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MICHAEL SERVETUS.*

By WILLIAM OSLER, M. D., F. R. S.,
Regius Professor of Medicine, University of Oxford.

The year 1553 saw Europe full of tragedies, and to the earnest student of the Bible it must have seemed as if the days had come for the opening of the second seal spoken of in the Book of Revelation, when peace should be taken from the earth and men should kill one another. One of these tragedies has a mournful interest this year, the four hundredth anniversary of the birth of its chief actor; yet it was but one of thousands of similar cases with which the history of the sixteenth century is stained. On October 27, shortly after twelve o'clock, a procession started from the town-hall of Geneva—the chief magistrates of the city, the clergy in their robes, the Lieutenant Criminel and other officers on horseback, a guard of mounted archers, the citizens, with a motley crowd of followers, and in their midst, with arms bound, in shabby, dirty clothes, walked a man of middle age, whose intellectual face bore the marks of long suffering. Passing along the rue St. Antoine through the gate of the same name, the cortège took its way towards the Golgotha of the city. Once outside the walls, a superb sight broke on their view: in the distance the blue waters and enchanting shores of the Lake of Geneva, to the west and north the immense amphitheatre of the Jura, with its snow-capped mountains, and to the south and west the lovely valley of the Rhone; but we may well think that few eyes were turned away

from the central figure of that sad procession. By his side, in earnest entreaty, walked the aged pastor, Farel, who had devoted a long and useful life to the service of his fellow citizens. Mounting the hill, the field of Champel was reached, and here on a slight eminence was the fateful stake, with the dangling chains and heaping bundles of faggots. At this sight the poor victim prostrated himself on the ground in prayer. In reply to the exhortation of the clergyman for a specific confession of faith, there was the cry, 'Misericordia, misericordia! Jesu, thou Son of the eternal God, have compassion upon me!' Bound to the stake by the iron chain, with a chaplet of straw and green twigs covered with sulphur on his head, with his long dark face, it is said that he looked like the Christ in whose name he was bound. Around his waist were tied a large bundle of manuscript and a thick octavo printed book. The torch was applied, and as the flames spread to the straw and sulphur and flashed in his eyes, there was a piercing cry that struck terror into the hearts of the bystanders. The faggots were green, the burning was slow, and it was long before in a last agony he cried again, 'Jesu, thou Son of the eternal God, have mercy upon me!' Thus died, in his forty-fourth year, Michael Servetus Villanovanus, physician, physiologist, and heretic. Strange, is it not, that could he have cried, 'Jesu, thou Eternal Son of God!' even at this last moment, the chains would have been unwound, the chaplet removed, and the faggots scattered; but he remained faithful unto death to what he believed was the *Truth* as revealed in the Bible.

* This address did double duty—at the Johns Hopkins Hospital Historical Club, and as an Extension lecture in the Summer School, Oxford.

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The story of his life is the subject of my address.

Michael Servetus, known also as Michel Villeneuve, or Michael Servetus Villanovanus, or, as he puts in one of his books, *alias* Reves, was a Spaniard born at Villanueva de Sigena, in the present province of Huesca. When on trial at Vienna, he gave Tudela, Navarre, as his birthplace, at Geneva, Villanueva of Aragon; and at one place he gave as the date of his birth 1509, and at the other 1511. The former is usually thought to be the more correct. As at Villanueva de Sigena there are records of his family, and as the family altar, made by the father of Servetus, still exists, we may take it that at any rate the place of his birth is settled. The altar-screen is a fine piece of work, with ten paintings. I am indebted to Signor Antonio Virgili, of Barcelona, for the photograph of it here reproduced (Fig. 2). Servetus seems to have belonged to a good family in easy circumstances, and at his trial he said he came of an ancient race, living nobly.

From the convent school he probably went to the neighbouring University of Saragossa. Possibly he may have studied for the priesthood, but however that may be, there is evidence that he was a precocious youth, and well read in Latin, Greek, and Hebrew, the last two very unusual accomplishments at that period.

