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THE MANUFACTURE AND SALE
OF
SAINT EINSTEIN

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19 ALBERT EINSTEIN'S NOBEL PRIZE

At a time when the Zionist movement was falling apart and Albert Einstein's fame was diminishing, Albert Einstein was awarded the Nobel Prize. The decision to award Einstein the prize came first, and then an excuse was manufactured to justify the unjustified award. The entire process was artificial. Far from celebrating a specific discovery Einstein had made—he had made none—those who decided that Einstein would be given a prize attempted to present a non-controversial excuse for awarding the prize. They failed and it was obvious that Einstein was given the prize not because he deserved it, but because influential persons had insisted that he be given it.

“Recently the Nobel Foundation Directorate awarded the Nobel premium for distinguished achievement in physical science to Albert Einstein. Uninformed and uncritical opinion will, undoubtedly, concur with the directorate in this choice. Biased opinion, created by world-wide propaganda, will heartily agree with the directorate in its decision. In this instance, however, the directorate has deliberately conferred a unique distinction and set its seal of approval upon a man who has been definitely and publicly charged with plagiarism through the medium of the international press and in such scientific journals as still retain their freedom of expression. It may be thought that the award to Einstein was based upon ignorance of the actually involved facts and that the directorate may be exonerated on the plea of lack of information. It must be admitted, however, that in this case ignorance of facts should not and cannot be accepted as a defense of the award. The plea of ignorance cannot be allowed because of the all-important reason that the directorate's attention had been definitely called both to the charges made against Einstein and also to the unbiased appraisal of his alleged achievements.”—ARVID REUTERDAHL³⁶⁵⁴

19.1 Introduction

Albert Einstein had accomplished nothing which merited a Nobel Prize. Influential persons who wanted to give him the prize were forced to manufacture an excuse so as to justify the unjustified award. They eventually settled upon the nebulous declaration that Einstein deserved the Nobel Prize merely because he deserved it, and that the law of the photo-electric effect was perhaps one reason why, or as the Nobel Committee phrased it, Einstein won the prize,

“for his services to Theoretical Physics, and especially for his discovery of the law of the photoelectric effect”³⁶⁵⁵

This excuse posed a difficulty for those who first determined that Einstein would be given a prize and then attempted to manufacture a reason why. Nobel Prizes could only be awarded for physical discoveries. The law of the photo-electric effect did not constitute an experimental discovery. The experimental discovery was allegedly made by Robert Andrews Millikan and he was slated to receive a Nobel Prize for it before Einstein.

19.2 The Nobel Foundation Directorate Learns that Einstein is a Plagiarist

Ernst Gehrcke³⁶⁵⁶ demonstrated that Paul Gerber had anticipated the general theory of relativity, as had Johann Georg von Soldner, making a Nobel Prize for the general theory of relativity impossible. Gehrcke and others also proved that the special theory of relativity was published by Lorentz and Poincaré, before Einstein, which made it impossible for the Nobel Committee to award Einstein a prize for the special theory of relativity.

Gösta Mittag-Leffler was the founding editor of the journal *Acta Mathematica* published in Sweden. On 7 July 1909, Mittag-Leffler wrote to Poincaré that Ivar Fredholm recognized Poincaré's priority for the theory of relativity over that of Lorentz, Einstein and Minkowski.³⁶⁵⁷ In 1914, Mittag-Leffler arranged for a special volume of the *Acta Mathematica* (Volume 38) devoted to honoring Henri Poincaré and his achievements with articles by his peers. Lorentz, Wien, Planck, and others, contributed articles, which acknowledged the fact that Poincaré had anticipated Einstein and Minkowski. Mittag-Leffler delayed publication of the tribute until after the French and their allies had won the war. He wrote to Albert Einstein on 16 December 1919, soon after Einstein had become internationally famous, and asked Einstein to contribute an article for the memorial volume—an article on Poincaré's contributions to the theory of relativity. Mittag-Leffler also told Max Planck that he would like Einstein to contribute such an article. Einstein delayed answering Mittag-Leffler until Einstein believed it would be too late for him to publish an article, and then stated that he would be happy to write such an article if there was still an opportunity to see it published.

As with his 1907 review article on the theory of relativity in the *Jahrbuch der Radioaktivität und Elektronik*, and as with the republication of the Einsteins' 1905 paper on special relativity in the book *Das Relativitätsprinzip: eine Sammlung von Abhandlungen* in 1913, Albert Einstein had a golden opportunity to redeem himself for his lies and his theft of Poincaré's ideas. When Mittag-Leffler informed Einstein that there was still time left for him to make a contribution, Einstein reneged on his promise and did not submit an article to honor Poincaré, whose ideas had given him his career.³⁶⁵⁸

Einstein would have been forced to have acknowledged that Poincaré was the father of the theory of relativity. Volume 38 of the *Acta Mathematica* was published in 1921 and it undoubtedly had an impact on the decision of the Nobel Prize

Committee *not* to award Einstein a prize for the theory of relativity. Wolfgang Pauli's article "The Theory of Relativity" in the *Enzyklopädie der mathematischen Wissenschaften mit Einschluss ihrer Anwendungen* in 1921 must also have made it clear to all that Einstein could *not* be awarded a prize for the theory of relativity.³⁶⁵⁹

Professor Oskar Edvard Westin, of Stockholm, informed the Nobel Foundation Directorate of the unoriginality of Einstein's work, its alleged metaphysical delusions, and of the accusations of plagiarism outstanding against Einstein, some of which Einstein never denied. Westin published a very important article in the *Nya Dagligt Allehanda* on 22 October 1922 leveling these charges against Einstein and Westin called Einstein a dishonest investigator, undeserving of the Nobel Prize premium.³⁶⁶⁰ Westin's article stated:

(Unfortunately, my photocopy of this article is taken from a low-quality microfilm, which is very difficult to read and contains many gaps in the text. Therefore, the attempted reproduction here is only an approximation and the original must be consulted for an absolutely accurate and complete knowledge of Westin's words.—My apologies to the reader.)

“Einstein blifvande Nobelpristagare?”

Kan A. Einstein med fog betecknas som en vetenskapsman af rang? — Och har han visat sig ärlig i sin forskning?

För N. D. A. af professor **O. E. Westin.**

Herr redaktör!

Enar den tid nu stundar, då inom k. vetenskapsakademien erforderliga förberedelser skola vidtagas i fråga om utdelandet af nobelpriset i fysik, och enär vissa tecken tyda därpå, att man på visat håll egendomligt nog vill försöka förmå akademien att tilldela Einstein detta pris, så torde det måhända kunna vara af gagn att göra några erinringar om denne mans vetenskapliga författarverksamhet. Därigenom kunde kanske förebyggas ett förhastande, som, om det komme att ske, sedan medförde mindre behagliga följder. Med edert benägna medgifvande vill jag därför här i största korthet beröra dels några elementära detaljer af Einsteins så mycket omtalade och för honom karaktäristiska s. k. 'relativitetsteori' och dels vissa andra omständigheter.

Einstein framträder i bemälda teori med betydande anspråk, och han och hans anhängare söka nedrifva verkligt värdefulla och bepröfvade vetenskapliga rön och i stället sätta fantastiska funderingar, stridande mot

sunda förnuftet; de göra sig stundom skyldiga till vantolkningar än i ett hänseende än i ett annat.

Den 'klassiska mekaniken' säges vara störtad, men giltiga skäl för detta påstående äro icke anförda. Einstein, som anser sig ha skapat en ny rörelselära bättre än den äldre, har tydligen icke en klar föreställning om innebörden af begreppet rörelse, hvarken den enskilda eller den sammansatta; detsamma gäller äfven andra mekaniska grundbegrepp. Hans skrifter visa detta och f. ö. äfven att han saknar erforderlig förmåga af självkritik och att han icke kan med erforderlig objektivitet bedöma hithörande förhållanden.

Einstein har upptäckt, att det icke finnes någon absolut rörelse. Han kan emellertid icke tillerkännas prioritet i det afseendet, ty den upptäckten var gjord före hans tid; han har icke fört den frågan ens ett tuffjät framåt.

En annan af Einsteins upptäckter är, att tiden är relativ, men äfven det rönet var gammalt. Han har emellertid[?] försökt få folk att tro, det tiden är imaginär, och därvid litat på en med honom andligen besläktad förf. H. Minkowski, som genom att i en matematisk formel göra det förnuftsvidriga utbytet af en reel storhet mot en imaginär, menade sig därmed ha visat, att tiden är imaginär. Sådant är relativitetsmatematik, men på så sätt befrämjas icke den vetenskapliga forskningen.

Minkowski kom ock på grund af nämnda matematiska otillbörlighet till det resultatet, att rymden är fyrdimensionell. Einstein antog visserligen, att det förhöll sig så, men var icke mera fast i sin ståndpunkt, än att han, anført afven en annan mening, enligt hvilken rymddimensionernas antal är — endast två! Han anser, att världen i geometriskt hänseende förhåller sig ungefär som den svagt krusade vattenytan af en sjö. Befintligbeten af de oändliga vidderna där ofvan fattar han icke. Han har kommit till det underbara resultatet, att kvadraten på 'världsradien' är = jordklotets volym, uttryckt i kbcm. [???] dividerad med materiens medeltäthet et angifven i gram. Detta [???] är ju förbluffande, dels därut[???]an att rymden anses vara en yta — en yta, som har en radie och förmodligen afven en medelpunkt, men förf. är blygsam nog att icke omtala hvar denna punkt är belägen — och dels däri, att en ytas storlek, uppges bestämd af kvoten af en v o l y m och en v i k t. Här ser man ett nytt [???] på r e l a t i v i t e t s m a t e m a t i k. Det torde vara tillåtet fråga pur kan en man, som besitter någon insikt i hithorande förhållanden, komma fram med något sådant, om hare har sitt förnuft i behåll? Det är f. ö. mer än lofligt naivt att vilja söka uttrycka världsrymdens utsträckning i c e n t i m e t e r då afstånden i n o m densamma i åtskilliga fall lämpligen anges i l j u s å r eller t. o. m. i ännu större längdenhet.

Den hastighet, 300,000km. i sek., hvarmed ljuset utgår från en lysande kropp, anser Einstein, stödjande sig dels på H. A. Lorentz' hypotes om maximivärdet för allt hvad hastigheter heter och dels på den s. k. lorentztransformationen, vara den största i världsrymden förekommande, men han beaktar icke, att den hastighet ljuset har relativt det belysta föremålet i vissa viktiga fall är ofantligt mycket större än den det har rel. ljuskällan. Stjärnljusets i initialhastighet rel. jorden t. ex., dess resulterande

hastighet, är sammansatt af två komponenter, nämligen dess hastighet rel. stjärnan och stjärnans hastighet rel. jorden. Enär den senare komponenten är tusentals gånger så stor som den förra, så är den resulterande hastigheten praktiskt taget oändlig. Det ligger icke något obegripligt däri, att en stjärna, som under en ändlig tid — ett dygn — genomlöper en snart sagdt oändlig våglängd — ett hvarf af vägen rel. jorden —, har en snart sagdt oändlig hastighet. Märk, att det är fråga om verklig rörelse och verklig hastighet!

Stjärnljusets bana rel. stjärnan är rätlinjig så länge den går genom ett medium af koncentriskt lager, hvart och ett med konstant eller t. o. m. försvinnande täthet, men ljusbanan rel. jorden har samtidigt, vid konstant stjärnafstånd från polaraxeln och banplan vinkelrätt mot densamma, formen af en archimedes' spiral, som är lindad hundratals hvarf omkring jorden, i viss mån likt tråden i ett nystan och hastigheten i denna resulterande bana aftar därvid mer och mer, så att den vid ankomsten hit har sjunkit ned till det nämnda jämförelsevis obetydliga beloppet 300,000 km. i sek. — Jämförelsevis obetydliga? frågar någon. Ja, allting är relativt. — Då strålen i sned riktning genomtränger ett medium af variabel täthet såsom solatmotfären, böjas de båda ljusbannorna och få hvar sin puckel.

