

Col1	Col2	Col3	Col4	Col5	
Row 1	FIRST, of an impulse which has been imparted to the forms of life, advancing them, in definite times, by generation, through grades of organisation terminating in the highest dicotyledons and vertebrata, these grades being few in number, and generally marked by intervals of organic character, which we find to be a practical difficulty in ascertaining affinities; SECOND, of another impulse connected with the vital forces, tending, in the course of generations, to modify organic structures in accordance with external circumstances, as food, the nature of the habitat, and the meteoric agencies, these being the 'adaptations' of the natural theologian." The author apparently believes	produce seeds. I cannot here give the details which I have collected and elsewhere published on this curious subject; but to show how singular the laws are which determine the reproduction of animals under confinement, I may mention that carnivorous animals, even from the tropics, breed in this country pretty freely under confinement, with the exception of the plantigrades or bear family, which seldom produce young; whereas, carnivorous birds, with the rarest exception, hardly ever lay fertile eggs. Many exotic plants have pollen utterly worthless, in the same condition as in the most sterile hybrids. When, on the one hand, we see domesticated animals and plants, though often weak and sickly, breeding freely under confinement; and when, on the other hand, we see individuals, though taken young from a state of nature perfectly tamed, long-lived, and healthy (of which I could give numerous instances) , yet having their reproductive system so seriously affected by unperceived causes as to fail to act, we need not be surprised at this system, when it does act under confinement, acting irregularly, and producing offspring somewhat unlike their parents. I may add that as some organisms breed freely under the most unnatural conditions--for instance, rabbits and ferrets kept in hutches--showing that their	ever lay fertile eggs. Many exotic plants have pollen utterly worthless, in the same condition as in the most sterile hybrids. When, on the one hand, we see domesticated animals and plants, though often weak and sickly, breeding freely under confinement; and when, on the other hand, we see individuals, though taken young from a state of nature perfectly tamed, long-lived, and healthy (of which I could give numerous instances) , yet having their reproductive system so seriously affected by unperceived causes as to fail to act, we need not be surprised at this system, when it does act under confinement, acting irregularly, and producing offspring somewhat unlike their parents. I may add that	physical conditions of life, something to the crossing of already existing forms, and much to use and disuse, that is, to the effects of habit. To this latter agency he seems to attribute all the beautiful adaptations in nature; such as the long neck of the giraffe for browsing on the branches of trees. But he likewise believed in a law of progressive development, and as all the forms of life thus tend to progress, in order to account for the existence at the present day of simple productions, he maintains that such forms are now spontaneously generated. (I have taken the date of the first publication of Lamarck from Isidore Geoffroy Saint-Hilaire's ("Hist. Nat. Generale", tom. ii. page 405, 1859) excellent history of opinion on this subject. In this work a full account is given of Buffon's conclusions on the same subject. It is curious how largely my grandfather, Dr. Erasmus Darwin, anticipated the views and erroneous grounds of opinion of Lamarck in his "Zoonomia" (vol. i. pages 500-510), published in 1794. According to	history or geologist, C. Geolog.", 2nd ed. that as new forms caused by spontaneous development over the world existing species affected by particular natural forms. In the Schaaflhaus ("Verhandl. d. Rheinlands" development

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Row 2	axiom of the continuous operation of creative power, or of the ordained becoming of living things." Further on (page xc), after referring to geographical distribution, he adds, "These phenomena shake our confidence in the conclusion that the Apteryx of New Zealand and the Red Grouse of England were distinct creations in and for those islands respectively. Always, also, it may be well to bear in mind that by the word 'creation' the zoologist means 'a process he knows not what.'" He	exposed to the same conditions, any very rare deviation, due to some extraordinary combination of circumstances, appears in the parent--say, once among several million individuals--and it reappears in the child, the mere doctrine of chances almost compels us to attribute its reappearance to inheritance. Every one must have heard of cases of albinism, prickly skin, hairy bodies, etc., appearing in several members of the same family. If strange and rare deviations of structure are truly inherited, less strange and commoner deviations may be freely admitted to be inheritable. Perhaps the correct way of viewing the whole subject would be, to look at the inheritance of every character whatever as the rule, and non-inheritance as the anomaly. The laws governing inheritance are for the most part unknown; no one can say why the same peculiarity in different individuals of the same species, or in different species, is sometimes inherited and sometimes not so; why the child often reverts in certain characteristics to its grandfather or grandmother or more remote ancestor; why a peculiarity