**INTRODUCTION**

In 1911, Fisher discovered that Mendel's original results all fell within the limits of probable error. Latter on, in 1936 Fisher gave a detailed statistical analysis of Mendel's data.\(^1\)

The Mendel-Fisher controversy has recently been mentioned.\(^2\) Gregor Mendel is indeed commonly regarded as the father of genetics; nevertheless, there has been an ongoing debate on what was frequently mentioned in Mendel's famous article entitled 'Experiments in Plant Hybridization'.\(^3\) The communication did not assess the complexities of statistics that Mendel used. It demonstrated that even legends such as Mendel (and Charles Darwin as well) have been the subject of controversial argument in the advanced world.\(^4\)

Noticeably, Fisher's last student, Edwards previously opined on Mendel's work, defending Fisher: The latter's painstaking analysis and defense of Mendel's integrity has been incorrectly reported as having exposed a scientific fraud of major proportions.\(^5\)

As aforementioned, Mendel's "Experiments in Plant-Hybridization",\(^2\) originally presented in 1865, became the groundwork of modern genetics. Nevertheless, the important issue is as follows. Did Mendel's research follow the rigors of valid scientific investigation, or was Mendel's data too good to be true? Leading experts present their wrapping-up on the famous controversy surrounding the confrontation by Fisher's analysis in 1936 to Mendel's research findings.\(^5\)

There is another work that demonstrates that the most famous scientists in the history have all used their gut feelings, convictions, perception and profound understanding of the processes they investigated, to one degree or the other, to reach their conclusions.\(^6\) In fact, science is really an amalgamation of subjective and objective outlooks. Likewise, there has been a controversy as to Mendel's use of subjectivity in his work since Fisher 'pointed out' in 1936.\(^6\)

Indeed, it appears that Fisher discovered that Mendel's research finding was too good to be true. Unfortunately, Fisher used too many 'excuses' to protect Mendel. Such a keen effort on Fisher's part could be due to the fact that Fisher himself is a strong believer of eugenics.

A paper by Chong-Ho (Alex) Yu evaluated the wealth and convolution of the ideas about probability with an importance on the associations between Fisherian and other probability hypotheses.\(^7\)

Although the dominant statistical and probabilistic approach is the Fisherian tradition, the application of Fisherian significance testing of the null hypothesis along with its probabilistic inference has been an ongoing debate. Dr. Yu demonstrated the viewpoints
that can sway the forum of an interesting topic in the history of science - but less well-known is the key player behind this spectacularly interesting history of inferences.

Kernel of Mendel-Fisher controversy: Fisher was indeed very merciful to Gregor Mendel, even if Fisher established that Mendel was not quite honest in explaining the outcomes of his own genetics studies.\textsuperscript{1,6-8} He constructed the notion that physical properties of species were subject to heredity. In collecting proof for his academic opinion, Mendel experimented a fertilization study in order to go after several age groups of axial and terminal flowers to detect how particular genes were approved from one generation to another.\textsuperscript{7}

Fisher (1936) discovered that Mendel's research outcomes were so near to the expected replica that the remaining portion of the size presented would be expected merely by a chance in less than once in 10,000 occasions if the replica were real.\textsuperscript{1} It was quite surprising that notwithstanding this refutation, Fisher described Mendel as an experienced and successful teacher who might well have adopted a style of presentation suitable for the lecture-room without feeling under any obligation to complete his story by unessential details, as lucidly pointed out by Yu.\textsuperscript{7} In dealing with how Mendel expressed 'incorrectly' about his own research data, Fisher noted that "Mendel took excessive and unnecessary liberties with facts".\textsuperscript{7} Yu, also clearly illustrated that in demonstrating why Mendel was 'incorrect' about his own research data, Fisher even hinted at Mendel being deceived by some assistant's mistake.\textsuperscript{7} This author (Tang) has searched hitherto; and found neither the proof of such an assistant's name, nor the assistant's research 'mistake' on this particular scientific event.

On the other hand, Fisher treated Darwin, but not Pearson, in a similarly polite manner as he treated Mendel.\textsuperscript{7,9} The very reason for Fisher's so doing, possibly, was due to Fisher's highly flavored Darwinian point of reference. It is noted that in probability models, especially on the subject of a pre-set alpha level, there are different opinions between Fisher and Pearson. Other focuses of dissimilarities still exist between both of them on topics such as type I and II error rates.\textsuperscript{7-11}

It appears that Fisher held a double standard meting out one treatment to Pearson on the one hand, and another to Mendel and Darwin. Both Fisher and Pearson were not only statisticians but geneticists as well. This author (Tang) agrees with Yu that Fisher had already heavily taken on Mendelian genetics and Darwinian evolutionary models. It is noted that one of Fisher's career targets was to fuse biostatistics, Mendelism, and Darwinism together.\textsuperscript{7,12-14}

