

**PROGRESS OF STATISTICS; READ  
BEFORE THE AMERICAN  
GEOGRAPHICAL & STATISTICAL  
SOCIETY, AT THE ANNUAL MEETING  
IN NEW YORK, DEC. 1, 1859**

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Progress of statistics; read before the American Geographical & Statistical Society, at the annual meeting in New York, Dec. 1, 1859 by Jos. C. G. Kennedy

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**JOS. C. G. KENNEDY**

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*University of C. I.*

PROGRESS OF STATISTICS;

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AMERICAN *462*

Geographical & Statistical Society,

AT THE

ANNUAL MEETING IN NEW YORK,

DEC. 1, 1859.

By JOS. C. G. KENNEDY, A. M.,

SUPERINTENDENT OF THE UNITED STATES CENSUS; CORRESPONDING MEMBER OF THE SOCIETY,  
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AND DUBLIN STATISTICAL SOCIETIES, ETC., ETC.

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KENNEDY on *Statistics*.

VII.—*The Origin and Progress of Statistics*. By JOSEPH C. G. KENNEDY, COR. MEM. A.G.S.S., Superintendent of the United States Census.

Read December 1, 1859.

The human mind dwells with satisfaction upon ascertained results, and finds pure enjoyment in the contemplation of truths which evince a progressive knowledge respecting the real condition of the human family.

Theories, by exciting the mental faculties, create an interest according to the novelty or magnitude and importance of their topics; but, based as they are on uncertainty, exercise only, but do not satisfy the mind, which finds repose in truths alone; a repose more or less affected by the degree of confidence with which we are enabled to determine what is truth, particularly in its relation to ourselves.

Disturb the mind with doubt or harrow it with uncertainty, man's convictions afford but little real comfort, and however correct they may be in the abstract, they yield but little pleasure, while their weakness deprives him of the ability or disposition to exert an influence by the impress of his sentiments upon others. Fanaticism may inspire confidence and courage, but its influence is apt to be temporary and limited. With regard to matters of conscience, and the determination of truths respecting religious trust, the same *force of conviction* as would naturally arise from actual demonstration, must exist to inspire faith and confidence, but conclusions in that case rest, in the nature of things, upon what is not susceptible of demonstration by any appeal to facts, and the mind settles upon what it deems most consistent with its convictions of a superior Providence and its relations to humanity, upon tradition or Divine Revelation, calling into play the comforting influences of faith. Religious convictions force themselves upon the belief because of our relations to what we know to be true. Man perceives himself infinitely above all other creatures which inhabit the globe he occupies; he realizes that all created things are constructed for his uses, and discovers his ability to overcome all physical obstacles to the attainment of his wishes, while he has not the power to construct or create the most trifling object in nature; himself the work of an intellect or force as immeasurably above his own as his is superior to those beneath him. He can tunnel mountains which the concentrated energy of the world could not raise; he can make rivers subservient to his

uses and span them with an arch, but cannot create a rivulet ; he perceives a vast luminary cheering successive generations with undiminished light and heat, and the harmony and uniformity of nature maintained for ages for him alone, realizing at the same time that he is but as a speck upon the earth, the memory of which departs from the knowledge of men centuries before other objects formed centuries in advance, show signs of decay ; while the earth itself which we inhabit is but an atom in comparison with what we know of the rest of creation. With such truths patent to the observation of every one of ordinary comprehension, and perceiving illustrations in nature harmonizing with the cheering idea, man deduces the conviction that he is the creature of a higher power who controls his destinies, believes in a future existence, and hopefully settles upon some form of natural or revealed religion, according to surrounding circumstances. How beautifully Cicero in his *Cato*, or essay on old age, illustrates this sentiment in speaking of the soul :—" Her native seat is in heaven, and it is with reluctance she is forced down from those celestial mansions into these lower regions where all is foreign and repugnant to her divine nature. But the gods, I am persuaded, have thus widely disseminated immortal spirits and clothed them with human bodies, that there might be a race of intelligent creatures, not only to have dominion over this our earth, but to contemplate the host of heaven, and imitate in their moral conduct the same beautiful order and uniformity so conspicuous in those splendid orbs ;" and also wherein he quotes, on the authority of Xenophon, the dying expression of Cyrus—" For my own part," declared that great man, " I never could be persuaded that the soul could be properly said to live while it remained in this mortal body, or that it ceased to live when death dissolves the vital union." Socrates, Plato, and other great men of antiquity, whose opinions have been handed down to our day, expressed similar ideas. Thus religious convictions fill a void in the human mind, but the confidence with which they are entertained is inspired by different considerations from any which would govern the belief on other subjects, because the same evidence is unattainable ; yet there must be confidence to insure enjoyment. Truth, with respect to all the affairs of life, is that at which intelligent beings aim, and where it can be attained, none but perverted understandings are satisfied with any thing short of it ; and that study or science which tends to deduce the truth with respect to what most directly concerns life, property, the promotion of happiness, and the alle-