is often transmitted from one sex to both sexes, or to one sex alone,	the Linnean Society. When the first edition of this work was published, I was so completely deceived, as were many others, by such expressions as "the continuous operation of creative power," that I included Professor Owen with other palaeontologists as being firmly convinced of the immutability of species; but it appears ("Anat. of Vertebrates", vol. iii, page 796) that this was on my part a preposterous error. In the last edition of this work I inferred, and the inference still seems to me perfectly just, from a passage beginning with the words "no doubt the type-form," etc. (Ibid., vol. i, page xxxv), that Professor Owen admitted that natural selection may have done something in the formation of a new species; but this it appears (Ibid., vol. iii, page 798) is inaccurate and without evidence. I also gave some extracts from a correspondence between Professor Owen and the editor of the "London Review", from which it appeared manifest to the editor as well as to myself, that Professor Owen claimed to have promulgated the theory of natural selection before I had done so; and I expressed my surprise and satisfaction at this announcement; but as far as it is possible to	facts collected by Heusinger, it appears that white sheep and pigs are injured by certain plants, while dark-coloured individuals escape: Professor Wyman has recently communicated to me a good illustration of this fact; on asking some farmers in Virginia how it was that all their pigs were black, they informed him that the pigs ate the paint-root (Lachnanthes), which coloured their bones pink, and which caused the hoofs of all but the black varieties to drop off; and one of the	etc.), in which organic forms species have few have been intermediate and animals new creation descendants
Row 3	all change in the organic, as well as in the inorganic world, being the result of law, and not of miraculous interposition. Lamarck seems to have been chiefly led to his conclusion on the gradual change of species, by the difficulty of distinguishing species and varieties, by the almost perfect gradation of forms in certain groups, and by the analogy of domestic productions. With respect to the means of modification, he attributed something to the direct action of the physical conditions of life, something to the crossing of already existing forms, and much to use and disuse, that is, to the effects of habit. To this latter agency he seems to attribute all the beautiful	the tendency to inheritance; that like produces like is his fundamental belief: doubts have been thrown on this principle only by theoretical writers. When any deviation of structure often appears, and we see it in the father and child, we cannot tell whether it may not be due to the same cause having acted on both; but when among individuals, apparently exposed to the same conditions, any very rare deviation, due to some extraordinary combination of circumstances, appears in the parent--say, once among several million individuals--and it reappears in the child, the mere doctrine of chances almost compels us to attribute its reappearance to inheritance. Every one must have heard of cases of albinism, prickly skin, hairy bodies, etc., appearing in several members of the same family. If strange and rare deviations of structure are truly inherited, less strange and commoner deviations may be freely admitted to be inheritable. Perhaps the correct way of viewing the whole subject would be, to look at the inheritance of every character whatever as the rule, and non-inheritance as the anomaly.	Wallace and myself in the "Linnean Journal", and as that enlarged in the present volume. Unfortunately the view was given by Mr. Matthew very briefly in scattered passages in an appendix to a work on a different subject, so that it remained unnoticed until Mr. Matthew himself drew attention to it in the "Gardeners' Chronicle", on April 7, 1860. The differences of Mr. Matthew's views from mine are not of much importance: he seems to consider that the world was nearly depopulated at successive periods, and then restocked; and he gives as an alternative, that new forms may be generated "without the presence of any mold or germ of former aggregates." I am not sure that I understand some passages; but it seems that he attributes much influence to the direct action of the conditions of life. He clearly saw, however, the full force of the principle of natural selection. The celebrated geologist and naturalist, Von Buch, in his excellent "Description Physique des Isles Canaries" (1836, page 147), clearly	new conditions to cause any great amount of variation; and that, when the organisation has once begun to vary, it generally continues varying for many generations. No case is on record of a variable organism ceasing to vary under cultivation. Our oldest cultivated plants, such as wheat, still yield new varieties: our oldest domesticated animals are still capable of rapid improvement or modification. As far as I am able to judge, after long attending to the subject, the conditions of life appear to act in two ways--directly on the whole organisation or on certain parts alone and in directly by affecting the reproductive system. With respect to the direct action, we must bear in mind that in every case, as Professor Weismann has lately insisted, and as I have incidentally shown in my work on "Variation under Domestication," there are two factors: namely, the nature of the organism and the nature of the conditions. The former seems to be much the more important; for nearly similar variations sometimes arise under, as far as we can judge, dissimilar conditions; and, on the other hand, dissimilar variations arise under conditions which appear to be nearly uniform. The effects on the offspring are either definite or in	and partly from others have which follow and that which animals when conditions. M susceptible slight change Nothing is m few things m freely under and female