Lorentztransformationen gäller rörelsen för elektroner i vacuumrör. Lorentz' antagande, att deras hastigheter där icke kunna uppgå till mer än högst 300,000 km. i sek. och att de undergå en med hastigheten växande afplattning, så att dimensionen i rörelseriktningen närmar sig värdet noll, må gälla för dem, men det gäller ingalunda kroppars rörelse i allmänhet; det nyss anförda beträffande storleken af de i världsrymden förekommande långt större hastigheterna visar detta. Afplattningen, som för hvarje kropp skulle vid den nämnda hastigheten bli så stor, att kroppens volym blefve försvinnande, öfverensstämmer icke med verkligheten, den visar sig icke å himlakroppar, som ha en långt större hastighet rel. jorden än den nämnda. Och då de f. ö. liksom alla andra föremål ha oändligt många samtida verkliga hastigheter i olika riktningar, så skulle det af dem icke bli någonting kvar, men verkligheten upplyser oss om, att det icke förhåller sig så. Hypotesen, hvarpå hela den ifrågavarande såsom allmänt gällande antagna afplattningsteorien hvilar, är ohållbar, och med den faller Einsteins af en del okritiska beundrare nästan gränslöst lofprisade relativitetsteori. Einstein anser sig visserligen ha matematiskt bevisat lorentztransformationens allmängiltighet, men han har kommit med ett cirkelbevis, och det bevisar ingenting.

Einstein tror tydligen, att en kroklinjig rörelse icke är förenlig med tröghetslagen, men det är ett misstag. Häller man sig endast till den ena eller den andra af de två äldre endast speciella fall gällande formuleringarna, så tyckes det visserligen förhålla sig så, men beaktas innehållet af dess allmänt gällande form, blir resultatet ett annat. Det ges ett stort antal rörelsen med till storlek och riktning föränderliga hastigheter, som äro förenliga med tröghetslagen.

Einstein anser sig, afven nu med stöd af lorentztransformationen, ha visit,

att hvarje materiell kropps kinetiska energi skulle bli oändlig, om dess hastighet närmade sig 300,000 km. i sek., men han uppger icke, hvilken hastighet det är fråga om, och han har tydligen ingen aning om, att det för hvarje kropp vid hvarje tillfälle finns många hastigheter att välja på. Han dekreterar helt enkelt, att hvarje hastighet måste vara mindre än den nämnda, och skälet är helt enkelt det, af honom dock ej nämnda, att eljest håller hans teori icke streck, men det är tydligen icke ett giltigt skäl.

Hans ifriga utopare och förespråkare A. Pflüger ordar i sin skrift om relativitetsteorien värtaligt om bl. a den i materien magasinerade energien. Han berättar, att hvarje kropp, som befinner sig i hvila i ett system — i hvila i ett system ! . . . — äger en latent energi af: 23,000,000,000,000 v. e. pr kg.

Detta belopp är ju visserligen icke oändligt stort men betydande nog ändå. Om det därvid är fråga om ett kg. afskräde på en sophög eller något annat, der är enligt den anförda förf. likgiltigt !! . . resultatet skulle ju gälla hvarje kropp. Att våga tvifla härpå vore väl hädiskt, då han låter oss veta, att ett kg. prima stenkolk, som förut ej utvecklade mer än [???] 7,000 v. e. vid fullständig förbränning, nu är tillräckligt för att drifva [???] atlanterångare om 50,000 khr. oafbrutet under en tid af tio år !! Frågan är emellertid den: hur skall denna energi frigöras? Ombudet i nobelkommittén kommer förmodligen att där lämna upplysning i detta afseende.

Pflüger ger anvisning på, huru relativitetsteorien skall tolkas. Det lönar sig mycket litet, säger han, att försöka komma till klarhet i saken genom logiskt tänkande, och däri har han rätt, ty att genom logiskt tänkande komma till insikt beträffande Einsteins fantasier, därtill finnes ingen utsikt. Pflüger varnar på det enträgnaste för sådana försök, men rekommenderar i stället användningen af den ofelbara tänkemaskinen matematiken, som, enligt hans uppgift, med en förbluffande snabbhet öfvervinner svårigheterna: den behöfver endast matas med problemen i form af ekvationer, och de bli lösta, försäkrar han. Exempel på i relativitetsteorien använd matematik äro ju lämnade i det föregående. Kommer sådan matematik till användning, ja, då går det väl med största lätthet att utreda spörsmålen ! ! . . .

Koordinataxlar, d. v. a. geometriska linjer, hvilka i saknad af hvarje spår af materia äro osynliga, dem menar sig Einstein kunna se; han ser dem ringla sig som ormarna på ett Medusahufvud. Pflüger upplyser, att dessa linjer äro synliga, om de betraktas — på afstånd ! ! . . .

Rymden är enligt einsteinärnas uppfattning krokig. Pflüger är uppriktig nog att erkänna, att den krokiga rymden icke kan uppfattas förnufts enligt, den måste behandlas matematiskt, säger han. Rätta linjer och plan finnas där icke. Användningen af dem är förmodligen för einsteinarna en öfvervunnen ståndpunkt.

Mycket kunde vara att tillägga såsom bidrag till belysningen af beskaffenheten af Einsteins relativitetsteori, men jag fruktar, att jag, genom att komma med mera än det anförda, skulle inkräkta alltför mycket på tidningens utrymme. Mina i Nya Dagligt Allehanda den 17 sistlidne aug.

intagna anmärkningar beträffande C. W. Oseens afhandling 'Om kring relativitetsteorien', tillsända denne förf. och af honom emottagna men ej besvarade, kunna ock i visa mån bidra till den föreliggande frågans belysning, och jag hänvisar till desamma.

Denne Einstein-lofsångare, som förklarar, att man kan ersätta de vanliga naturlagarna med andra lagar efter behag, har visserlingen blifvit insatt i vetenskapsakademiens nobelkommitté, men äfven om han där kan göra proselyter, så är det lyckligtvis så, att naturföreteelserna förlöpa på samma från all godtycklighet fria sätt nu som förr, oberoende af det nonsens relativisterna bjudit på.

Jag inskränker mig nu f. ö. att till det redan anförda påpeka ett faktum, som är belysande för ärligheten i Einsteins forskning. I The Minneapolis Journal for den 10 sistlidne sept. lämnar A. Reuter Dahl ett meddelande, enligt hvilket P. Lenard har funnit, att Einsteins så högt beprisade formel för beräkning af stjärnljusets böjning vid gången förbi solen endast är ett plagiat af en af J. Soldner för mer än hundra år sedan för samma ändamål härledd formel. Nu har i N. D. A. prof. E. Gehrcke i Berlin vittnat om att formlerna äro identiska. En i Soldners formel förekommande numerisk felaktighet har äfven gått igen i kopian. En olikhet förefinnes emellertid: för beteckningarna äro, enligt hvad Reuter Dahl uppgifver, andra bokstäfver använda af Einstein än de Soldner betjänade sig af. Fusket skulle alltså på sådant sätt döljas. En i sanning snygg historia!

Af det anförda synes mig med fog kunna dragas den slutsatsen, dels att Einstein icke är en vetenskapsman af rang och dels att han icke heller är en ärlig forskare samt att giltig anledning saknas att förorda honom till erhållande af nobelpriset.

Ännu en sak anser jag mig böra omnämna. Från ett håll, hvars trovärdighet jag icke har anledning betvifla, har jag erfarit, att Einsteins formel för bestämning af Mercurius' perihelflyttning också den är ett plagiat, nämligen af en af Gerber för detta ändamål härledd formel. Den af Oseen i Kosmos för i år högt lofprisade formel, som han kallat 'Den Einsteinska lagen', lär icke kunna helt tillerkännas Einstein. För den händelse denne nu föreslås som nobelpriskandidat, har vetenskapsakademien gifvetvis att låta med erforderlig sorgfällighet pröfva, huruvida påståendena, att han är en plagiator, kunna anses befogade eller icke.

Åmål den 20 okt. 1922.

O. E. Westin.
Professor."

The *Hamburger Fremdenblatt* mentioned Westin's article the next day on 23 October 1922, in an article entitled "Einstein Nobel-Preisträger?" It reported that Prof. Westin had stated that Einstein was a plagiarist, not a scientist of note, and not an honest researcher.

Nobel Prize judge Sven Hedin told Irving Wallace that Nobel Prize laureate

Philipp Lenard had informed the Nobel Prize judges that the theory of relativity,

“was not actually a discovery, had never been proved, and was valueless.”³⁶⁶¹

The *Hannover Kurier* of 4 February 1923 in article entitled “Lenard gegen Einstein” confirms that Lenard sent such a letter to the Nobel Prize Committee. This article was followed by another in the *Hannover Kurier*, “Einstein und der Nobelpreis” on 5 May 1923, which mentioned Westin’s article in the *Nya Dagligt Allehanda*.

On 29 April 1922, Westin published an article in the *Svenska Dagbladet* calling attention to Reuterdahl’s work. The Norwegian *Aftenposten*³⁶⁶² interviewed Einstein and detailed Reuterdahl’s work on relativity theory, on 18 June 1920, while Einstein was in Oslo. Reuterdahl accused Einstein of plagiarizing Reuterdahl’s theory of a “space-time potential”, a copy of which theory was in the possession of Mittag-Leffler, who corresponded extensively with Einstein. Arvid Reuterdahl’s accusations also received attention in Sweden, his native land. The *Stockholms-Tidningen* featured Reuterdahl’s accusations against Einstein on 27 April 1922, and the *Svenska Dagbladet* lampooned Einstein in a cartoon on 30 April 1922. Nobel Prize laureate Philipp Lenard informed the broader scientific community that Einstein was a career plagiarist.

The judges could not have missed the public humiliation Einstein faced in the period from 1920 to 1922. They simply could not award Einstein the prize for the theory of relativity, but some of them were determined that Einstein would be given a prize whether he deserved one or not. Though the judges wanted to give Millikan the prize for the photo-electric effect, they fabricated an excuse to give Einstein a prize by awarding a Nobel Prize to him, in part, for the law of the photo-electric effect. In 1923, the Committee then gave Millikan the Nobel Prize for the photo-electric effect in 1923, as they phrased it,

“for his work on the elementary charge of electricity and on the photoelectric effect”³⁶⁶³

The bogus award given to Einstein was outrageous. Arvid Reuterdahl wrote in early 1923,

“Recently the Nobel Foundation Directorate awarded the Nobel premium for distinguished achievement in physical science to Albert Einstein. Uninformed and uncritical opinion will, undoubtedly, concur with the directorate in this choice. Biased opinion, created by world-wide propaganda, will heartily agree with the directorate in its decision. In this instance, however, the directorate has deliberately conferred a unique distinction and set its seal of approval upon a man who has been definitely and publicly charged with plagiarism through the medium of the international press and in such scientific journals as still retain their freedom of expression.

