

Church is split, but still standing. In the old palace of the Governor, one part of the building fell in. There is hardly a house that has not been more or less seriously injured. The earthquake is said to have been more violent still in the neighbouring places, Balacan and Cavite, where also a lamentable loss of human life took place. Except the first two shocks, with which the earthquake began, the movement of the earth's surface was horizontal, but the violence was not less than that in the year 1863. If the shocks from below had recurred, Manilla would in all probability have been to-day but a heap of ruins.—3rd October: Yesterday evening, at six o'clock, we had a second earthquake with horizontal movement, and of rather long duration.—4th October: Yesterday evening, at eight o'clock, another earthquake of short duration. The original news from Balacan and Cavite is confirmed: in the first locality nearly all the stone houses fell in; amongst them the church, the town-hall, the parsonage, &c.—11th October: The shocks were repeated on the two following days—(on the 4th and 5th) so that we have been visited with earthquakes on five consecutive days. Since then there has been quiet. According to the accounts received to-day from the provinces, the earthquake was felt throughout the whole of the Island of Luzon, that is to say, over an extent of country six times larger than Wales. The earthquake is said to have been most destructive in the southern province of Albay.\* It is evident from all this that we have here no mere ordinary earthquake, but, in point of fact, an event resembling the earthquake of 1863, as expressly observed in the passages cited.

The question will now occur to every thinking man: Is this exact concurrence of prediction with observation only an accident, or the actual expression of a law of nature? Is the circumstance that the catastrophe happened *two hours and a half after the culmination of the Moon*, which took place on that day in the zenith of Manilla, only a playful freak of the subterranean goblins, or is it connected with that theory according to which earthquakes occur, under favourable circumstances, at those places situated immediately over the summit of the tidal wave\*? He who answers the question without previously examining into the matter, adopts certainly the most convenient method. But such is not the conduct of a friend of truth. I have derived my answer from the investigation mentioned in the commencement of this communication, and believe that what I have published is a sufficient justification for the prediction I have made; at the same time I consider that I may, in reliance upon their professional feeling, venture to demand from the representatives of science that they pass no judgment on my views, without knowing them in their entirety.

Prague

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### Right-Handedness

If asked what part of the human body seems chiefly affected by advancing civilisation, I would be inclined to reply that it is the right hand.

At first sight the four-handed mammals might be thought to have an advantage; but because four hands are employed both for prehension and locomotion, while in man there is one pair of organs for each, man's two hands are worth more than the ape's four. As man rises from the rudest stages—such as digging roots, hunting, and tending cattle, to arts which are highly mechanical—the right hand becomes a more special and serviceable organ than the left, so that the loss of it to an engraver, a clerk, or an artist, compared to the loss of the left, would be a much more serious affair than it would be to a drover, who could clutch his stick or gesticulate to his dog almost as well with the one hand as the other. Admitting that, physiologically, there is a slight reason for the preference of the right hand, all our tools and fashions lend themselves to encourage its further dexterity. Screws, gimblets, &c., are made to suit the supinating motion of the right hand. Tools of the scissor kind are also made for the right hand, and I have seen a print-cutter's gauge made specially for a left-handed person fetch a very low price when it came to be sold. The slant in writing, the shed of the hair in boys, the manner in which buttons and hooks are placed on clothes, and the system of writing from left to right, all seem related to right-handedness.

\* The point of greatest pressure outwards against the earth's crust—such pressure being caused, according to my theory, by the action of the tide of the semi-fluid central mass of the earth—is situated mathematically under the place in the zenith of which the moon is at the time. Local circumstances unfavourable to the occurrence of earthquakes *can*, and in most cases, *will*, modify the observed result, so as to cause it to vary more or less from the mathematical calculation.

In drawing, the pupil is recommended to begin at the uppermost corner on the left hand side, where the ornament is of a small and repeating character, so as to avoid fingering the part already finished. A schoolmaster I knew was able to detect left-handed boys, when they used the pen with the left against orders, by the writing either being straight or sloped the wrong way. Most boys know that it is easier to draw a profile with the face looking towards the left hand; yet on looking over the hieroglyphs in the British Museum the faces will be generally found towards the right. The normal way of writing the hieroglyphs is from right to left, though frequent instances occur of their being written from left to right.

I believe there is a constitutional reason for the preference given to the right hand, but I also believe that habit has strengthened nature's tendency, and that as the touch of the hereditary Hindoo weaver has become proverbially fine, so the aptitude of the right hand over the left is greater, with advancing civilisation, than in a state utterly savage. At that period of a child's life when creeping seems a more natural mode of progression than walking, there is no apparent dexterity in the right hand more than the left, and when man was almost utterly without arts, I can believe his state to have been ambidexter or ambisinister.

The elephant is known to employ one tusk more than another in rooting, &c., and when I asked Sir Samuel Baker which tusk went by the name of the "servant," he informed me that it was the right tusk generally, but the exceptions to the rule were far more numerous than was the phenomenon of left-handedness with human beings.

We have no reliable statistics of the proportion of left-handed persons to right in ancient or in savage nations. If Judges xx. 15, 16, is to have any weight in the matter, the proportion of left-handed in the tribe of Benjamin seems to have been greater than at the present day.

Left-handedness is very mysterious; it seems quite against physiological deductions and the whole tendency of arts and fashion. Prof. Buchanan, of Glasgow, who wrote an able memoir on right-handedness in 1862, thinks that left-handedness may be due to transposition of the viscera, and tells me that his friend Dr. Aitken found such a case. But surely transposition of the viscera must be far rarer than obstinate left-handedness. In cases of left-handed persons which I have examined, the limbs of the left side were proportionally larger, just as those of the right side are in normal cases. I have also found that left-handedness is hereditary.

J. S.

### The Balance of Nature

PREVIOUSLY to the recent wonderful Spectrum discoveries the sun's energy attracted more attention from savans, and many apparently extravagant theories were offered in explanation of this most wonderful of all physical phenomena; it is probable that the few remarks I have to make may appear equally extravagant.

As my intention is to allude more especially to the maintenance of the sun's energy, I will only make a passing observation as to its origin. The two conditions in which we find matter in the solar system are that of orbital motion and central repose; in the latter condition matter exhibits its energy in the form of light and heat; whilst in the former the light and heat are transformed into motion. If the earth was suddenly brought to a condition of rest, its energy, hitherto under the form of motion, would be exhibited as light and heat, and it would in a certain degree be converted into a sun.

If it could be shown that the sun was surrounded by an absolute non-conductor of its forces, it evidently would retain its energy for ever. As there would be no exhaustion, the sensations of light and heat would no longer exist. Now we reasonably believe that all space is filled with a highly elastic fluid or ether—this ether in a state of constant and intense action giving rise to the phenomena of solar light and heat. But if no obstacle existed to check or interfere with this action of the ether, it would, like any other body moving in space, retain its action for ever, without the necessity of a continuously acting agency or cause. If this can be granted, then it follows that the energy of the sun—which may have been necessary in the beginning to give this action to the ether—is no longer exhausted when the ether is once in motion. Hence this active ether is really an absolute preserver or non-conductor of the solar power or force, exhibiting itself as light, heat, &c.

But certain obstacles do exist to check the action of the ether. These are the various bodies which move in space and revolve