viation of misery, might well claim man's respect and national care. Such is the aim and tendency of statistics. Whatever tends to prolong life not only serves to extend the most precious boon, but promotes the enjoyment of its entire duration, for whatever conduces to the healthful preservation of the human system to that period when nature imperatively demands her own, contributes to relieve us from life's besetting ills and disquietudes, and renders us the more susceptible of real enjoyment and of fulfilling the design of our creation.

While statistics do not profess to heal diseases of the body or the mind, the unerring certainty with which they instruct mankind of the existence of remedial causes, leads to the investigation of their origin, and lays open defects, which, when exposed, may be said to be in a fair way to be abated or remedied. To statistics are we indebted not only for the knowledge of such a result, but for the fact itself, remarkable as it is, that "the same number of persons which in the early part of the eighteenth century produced one hundred and six deaths in England, furnished only sixty-six deaths per annum at the commencement of the present century, and twenty years later only sixty-two," reducing the mortality two-fifths in the space of a century. Statistics develop the real condition of the human family, taking the place of vague and unwarrantable ideas whereon absurd theories were established, and which, by diverting the mind from truths, and wasting the intellectual energies of man upon illusions, threw discredit upon knowledge itself. Their object is the amelioration of man's condition by the exhibition of facts whereby the administrative powers are guided and controlled by the lights of reason, and the impulses of humanity impelled to throb in the right direction. Viewed in its application to every man personally, or to the amelioration of the condition of the human family, this science presents the strongest claims to our consideration, and on the principle involved in the admirable declaration of *Cremes to Menidemus* in the drama of Terence—*Homo sum ; humani nihil a me alienum puto*—this study commends itself to the attention of every Christian and philanthropist.

We may seem to make slow progress in developing the utility of statistics as the results flow from our social or individual efforts, but we can afford to pursue the slow and laborious process of experimental investigation and mathematical deduction, and patiently witness the apparent triumph of short-lived theories, in view of the certainty and utility of our results.



Although moral statistics are of comparatively recent origin, they have accomplished more in the last half century for the alleviation of misery, the prolongation of life, and the elevation of humanity, than all other agencies combined,—they are the practical workings of an elevated Christianity.

Statistics have been termed the science of social facts expressed by numerical terms; their object the knowledge of society, considered in its elements, economy, condition, and movements.

The basis of Political Economy, the contributor to Geography, and indispensable to History, they present this marked difference, that while the battles, triumphs, and conquests of the latter are its most attractive features, the former best fulfil their mission under the blessings of peace. The mere numbering of the people is an institution of great antiquity, whereof we have the first example recorded in Holy Writ, in the enumeration of the Israelites, while, through all ages, except when barbarism prevailed, history has left examples of such investigations, very different, however, in character and aims from some which distinguish the nineteenth century. Although occasional recourse has been had to statistics by all civilized nations when peace permitted and prosperity seemed to recommend it, we find they have often had to struggle for an existence, and not unfrequently had their revelations altogether obliterated and their developments smothered when their truths indicated mal-administration or registered decay. Thus we learn from history that the alarming diminution of the French population, occasioned by the revocation of the edict of Nantz, was purposely concealed, and that the statistics of France instituted by Louis XIV., after the treaty of Riswick, and fostered by such men as Colbert and Vauban, were abandoned after the disasters of Hochstadt and Ramillies, only to struggle feebly into life and immediately to die, until deemed necessary by the first emperor to register with figures the greatness of his conquests and the success of his arms, to find a grave with his misfortunes, only reviving again in 1833, never, we hope, to be again obliterated.