It may be thought that the award to Einstein was based upon ignorance

of the actually involved facts and that the directorate may be exonerated on the plea of lack of information. It must be admitted, however, that in this case ignorance of facts should not and cannot be accepted as a defense of the award. The plea of ignorance cannot be allowed because of the all-important reason that the directorate's attention had been definitely called both to the charges made against Einstein and also to the unbiased appraisal of his alleged achievements.³⁶⁶⁴

19.3 “The Thomson-Einstein Theory” Makes a Convenient Excuse

Robert Andrews Millikan argued that Einstein's formulation of the law of the photoelectric effect was “untenable”. Millikan was himself awarded the Nobel Prize in 1923 for his work on the photo-electric effect. Whether or not Millikan achieved the results he claimed to have achieved is an open question. Millikan's integrity has been questioned, and his “confirmation” of the law of the photoelectric effect is suspect.³⁶⁶⁵ This, however, is a separate question from Millikan's well-founded on Albert Einstein's work. Millikan was an outspoken critic of Einstein and opposed the hype surrounding the eclipse observations of 1919 and wrote in 1917 (Figures and tables have been omitted. One must bear in mind that the alleged confirmation of “Einstein's equation” brought Millikan international fame.),

“III. EINSTEIN'S QUANTUM THEORY OF RADIATION

Yet the boldness and the difficulties of Thomson's ‘ether-string’ theory did not deter Einstein [*Footnote: Ann. d. Phys.* (4), XVII (1905), 132; XX (1906), 199.] in 1905 from making it even more radical. In order to connect it up with some results to which Planck of Berlin had been led in studying the facts of black-body radiation, Einstein assumed that the energy emitted by any radiator not only kept together in bunches or quanta as it traveled through space, as Thomson had assumed it to do, but that a given source could emit and absorb radiant energy only in units which are all exactly equal to $h\nu$, ν being the natural frequency of the emitter and h a constant which is the same for all emitters.

I shall not attempt to present the basis for such an assumption, for, as a matter of fact, it had almost none at the time. But whatever its basis, it enabled Einstein to predict at once that the energy of emission of corpuscles under the influence of light would be governed by the equation

$$\frac{1}{2}mv^2 = Ve = h\nu - p \dots \dots \dots (41)$$

in which $h\nu$ is the energy absorbed by the electron from the light wave or light quantum, for, according to the assumption it was the whole energy contained in that quantum, p is the work necessary to get the electron out of

the metal, and $\frac{1}{2}m\mathbf{v}^2$ is the energy with which it leaves the surface—an energy evidently measured by the product of its charge e by the potential difference V against which it is just able to drive itself before being brought to rest.

At the time at which it was made this prediction was as bold as the hypothesis which suggested it, for at that time there were available no experiments whatever for determining anything about how the positive potential V necessary to apply to the illuminated electrode to stop the discharge of negative electrons from it under the influence of monochromatic light varied with the frequency ν of the light, or whether the quantity h to which Planck had already assigned a numerical value appeared at all in connection with photo-electric discharge. We are confronted, however, by the astonishing situation that after ten years of work at the Ryerson Laboratory and elsewhere upon the discharge of electrons by light this equation of Einstein's seems to us to predict accurately all of the facts which have been observed.

IV. THE TESTING OF EINSTEIN'S EQUATION

The method which has been adopted in the Ryerson Laboratory for testing the correctness of Einstein's equation has involved the performance of so many operations upon the highly inflammable alkali metals in a vessel which was freed from the presence of all gases that it is not inappropriate to describe the present experimental arrangement as a machine-shop *in vacuo*. Fig. 27 shows a photograph of the apparatus, and Fig. 28 is a drawing of a section which should make the necessary operations intelligible.

One of the most vital assertions made in Einstein's theory is that the kinetic energy with which monochromatic light ejects electrons from any metal is proportional to the frequency of the light, i. e., if violet light is of half the wave-length of red light, then the violet light should throw out the electron with twice the energy imparted to it by the red light. In order to test whether any such linear relation exists between the energy of the escaping electron and the light which throws it out it was necessary to use as wide a range of frequencies as possible. This made it necessary to use the alkali metals, sodium, potassium, and lithium, for electrons are thrown from the ordinary metals only by ultra-violet light, while the alkali metals respond in this way to any waves shorter than those of the red, that is, they respond throughout practically the whole visible spectrum as well as the ultra-violet spectrum. Cast cylinders of these metals were therefore placed on the wheel W (Fig. 28) and fresh clean surfaces were obtained by cutting shavings from each metal in an excellent vacuum with the aid of the knife K , which was operated by an electromagnet F outside the tube. After this the freshly cut surface was turned around by another electromagnet until it was opposite the point O of Fig. 28 and a beam of monochromatic light from a spectrometer

was let in through O and allowed to fall on the new surface. The energy of the electrons ejected by it was measured by applying to the surface a positive potential just strong enough to prevent any of the discharged electrons from reaching the gauze cylinder opposite (shown in dotted lines) and thus communicating an observable negative charge to the quadrant electrometer which was attached to this gauze cylinder. For a complete test of the equation it was necessary also to measure the contact-electromotive force between the new surface and a test plate S . This was done by another electromagnetic device shown in Fig. 27, but for further details the original paper may be consulted. [*Footnote: Phys. Rev.*, VII (1916), 362.] Suffice it here to say that Einstein's equation demands a linear relation between the applied positive volts and the frequency of the light, and it also demands that the slope of this line should be exactly equal to $\frac{h}{e}$. Hence from this slope, since e is known, it should be possible to obtain h . How perfect a linear relation is found may be seen from Fig. 29, which also shows that from the slope of this line h is found to be 6.26×10^{-27} , which is as close to the value obtained by Planck from the radiation laws as is to be expected from the accuracy with which the experiments in radiation can be made. The most reliable value of h obtained from a consideration of the whole of this work is

$$h = 6.56 \times 10^{-27}.$$

In the original paper will be found other tests of the Einstein equation, but the net result of all this work is to confirm in a very complete way the equation which Einstein first set up on the basis of his semi-corpuseular theory of radiant energy. And if this equation is of general validity it must certainly be regarded as one of the most fundamental and far-reaching of the equations of physics, and one which is destined to play in the future a scarcely less important rôle than Maxwell's equations have played in the past, for it must govern the transformation of all short-wave-length electromagnetic energy into heat energy.

V. OBJECTIONS TO AN ETHER-STRING THEORY

In spite of the credentials which have just been presented for Einstein's equation, we are confronted with the extraordinary situation that the semi-corpuseular theory out of which Einstein got his equation seems to be wholly untenable and has in fact been pretty generally abandoned, though Sir J. J. Thomson [*Footnote: Proc. Phys. Soc. of London*, XXVII (December 15, 1914), 105.] and a few others [*Footnote: Modern Electrical Theory*, Cambridge, University Press, 1913, p. 248.] seem still to adhere to some form of ether-string theory, that is, to some form of theory in which the energy remains localized in space instead of spreading over the entire wave

front.

Two very potent objections, however, may be urged against all forms of ether-string theory, of which Einstein's is a particular modification. The first is that no one has ever yet been able to show that such a theory can predict any one of the facts of interference. The second is that there is direct positive evidence against the view that the ether possesses a fibrous structure. For if a static electrical field has a fibrous structure, as postulated by any form of ether-string theory, 'each unit of positive electricity being the origin and each unit of negative electricity the termination of a Faraday tube,' [*Footnote*: J. J. Thomson, *Electricity and Matter*, p. 9.] then the force acting on one single electron between the plates of an air condenser cannot possibly vary *continuously* with the potential difference between the plates. Now in the oil-drop experiments [*Footnote*: *Phys. Rev.*, II (1913), 109.] we actually study the behavior in such an electric field of one single, isolated electron and we find, over the widest limits, exact proportionality between the field strength and the force acting on the electron as measured by the velocity with which the oil drop to which it is attached is dragged through the air.

When we maintain the field constant and vary the charge on the drop, the granular structure of electricity is proved by the discontinuous changes in the velocity, but when we maintain the charge constant and vary the field the lack of discontinuous change in the velocity disproves the contention of a fibrous structure in the field, unless the assumption be made that there are an enormous number of ether strings ending in one electron. Such an assumption takes all the virtue out of an ether-string theory.

Despite then the apparently complete success of the Einstein equation, the physical theory of which it was designed to be the symbolic expression is found so untenable that Einstein himself, I believe, no longer holds to it, and we are in the position of having built a very perfect structure and then knocked out entirely the underpinning without causing the building to fall. It stands complete and apparently well tested, but without any visible means of support. These supports must obviously exist, and the most fascinating problem of modern physics is to find them. Experiment has outrun theory, or, better, guided by erroneous theory, it has discovered relationships which seem to be of the greatest interest and importance, but the reasons for them are as yet not at all understood.

VI. ATTEMPTS TOWARD A SOLUTION

It is possible, however, to go a certain distance toward a solution and to indicate some conditions which must be satisfied by the solution when it is found. For the energy $h\nu$ with which the electron is found by experiment to escape from the atom must have come either from the energy stored up inside of the atom or else from the light. There is no third possibility. Now the fact that the energy of emission is the same, whether the body from which it is emitted is held within an inch of the source, where the light is very intense,

or a mile away, where it is very weak, would seem to indicate that the light simply pulls a trigger in the atom which itself furnishes all the energy with which the electron escapes, as was originally suggested by Lenard in 1902, [*Footnote: Ann. d. Phys.* (4), VIII (1902), 149.] or else, if the light furnishes the energy, that light itself must consist of bundles of energy which keep together as they travel through space, as suggested in the Thomson-Einstein theory.

Yet the fact that the energy of emission is directly proportional to the frequency ν of the incident light spoils Lenard's form of trigger theory, since, if the atom furnishes the energy, it ought to make no difference what kind of a wave-length pulls the trigger, while it ought to make a difference what kind of a gun, that is, what kind of an atom, is shot off. But both of these expectations are the exact opposite of the observed facts. *The energy of the escaping corpuscle must come then, in some way or other, from the incident light.*

When, however, we attempt to compute on the basis of a spreading-wave theory how much energy a corpuscle can receive from a given source of light, we find it difficult to find anything more than a very minute fraction of the amount which the corpuscle actually acquires.

Thus, the total luminous energy falling per second from a standard candle on a square centimeter at a distance of 3 m. is 1 erg. [*Footnote: Drude, Lehrbuch der Optik*, 1906, p. 472.] Hence the amount falling per second on a body of the size of an atom, i.e., of cross-section 10^{-15} cm., is 10^{-15} ergs, but the energy $h\nu$ with which a corpuscle is ejected by light of wave-length $500 \mu\mu$ (millionths millimeter) is 4×10^{-12} ergs, or 4,000 times as much. Since not a third of the incident energy is in wave-lengths shorter than $500 \mu\mu$, a surface of sodium or lithium which is sensitive up to $500 \mu\mu$ should require, even if all this energy were in one wave-length, which it is not, at least 12,000 seconds or 4 hours of illumination by a candle 3 m. away before any of its atoms could have received, all told, enough energy to discharge a corpuscle. Yet the corpuscle is observed to shoot out the instant the light is turned on. It is true that Lord Rayleigh has recently shown [*Footnote: Phil. Mag.* XXXII (1916), 188.] that an atom may conceivably absorb wave-energy from a region of the order of magnitude of the square of a wave-length of the incident light rather than of the order of its own cross-section. This in no way weakens, however, the cogency of the type of argument just presented, for it is only necessary to apply the same sort of analysis to the case of γ -rays, the wave-length of which is of the order of magnitude of an atomic diameter (10^{-8} cm.), and the difficulty is found still more pronounced. Thus Rutherford [*Footnote: Radioactive Substances and the Radiations*, p. 288.] estimates that the total γ -ray energy radiated per second by one gram of radium cannot possibly be more than 4.7×10^4 ergs. Hence at a distance of 100 meters, where the γ -rays from a gram of radium would

be easily detectable, the total γ -ray energy falling per second on a square millimeter of surface, the area of which is ten-thousand billion times greater than that either of an atom or of a disk whose radius is a wave-length, would be $4\pi \times 10^{10} = 4 \times 10^7$ ergs. This is very close to the energy with which β -rays are actually observed to be ejected by these γ -rays, the velocity of ejection being about nine-tenths that of light. Although, then, it should take ten thousand billion seconds for the atom to gather in this much energy from the γ -rays, on the basis of classical theory, the β -ray is observed to be ejected with this energy as soon as the radium is put in place. This shows that if we are going to abandon the Thomson-Einstein hypothesis of localized energy, which is of course competent to satisfy these energy relations, there is no alternative but to assume that at some previous time the corpuscle had absorbed and stored up from light of this or other wave-length enough energy so that it needed but a minute addition at the time of the experiment to be able to be ejected from the atom with the energy $h\nu$.