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Row 4	In December, 1859, Dr. Hooker published his "Introduction to the Australian Flora". In the first part of this great work he admits the truth of the descent and modification of species, and supports this doctrine by many original observations. The first edition of this work was published on November 24, 1859, and the second edition on January 7, 1860. CAUSES OF VARIABILITY. When we compare the individuals of the same variety or sub-variety of our older cultivated plants and animals, one of the first points which strikes us is, that they generally differ more from each other than do the individuals of any one species or variety in a state of nature. And if we reflect on the vast diversity of the plants and animals which have been cultivated, and which have varied during all ages under the most different climates and treatment, we are driven to conclude that this	been chemically affected by circumambient molecules of a particular nature, and thus have given rise to new forms. In this same year, 1853, Dr. Schaaffhausen published an excellent pamphlet ("Verhand. des Naturhist. Vereins der Preuss. Rheinlands", etc.), in which he maintains the development of organic forms on the earth. He infers that many species have kept true for long periods, whereas a few have become modified. The distinction of species he	relation to the whole series of changes which they have suffered." In December, 1859, Dr. Hooker published his "Introduction to the Australian Flora". In the first part of this great work he admits the truth of the descent and modification of species, and supports this doctrine by many original observations. The first edition of this work was published on November 24, 1859, and the second edition on January 7, 1860. CAUSES OF VARIABILITY. When we compare the individuals of the same variety or sub-variety of our older cultivated plants and animals, one of the first points which strikes us is, that they generally differ more from each other than do the individuals of any one species or variety in a state of nature. And if we reflect on the vast diversity of the plants and animals which have been cultivated, and which have varied during all ages under the most different climates and treatment, we are driven to conclude that this great variability is due to our domestic productions having been raised	the tendency to inheritance; that like produces like is his fundamental belief: doubts have been thrown on this principle only by theoretical writers. When any deviation of structure often appears, and we see it in the father and child, we cannot tell whether it may not be due to the same cause having acted on both; but when among individuals, apparently exposed to the same conditions, any very rare deviation, due to some extraordinary combination of circumstances, appears in the parent--say, once among several million individuals--and it reappears in the child, the mere doctrine of chances almost compels us to attribute its reappearance to inheritance. Every one must have heard of cases of albinism, prickly skin, hairy bodies, etc., appearing in several members of the same family. If strange and rare deviations of structure are	similar views work written till long after ("Goethe als s. 34) that th how, for inst what they are of the mann the same tin Darwin in Er we shall imm same conclu years 1794- in his "Life", as 1795, tha degeneration 1828 that he same forms
Row 5	the world, so at certain periods the germs of existing species may have been chemically affected by circumambient molecules of a particular nature, and thus have given rise to new forms. In this same year, 1853, Dr. Schaaffhausen published an excellent	pamphlet ("Verhand. des Naturhist. Vereins der Preuss. Rheinlands", etc.), in which he maintains the development of organic forms on the earth. He infers that many species have kept true for long periods, whereas a few have become modified. The distinction of species he explains by the destruction of intermediate graduated forms. "Thus living plants and animals are not separated from the extinct by new creations, but are to be regarded as their descendants through continued reproduction." A well-known French botanist, M. Lecoq, writes in 1854 ("Etudes sur	pamphlet ("Verhand. des Naturhist. Vereins der Preuss. Rheinlands", etc.), in which he maintains the development of organic forms on the earth. He infers that many species have kept true for long periods, whereas a few have become modified. The distinction of species he explains by the destruction of intermediate graduated forms. "Thus living plants and animals are not separated from the extinct by new creations, but are to be regarded as their descendants through continued reproduction."	March, 1852, and republished in his "Essays", in 1858), has contrasted the theories of the Creation and the Development of organic beings with remarkable skill and force. He argues from the analogy of domestic productions, from the changes which the embryos of many species undergo, from the difficulty of distinguishing species and varieties, and from the principle of general gradation, that species have been modified; and he attributes the modification to the change of circumstances. The author (1855) has also treated Psychology on the principle of the necessary acquirement of each mental power and capacity by gradation. In 1852 M. Naudin, a distinguished botanist, expressly stated, in an admirable paper on the Origin of Species ("Revue Horticole", page 102; since partly republished in the "Nouvelles Archives du Museum", tom. i, page 171), his belief that species are formed in an analogous manner as varieties are under cultivation; and the latter process he attributes to	physical con crossing of a use and disu this latter ag beautiful ada neck of the e trees. But he progressive life thus teno the existenc productions, spontaneous of the first p Geoffroy Sa tom. ii. page opinion on th is given of B subject. It is Dr. Erasmus erroneous g "Zoonomia" 1794. Accor