We next hear of him at Toulouse, studying canon and civil law. He could not have been twenty when he entered the service of the Friar Quintana, confessor to the Emperor Charles V, apparently as his private secretary. In the suite of the Emperor he went to Italy, and was present when Pope and Emperor entered Bologna, and 'he saw the most powerful prince of the age at the head of 20,000 veterans kneeling and kissing the feet of the Pope.' Here he had his first impression of the worldliness and mercenary character of the Papacy, hatred of which, very soon after, we find to have become an obsession.

In the summer of 1530 the Emperor attended the Diet of Augsburg, where the Princes succeeded in getting Protestantism recognized politically. Such a gathering must have had a profound influence on the young student, already, we may suppose, infected with the new doctrines. Possibly at Saragossa, or at Toulouse, he may have become acquainted with the writings of Luther. Such an expression of opinion as the following, written before his twenty-first year, could scarcely have been of a few months' growth: 'For my own part, I neither agree nor disagree in every particular with either Catholic or Reformer. Both of them seem to me to have something of truth and something of error in their views; and whilst each sees the other's shortcomings, neither sees his own. God in his goodness give us all to understand our errors, and incline us to put them away. It would be easy enough, indeed, to judge dispassionately of everything, were we but suffered without molestation by the churches freely to speak our minds.' (Willis.)

How far he held any personal communication with the German reformers is doubtful. It is quite possible, and Tollin, his chief biographer, makes him visit Luther. We do not

know how long he held service with Quintana, Tollin thinks a year and a half. It is not unlikely that the good friar was glad to get rid of a young secretary infected with heresy so shocking as that contained in his first book, published in 1531; indeed, there is a statement to the effect that a monk in the suite of Quintana found the book in a shop at Ratisbon and hastened to tell the confessor of its terrible contents. Servetus

DE TRINITATIS ERRORIBVS LIBRI SEPTEM.

*Per Michaellem Serueto, alias
Reues ab Aragonia
Hispanum.*

Anno M. D. XXXI.

FIG. 3.

had plunged headlong into studies of the most dangerous character, and had even embooked them in a small octavo volume, entitled *De Trinitatis Erroribus*, which appeared without the printer's name, but on the title-page the author, Michael Serveto, *alias* Reves ab Aragonia, Hispanum, and with the date MDXXXI. In the innocence of his heart he thought the work would be a good introduction to the more liberal of the Swiss reformers, but they would have none of it, and were inexpressibly shocked at its supposed blasphemies. Nor did