Now the corpuscle which is thus ejected by the light cannot possibly be one of the free corpuscles of the metal, for such a corpuscle, when set in motion within a metal, constitutes an electric current, and we know that such a current at once dissipates its energy into heat. In other words, a *free* corpuscle can have no mechanism for storing up energy and then *jerking* itself up 'by its boot straps' until it has the huge speed of emission observed.

The ejected corpuscle must then have come *from the inside of the atom*, in which case it is necessary to assume, if the Thomson-Einstein theory is rejected, that within the atom there exists some mechanism which will permit a corpuscle continually to absorb and load itself up with energy of a given frequency until a value at least as large as $h\nu$ is reached. What sort of a mechanism this is we have at present no idea. Further, if the absorption is due to resonance—and we have as yet no other way in which to conceive it—it is difficult to see how there can be, in the atoms of a solid body, corpuscles having all kinds of natural frequencies so that some are always found to absorb and ultimately be ejected by impressed light of any particular frequency. But apart from these difficulties, the thing itself is impossible if these absorbing corpuscles, when not exposed to radiation, are emitting any energy at all; for if they did so, they would in time lose all their store and we should be able, by keeping bodies in the dark, to put them into a condition in which they should show no emission of corpuscles whatever until after hours or years of illumination with a given wave-length. Since this is contrary to experiment, we are forced, even when we discard the Thomson-Einstein theory of localized energy, to postulate electronic absorbers which, during the process of absorbing, do not radiate at all until the absorbed energy has reached a certain critical value when explosive emission occurs.

However, then, we may interpret the phenomenon of the emission of corpuscles under the influence of ether waves, whether upon the basis of the Thomson-Einstein assumption of bundles of localized energy traveling

through the ether, or upon the basis of a peculiar property of the inside of an atom which enables it to absorb continuously incident energy and emit only explosively, *the observed characteristics of the effect seem to furnish proof that the emission of energy by an atom is a discontinuous or explosive process.* This was the fundamental assumption of Planck's so-called quantum theory of radiation. The Thomson-Einstein theory makes both the absorption and the emission sudden or explosive, while the loading theory first suggested by Planck, though from another view-point, makes the absorption continuous and only the emission explosive.

The h determined above with not more than one-half of 1 per cent of uncertainty is the explosive constant, i.e., it is the unchanging ratio between the energy of emission and the frequency of the incident light. It is a constant the existence of which was first discovered by Planck by an analysis of the facts of black-body radiation, though the physical assumptions underlying Planck's analysis do not seem to be longer tenable. For the American physicists Duane and Hunt [*Footnote: Phys. Rev.*, VI (1915), 166.] and Hull [*Ibid.*, VII (1916), 157.] have recently shown that the same quantity h appears in connection with the impact of corpuscles against any kind of a target, the observation here being that the highest frequency in the general or white-light X-radiation emitted when corpuscles impinge upon a target is found by dividing the kinetic energy of the impinging corpuscle by h . Since black-body radiation is presumably due to the impact of the free corpuscles within a metal upon the atoms, it is probable that the appearance of h in black-body radiation and in general X-radiation is due to the same cause, so that, contrary to Planck's assumption, there need not be, in either of these cases, any coincidence between natural and impressed periods at all. The $h\nu$ which here appears is not a characteristic of the atom, but merely a property of the ether pulse which is generated by the stopping of a moving electron. Why this ether pulse should be resolvable into a continuous, or white-light spectrum which, however, has the peculiar property of being chopped off sharply at a particular limiting frequency given by $h\nu = PD \times e$ is thus far a complete mystery. All that we can say is that experiment seems to demand a sufficient modification of the ether-pulse theory of white-light and of general X-radiation to take this experimental fact into account.

On the other hand, the appearance of h in connection with the absorption and emission of *monochromatic* light (photo-electric effect and Bohr atom) seems to demand some hitherto unknown type of absorbing and emitting mechanism within the atom. This demand is strikingly emphasized by the remarkable absorbing property of matter for X-rays, discovered by Barkla [*Footnote: Phil. Mag.*, XVII (1909), 749.] and beautifully exhibited in De Brogue's photographs opposite p. 197. It will be seen from these photographs *that the atoms of each particular substance transmit the general X-radiation up to a certain critical frequency and then absorbs all radiations of higher frequency than this critical value.* The extraordinary significance of this

discovery lies in the fact that it indicates that there is a type of absorption which is not due either to resonance or to free electrons. But these are the only types of absorption which are recognized in the structure of modern optics. We have as yet no way of conceiving of this new type of absorption in terms of a mechanical model.

There is one result, however, which seems to be definitely established by all of this experimental work. Whether the radiation is produced by the stopping of a free electron, as in Duane and Hunt's experiments, and presumably also in black-body experiments, or by the absorption and re-emission of energy by bound electrons, as in photo-electric and spectroscopic work, Planck's h seems to be always tied up in some way with the emission and absorption of energy by the electron. *h may therefore be considered as one of the properties of the electron.*

The new facts in the field of radiation which have been discovered through the study of the properties of the electron seem, then, to require in any case a very fundamental revision or extension of classical theories of absorption and emission of radiant energy. The Thomson-Einstein theory throws the whole burden of accounting for the new facts upon the unknown nature of the ether and makes radical assumptions about its structure. The loading theory leaves the ether as it was and puts the burden of an explanation upon the unknown conditions and laws which exist inside the atom, and have to do with the nature of the electron. I have already given reasons for discrediting the first type of theory. The second type, though as yet very incomplete, seems to me to be the only possible one, and it has already met with some notable successes, as in the case of the Bohr atom. Yet the theory is at present woefully incomplete and hazy. About all that we can say now is that we seem to be driven by newly discovered relations in the field of radiation either to the Thomson-Einstein semi-corpuscular theory, or else to a theory which is equally subversive of the established order of things in physics. For either one of these alternatives brings us to a very revolutionary quantum theory of radiation. To be living in a period which faces such a complete reconstruction of our notions as to the way in which ether waves are absorbed and emitted by matter is an inspiring prospect. The atomic and electronic worlds have revealed themselves with beautiful definiteness and wonderful consistency to the eye of the modern physicist, but their relation to the world of ether waves is still to him a profound mystery for which the coming generation has the incomparable opportunity of finding a solution.

In conclusion there is given a summary of the most important physical constants the values of which it has become possible to fix, [*Footnote: See Proc. Nat. Acad. Sci.*, III (1917), 236; also *Phil. Mag.*, July, 1917.] within about the limits indicated, through the isolation and measurement of the electron.”³⁶⁶

Arvid Reuterdaahl noted that Millikan changed his stance in an international radio

broadcast in 1924, after Millikan had won the Nobel Prize. Reuter Dahl also noted that Millikan did not reveal what had occurred in the interim that rendered Einstein's previously untenable theory, tenable. Reuter Dahl pointed out that the Nobel Committee irrationally used Millikan's original declaration as if it were a justification for the reward of an "untenable" Thomson-Einstein theory, instead of excluding Einstein from consideration, as would have been appropriate.

Millikan stated in 1949,

"Einstein's third 1905 paper reveals more strikingly than either of the foregoing his boldness in breaking with tradition and setting up a photoelectric stopping potential $PD \cdot e = \frac{1}{2}mv^2 = h\nu - p$ which at the time seemed completely unreasonable because it *apparently* ignored and indeed seemed to contradict all the manifold facts of interference and thus to be a straight return to the corpuscular theory of light which had been completely abandoned since the times of Young and Fresnel around 1800 A.D. [***] These contradictions have now partially disappeared, however, through the development of the so-called 'wave mechanics' by the work of Louis De Broglie, Schroedinger, Heisenberg, and Dirac."³⁶⁶⁷

It appears that Einstein's Nobel Prize was the product not of merit, but of politics and of the Einstein mania which followed the eclipse observations of 1919 that had made Einstein an international celebrity. They insisted on giving Einstein a prize not because of his alleged achievements, but because it would increase the prestige of the Committee and further the cause of rapprochement among the post-war nations, as well as promote Einstein's friends, like Max Planck, as well as promote Einstein's political cause of Zionism.

Carl Wilhelm Oseen joined the Nobel Committee in 1922 in order to see to it that Albert Einstein was awarded a prize. Oseen was a corrupting influence on the Nobel Prize Committee.³⁶⁶⁸ He attempted to base the prizes on political considerations, personal friendships and other corrupt motivations. He ridiculously parsed words and sophistically contradicted himself, while applying double standards to award the prizes to those who did not deserve them, or withhold them from those who did. Given that it was impossible to award Einstein the prize for his plagiarism of the theory of relativity, Oseen manufactured the excuse of giving Einstein the Nobel Prize for the law of the photo-electric effect. However, the prize for the photo-electric was rightfully owed to Millikan, the experimentalist—as opposed to theorist, because the express purpose of the prize was to reward physical discoveries, not theories; and it was Millikan, not Einstein, who had allegedly made the physical discovery. In addition, it was well-known that the Einsteins' contribution to the ultimate form of the law was not revolutionary but evolutionary, and their derivation was flawed and based upon an "untenable" theory—as Millikan had stated.

[19.4 The Origins of the Law of the Photo-Electric Effect](#)

Even if the Einsteins' work on the photo-electric effect had met the requirements for the awarding of a prize, it did not merit a Noble Prize. It was for the most part unoriginal. All of the foundational work had been accomplished by others, and the Einsteins forced their derivations in order to achieve a known result.

The Einsteins had many predecessors and there is a great deal of literature on the subject. Isaac Newton presented a corpuscular theory of light two centuries before the Einsteins. The Einsteins' predecessors also include: E. Becquerel, *La Lumière: Ses Causes et Ses Effets: 2 : Effets de la Lumière*, Volume 2, Librairie de Firmin Didot frères, Paris, (1868), p. 122. **See also:** G. R. Kirchhoff, "Ueber das Verhältniss zwischen dem Emissionsvermögen und dem Absorptionsvermögen der Körper für Wärme und Licht", *Annalen der Physik und Chemie*, Volume 109, (1860), pp. 275-301; republished in: *Gesammelte Abhandlungen*, J. A. Barth, Leipzig, (1882), pp. 571-598. **See also:** L. Boltzmann, "Analytischer Beweis des 2. Hauptsatzes der mechanischen Wärmetheorie aus den Sätzen über das Gleichgewicht der lebendigen Kraft", *Sitzungsberichte der mathematisch-naturwissenschaftlichen Classe der Kaiserlichen Akademie der Wissenschaften in Wien, Zweite Abtheilung*, Volume 63, (1871), pp. 712-732; republished in: *Wissenschaftliche Abhandlungen*, Volume 1, J. A. Barth, Leipzig, (1909), pp. 288-308; **and** "Über die Beziehung zwischen dem zweiten Hauptsatz der mechanischen Wärmetheorie und der Wahrscheinlichkeitsrechnung, respective den Sätzen über das Wärmegleichgewicht", *Sitzungsberichte der mathematisch-naturwissenschaftlichen Classe der Kaiserlichen Akademie der Wissenschaften in Wien, Zweite Abtheilung*, Volume 76, (1877), pp. 373-435; republished in: *Wissenschaftliche Abhandlungen*, Volume 2, J. A. Barth, Leipzig, (1909), pp. 164-223; **and** *Vorlesungen über Gastheorie*, J. A. Barth, Leipzig, (1896). **See also:** H. F. Weber, "Die specifischen Wärmen der Elemente Kohlenstoff, Bor und Silicium", *Annalen der Physik und Chemie*, Volume 4, (1875), pp. 367-423, 553-582; **and** "Die Entwicklung der Lichtemission glühender fester Körper", *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, (1887), pp. 491-504; **and** "Untersuchungen über die Strahlung fester Körper", *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, (1888), pp. 933-957. **See also:** H. R. Hertz, "Über sehr schnelle electriche Schwingungen", *Annalen der Physik und Chemie*, Volume 31, (1887), pp. 421-449; English translation in: *Electric Waves, Being Researches on the Propagation of Electric Action with Finite Velocity Through Space*, London, New York, Macmillan, (1893), p. 29ff.; **and** "Über einen Einfluß des ultravioletten Lichtes auf die electriche Entladung", *Annalen der Physik und Chemie*, Volume 31, (1887), pp. 983-1000; English translation in: *Electric Waves, Being Researches on the Propagation of Electric Action with Finite Velocity Through Space*, London, New York, Macmillan, (1893), p. 63ff.; **and** *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, (1887), pp. 487ff.; **and** "Über die Einwirkung einer geradlinigen electriche Schwingung auf eine benachbarte Strombahn", *Annalen der Physik und Chemie*, Volume 34, (1888), pp. 155-171; **and** "Über die Ausbreitungsgeschwindigkeit der electrodynamischen Wirkungen", *Annalen der Physik und Chemie*, Volume 34, (1888), pp. 551-569; **and** "Über elektrodynamische Wellen im Luftraume und deren Reflexion", *Annalen der Physik*

