the use of the word “untenable” Einstein shows that he is not sure that his theories have any foundation.

PROPOSITION 8.

*“Apart from this one [the perihelion of Mercury], it has hitherto been possible to make only **two deductions from the theory which admit of being tested by observation**, to wit, the curvature of light rays by the gravitational field of the sun, and a displacement of the spectral lines reaching us from large stars, ... **These two deductions from the theory have both been confirmed.**” [Einstein]*

COMMENT.

For the third time we must stress that Einstein is speaking of deductions, leaving the question of the existence of a proper foundation an open question. On this occasion he states that the existence of the red shift has *“been confirmed”*. This claim is made in the same book from which the previous quote was taken, which stated that the red shift has not been measured.

Here we have a statement and its contradiction both being presented as equally true.

Such contradictions fall directly under the Papal condemnations of pseudo science:

“It interferes with sound judgement.” [1953; D 36 above]

“It arrests the intellectual life.” [1953; D 37 above]

“The distorted vision it offers contains a basic falsehood.” [1953; D 38 above]

“It puts man into a frame of mind unfavourable for searching and for finding supernatural Truth.” [1953; D 35 above].

PROPOSITION 9.

*“The force acting on himself [the force acting on an observer sitting eccentrically on a uniformly rotating disc], and in fact on all other bodies which are at rest relative to the disc, he regards as the effect of a gravitational field. Nevertheless, the space-distribution of this gravitational field is of a kind that would not be possible on Newton’s theory of gravitation. **But since the observer believes in the general theory of relativity**, this does not disturb him, he is quite in the right **when he believes that a general law of gravitation can be formulated – a law which not only explains the motion of the stars correctly, but also the field of force experienced by himself.**” [Einstein]*

COMMENT.

No wonder Einstein avoided at all cost the scrutiny of the foundation of his theories as well as making us privy to it, for here he categorically declares that it can only be accepted by an act of faith. With his admittance that an act of faith is required to accept relativity, Einstein’s system comes dangerously close to the Papal condemnations of pseudo science because *“the distorted vision it offers contains a basic falsehood.”* [1953; D 38 above]

PROPOSITION 10.

*“The great power possessed by the general principle of relativity lies in **the comprehensive limitation which is imposed on the laws of nature in consequence of what we have seen above**.” [Einstein]*

COMMENT.

According to Pope Pius XII a man-made law is not to be imposed on Nature as a Law of Nature. The Laws of Nature are found in Nature by true science.

So it is that the genuine law of Nature, patiently and diligently investigated in the laboratory prior to any statement or formula, is something much greater and

better than a mere description or intellectual calculation. For such calculation only deals with phenomena and not with the real essence and fundamental properties of things. A genuine law of Nature does not stop short at appearances or sense-images. It plumbs the depth of reality, searches and discovers the intimate and hidden forces of phenomena, and lays bare their activity and interaction. [1948; cf A 6 above]

PROPOSITION 11.

“In the field of mathematics I have traced out successively from Descartes onward the source of his [Einstein’s] ideas - for here, too, there is nothing original - and I have shown that the magic, or the paradox of his theory consists in giving to mathematical expressions, strained meanings, and the setting down as realities what are conventional modes of representing operations.” [Lynch]

COMMENT.

In this criticism Lynch is pointing the finger at one of the fundamental flaws of Einstein’s theories of relativity: the substitution of mathematical calculations (abstractions) for physical realities. In taking exception to this sleight-of-hand Lynch is not only fully in line with all true scientists but also with Pope Pius XII who already in 1948 made the following astute observation:

The equations (of Maxwell) are certainly a work of genius, yet, as with every similar advance in physical theory, they both suppose and imply a simplification and idealisation [abstraction] of reality without which mathematics cannot usefully develop. How often at the present time, instead of exact laws, one can only propose norms of a particular, instead of a general, explanation? The investigator does what he can and gives the most probable explanation. Since however he does not know what is the basic dynamic principle of the registered change, he must confine himself to formulating a statistical law There are cases in which the investigation moves rather in a circle; cases that is to say, in which theories that seemed to have conquered the world reach the category of undisputed doctrines, thus earning for their advocates the esteem of the scientific world, only to fall again into the region of hypothesis, and to be eventually discarded.

In other words, ‘Statistical laws’ (i.e. mathematical calculations) must not be confused by scientists with ‘laws in nature’, because the former are not real but only mere abstractions.

PROPOSITION 12.

“Physical objects are not in space, but these objects are spatially extended. In this way the concept ‘empty space’ loses its meaning.” [Einstein]

COMMENT.

If physical objects e.g. sun, earth, moon, planets, Hubble telescopes, satellites, Mars probes etc are not in space, then where are they? How are the man-made objects controlled if scientists do not know exactly where they are?

PROPOSITION 13

“The concept of space as something existing objectively and independent of things belongs to pre-scientific thought, but not so the idea of an infinite number of spaces in motion relatively to each other.

This latter idea is indeed logically unavoidable, but is far from playing a considerable role even in scientific thought.” [Einstein]

COMMENT.

No comment. How can anyone postulate as certain, and then expect anyone else to agree, that “one space” can have no objective and independent existence, but an infinite number of spaces is logically unavoidable. An infinite number of spaces is composed of an infinite number of single spaces which means of an infinite number of spaces to which, according to Einstein, we must deny existence....

Such immense contradictions paraded as ‘truth’ call to mind what Pope Pius XII has said above about ‘pseudo-science’:

PROPOSITION 14.

[About the constancy of the speed of light]

*“Experience has led to the conviction that, on the one hand, the principle of relativity holds true and that on the other hand the velocity of light in ‘vacuo’ has to be considered equal to a constant ‘c’. By uniting these two postulates we obtain the law of transformation ... of the events which constitute the processes of nature. ... This [transformation] is a definite mathematical condition that the theory of relativity demands of a natural law, and in virtue of this, the theory becomes a valuable heuristic aid [i.e. propaganda tool] in the search for general laws of nature. If a general law of nature were to be found which did not satisfy this condition, then at least one of the two **fundamental assumptions** of the theory would have been disproved.” [Einstein]*

COMMENT.

Note the basic contradiction presented by Einstein concerning the constancy of the speed of light. He introduces this concept as a conviction based on experience, and finishes by admitting that in fact it is only an assumption.

It has come to light that many scientists at the time that these postulates were made by Einstein were privately very concerned about these assumptions, and subsequent research has shown that they had every reason to be concerned.

Their uneasiness with a never proven constancy of the speed of light, in the face of many findings in modern research that the speed of light is *not* constant, bears out what Pope Pius XII announced as far back as 1951. In this address to the scientific community, the Holy Father made the findings of contemporary scientific research the foundation upon which to build his argument that literally everything considered by science

- (a) is in continual change (state of flux), and
- (b) has a ‘run-down’ direction (entropy).

And furthermore, nowhere in this address does the Holy Father fall into the trap of calling the results of these scientific endeavours ‘facts’, in the literal sense of the word, as we saw Einstein do in the above proposition. They are empirical facts, open to change.

CONCLUSION

The foregoing speaks for itself and is in no need of further elaboration.
Rome has spoken, the matter is finished.