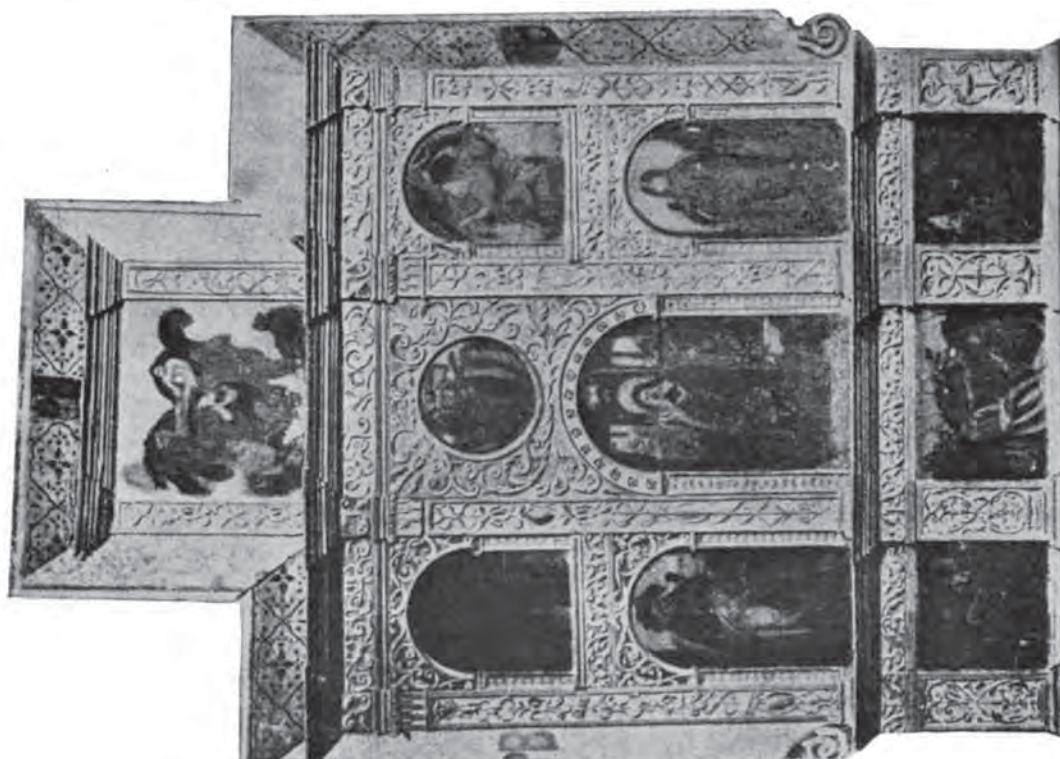


FIG. 2.—Altar Screen at Barcelona.



FIG. 1.

he fare better at Strassburg; and even the kind-hearted Bucer said that the author of such a work should be disembowelled and torn in pieces.

In thorny theological questions a layman naturally seeks shelter, and I am glad to quote the recent opinion of a distinguished student of the period, Professor Emerton,¹ on this youthful phase of the life of Servetus. 'He would not admit that the eternal Son of God was to appear as man, but only that a man was to come who should be the Son of God. This is the earliest intimation we have as to the speculations which were occupying the mind of the young scholar. It is highly significant that from the start he was impressed with what we should now call the historical view of theology. As he read the Old Testament, its writers seemed to him to be referring to things that their hearers would understand. Their gaze into the future was limited by the fortunes of the people at the moment. To imagine them possessed of all the divine mysteries, and to have in mind the person of the man Jesus as the ultimate object of all their prophetic vision, was to reflect back the knowledge of history into a past to which such knowledge was impossible. So far as I can understand him, this is the key to all of Servetus' later thought. His manner of expressing himself is confusing and intricate to the last degree, so much so that neither in his own time nor since has any one dared to say that he understood it. To his contemporaries he was a half-mad fanatic; to those who have studied him, even sympathetically, his thought remains to a great extent enigmatical; but this one point is fairly clear: that he grasped, as no one up to his time had grasped, this one central notion, that, whatever the divine plan may have been, it must be revealed by the long, slow movement of history—that, to understand the record of the past, it must be read, so far as that is possible, with the mind of those to whom it was immediately addressed, and must not be twisted into the meanings that may suit the fancy of later generations.'

'To have seized upon such an idea as this—an idea which has begun to come to its rights only within our memories—was an achievement which marks this youth of twenty as at all events an extraordinary individual, a disturbing element in his world, a man who was not likely to let the authorities rest calmly in possession of all the truth there was.'

In the following year, 1532, two dialogues appeared, explanatory and conciliatory, a little book which only aggravated the offence, and feeling the Protestant atmosphere too hot, Servetus went to Paris. Dropping this name by which he has been known, and closing this brief but stormy period, for the next twenty-one years we now follow Michel Villeneuve, or Michael Villanovanus, in a varied career as student, lecturer, practitioner, author and editor, still nursing the unconquerable hope that the world might be reformed could he but restore the primitive doctrine of the Church.

II

We know very little of this his first stay in Paris. Possibly he found employment as teacher, or as reader to the press. At

this period his path first crossed that of Calvin, then a young student. Of about the same age, both ardent students, both on the high road of emancipation from the faith of their birth, they must have had many discussions on theological questions. One may conclude from the reproachful sentence of Calvin many years later, 'Vous avez fuy le luité', that arrangements had been made for a public debate.