und Chemie, Volume 34, (1888), pp. 609-623; **and** “Ueber die Grundgleichungen der Elektrodynamik für ruhende Körper”, *Nachrichten von der Königlichen Gesellschaft der Wissenschaften und der Georg-Augusts-Universität zu Göttingen*, (1890), pp. 106-149; reprinted *Annalen der Physik und Chemie*, Volume 40, (1890), pp. 577-624; reprinted *Untersuchung über die Ausbreitung der Elektrischen Kraft*, Johann Ambrosius Barth, Leipzig, (1892), pp. 208-255; translated into English by D. E. Jones, as: “On the Fundamental Equations of Electromagnetics for Bodies at Rest”, *Electric Waves, Being Researches on the Propagation of Electric Action with Finite Velocity Through Space*, London, New York, Macmillan, (1893), pp. 195-239; and “Ueber die Grundgleichungen der Elektrodynamik für bewegte Körper”, *Annalen der Physik und Chemie*, Volume 41, (1890), pp. 369-399; reprinted *Untersuchung über die Ausbreitung der Elektrischen Kraft*, Johann Ambrosius Barth, Leipzig, (1892), pp. 256-285; translated into English by D. E. Jones, as: “On the Fundamental Equations of Electromagnetics for Bodies in Motion”, *Electric Waves, Being Researches on the Propagation of Electric Action with Finite Velocity Through Space*, London, New York, Macmillan, (1893), pp. 241-268.; **and** “Über den Durchgang der Kathodenstrahlen durch dünne Metallschichten”, *Annalen der Physik und Chemie*, Volume 45, (1892), pp. 28-32. **See also:** J. H. Van’t Hoff, “Die Rolle des osmotischen Druckes in der Analogie zwischen Lösungen und Gasen”, *Zeitschrift für physikalische Chemie, Stöchiometrie und Verwandtschaftslehre*, Volume 1, (1887), pp. 481-508. **See also:** W. Hallwachs, “Über den Einfluss des Lichtes auf electrostatisch geladene Körper”, *Annalen der Physik und Chemie*, Volume 33, (1888), pp. 301-312. **See also:** H. Ebert and E. Wiedemann, “Über den Einfluss des Lichtes auf die electricen Entladungen”, *Annalen der Physik und Chemie*, Volume 33, (1888), pp. 241-264. **See also:** A. Righi, “Di alcuni nuovi fenomeni elettrici provocati dalle radiazioni — Nota V”, *Rendiconti della Reale Accademia dei Lincei*, Volume 4, Number 2, (1888), pp. 16-19. **See also:** M. A. Stoletow, “Suite des Recherches Actino-Électriques”, *Comptes Rendus Hebdomadaires des Séances de L’Académie des Sciences*, Volume 107, (1888), pp. 91-92. **See also:** P. Lenard and M. Wolf, “Zerstäuben der Körper durch das ultraviolette Licht”, *Annalen der Physik und Chemie*, Volume 37, (1889), pp. 443-456. **See also:** J. Elster and H. Geitel, *Annalen der Physik und Chemie*, Volume 38, (1889), pp. 40, 497; **and** *Annalen der Physik und Chemie*, Volume 39, (1890), p. 332; **and** *Annalen der Physik und Chemie*, Volume 41, (1890), p. 161; **and** “Über den hemmenden Einfluss des Magnetismus auf lichtelectrische Entladungen in verdünntenn Gasen”, *Annalen der Physik und Chemie*, Volume 41, (1890), pp. 166-176; **and** “Über die durch Sonnenlicht bewirkte electriche Zerstreuung von mineralischen Oberflächen”, *Annalen der Physik und Chemie*, Volume 44, (1891), pp. 722-736; **and** *Annalen der Physik und Chemie*, Volume 52, (1894), p. 433; **and** *Annalen der Physik und Chemie*, Volume 55, (1895), p. 684; **and** “Über die angebliche Zerstreuung positiver Electricität der Licht”, *Annalen der Physik und Chemie*, Volume 57, (1895), pp. 24-33. **See also:** W. Wien, “Eine neue Beziehung der Strahlung schwarzer Körper zum zweiten Hauptsatz der Wärmetheorie”, *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, (1893), pp. 55-62; **and** “Temperatur und Entropie der Strahlung”, *Annalen*

der Physik und Chemie, Volume 52, (1894), pp. 132-165; **and** "Ueber die Energievertheilung im Emissionsspectrum eines schwarzen Körpers", *Annalen der Physik und Chemie*, Volume 58, (1896), pp. 662-669. **See also:** E. Branly, "Déperdition des Deux Électricités par les Rayons très Réfrangibles", *Comptes Rendus Hebdomadaires des Séances de L'Académie des Sciences*, Volume 114, (1892), pp. 68-70. **See also:** O. E. Meyer, *Die kinetische Theorie der Gase*, Multiple Editions. **See also:** O. Knoblauch, "Ueber die Fluorescenz von Lösungen", *Annalen der Physik und Chemie*, Volume 54, (1895), pp. 193-220. **See also:** J. J. Thomson, "On Cathode Rays", *Philosophical Magazine*, Volume 44, (1897), pp. 293-316; **and** "On the Charge of Electricity Carried by the Ions Produced by Roentgen Rays", *Philosophical Magazine*, Volume 46, (1898), pp. 528-545; **and** "On the Masses of the Ions in a Gas at Low Pressure", *Philosophical Magazine*, Volume 48, (1899), pp. 547-567; **and** *Les Discharges Électriques dans les Gaz*, Paris, (1900), p. 56; **and** *Electricity and Matter*, Charles Scribner's Sons, New York, (1904); translated into German, *Elektrizität und Materie*, F. Vieweg und Sohn, Braunschweig, (1904); **and** "On the Emission of Negative Corpuscles by the Alkali Metals", *Philosophical Magazine*, Volume 10, (1905), pp. 584-590. **See also:** E. Rutherford, *Proceedings of the Cambridge Philosophical Society*, Volume 9, (1898), p. 401. **See also:** O. Lummer and E. Pringsheim, "Die Vertheilung der Energie im Spectrum des schwarzen Körpers und des blanken Platins", *Verhandlungen der Deutschen Physikalischen Gesellschaft*, Volume 1, (1899), pp. 215-230. **See also:** M. Planck, "Über irreversible Strahlungsvorgänge. Vierte Mittheilung", *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, (1898), pp. 449-476; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn, Braunschweig, (1958), pp. 532-559; **and** "Über irreversible Strahlungsvorgänge. Fünfte Mittheilung", *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, (1899), pp. 440-480; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn, Braunschweig, (1958), pp. 560-600; **and** "Ueber irreversible Strahlungsvorgänge", *Annalen der Physik*, Series 4, Volume 1, (1900), pp. 69-122; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn, Braunschweig, (1958), pp. 614-667; **and** "Entropie und Temperatur strahlender Wärme", *Annalen der Physik*, Series 4, Volume 1, (1900), pp. 719-737; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn, Braunschweig, (1958), pp. 668-686; **and** "Ueber eine Verbesserung der Wien'schen Spectralgleichung", *Verhandlungen der Deutschen Physikalischen Gesellschaft*, Volume 2, (1900), pp. 202-204; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn, Braunschweig, (1958), pp. 687-689; **and** "Kritik zweier Sätze des Hrn. W. Wien", *Annalen der Physik*, Series 4, Volume 3, (1900), pp. 764-766; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn, Braunschweig, (1958), pp. 695-697; **and** "Zur Theorie des Gesetzes der Energieverteilung im Normalspectrum", *Verhandlungen der Deutschen Physikalischen Gesellschaft*, Volume 2, (1900), pp. 237-245; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn,

Braunschweig, (1958), pp. 698-706; **and** “Ueber das Gesetz der Energieverteilung im Normalspectrum”, *Annalen der Physik*, Series 4, Volume 4, (1901), pp. 553-563; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn, Braunschweig, (1958), pp. 717-727; **and** “Ueber die Elementarquanta der Materie und der Elektrizität”, *Annalen der Physik*, Series 4, Volume 4, (1901), pp. 564-566; reprinted in: *Physikalische Abhandlungen und Vorträge*, Volume 1, Friedrich Vieweg und Sohn, Braunschweig, (1958), pp. 728-730. **See also:** E. Merritt and O. M. Stewart, “The Development of Cathode Rays by Ultraviolet Light”, *Physical Review*, Volume 11, (1900), pp. 230-250. **See also:** P. Drude, *Lehrbuch der Optik*, S. Hirzel, Leipzig, (1900); translated into English *The Theory of Optics*, Longmans, Green and Co., London, New York, Toronto, (1902); **and** “Zur Elektronentheorie der Metalle. I & II”, *Annalen der Physik*, Series 4, Volume 1, (1900), pp. 566-613; Volume 3, (1900), pp. 369-402; **and** “Optische Eigenschaften und Elektronentheorie, I & II”, *Annalen der Physik*, Series 4, Volume 14, (1904), pp. 677-725, 936-961; **and** “Die Natur des Lichtes” in A. Winkelmann, *Handbuch der Optik*, Volume 6, Second Edition, J. A. Barth, Leipzig, (1906), pp. 1120-1387; **and** *Physik des Aethers auf elektromagnetischer Grundlage*, F. Enke, Stuttgart, (1894), Posthumous Second Revised Edition, W. König, (1912). **See also:** Lord Rayleigh, “Remarks upon the Law of Complete Radiation”, *Philosophical Magazine*, Volume 49, (1900), pp. 539-540; republished in: *Scientific Papers*, Volume 4, Dover, New York, (1964), pp. 483-485; **and** “The Dynamical Theory of Gases and of Radiation”, *Nature*, Volume 72, (1905), pp. 54-55; republished in: *Scientific Papers*, Volume 5, Dover, New York, (1964), pp. 248-252; **and** “The Constant of Radiation as Calculated from Molecular Data”, *Nature*, Volume 72, (1905), pp. 243-244; republished in: *Scientific Papers*, Volume 5, Dover, New York, (1964), p. 253. **See also:** P. Lenard, “Ueber Wirkungen des ultravioletten Lichtes auf gasförmige Körper”, *Annalen der Physik*, Series 4, Volume 1, (1900), pp. 486-507; **and** “Erzeugung von Kathodenstrahlen durch ultraviolettes Licht”, *Annalen der Physik*, Series 4, Volume 2, (1900), pp. 359-375; **and** “Ueber die Elektrizitätszerstreuung in ultraviolet durchstrahlter Luft”, *Annalen der Physik*, Series 4, Volume 3, (1900), pp. 298-319; **and** “Ueber die lichtelektrische Wirkung”, *Annalen der Physik*, Series 4, Volume 8, (1902), pp. 149-198; **and** “Über die Beobachtung langsamer Kathodenstrahlen mit Hilfe der Phosphoreszenz und über Sekundärentstehung von Kathodenstrahlen”, *Annalen der Physik*, Series 4, Volume 12, (1903), pp. 449-490. **See also:** F. Paschen, “Ueber das Strahlungsgesetz des schwarzen Körpers”, *Annalen der Physik*, Series 4, Volume 4, (1901), pp. 277-298; **and** “Ueber das Strahlungsgesetz des schwarzen Körpers. Entgegnung auf Ausführungen der Herren O. Lummer und E. Pringsheim”, *Annalen der Physik*, Series 4, Volume 6, (1901), pp. 646-658. **See also:** H. Rubens and F. Kurlbaum, “Anwendung der Methode der Reststrahlen zur Prüfung des Strahlungsgesetzes”, *Annalen der Physik*, Series 4, Volume 4, (1901), pp. 649-666. **See also:** J. Stark, *Die Elektrizität in Gasen*, J. A. Barth, Leipzig, (1902). **See also:** E. R. Ladenburg, *Annalen der Physik*, Series 4, Volume 12, (1903), pp. 558. **See also:** E. v. Schweidler, “Die lichtelektrischen Erscheinungen”, *Jahrbuch der Radioaktivität und Elektronik*, Volume 1, (1904), pp. 358-400. **See also:** J. H. Jeans, “On the Partition

of Energy between Matter and Aether”, *Philosophical Magazine*, Volume 10, (1905), pp. 91-98; **and** “The Dynamical Theory of Gases and of Radiation”, *Nature*, Volume 72, (1905), pp. 101-102; **and** “A Comparison between Two Theories of Radiation”, *Nature*, (1905), pp. 293-294.