With these preliminary remarks, I will, for a little time, endeavor to occupy your attention with some account of the statistical investigations of different peoples, with a view to apprehending the cotemporaneous progress of Statistics.

Among the Greeks, Romans, and Egyptians, the enumeration of the people was no unusual thing. By reference to Dionysius of Halicarnassus, Book I., c. 84, it will be seen that he establishes the data of the irruption of the Gauls, in which

the city of Rome was taken, and from that the date of Romulus, which he says appears "particularly by the records of the censors, which were transmitted with great care, in which I find that the year before the taking of the city, there was a census of the Roman people, to which there is affixed the data, which is this—'In the consulship of Lucius Valerius Potitus and Titus Manlius Capitolinus, the 119th year after the expulsion of the king.'" The same author, in his fourth Book, ch. xv., describes the institution of a festival termed *Pagnalia*, to which the entire population contributed each a certain piece of money, differing in amount as to men, women, and children, and of which he says, "when these pieces were told by those who presided at the sacrifices, the number of people, distinguished by their age and sex, became known." Not only did Servius Tullius establish this ingenious method of at once improving the treasury and taking the census of the living population, but he instituted a plan for ascertaining the number of births and deaths, and the time at which every male person arrived at the years of manhood. In his history of Laertius, the first dictator, he refers to the revival of this, "the wisest of all the institutions established by Servius Tullius, the most popular king," in order "to register the valuation of their fortunes, adding the names of their wives, with the names and ages of their children, and their own age," Book V., c. lxxv. The last lines of this renowned writer which have reached posterity, relate to this institution, and the eightieth chapter of his eleventh book abruptly ends while describing the demands made to the senate for the re-establishment of "particularly the most necessary of all, the custom relating to the census," which had been disused "for seventeen years since the consulship of Lucius Cornelius and Quintus Fabius." Livy, in the first book of his History of Rome, bears testimony to the importance of the census as established by Tullius, which he terms "an ordinance of the most salutary consequences in our empire." This author also refers to the census combining a survey and description of all the lands and houses, and the entire revenue of the Roman people, (b. c. 440.) In his twelfth book the same author refers to the survey of the twelve colonies presented to the senate by the censors. Tacitus mentions a census in the handwriting of Augustus, which contained an exact account of his dominions. The learned French statist, Moreau de Jonnes, gives the details of the Roman population for thirty-six censuses, extending through a period of near eight hundred years, from the time of Servius Tullius to that of Vespasian, and re-

marks that "no people of modern Europe presents an example of arrangements so numerous as those made at Rome from the earliest times, to ascertain by periodical enumerations all the details of her population, and the changes that occurred in its condition from one year to another."

In the first book of Cæsar's Commentaries (chap. 21) we learn that when that general seized the Helvetic camp, he found therein a census by names, wherein was recorded the warriors, the old men and women, and children, which is the most ancient statistical record to which reference is made of any portion of the country now embraced within the French empire, and it stands out prominent and solitary from any thing similar with reference to that country for many ages. With the Roman census you are all familiar; its object is plainly indicated in the second chapter of Luke, and seems to have led to the fulfilment of prophecy respecting the birth-place of our Saviour. In the remarkable discourse of Xenophon upon the manner of increasing the revenues of Athens, we find everywhere inculcated the admirable maxim that the true wealth and greatness of a nation consist in the numbers of people well employed. The aim of this remarkable political essay was to demonstrate the feasibility of supporting the population of the state by the development of their native riches, rather than by the oppression of their neighbors by tribute and taxes. It seems a well-authenticated fact that the census of China was taken nearly twenty centuries before our era, if any reliance is to be placed in their most venerated writings, which state that it was engraved on their public monuments in order to its preservation, and to prevent any alteration of its text.

The Arabs, distinguished as they were in all relating to figures, and who possessed a genius for calculation, were careful cultivators of statistics; and having conquered Spain in the eighth century, we learn that they very soon obtained an exact account of the country, its cities, population, and revenues.

While thus it is evident that the nations of the Old World appreciated the value and importance of statistics, it appears from undoubted authority, that on the discovery of this continent people were found who were not ignorant of their utility, but who, with all the disadvantages of an unwritten language, maintained copious statistical records.

The ancient Peruvians were found to possess accurate accounts of their numbers, wealth, and ages, even to those at the breast, and their social condition, by means of threads of differ-