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Row 6	the conditions of life. He clearly saw, however, the full force of the principle of natural selection. The celebrated geologist and naturalist, Von Buch, in his excellent "Description Physique des Isles Canaries" (1836, page 147), clearly expresses his belief that varieties slowly become changed into permanent	myself, that Professor Owen claimed to have promulgated the theory of natural selection before I had done so; and I expressed my surprise and satisfaction at this announcement; but as far as it is possible to understand certain recently published passages (Ibid., vol. iii. page 798) I have either partially or wholly again fallen into error. It is consolatory to me that others find Professor Owen's controversial writings as difficult to understand and to reconcile with each other,	browsing on the branches of trees. But he likewise believed in a law of progressive development, and as all the forms of life thus tend to progress, in order to account for the existence at the present day of simple productions, he maintains that such forms are now spontaneously generated. (I have taken the date of the first publication of Lamarck from Isidore Geoffroy Saint-Hilaire's ("Hist. Nat. Generale", tom. ii. page 405, 1859) excellent history of opinion on this subject. In this work a full account is given of Buffon's conclusions on the same	facts as the complex and extraordinary outgrowths which variably follow from the insertion of a minute drop of poison by a gall-producing insect, shows us what singular modifications might result in the case of plants from a chemical change in the nature of the sap.	from each of these have become a degree from variation which we see in us. But the deviations of those of course are endless. large volume subject. No tendency to his fundame
Row 7	reared under new or unnatural conditions. Many facts clearly show how eminently susceptible the reproductive system is to very slight changes in the surrounding conditions. Nothing is more easy than to tame an animal, and few things more difficult than to get it to breed freely under confinement, even when the male and female unite. How many animals there are which will not breed, though kept in an almost free state in their native country! This is generally, but erroneously attributed to vitiated instincts. Many cultivated plants display the utmost vigour, and yet rarely or never seed! In some few cases it has been discovered that a very trifling change, such as a little more or less water at some particular period of growth, will determine whether or not a plant will	C'est cette puissance qui harmonise chaque membre a l'ensemble, en l'appropriant a la fonction qu'il doit remplir dans l'organisme general de la nature, fonction qui est pour lui sa raison d'etre." (From references in Bronn's "Untersuchungen uber die Entwicklungs-Gesetze", it appears that the celebrated botanist and palaeontologist Unger published, in 1852, his belief that species undergo development and modification. Dalton, likewise, in Pander and Dalton's work on Fossil Sloths, expressed, in 1821, a similar belief. Similar views have, as is	la variabilite LIMITEE des especes. Les EXPERIENCES sur les animaux sauvages devenus domestiques, et sur les animaux domestiques redevenus sauvages, la demontrent plus clairement encore. Ces memes experiences prouvent, de plus, que les differences produites peuvent etre de VALEUR GENERIQUE." In his "Hist. Nat. Generale" (tom. ii, page 430, 1859) he amplifies analogous conclusions. From a circular lately issued it appears that Dr. Freke, in 1851 ("Dublin Medical Press", page 322), propounded the doctrine that all organic beings have descended from one primordial form. His grounds of belief and treatment of the subject are wholly different from mine; but as Dr. Freke has now (1861) published his Essay on the "Origin of Species by means of Organic Affinity", the difficult attempt to give any	under confinement, even when the male and female unite. How many animals there are which will not breed, though kept in an almost free state in their native country! This is generally, but erroneously attributed to vitiated instincts. Many cultivated plants display the utmost vigour, and yet rarely or never seed! In some few cases it has been discovered that a very trifling change, such as a little more or less water at some particular period of growth, will determine whether or not a plant will produce seeds. I cannot here give the details which I have collected and elsewhere published on this curious subject; but to show how singular the laws are which determine the reproduction of animals under confinement, I may mention that carnivorous animals, even from the tropics, breed in this country pretty freely under confinement, with the exception of the plantigrades or bear family, which seldom produce young; whereas, carnivorous birds, with the rarest exception, hardly	nature of these being theologian." organisation the effects p gradual. He grounds that productions. supposed "in for the nume which we se we thus gain woodpecker habits of life brilliant style