On the history of the origin and derivation of the formulas and concepts, *see*: P. Ehrenfest, “Welche Züge der Lichtquantenhypothese spielen in der Theorie der Wärmestrahlung eine wesentliche Rolle?”, *Annalen der Physik*, Series 4, Volume 36, Number 11, (1911), pp. 91-118. **See also**: A. Joffé, “Zur Theorie der Strahlungserscheinungen”, *Annalen der Physik*, Series 4, Volume 36, Number 13, (1911), pp. 534-552. **See also**: L. Natanson, “Über die statistische Theorie der Strahlung. (On the Statistical Theory of Radiation.)”, *Physikalische Zeitschrift*, Volume 12, Number 16, (15 August 1911), pp. 659-666. **See also**: G. Krutkow, “Aus der Annahme unabhängiger Lichtquanten folgt die W i e n s c h e Strahlungsformel”, *Physikalische Zeitschrift*, Volume 15, Number 3, (1 February 1914), pp. 133-136. **See also**: F. Hund, “Die Strahlung heisse Körper”, *Einführung in die theoretische Physik*, Volume 4 “Theorie der Wärme”, *Especially* Sections 66 and 67, Bibliographisches Institut, Leipzig, (1950), pp. 309-315; **and** F. Hund, “Die Strahlung heisse Körper”, *Einführung in die theoretische Physik*, Volume 4, “Theorie der Wärme”, *Especially* Sections 66 and 67, Bibliographisches Institut, Leipzig, (1950), pp. 309-315; **and** “Lichtteichen”, *Einführung in die theoretische Physik*, Volume 5 “Atom- und Quantentheorie”, Section 36, Bibliographisches Institut, Leipzig, (1950), pp. 166-169; **and** F. Hund, *The History of Quantum Theory*, Barnes & Noble Books, New York, (1974). **See also**: E. T. Whittaker, *A History of the Theories of Aether and Electricity*, Volume 1, Chapter 11, pp. 356-357; Volume 2, Chapter 3, Thomas Nelson and Sons, London, (1951/1953). **See also**: A. Pais, *Subtle is the Lord*, Chapter 19, Oxford University Press, (1982), pp. 364-388. **See also**: *The Collected Papers of Albert Einstein*, Volume 2, Document 14, Princeton University Press, (1989), pp. 134-169. **See also**: S. Galdabini, G. Giuliani and N. Robotti, *Photoelectricity Within Classical Physics: from the Photocurrents of Edmond Becquerel to the First Measure of the Electron Charge*, URL:

<<http://fiscavolta.unipv.it/percorsi/pdf/napesi.pdf>>

19.5 Einstein's Nobel Prize was Undeserved

Why did the Nobel Committee not award Einstein the Nobel Prize for his work on relativity theory? All who were familiar with the facts knew that Einstein did not originate the major concepts behind relativity theory. Political motives, and not merit, were the impetus behind Einstein's award. Max Planck, who had selfish interests in the award, placed heavy pressure on the Committee to award Einstein the prize.

Some ten years prior, Wilhelm Wien had recommended that the Nobel Prize for Physics be given to both Hendrik Antoon Lorentz and Albert Einstein in 1912, on the grounds that,

“While Lorentz must be considered as the first to have found the mathematical content of the relativity principle, Einstein succeeded in reducing it to a simple principle. One should therefore assess the merits of both investigators as being comparable.”³⁶⁶⁹

However, Einstein’s half of the relativity pie by all rights belonged to Poincaré, who died in 1912. It would have been in exceedingly bad taste to have exploited Poincaré’s death in order to award the Nobel Prize to Einstein; and Boscovich, Voigt, FitzGerald and Larmor held rights to Lorentz’ share. Wien knew Poincaré’s work well, and, thus, knew that Einstein had done little other than copy Poincaré’s principle of relativity.³⁶⁷⁰ Wien’s recommendation of Lorentz and Einstein for the special theory of relativity could not be seriously considered. Too many knew that Poincaré stated the principle of relativity long before Einstein, and many others had published the theory’s fundamental mathematical formalisms long before Einstein or Lorentz.

Since Einstein was ineligible for a Nobel Prize for the theory of relativity on account of his well-known plagiarism of the theory, and since influential persons compelled the Committee to award him a prize, Carl Wilhelm Oseen nominated Einstein for a prize for the photo-electric effect. This also presented the Committee with several dilemmas, and one notes that the photo-electric effect was merely mentioned as an aside, an aside to the otherwise completely nebulous statement that the award was made “for his services to Theoretical Physics”.³⁶⁷¹

Einstein’s equations were not sufficient to merit a prize, in that the prizes were intended only for inventions and experimental discoveries, and the formal mathematical expression of a law was not appropriate grounds for a prize. Einstein had also had many predecessors who had worked out the formalisms before him, and Millikan had stated that the theory behind Einstein’s equations was “untenable”. Theoretical work was also not a valid basis for the awarding of a prize. In addition, the Nobel Committee sought to award Millikan the prize for his experimental work on the photo-electric effect, which was the appropriate award. Ultimately, Nobel Prizes were awarded to both Einstein (1921), “for his services to Theoretical Physics, and especially for his discovery of the law of the photoelectric effect”;³⁶⁷² and Millikan (1923), “for his work on the elementary charge of electricity and on the photoelectric effect”.³⁶⁷³

The question naturally arises, did the Einsteins’ work on the photo-electric effect merit an award of the magnitude of a Nobel Prize? And should any such award have been awarded exclusively to the Einsteins’; or, instead, to a group of physicists, including the Einsteins, who developed the theory over the course of many years?

Professor Friedwardt Winterberg, theoretical physicist at the University of Nevada, Reno, argues in a private communication that Planck, not Einstein, was the founder of quantum mechanics—contrary to the opinions of Kragh, Kuhn and Hermann.³⁶⁷⁴ Prof. Winterberg, who has permitted me to reproduce some of his arguments here, calls attention to the fact that one of the fundamental elements of quantum theory is the assertion that there is a smallest action. Neither Planck (1900), nor Einstein (1905), had yet incorporated this fundamental property of quantum

mechanics into their work. According to Prof. Winterberg, the principle of a smallest action first appeared in quantum theory in Planck's,

“1911 paper, where he replaced,

$$\epsilon_{\varphi} = \varphi \nu \quad \varphi = \Theta \epsilon \zeta \zeta \zeta$$

for the discrete energy steps of a harmonic oscillator, with,

$$\epsilon_{\varphi} = \left(\varphi + \frac{\Theta}{\theta} \right) \nu$$

with the zero point energy $\epsilon_{\eta} = \left(\frac{\Theta}{\theta} \right) \nu$ for $\varphi = \eta$, which was later shown to be a consequence of Heisenberg's uncertainty principle.”

The postulation of discrete energy levels leads to the conclusion that light must be emitted, or absorbed, through a discrete change in the energy of the oscillator,

“for example, from $n + 1$ to φ with $\Delta \epsilon = \nu$ the energy of the emitted radiation.”

Prof. Winterberg concludes,

“Planck's black body radiation formula is the interpolation between wave-like (Rayleigh-Jeans) and particle-like (Wien) behavior for the long-wave and short-wave limit and thus a direct expression of the wave-particle duality of quantum mechanics. Wien, in arriving at his 1896 radiation law, was guided by the similarity of the high frequency tail of the black body radiation with the Maxwell-Boltzmann distribution of a gas, and Wien found that the energy of the corresponding particles would have to be proportional to ν , in different notation, equal to ν . Therefore, a case can be made that the photon concept should be shared by Wien and Planck, with Einstein having made the connection between the two.”

Prof. Winterberg raises three points, which justify his contentions:

“1. We begin with Wien's displacement law of black body radiation for the distribution of the energy $u(\nu)$ over the frequency ν ,

$$r(\nu) = \nu^I \omega \left(\frac{\nu}{\omega} \right), \tag{1}$$

where ω is the absolute temperature and ω a universal function which is yet to be determined. Equation (1) is an exact statement for black body radiation.

2. Experimentally, it was found that for large frequencies,

$$r \sim \nu^I \Omega^{-\frac{\theta \nu}{\epsilon \omega}}, \tag{2}$$

where h is a constant, which is today called ‘Planck’s constant’.

3. Wien then compares (2) with the Maxwell-Boltzmann distribution for the kinetic energy of gas molecules, setting,

$$\begin{aligned} r &\sim \nu^I \Omega^{-\frac{\epsilon}{\epsilon \omega}} \tilde{\nu}^* \\ &\sim \epsilon \Omega^{-\frac{\epsilon}{\epsilon \omega}} \tilde{\nu}^* \end{aligned} \tag{3}$$

where $\tilde{\nu}^*$ is the velocity and ϵ the kinetic energy of the gas molecules. He then conjectures that the molecules emit a radiation of the intensity $r = r(\epsilon)$ and a frequency $\nu = \nu(\epsilon)$, whereby, one has,

$$r \sim r(\nu) \epsilon(\nu) \frac{\tilde{\nu}^*(\nu)}{\tilde{\nu}} \Omega^{-\frac{\epsilon(\nu)}{\epsilon \omega}} \tilde{\nu}. \tag{4}$$

However, this is compatible with (1) if, and only if,

$$\begin{aligned} r &\sim \nu^I \Omega^{-\frac{\theta \nu}{\epsilon \omega}} \\ \epsilon &= \theta \nu \zeta \end{aligned} \tag{5}$$

Therefore, the radiation behaves like the energy from a gas with the molecules having the energy $h\nu$, as in Einstein’s theory.”

19.6 Einstein Breaks the Rules

In late 1922, the Nobel Prize Committee awarded Albert Einstein the Nobel Prize for

1921. The award was mired in controversy. Einstein's Nobel Prize was not awarded for the theory of relativity, because everyone involved knew that Einstein had plagiarized the theory. Einstein, the nature of his prize, and the method by which his prize was awarded, broke many of the rules the Nobel Committee was duty bound to uphold.

Einstein was touring the globe when his award was announced. Confusion arose from Einstein's self-declared status as a citizen of the world. The Nobel Committee asked the German ambassador to accept the prize on Einstein's behalf. The Committee determined that Einstein was both a Swiss and a German citizen, and the German Ambassador made mention of Switzerland when accepting the prize for Einstein, who was traveling abroad. Einstein maintained that he was a Swiss citizen and not a German citizen.