This can be traced back as far as to an era of the late 19th century. At that time, Mendel gave a clear response to one of the major issues of evolution. The issue mainly at that time was, whether the variation of a trait in humans, is genetic or not. Mendel did respond to this with his presentation of an elementary structure of the genetic theory.\textsuperscript{7} Indeed, Mendel's theory was forgotten for quite a long-time until it was re-visited and re-elaborated by de Vries in 1900. Whether or not, de Vries really did understand Mendel's original theory is still a different but open question, but it is really beyond the current scope of this author's writing.\textsuperscript{16}

Fisher worked at Rothamsted on evolution, and on incorporating Mendelian theory with Darwin's hypothesis of natural selection. His first academically theoretical paper was On the Dominance Ratio.\textsuperscript{17} Also, he worked in partnership with E. B. Ford on the study of assortment in wild populations. Fisher's concepts on evolution were incorporated together in the book of Genetical Theory of Natural Selection.\textsuperscript{18} Hamilton rated this book as second in importance in evolution theory to Darwin's Origin. It introduced the fundamental theorem of natural selection which caused the argument between Fisher and others much later as reviewed in Bennett Natural Selection.\textsuperscript{19} Merely two reviews are nowadays available on JSTOR. Both stress the chapters on human populations — N. M. Grier in Social Forces Dec (1930) JSTOR and A. B. Hill in JRSS No. 1 (1931) JSTOR.\textsuperscript{20, 21}

Fisher argued that Mendelism with its outlook of specific legacy, did not disagree with Darwinism; on the contrary, he felt that Mendelism with its vision can rely on Darwinism. Fisher, with Sewall Wright and J. B. S. Haldane, is by and large regarded as one of the designers of The Modern Synthesis.

An organizational restructuring never going towards a happy synchronization: In 1933, Fisher succeeded Karl Pearson not only as the Francis Galton, Professor of Eugenics but also the chief of the Galton Laboratory at University College, London. Fisher had much more respect for Galton than for his disciple. It is noteworthy that Galton, a cousin of Darwin, rebuffed the concept of minute variations in traits as an evolutionary drive. Nevertheless, Galton has still been regarded as the pioneer of biometrics due to his contribution of statistical methods to the subject of biological evolution. One of Galton's famous contributions is his concept of regression toward the mean. Eventually, even though Fisher was Karl Pearson's natural successor in both statistics and eugenics, Fisher did not become heir to the entire academic territory as the original Department of Applied Statistics was then divided off and headed by Pearson's son, E. S. Pearson. Such an organizational restructuring indeed did not go towards a happy synchronization. Noticeably, the relationship between Fisher and members of E. S. Pearson's department,
particularly, the most important theorist within this department, Jerzy Neyman, steadily worsened.

The following is a brief summary. Opposing Darwin's initial standpoint that evolution is a consequence of gathered minute variations of traits, biologists who were in favour of Mendel's genetic theory afterward proposed the contrary: evolution is indeed led by mutation. In addition, evolution is broken in nature. Noticeably, by the end of the 19th and the early 20th centuries, two contrasting disciplines of theories were established. They were the Mendelians and the biometricians.7

The aforementioned miscellaneous opinions of the evolutionary and genetic hypotheses are relevant to the development of probabilistic and statistical inferences. Specifically, due to the concepts of the never-ending population in the Fisherian discipline, as well as the portrayal of separate data sets in the Pearsonian discipline, they can well be drawn back to their respective original positions in biological sciences.22

The academic style of eugenics in the late 19th and early 20th centuries: In fact, Fisher's fusion of Mendelism, Darwinism, and biometrics is connected to the academic style of eugenics; an alternative of Mendelism, Darwinism, and biometrics is connected to this academic style of eugenics.25

During that time period, Westerners highly favoured eugenics, i.e. applied genetics. Several researchers were dedicated to interpreting the reason that Western civilizations were much ‘better’ than others, along with finding the best way for them to conserve and defend their established civilizations. Based on Darwinism, the fittest species appear to be the ones who are physically most powerful and could replicate more offspring. Darwinism was able to explain the concept that the West was physically more powerful and thus had the “mandate destiny” because nature had chosen it as the superior. Nevertheless, there was still some dissenting voices, such as that of Kari Pearson, along with those from Mendelians and biometricians. All those inputs constitute dispute, and have been regarded as an obstruction to the development and forward movement of Darwinism.7 It appears that the late 1990s was a time for revisiting and reconsidering many aspects of the p < 0.05 relic from Fisher's work,23,24 if not “the Fisher controversy” per se that this author is referring to.