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Row 8	formation of varieties of mankind, fitted for the country which they inhabit. Of the accidental varieties of man, which would occur among the first few and scattered inhabitants of the middle regions of Africa, some one would be better fitted than others to bear the diseases of the country. This race would consequently multiply, while the others would decrease; not only from their inability to sustain the attacks of disease, but from their incapacity of contending with their more vigorous neighbours. The colour of this vigorous race I take for granted, from what has been already said, would be dark. But the same disposition to form varieties still existing, a darker and a darker race would in the course of time occur: and as the darkest would be the best fitted for the climate, this would at length become the most prevalent, if not the only race, in the particular country in which it had originated." He then extends these same views to the white inhabitants of colder climates. I am indebted to Mr. Rowley, of the United States, for having called my attention, through Mr. Brace, to the above passage of Dr. Wells' work.	of creation, twenty-seven have written on special branches of natural history or geology.) In 1853 a celebrated geologist, Count Keyserling ("Bulletin de la Soc. Geolog.", 2nd Ser., tom. x, page 357), suggested that as new diseases, supposed to have been caused by some miasma have arisen and spread over the world, so at certain periods the germs of existing species may have been chemically affected by circumambient molecules of a particular nature, and thus have given rise to new forms. In this same year, 1853, Dr. Schaaffhausen published an excellent pamphlet ("Verhand. des Naturhist. Vereins der Preuss. Rheinlands", etc.), in which he maintains the development of organic forms on the earth. He infers that many species have kept true for long periods,	not improbable that if we could succeed in naturalising, or were to cultivate, during many generations, the several races, for instance, of the cabbage, in very poor soil—in which case, however, some effect would have to be attributed to the DEFINITE action of the poor soil—that they would, to a large extent, or even wholly, revert to the wild aboriginal stock. Whether or not the experiment would succeed is not of great importance for our line of argument; for by the experiment itself the conditions of life are changed. If it could be shown that our domestic varieties manifested a strong tendency to reversion—that is, to lose their acquired characters, while kept under the same conditions and while kept in a considerable body, so that free intercrossing might check, by blending together, any slight deviations in their structure,	organic beings have descended from one primordial form. His grounds of belief and treatment of the subject are wholly different from mine; but as Dr. Freke has now (1861) published his Essay on the "Origin of Species by means of Organic Affinity", the difficult attempt to give any idea of his views would be superfluous on my part. Mr. Herbert Spencer, in an Essay (originally published in the "Leader", March, 1852, and republished in his "Essays", in 1858), has contrasted the theories of the Creation and the Development of organic beings with remarkable skill and force. He argues from the analogy of domestic productions, from the changes which the embryos of many species undergo, from the difficulty of distinguishing species and varieties, and from the principle of general gradation, that species have been modified; and he attributes the modification to the change of circumstances. The author (1855) has also treated Psychology on the principle of the necessary acquirement of each mental power and capacity by gradation.	attention to in thus preparatory analogous v M.J. d'Omal though short Bruxelles", to more probably produced by they have been promulgated Owen, in 18 as follows: "the flesh und this planet, l animal spec natural laws succession phenomena yet, are ignored Association, axiom of the power, or of things." Fur
Row 9	supposed to have been caused by some miasma have arisen and spread over the world, so at certain periods the germs of existing species may have been chemically affected by circumambient molecules of a particular nature, and thus have given rise to new forms. In this same year, 1853, Dr. Schaaffhausen published an excellent pamphlet ("Verhand. des Naturhist. Vereins der Preuss. Rheinlands", etc.), in which he maintains the development of organic forms on the	circonstances: ils se modifient, si les circonstances ambiantes viennent a changer. En resume, L'OBSERVATION des animaux sauvages demontre deja la variabilite LIMITEE des especes. Les EXPERIENCES sur les animaux sauvages devenus domestiques, et sur les animaux domestiques redevenus sauvages, la demontrent plus clairement encore. Ces memes experiences prouvent, de plus, que les differences produites peuvent etre de VALEUR GENERALE." In his "Hist. Nat. Generale" (tom. ii, page 430, 1859) he amplifies analogous conclusions. From a circular lately issued it appears that Dr. Freke, in 1851 ("Dublin Medical Press", page 322), propounded the doctrine that all organic beings have descended