The Committee violated the rules by awarding Einstein a prize for a non-discovery. Alfred Nobel did not create a Nobel Prize for Mathematics and was not interested in theoretical work, but instead intended his prizes to be given out for inventions and experimental discoveries that benefitted humanity. Nobel did this to deliberately encourage the development of inventions and experimental discoveries.

Einstein violated the rules by giving an acceptance speech on the theory of relativity, instead of the photo-electric effect; which unwarranted speech gave the public the false and misleading impression that Einstein had won the Nobel Prize for the theory of relativity. Einstein had not won a Nobel Prize for the theory of relativity, though his speech made it appear to the world that he had. The award specifically stated that it was awarded, "irrespective of such value which, after eventual substantiation, may be assigned to his relativity and gravitational theories".³⁶⁷⁵ Einstein also broke the rules by giving his speech in Göteborg. The Constitution of the Nobel Directorate required that Einstein must give a lecture in Stockholm on the subject for which the award was made. He never did.

Arvid Reuter Dahl protested in *THE DEARBORN INDEPENDENT* on 6 January 1923,

"Recently the Nobel Foundation Directorate awarded the Nobel premium for distinguished achievement in physical science to Albert Einstein. Uninformed and uncritical opinion will, undoubtedly, concur with the directorate in this choice. Biased opinion, created by world-wide propaganda, will heartily agree with the directorate in its decision. In this instance, however, the directorate has deliberately conferred a unique distinction and set its seal of approval upon a man who has been definitely and publicly charged with plagiarism through the medium of the international press and in such scientific journals as still retain their freedom of expression.

It may be thought that the award to Einstein was based upon ignorance of the actually involved facts and that the directorate may be exonerated on the plea of lack of information. It must be admitted, however, that in this case ignorance of facts should not and cannot be accepted as a defense of the award. The plea of ignorance cannot be allowed because of the all-important reason that the directorate's attention had been definitely called [by Prof. O. E. Westin] both to the charges made against Einstein and also to the unbiased

appraisal of his alleged achievements.

[***]

Was Einstein brought before this tribunal to defend himself against these charges of plagiarism? We understand that he was far away from Sweden at the time the award was made. Has Einstein ever flatly denied the charges made against him and has he ever tried to show that they are not true? If he had, the world would have known it by every means under the control of his supporters.

It would seem the same sinister influence which forced Einsteinism upon the world has controlled the decision of the Nobel directorate in its recent award. In view of the timely warning of the fearless and honest savant, Professor O. E. Westin, it is difficult to find any justification for the directorate in bestowing the Nobel premium in physics upon Albert Einstein.”

Peter A. Bucky stated that Einstein later showed no interest in his Nobel Prize, which his wife kept in cabinet.³⁶⁷⁶

19.7 Conclusion

Personality cults are common in the history of Physics. This hero worship has a deleterious effect on the progress of science. Galileo Galilei nearly lost his life for opposing the many myths of the beloved Aristotle, who was considered a divine philosopher by the Church. Had the Church succeeded in its promotion of Aristotle and its suppression of the truth, teachers would to this day be teaching students that the Earth did not orbit the Sun. John Toland complained in 1704 that the cult of personality which had grown up around Spinoza’s dogma was as destructive to rational thought, as it was distasteful to free-thinking philosophers.³⁶⁷⁷ Eugen Karl Dühring registered the same complaint and attributed it to shameless ethnically-biased advertising and was himself ethnically-biased.³⁶⁷⁸ Spinoza plagiarized his philosophy from better minds such as David of Dinant,³⁶⁷⁹ Amalric of Chartres and the Amalricians, John Scotus Eriugena, “Alexander a disciple of Xenophanes”, Archdeacon Gundisalvi of Segovia, Avicbron, Giordano Bruno and René Des Cartes. George Berkeley (followed by Colin Maclaurin, and the less religiously inclined T. H. Pasley, Ernst Mach, and many others) opposed the myths of Sir Isaac Newton, and fought hard to free Physics from the authority of Newton’s Cabalistic religious beliefs, which had inspired a fervent following, which group of tacit pantheists attributed physical phenomena to the active governance of God and declared all contrary beliefs to be heresy, thereby forbidding the search for the causal mechanism behind gravitation. Hermann Boltzmann predicted in 1904 that the authority of Newton and others would someday fall, but that it had ruined his attempts to interject more science into Physics. Boltzmann then took his own life. Newton, in order to achieve his cult status, had to overcome the fame of Des Cartes, who is today, outside of France, known almost exclusively for his Mathematics and Philosophy, not his Physics, though at the time, he was world-renowned for his

Physics.

One hero gives way to another, often based upon arguments which have little or nothing to do with science. The success of a theory sometimes depends more upon its widespread publication and promotion in several languages, particularly in the *Lingua Franca* of the day, than it does upon the merits of the theory. Voltaire played no small role in the promotion of Newton by bringing him to France and ridiculing Des Cartes, who was then the leading authority in Physics. Voltaire also lampooned Newton's staunchest critic, Leibnitz.

Knowing this history, and knowing how to manufacture and destroy heroes in science, and knowing how to hide the achievements of their predecessors, Albert Einstein, Max Planck, Max Born, Erwin Freundlich, Arnold Sommerfeld, Max von Laue, Alexander Moszkowski, and others, deliberately set out to create a "star cult" around Albert Einstein and the "theory of relativity". We know this from their words and from their deeds. Moszkowski, for example, wrote to Einstein that he had made it his life's goal to promote Einstein, and was good to his word in his book *Einstein: The Searcher* of 1921, which presented Einstein as an arrogant demi-god with the full right to pass judgement on all things and the just power to censor out opposition, as a matter of course, while denying that he was doing so. Freundlich and Born gave credence to the myths of Moszkowski, and they each profited financially from the Einstein name.

Einstein and Moszkowski discussed the "Valhalla" of great thinkers, and who it was that St. Einstein, like St. Peter before him, would allow into the hall, and who it was that he would exclude. Moszkowski coolly calculated that eclipse observations of starlight could be used in comic book fashion to hype Einstein as a super-human hero, who had deduced God's secrets through pure thought. Even as early as 1916, Moszkowski uttered the prophecy that Einstein would someday be referred to as Abertus Maximus, and called him the Galileo of the Twentieth Century—a "prophecy" Moszkowski, himself, set out to fulfill. Moszkowski kicked off his campaign to make Einstein a superstar with an article in the *Berliner Tageblatt* on 8 October 1919, "Die Sonne bracht' es an den Tag!" and set the stage for all the shameless promotion of Einstein that soon followed. Just as Theodor Herzl took his racist plans from Dühring,³⁶⁸⁰ Einstein's promoters, who sought to make pro-Zionist propaganda with Einstein, took taken their promotional plans from Dühring, who believed that ethnic bias led to the shameless promotion of Lessing. Dühring wrote in 1881,

"One needs only to consider the advertisements with which the Jews seek at present, at any cost, to raise their Lessing up to a god after they have for a century raised his fame ten times more than what he is worth with all the arts of false praise. The business which the Jewish press and Jewish literature have always systematically made out of bringing a powerful overvaluation of Lessing into the public has recently been carried out indeed to the point of disgust. The Jewish newspaper writers have raised the author of that flat Jewish piece which is entitled *Nathan der Weise* over the greatest authors and poets and declared him to be, for example, the greatest German, to say

something against whom would be a *lèse Majesté*.”³⁶⁸¹

Indeed, such talk may have caused Paul Ehrenfest doubts. He wrote to Einstein,

“I just read a few novellas by Zangwill (Tauchnitz Edition). Artistically worthless ghetto scenes. Where is the literature concerning Jews that, if only on a reduced scale, does to *some* extent what *Dostoyevsky* has done for Russians, or at least Tolstoy, or Turgenev, or Gorky or at the very least Herzen?”³⁶⁸²

The weariness of the world after the dreariness of World War I made fertile ground for the publicity stunts used to promote Einstein as the new Newton—the new heroic cult figure of science. As Arvid Reuterdaahl aptly phrased it, Einstein was the P. T. Barnum of the scientific world and basked in the circus limelight he focused narrowly on himself—Valhalla ultimately only had room for one. Never before had a hero in the world of science been so quickly and cleverly manufactured from plagiarism, false data and sophistry, and never before had intellectual opposition to the absurd been so effectively suppressed by race-baiting and brow-beating, as was done by Einstein and his cronies, deliberately and in the knowledge of the historical forces at play and how they might be manipulated to fit the purpose.

Accounts from Einstein’s contemporaries disclose that many were aware that Einstein was not the genius he was made out to be, and that his world-wide fame resulted from media hype, not merit. Gertrude Besse King wrote in the early 1920’s of the immoderate promotion of Einstein in the popular press in America and of the untruths that Einstein’s promoters told the public. Felix Klein also wrote of the awful hype wasted on Einstein, and how it failed to capture his true persona, which was in reality that of a silly child—and many who had met him described Einstein as childlike.

Ernst Gehrcke and Paul Weyland gave public lectures in the 1920’s informing the world that Einstein was a fraud and a plagiarist, and that his ill begotten fame was the product of a marketing campaign based on public ignorance of the facts—a mass-suggestion to accept the absurd, because it was unintelligible, and therefore somehow worthy of worship. While privately agreeing with these accusations, Einstein largely hid from them in public. Einstein sometimes quietly conceded that he was overrated as a physicist, and the cult of personality surrounding him was unjustified. The press claimed that Einstein was the greatest and most original thinker the world had ever seen. However, Albert Einstein wrote to Hendrik Antoon Lorentz on 19 January 1920,

“Nevertheless, unlike you, nature has not bestowed me with the ability to deliver lectures and dispense original ideas virtually effortlessly as meets your refined and versatile mind. [***] This awareness of my limitations pervades me all the more keenly in recent times since I see that my faculties are being quite particularly overrated after a few consequences of the general theory stood the test.”³⁶⁸³

Oskar Edvard Westin, of Stockholm, published important newspaper articles informing the Nobel Prize Committee of Einstein's plagiarism, and thereby prevented him from receiving the Nobel Prize for the theory of relativity. In the 1920's and 1930's, Arvid Reuterdaahl, Charles Lane Poor and Thomas Jefferson Jackson See informed the American public that Einstein was a sophist, a plagiarist and a self-promoter. It is amazing that during his lifetime, Einstein's fame was always attended by widespread accusations among leading authorities that he was a plagiarist, a sophist and a con man, yet few today know this important history.

Einstein has become a cartoon hero, which is reflective of the increasingly anti-intellectual trends of the Twentieth Century—trends sponsored by the same people who sponsored Einstein. Awestruck and fawning students are attracted to a comic book type of Physics, where they expect to learn the divine truths of the fuzzy-haired messiah and are indoctrinated to refuse to respect disagreements. Our brightest and best, those who have the ability to think independently, creatively and skeptically, those who would most likely succeed as our innovators and discoverers, suffer under a religious horde, who have fallen for the myth, and will do everything in their power to perpetuate it. The rich history of Physics is being stolen from us as the lineage is broken off in the popular press, and now in the text books, at St. Einstein, who is simplistically portrayed as our comic book hero—a legend and approach to science and history that does not appeal to sophisticated and creative minds.

Einstein's papers were not only not original, they are not the best work on the subjects he addressed. Our rich legacy is stolen from us and the insights and expositions of Poincaré, Hilbert, Riemann, Mach, Berkeley, Locke, Hume, Parmenides, Fechner, etc., which are vastly superior to anything Einstein ever produced, are less likely to be read and cited. The long and involved history, which has led to the many difficulties facing modern Physics, has lost its context, making it more difficult for us to discover where we have erred and how to fix Physics and free it from the ontology of hyperspace. We are not likely to accomplish this most desirable result in a climate of hero worship, censorship and a comic book level understanding of the history of science.