The arguments involved in the current controversy: 1. Initially, Galton was convinced that intelligence along with other valued human characteristics were inherited instead of being affected by the environmental factor. In order to promote intelligence and put off feeble-mindedness, Galton promoted so-called "good" marriages, the argument being that such marriages would result in the production of extremely bright males and ensure supply of cohorts. This notion of Galton's concept of eugenics can be traced back to Charles Darwin's 1859 book, The Origin of Species.25

2. In fact, evolutionary theory came into issue in the first place. Under such a theory, the human race was classified as "fit" and "unfit". Eugenics turned out to be the scientific community's calling at that time. In addition, there was another factor of social control that must be considered as well.

3. Galton accorded that "social control may improve or impair the racial qualities of future generations whether physically or mentally." Darwin quoted Galton repeatedly in his next book, The Descent of Man. Galton and Darwin agreed with each other that intellect and bravery, along with other fine as well as disagreeable emotions were affected by family education.26 On the other hand, characteristics, for example, mental disorder was inclined to be taken over. With respect to medical care, social Darwinists believed it provided the "fragile" with an augmented capacity to stay alive. With medical care, the “weak” people could hopefully be prevented from being eradicated by nature.

4. There are evidences as following that are considered as Fisher's 'misconducts' or 'misconcepts'. Generally speaking, it is essential for one, especially for a scientist, to persist in one's real faith in the incomprehensive. For a scientist, the incomprehensible must soon become comprehensible; otherwise, one would cease to explore it in the first place. That being said, there is still the matter of the mainstream philosophy of science.

This mainstream philosophy of science has to be further assessed for the following question. On what base does such a philosophy depend? It relies on the view of knowledge as justified and on real faith and it associates with the epistemology based on this view.

That having been said, as per the current analysis, what Fisher had done right and wrong appears to be able to be identified as outlined here even without employing the rational belief change theory, the way Pilpel did philosophically.27

What this author has done is to merely apply the principle of justice to bioethics, without even touching the rational belief change theory in philosophy as Pilpel did.

Fisher's opinions were not in conformity with the mainstream philosophy of science. For argument's sake, this author feels that there is little difference in the philosophy of science between Fisher's days and the current time. Even if there is some difference in the philosophy of science between these two different generations (cohorts), the bioethical principles are very seldom altered.

BioethICAL considerations are employed not only in scientific research but also in policy-making. Most of Fisher's research supplied a response to the issue that was critically considered by Western policy makers and researchers. This author envisages that people are
people, and should not be classified as either 'high' or 'low' class. Such a classification seriously violates the principle of justice in bioethics.

Based on the Mendelian-Darwinian-Biometrician fusion, Fisher ‘advised’ that the only way to ‘guarantee’ enhancement of the country (the UK) was to increase the reproduction of 'high-class people', according to Brenner-Golomb.7,14 Indeed, Hitler's Nazism and the notion of a better race have a strong foot print of Darwinism. This was discussed in the documentary by Benjamin Stein.27 However, it is important to emphasize that this notion is not the original intent of Darwin.

Pilpel suggests that the objective of Fisher's paper is not to reject Mendel or Mendelism, but to rescue Mendel from the misinterpretations forced upon him by the anti-Darwinian camp.28 Fisher wanted to synthesize biometrics and Mendelism, so he could not side with the biometricians to discredit Mendel.

In a fair society, classifying people as 'high-class' and 'lower-class' does involve serious bioethical issues. John Rawls, a British philosopher, viewed that the ethical quandaries of a fair society cannot be solved by passing on merely to 'present time.' Rather, history must be considered for a complete perspective. There are no exemptions for scientific, public health, genetic or even medical dilemmas.17

For argument's sake, with the spread of Western culture to the East, particularly from last century, the confrontation between the Eastern understanding of nature and the Western manipulation-of-nature based agriculture, is a typical example of confrontation in the humble opinion of this author (Tang). This confrontation has ended up in an awareness of the benefits of smallholder agriculture, where farmers' agricultural practices are incorporated with their cultural persuasion and performance. In this context, along with the association of religion and agriculture, it has constructed the ground of prevailing the field of research within the general scope of agricultural philosophy.29 The latter is a vigorous and robust example of the rebuilding of a mind with farsighted imagination, based on ancient wisdom. One can also visualize the sustainability of Christianity and Buddhism in the context of religion and agriculture, considering the latter as a field of applied science.