After a short stay at Avignon and Orleans, we next find Servetus at Lyons, in the employ of the Trechsels brothers, the famous printers. Those were the days of fine editions of the classics and other books, which required the assistance of scholarly men to edit and correct. He brought out a splendid folio of Ptolemy's Geography, 1535 (Fig. 4), with commentaries on the different countries, which show a wide range of knowledge in so young a man. It is marked also by many examples of independent criticism, as, when speaking of Palestine, he says that the 'Promised Land' was anything but a 'promising land', and instead of flowing with milk and honey, and a land of corn, olives and vineyards, it was inhospitable and barren, and the stories about its fertility nothing but boasting and untruth. He seems to have been brought to task for this, as in the second edition, 1541, this section does not exist. For this work he was paid by the Trechsels 500 crowns.

It is possible that Servetus and Rabelais may have met at Lyons, as at this time the 'great Dissimulator' was physician to the Hôtel-Dieu, but there is nothing in the writings of either to indicate that their paths crossed. The man who had the greatest influence upon him at Lyons was Symphorien Champier, one of the most interesting and distinguished of the medical humanists of the early part of the sixteenth century. Servetus helped him with his French *Pharmacopoeia*, and Pastor Tollin will have it that Champier even made a home for the poor scholar. An ardent Galenist, an historian, the founder of the hospital and of the medical school, Champier had the usual predilection of the student of those days for astrology. Probably from him Servetus received his instructions in the subject. At any rate, when the distinguished Professor of Medicine of Tübingen, Fuchsius, attacked Champier on the ground of his astrological vagaries, Servetus took up his pen and replied in defence with a pamphlet entitled 'In Leonhardum Fuchsium defensio apologetica pro Symphoriano Campeggio', an exceedingly rare item, the only one indeed of the writings of Servetus that I have not seen in the original.

Stimulated doubtless by the example and precept of Champier, Servetus returned to Paris to study medicine. Fairly rich in pocket with the proceeds of his literary work, he attached himself first to the College of Calvi, and afterwards to that of the Lombards, and it is said that he took the degrees of M.A. and M.D., but of this I am told that there is no documentary evidence.

Of his life in Paris we have very little direct evidence, except in connexion with a single incident. We know that he came into intimate contact with three men—Guinther of Andernach, Jacobus Sylvius, and Vesalius. Guinther and

¹ *Harvard Theological Review*, April, 1909.

Sylvius must have been men after his own heart, ripe scholars, ardent Galenists, and keen anatomists. In the *Institutiones Anatomicae* (Basel, 1539), Guinther speaks of Servetus in connexion with Vesalius, who was at this time his fellow pro-sector. 'And after him by Michael Villanovanus, distinguished by his literary acquirements of every kind, and scarcely second to any in his knowledge of Galenical doctrine.' With their help he states that he has examined the whole body, and demonstrated to the students all of the muscles, veins, arteries, and nerves. There was at this time a very keen revival in the study of anatomy in Paris, and to have been associated with such a young genius as Vesalius, already a brilliant dissector, must have been in itself a liberal education in the subject. It is easy to understand whence was derived the anatomical knowledge upon which was based the far-reaching generalization with which the name of Servetus is associated in physiology.

But the Paris incident of which we know most is connected with certain lectures on judicial astrology. We have seen that at Lyons, Servetus had defended his friend and patron Symphorien Champier, through whom he had doubtless become familiar with its practice. Though forbidden by the Church, judicial astrology was still in favour in some universities, and was practised largely by physicians occupying the most distinguished positions. In those days few were strong minded enough to defy augury, and in popular belief all were 'servile to skiey influences'. It was contrary to the regulations of the Paris Faculty to lecture on the subject, though at this time the king had in his employ a professional astrologist, Thibault. Shortly after reaching Paris Servetus began a course of lectures on the subject, which very soon brought him into conflict with the authorities.