In addition, a terrible injustice is being perpetrated against the legacies of many scientists, philosophers and mathematicians of the past. Our children are being lied to and asked to believe in a Santa Claus scientist, who understood the truth that they never can. Science and history are degraded into hero worship and the many wonderful and educational facts and stories of history are distilled into an infantile comic strip featuring only one character. Our children deserve to be told the truth. Science must progress and be treated in a dignified and worthy manner. We cannot expect great things from our children if we teach them from comic books and insist that they believe in a myth. On the other side of Einstein await many wonderful stories in the history of Physics and promising analog models of gravity and electromagnetism which offer tangible explanations of the phenomena.

- 3640.** M. Winteler-Einstein, English translation by A. Beck, “Albert Einstein—A Biographical Sketch”, *The Collected Papers of Albert Einstein*, Volume 1, Princeton University Press, (1987), pp. xv-xxii, at xviii.
- 3641.** P. Micheltore, *Einstein, Profile of the Man*, Dodd, Mead, New York, (1962), p. 43. M. Marić to H. Savić, *The Collected Papers of Albert Einstein*, Volume 1, Document 125, Princeton University Press, (1987).
- 3642.** Michele Zackheim, *Einstein’s Daughter, the Search for Lieserl*, Riverhead Books, Penguin Putnam, New York, (1999), p. 244.
- 3643.** “Deposition in Divorce Proceedings” English translation by A. M. Hentschel, *The Collected Papers of Albert Einstein*, Volume 8, Document 676, Princeton University Press, (1998), p. 713. *See also:* M. Zackheim, *Einstein’s Daughter, the Search for Lieserl*, Riverhead Books, Penguin Putnam, New York, (1999), pp. 78-79.
- 3644.** M. White and J. Gribbin, *Einstein, A Life in Science*, Plume, New York, (1995), p. 123.
- 3645.** *See:* A. Einstein to Ilse Einstein, *The Collected Papers of Albert Einstein*, Volume 8, Document 536, Princeton University Press, (1998); **and** Ilse Einstein to Georg Nikolai, *The Collected Papers of Albert Einstein*, Volume 8, Document 545, Princeton University Press, (1998).
- 3646.** Ilse Einstein to Georg Nikolai, English translation by A. M. Hentschel, *The Collected Papers of Albert Einstein*, Volume 8, Document 545, Princeton University Press, (1998), p. 565. *See also:* D. Overbye, *Einstein in Love: A Scientific Romance*, Viking, New York, (2000), pp. 343, 404, note 22. *See also:* A. Einstein to Ilse Einstein, *The Collected Papers of Albert Einstein*, Volume 8, Document 536, Princeton University Press, (1998).
- 3647.** D. Overbye, *Einstein in Love: A Scientific Romance*, Viking, New York, (2000), pp. 343, 404, note 22. *See:* A. Einstein to Ilse Einstein, *The Collected Papers of Albert Einstein*, Volume 8, Document 536, Princeton University Press, (1998); **and** Ilse Einstein to Georg Nikolai, *The Collected Papers of Albert Einstein*, Volume 8, Document 545, Princeton University Press, (1998).
- 3648.** A. Einstein, English translation by I. Born in M. Born, *The Born-Einstein Letters*, Walker and Company, New York, (1971), p. 8.
- 3649.** P. Frank, *Einstein: His Life and Times*, Alfred A. Knopf, New York, (1947), p. 293.
- 3650.** R. Highfield and P. Carter, *The Private Lives of Albert Einstein*, St. Martin’s Press, New York, (1993), p. 148.
- 3651.** P. A. Bucky, Einstein, and A. G. Weakland, “Einstein’s Roving Eye”, *The Private Albert Einstein*, Andrews and McMeel, Kansas City, (1992), pp. 127-135.
- 3652.** P. Micheltore, *Einstein, Profile of the Man*, Dodd, Mead, New York, (1962), p. 22.
- 3653.** E. R. Einstein, *Hans Albert Einstein: Reminiscences of His Life and Our Life Together*, Iowa Institute of Hydraulic Research, University of Iowa, Iowa City, (1991), pp. 98.
- 3654.** A. Reuter Dahl, “Einstein and the Nobel Premium”, *The Dearborn Independent*, (6 January 1923).
- 3655.** <http://nobelprize.org/physics/laureates/1921/>
- 3656.** E. Gehrcke, *Annalen der Physik*, 51, (1916), pp. 119-124; **and** *Verhandlungen der Deutschen Physikalischen Gesellschaft*, 20, (1918), pp. 165-169; **and** *Verhandlungen der Deutschen Physikalischen Gesellschaft*, 21, (1919), pp. 67-68; **and** *Zeitschrift für technische Physik*, 1, (1920), p. 123; **and** “Die Relativitätstheorie, eine wissenschaftliche Massensuggestion”, Lecture Delivered in the Berlin Philharmonic on August 24th, 1920, published in E. Gehrcke, *Kritik der Relativitätstheorie*, Hermann Meusser, Berlin, (1924), pp. 54-68; **and** “Kosmos”, Special Edition on the Theory of Relativity, (1921), pp. 296-298.

- 3657.** S. Walter, “Minkowski, Mathematicians, and the Mathematical Theory of Relativity”, in H. Goenner, et al., Editors, *The Expanding Worlds of General Relativity*, Birkhäuser, Boston, (1999), pp. 45-86.
- 3658.** A. Pais, *Subtle is the Lord*, Oxford University Press, New York, (1982), p. 171. Letter from G. Mittag-Leffler to A. Einstein of 16 December 1919, *The Collected Papers of Albert Einstein*, Volume 9, Document 218, Princeton University Press, (2004), pp. 308-309, 611.
- 3659.** W. Pauli, “Relativitätstheorie”, *Encyklopädie der mathematischen Wissenschaften mit Einschluss ihrer Anwendungen*, Volume 5, Part 2, Chapter 19, B. G. Teubner, Leipzig, (1921), pp. 539-775; English translation by G. Field, *Theory of Relativity*, Pergamon Press, London, Edinburgh, New York, Toronto, Sydney, Paris, Braunschweig, (1958).
- 3660.** See also: *Svenska Dagbladet*, (29 April 1922) and (19 October 1924); and *Nya Dagligt Allehanda*, (5 January 1924).
- 3661.** I. Wallace, *The Writing of One Novel*, Simon and Schuster, New York, (1968), pp. 18-19.
- 3662.** “Diskussionen om relativitetsteorien. En amerikansk professor, som gjør krav paa af være teoriens skaber. En udtalelse af professor Einstein”, *Aftenposten*, (18 June 1920). See also: “Relativitetsteorien og dens mænd. Professor Arvid Reuterdaahl udgiver en bog om sin teori af 1902.” *Aftenposten*, (Friday Morning, 10 September 1920).
- 3663.** <http://nobelprize.org/physics/laureates/1923/>
- 3664.** A. Reuterdaahl, “Einstein and the Nobel Premium”, *The Dearborn Independent*, (6 January 1923).
- 3665.** See: W. Broad and N. Wade, *Betrayers of the Truth: Fraud and Deceit in the Halls of Science*, Simon & Schuster, New York, (1982), pp. 23, 33-36, 213, 227-228.
- 3666.** R. A. Millikan, *The Electron, Its Isolation and Measurement and the Determination of Some of Its Properties*, University of Chicago Press, (1917), pp. 222-238.
- 3667.** R. A. Millikan, “Albert Einstein on His Seventieth Birthday”, *Reviews of Modern Physics*, Volume 21, Number 3, (July, 1949), pp. 343-347, at 344.
- 3668.** R. M. Friedman, “Nobel Physics Prize in Perspective”, *Nature*, Volume 292, (27 August 1981), pp. 793-798; and “Quantum Theory and the Nobel Prize”, *Physics World*, Volume 15, Number 8, (August, 2002), pp. 33-38.
- 3669.** A. Pais, *Subtle is the Lord*, Oxford University Press, (1982), p. 153.
- 3670.** See: W. Wien, “Die Bedeutung Henri Poincaré’s für die Physik”, *Acta Mathematica*, Volume 38, (Article dated March 9th, 1915, published 1921!), pp. 289-291; reprinted in *Œuvres de Henri Poincaré*, Volume 11, (1956), pp. 243-246. The next article after this one is H. A. Lorentz, “Deux Mémoires de Henri Poincaré sur la Physique Mathématique”, *Acta Mathematica*, Volume 38, (1921!), pp. 293-308; reprinted in *Œuvres de Henri Poincaré*, Volume 9, Gautier-Villars, Paris, (1954), pp. 683-695; and Volume 11, (1956), pp. 247-261. Pauli also wrote in 1921. One can only wonder what implications these articles held for Einstein’s Nobel Prize, and the fact that it was not awarded for “the theory of relativity”.
- 3671.** <http://nobelprize.org/physics/laureates/1921/>
- 3672.** <<http://nobelprize.org/physics/laureates/1921/>>
- 3673.** <<http://nobelprize.org/physics/laureates/1923/>>
- 3674.** H. Kragh, “Max Planck: The Reluctant Revolutionary”, *Physics World*, Volume 13, Number 12, (December, 2000), pp. 31-35. T. S. Kuhn, “Einstein’s Critique of Planck”, in H. Woolf, Editor, *Some Strangeness in the Proportion: A Centennial Symposium to Celebrate the Achievements of Albert Einstein*, Addison-Wesley Publishing Company, Reading, Massachusetts, (1980), pp. 186-191. A. Hermann, *Der Weg in das Atomzeitalter: Physik wird Weltgeschichte*, Moos, München, (1986).

- 3675.** *Svenska Dagbladet*, (19 October 1924). **See also:** *Nya Dagligt Allehanda*, (5 January 1924).
- 3676.** P. A. Bucky, Einstein, and A. G. Weakland, *The Private Albert Einstein*, Andrews and McMeel, Kansas City, (1992), p. 58.
- 3677.** J. Toland, *Letters to Serena*, Letter V, B. Lintot, London, (1704); reproduced F. Fromann, Stuttgart, (1964) and Garland, New York, (1976).
- 3678.** E. K. Dühring, *Die Judenfrage als Racen-, Sitten- und Culturfrage: mit einer weltgeschichtlichen Antwort*, H. Reuther, Karlsruhe, (1881); English translation by A. Jacob, *Eugen Dühring on the Jews*, Nineteen Eighty Four Press, Brighton, England, (1997), p. 101.
- 3679.** “David of Dinant”, *The Catholic Encyclopedia*, Volume 4, Robert Appleton Company, New York, (1908), p. 645.
- 3680.** M. Samuel, “Diaries of Theodor Herzl”, in: M. W. Weisgal, *Theodor Herzl: A Memorial*, The New Palestine, New York, (1929), pp. 125-180, at 129. T. Herzl, English translation by H. Zohn, R. Patai, Editor, *The Complete Diaries of Theodor Herzl*, Volume 1, Herzl Press, New York, (1960), pp. 4, 111.
- 3681.** E. K. Dühring, *Die Judenfrage als Racen-, Sitten- und Culturfrage: mit einer weltgeschichtlichen Antwort*, H. Reuther, Karlsruhe, (1881); English translation by A. Jacob, *Eugen Dühring on the Jews*, Nineteen Eighty Four Press, Brighton, England, (1997), p. 115. **See also:** E. K. Dühring, *Die Ueberschätzung Lessing's und Dessen Anwaltschaft für die Juden*, H. Reuther, Karlsruhe, (1881).
- 3682.** Letter from P. Ehrenfest to A. Einstein of 8 February 1920, English translation by A. Hentschel, *The Collected Papers of Albert Einstein*, Volume 9, Document 303, Princeton University Press, (2004), pp. 251-254, at 253-254.
- 3683.** Letter from A. Einstein to H. A. Lorentz of 19 January 1920, English translation by A. Hentschel, *The Collected Papers of Albert Einstein*, Volume 9, Document 265, Princeton University Press, (2004), p. 220.