from one primordial form. His grounds of belief and treatment of the subject are wholly different from mine; but as Dr. Freke has now (1861) published his Essay on the "Origin of	The celebrated geologist and naturalist, Von Buch, in his excellent "Description Physique des Isles Canaries" (1836, page 147), clearly expresses his belief that varieties slowly become changed into permanent species, which are no longer capable of intercrossing. Rafinesque, in his "New Flora of North America", published in 1836, wrote (page 6) as follows: "All species might have been varieties once, and many varieties are gradually becoming species by assuming constant and peculiar characters;" but further on (page 18) he adds, "except the original types or ancestors of the genus." In 1843-44 Professor Haldeman ("Boston Journal of Nat. Hist. U. States", vol. iv, page 468) has ably given the arguments for and against the hypothesis of the development and modification of species: he seems to lean toward the side of change.	Having alluded to the subject of reversion, I may here refer to a statement often made by naturalists--namely, that our domestic varieties, when run wild, gradually but invariably revert in character to their aboriginal stocks. Hence it has been argued that no deductions can be drawn from domestic races to species in a state of nature. I	Mr. Herbert published in republished contrasted the Development skill and force domestic pro embryos of difficulty of c and from the species have modification author (1855) principle of t mental powe M. Naudin, a stated, in an Species ("R republished Museum", to are formed i are under cu attributes to

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Row 10	of a litter for raising, as they alone have a good chance of living." Hairless dogs have imperfect teeth; long-haired and coarse-haired animals are apt to have, as is asserted, long or many horns; pigeons with feathered feet have skin between their outer toes; pigeons with short beaks have small feet, and those with long beaks large feet. Hence if man goes on selecting, and thus augmenting, any peculiarity, he will almost certainly modify unintentionally other parts of the structure, owing to the mysterious laws of correlation. The results of the various, unknown, or but dimly understood laws of variation are infinitely complex and diversified. It is well worth while carefully to study the several treatises on some of our old cultivated plants, as on the hyacinth, potato, even the dahlia, etc.; and it is really surprising to note the endless points of structure and constitution in which the varieties and sub-varieties differ slightly from each other. The whole organisation seems to have become plastic, and departs in a slight degree from that of the parental type.	colour from the nature of the food, thickness of the skin and hair from climate, etc. Each of the endless variations which we see in the plumage of our fowls must have had some efficient cause; and if the same cause were to act uniformly during a long series of generations on many individuals, all probably would be modified in the same manner. Such facts as the complex and extraordinary outgrowths which variably follow from the insertion of a minute drop of poison by a gall-producing	the more important; for nearly similar variations sometimes arise under, as far as we can judge, dissimilar conditions; and, on the other hand, dissimilar variations arise under conditions which appear to be nearly uniform. The effects on the offspring are either definite or in definite. They may be considered as definite when all or nearly all the offspring of individuals exposed to certain conditions during several generations are modified in the same manner. It is extremely difficult to come to any conclusion in regard to the extent of the changes which have been thus definitely induced. There can, however, be little doubt about many slight changes, such as size from the amount of food, colour from the nature of the food, thickness of the skin and hair from climate, etc. Each of the endless variations which we see in the plumage of our fowls must have had some efficient cause; and if the same cause were to act uniformly during a long series of generations on many individuals, all probably would be modified in the same manner. Such	has been indicated; but he applies it only to the races of man, and to certain characters alone. After remarking that negroes and mulattoes enjoy an immunity from certain tropical diseases, he observes, firstly, that all animals tend to vary in some degree, and, secondly, that agriculturists improve their domesticated animals by selection; and then, he adds, but what is done in this latter case "by art, seems to be done with equal efficacy, though more slowly, by nature, in the formation of varieties of mankind, fitted for the country which they inhabit. Of the accidental varieties of man, which would occur among the first few and scattered inhabitants of the middle regions of Africa, some one would be better fitted than others to bear the diseases of the country. This race would consequently multiply, while the others would decrease; not only from their inability to sustain the attacks of disease, but from their incapacity of contending with their more vigorous neighbours. The colour of this vigorous race I take for granted, from what has been already said, would be dark. But the same	the type-form Professor Owen may have described (new species 798) is inaccurate between Professor Owen's "London Review" to the editor of the "Owen claimed natural selection expressed no announcement