

From Fraser's Magazine.

## MANSFIELD'S PARAGUAY, BRAZIL, AND THE PLATE.\*

THE "over-population" theory, so popular at the beginning of this century, has been falling fast into disrepute. That startling dogma of the *science du néant* which used of old so magisterially to inform the human race that it was on the whole a failure, because "the number of human beings had always a tendency to increase faster than the means of subsistence," is now becoming, not merely questionable, but ludicrous. Started, so wicked wags affirm, by a few old bachelors, who, having no children themselves, bore a grudge against their "recklessly-multiplying" neighbors for having any—it was suspected from the first on moral grounds; and may be now considered as fairly abolished on scientific ones. The moral philosopher answered to it, that it was impossible that the universe could be one grand mistake; human nature a disease; and the Creator of mankind one who—but reverence forbids us to say what we should have a right to say of Him, were that theory a true one. The student of humanity asked, "Is it possible that the family life, which is the appointed method of educating the highest and holiest feelings of man, should be at the same time the normal cause of his final poverty and starvation? Leave such inhuman dreams to monks and faquirs." The scientific agriculturist doubted the truth of the dogma more and more as his science revealed to him that the limit of productiveness, even upon old soils, had been nowhere reached. The sanitary reformer put in as a demurrer the important fact, that under proper arrangements that limit could never be reached; for as each human being (so he asserted) returned to the soil the whole elements of the food which he consumed, saving those which already existed in boundless abundance in the atmosphere, the product-

iveness of the soil ought to increase in exact ratio to the number of human beings concentrated on it. From these broad facts, the advocates of the *science du néant* took refuge in arguments about the cost of production. More skilful farming, more complete sewage, might certainly enable the land to support greater numbers; but not to do so profitably. The increased expense of the processes would interfere with the general rapid production of wealth. Here perhaps they had, on the whole, the best of the argument; and if it were any pleasure to them to prove the impotency of humanity, they must have enjoyed that lofty gratification awhile. One would have thought, certainly, that the business of the philosopher who desired the good of his fellow-creatures, was rather to show them what they could do, than what they could not; to preach progress, rather than "the stationary state," and hope, rather than despair; to bend his mind, like a practical man, to the ascertaining by experiment what could be done towards increasing the sustenance of the peoples, instead of sending forth from his remote study, *idola specūs*, abstract maxims which only strengthened the dogged laziness which refused to till the land, and the dogged ignorance which refused either to use or let others use the refuse of the towns, though it was poisoning hundreds yearly by epidemics. But the *science du néant* took little account of such plain matters; after all, why help to support more human beings, when it had settled long ago that there were too many already? Why even stop epidemics, which might be only nature's wholesome method of ridding herself of that plethora of rational beings—"Children of God"—as the obsolete traditions of an obscure Semitic tribe (so men talked) called them—with which she was periodically embarrassed. So the agriculturist and the sanitary reformer had to fight on, and on the whole, conquer, with little or no help from that science which arrogated to itself the knowledge of the laws of wealth.

Meanwhile stood by, laughing bitterly enough, the really practical men,—such

\* *Paraguay, Brazil, and the Plate.* Letters written in 1852-3. By C. B. Mansfield, Esq., M. A., of Clare Hall, Cambridge; with a Sketch of the Author's Life, by the Rev. C. Kingsley. Cambridge: Macmillan and Co. 1856.

ways and processes, to "the head and front of her offending" at Herat, there to influence the Persian mind, and make the Shah a better boy for the future. Herat smokes (probably literally, as there is news from the East that the Persians have captured it), and Kurrak must smart for it. We hope the plan may succeed: but it would have been well to have sent a stouter pedagogue for the service.

Meanwhile we have added a little to our geographical knowledge, which is a comfort. "It is important," observes our *London Times*, concurring in the views of the *Times of Bombay*, "to familiarize our chil-

dren with the name of Herat, for perhaps ten or twenty years hence they will see the place, or perhaps they will be killed there, or their fathers will, or their sons or grandsons. Perhaps ten years hence everybody will be in mourning. Mr. Charles Kean will be obliged to give up his theatre, and a gloom worse than the worst November fog will hang over the metropolis, because, having captured Herat, stationed an army there, and put a club-house General, laboring under old age and the gout, in command, the army has been driven out in the snows of winter or the heats of summer, and disappeared."

**A NEW CALCULATING MACHINE.**—The French *Moniteur* gives some interesting particulars of a new calculating machine, from which we extract the following passages: "M. Thomas, of Colmar, has lately made the finishing improvements in the calculating machine, called the arithmometer, at which he has been working for upwards of thirty years. Pascal and Leibnitz, in the seventeenth century, and Diderot at a later period, endeavored to construct a machine which might serve as a substitute for human intelligence in the combination of figures; but their efforts failed. M. Thomas' arithmometer may be used without the least trouble or possibility of error, not only for addition, subtraction, multiplication, and division, but also for much more complex operations, such as the extraction of the square root, involution, the resolution of triangles, etc. A multiplication of eight figures by eight others is made in eighteen seconds; a division of sixteen figures by eight figures, in twenty-four seconds; and in one minute and a quarter one can extract the square root of sixteen figures, and also prove the accuracy of the calculation. The arithmometer adapts itself to every sort of combination. As an instance of the wonderful extent of its powers, we may state that it can furnish in a few seconds products amounting to 999,999,999,999,999,999,999,999,999. A marvellous number, comparable to the infinite multitude of stars which stud the firmament, or the particles of dust which float in the atmosphere. The working of this instrument is, however, most simple. To raise or lower a nut-screw, to turn a winch a few times, and, by means of a button, to slide off a metal plate from left to right, or from right to left, is the whole secret. Instead of simply reproducing the operations of man's intelligence, the arithmometer relieves that intelligence from the necessity of making the operations. Instead of repeating responses dictated to it, this instrument instantaneously dictates the proper answer to the man who asks it a question. It is not matter producing material effects, but

matter which thinks, reflects, reasons, calculates, and executes all the most difficult and complicated arithmetical operations with a rapidity and infallibility which defies all the calculators in the world. The arithmometer is, moreover, a simple instrument, of very little volume and easily portable. It is already used in many great financial establishments, where considerable economy is realized by its employment. It will soon be considered as indispensable and be as generally used as a clock, which was formerly only to be seen in palaces, and is now in every cottage."—*Athenæum*.

**SUBMARINE MAPS.**—We read in the *Daily News*, that as far back as the year 1852 the celebrated orientalist, Professor Forchhammer, of the University of Kiel, suggested in a speech to the assembled savans of Germany at their annual gathering at Wiesbaden, the possibility of constructing submarine charts on the same principle as the common geographical maps, with a shading of greater or lesser strength to denote the mountains and other inequalities of the bed of the sea. That gentleman has just now had a map on this principle engraved. It is intended to illustrate a work of his now in the press on the Ruins of Troy, and represents the sea between the Island of Tenedos and the opposite coast of Asia Minor, including therefore the classic spot where the Greek fleet lay at anchor, the rendezvous of the different naval contingents to the memorable expedition to Troy. This submarine map is partly based on the soundings taken by the late Captain T. Graves, R.N., of H.M.'s surveying ship *Beacon*, and published in the Admiralty charts, and partly from the observations made on the spot by the learned Professor himself, who spent a long time in those classical parts for the purpose of studying their topography. He proposes to call the charts constructed on his new system "Bentheographical Maps," preferring (perhaps for the sake of euphony) the Ionic form of *Béθηος*, to the Attic *Báθηος*, more generally used to designate depth.