Lessons in history: the emergence of the eastern phenomenon and the decline of the western power:

Western power was at its acme towards the late 19th century. At that peak, Western standards of religion, science, technology, morality, and education were emphasized almost everywhere – not only that, these Western standards were even accepted as being superior to that of the East. A little more than half a century later, there was a weakening of this West power and Japan was elevated to the position of a financial and economic superpower. This was followed by the emergence of the other four Asian dragons (Singapore, Hong Kong, South Korea and Taiwan) on the Asian platform. Empires do fall. Many may call it “the American Century”. Nevertheless, during the past hundred years, there was an obvious transfer away from Western dominance to other emerging powers. Under the telescopic examination of Edward Gibbon's historical assessment, Rome 331, along with America and Europe 2006 appear to have more than a few issues shared together, not even to mention that there are still more problems up to this time.30,31

The fall of Rome was indeed an ordinary and unavoidable outcome. It is among the unblemished and unbroken constructions of another city that one might start to stretch one's metaphor for a potential complication that might be repeatedly recorded: the history of the fall of the West, signifying a distinctive complexity of faiths and organizations that was initiated with the Greeks and was established with the crossing of the Romans into Europe embraced Christianity and then crossed into the New World with Columbus.31

The concept of Western fall is hardly a recent one. After the end of the First World War, a retired German schoolteacher, Oswald Spengler published his famous book entitled Der Untergang des Abendlandes, (The Decline of the West).32 Spengler's characteristic hypothesis is that human developments cross periods. At any rate, occurrences since the end of the Second World War have initially tended to damage the reputation of Spengler's key concept of a Western decline. After all, his notion has turned out to be far more convincing and persuasive in representing the history of the 20th century as a portion of a stretched out occidental ascendancy.33

As aforementioned, Oswald Spengler (1880-1936) is best known for The Decline of the West, in which he advocated his trail breaking philosophy of world history and infiltrating diagnosis of the catastrophe of modernism. Drawing upon Spengler's personal papers, John Farrenkopf proceeds to present a courageous explanation of the fruition of Spengler's political concept, unveiling a stage in the years prior to Germany's overthrow in World War I in which Spengler was a conventional supporter of the semi-democratization of the Second Reich.34 John Farrenkopf investigates Spengler's association to German historicism, his position in the German traditions of cultural cynicism and real politics without moral consideration and his serious attitude concerning Nazism. It appears to be impossible to recognize Spengler without a greater recognition of the historicism (and Goethe) that filtered through his worldview at that time. John Farrenkopf's contribution through his book is long past due.35
Noticeably, the uncomplicated truths presented by Adam Smith have raised more people above the poverty line in the last about 30 years than all the government assistance programs of all the nations in the world in the same period. Zakaria records that in 2007, the Pew Global Attitudes Survey polled citizens in 47 nations in order to understand the degree to which they have optimistic outlooks concerning free trade and open markets. The US came in last in this poll, after every other nation. He further observes that in the 6-7 years since the survey has been done, no nation has seen as sluggish a growth as the US. His conclusion is that other nations are rising relative to the US, and that this has been occurring since WW-II.

The weakness of his book appears to be as follows. He refers to the "West" as Western Europe and the US. Such a definition appears to be flawed, and S. Huntington modified his to comprise southern regions in Latin America and Eastern European nations. Furthermore, there are still more recent works on Western decline other than those mentioned above.

The end-of-the-West theorists foresee an augmentation in the attractiveness of religion as an answer to the deficiency of ethical along with moral confidences and the collapse of acknowledged values. Those theorists who foresee the end of Western civilization differ on various issues. Nevertheless, they see Russia as an overpass between the East and the West as the world moves on its way towards a global civilization.

The idea of decline is indeed a theory about the nature and meaning of time. The words "decadence" and "degeneracy", so widely used to by politicians and cultural commentators three or more generations ago, are rarely the key words of current political debate. Echoing the reduction in college courses on Western civilization, Marshall Sahlins targets to hasten the tendency by decreasing "Western Civilization" to about two hours per week. He refers to Nietzsche saying that immeasurable problems are similar to cold baths; one ought to get into and out of them as promptly as possible. The bottomless issue at this juncture is the primeval Western phantom of an antisocial and pre-social human nature: a hypothetically inborn self-centeredness that is symbolized in our natural myths as the foundation or vengeance of cultural order. Nonetheless, these Western concepts of nature and culture overlook the eugenics/Darwinism, and the overly forgiving manner by Fisher is correct. Assessment of the link between eugenics/Darwinism, and the overly forgiving manner by Fisher is correct. Indeed, Hitler's Nazism and the notion of a better race appear to have a burly trail of Darwinism. Nevertheless, it is important to emphasize that it is not the original aim of Darwin.

Therefore, the problem appears to be the ideology behind Fisher's theory, which is not merely against the principle of justice in bioethics, but, as well, gives birth to certain policies and their affects.

Acknowledgment: Thanks are due to Professor Robert Matthews and Dr. Chong-Ho (Alex) Yu for their respective critical readings, and to Dr. Shui-Tein Chen, Head of Systemic Biology Laboratory, Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan, along with Dr. Yemen Chen, President of New York College of Traditional Chinese Medicine, NY, USA for their respective encouragement as well.

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