The admirable practice for the Dean to write out each year his report, has preserved for us the full details of the procedure against Servetus. Duboulay, in his *History of the University of Paris*, vol. vi, has extracted the whole affair from the Dean's Commentary, as it is called, of the year. He says that a certain student of medicine, a Spaniard, or as he says, from Navarre, but with a Spanish father, had taught for some days in Paris in 1537 judicial astrology or divination. After having found out that this was condemned by the Doctors of the Faculty, he caused to be printed a certain apology in which he attacked the doctors, and moreover declared that wars and pests and all the affairs of men depended on the heavens and on the stars, and he imposed on the public by confounding true and judicial astrology. The Dean goes on to state that, accompanied by two of his colleagues, he tried to prevent Villanovanus from publishing the apology, and met him leaving the school where he had been making a dissection of the body with a surgeon, and in the presence of several of the scholars, and of two or three doctors, he not only refused to stop the publication, but he threatened the Dean with bitter words.

The Faculty appears to have had some difficulty in getting the authorities to move in the matter. Possibly we may see here the influence of the court astrologer, Thibault. After many attempts, and after appealing to the Theological Faculty

and the Congregation of the University, the question was taken up by Parliament. The speeches of counsel for the Faculty, for the University, for Villanovanus, and for the Parliament are given in full. The Parliament decided that the printed apology should be recalled, the booksellers were forbidden to keep them, the lectures on astrology were forbidden, and Villanovanus was urged to treat the Faculty with respect. But on their part they were asked to deal with the offender gently, and in a parental fashion. It is a very interesting trial, and the Dean evidently enjoyed his triumph. He says that he took with him three theologians, two doctors in medicine, the Dean of the Faculty of Canonical Law, and the Procurator-General of the University. The affair was discussed by Parliament with closed doors.

The *Apologetica disceptatio pro astrologia*, the rarest of the Servetus items, the only copy known being in the Bibliothèque Nationale, is an eight leaf pamphlet, without title-page, pagination, or printer's name. The friends of the Faculty must have been very successful in their confiscation of the work. Tollin, who discovered the original, has reprinted it (Berlin, 1880). It was not hard for Servetus to cite powerful authorities on his side, and he summons in his defence the great quartette, Plato, Aristotle, Hippocrates, and Galen. A practical star-gazer, he took his own observations, and the pamphlet records an eclipse of Mars by the moon. He must, too, have been a student of the weather, as he speaks of giving in his lectures public predictions which caused great astonishment. The influence of the moon in determining the critical days of diseases, a favourite doctrine of Galen, is fully discussed, and he says that Galen's opinion should be written in letters of gold. He rests content with these great authorities, referring very briefly to one or two minor lights. He scoffs at the well-known bitter attack on divination by Picus.

It took several generations to eradicate completely from the profession a belief in astrology, which lingered well into the seventeenth century. In his *Vulgar Errors*, discussing the 'Canicular' or 'Dog Days', Sir Thomas Browne expresses his opinion of astrology in the most characteristic language. 'Nor do we hereby reject or condemn a sober and regulated Astrology; we hold there is more truth therein than in Astrologers; in some more than many allow, yet in none so much as some pretend. We deny not the influence of the Starres, but often suspect the due application thereof; for though we should affirm that all things were in all things; that heaven were but earth celestified, and earth but heaven terrestriated, or that each part above had an influence upon its divided affinity below; yet how to single out these relations, and duly to apply their actions, is a work oft times to be effected by some revelation, and Cabala from above, rather than any Philosophy, or speculation here below.'

Among the auditors of Servetus was a young man, Pierre Paumier, the Archbishop of Vienne, who appears to have befriended him in Paris, and who a few years later asked him to be his body physician. The astrology trial was settled in March, 1537.

Servetus cannot have been very long a student of medicine,

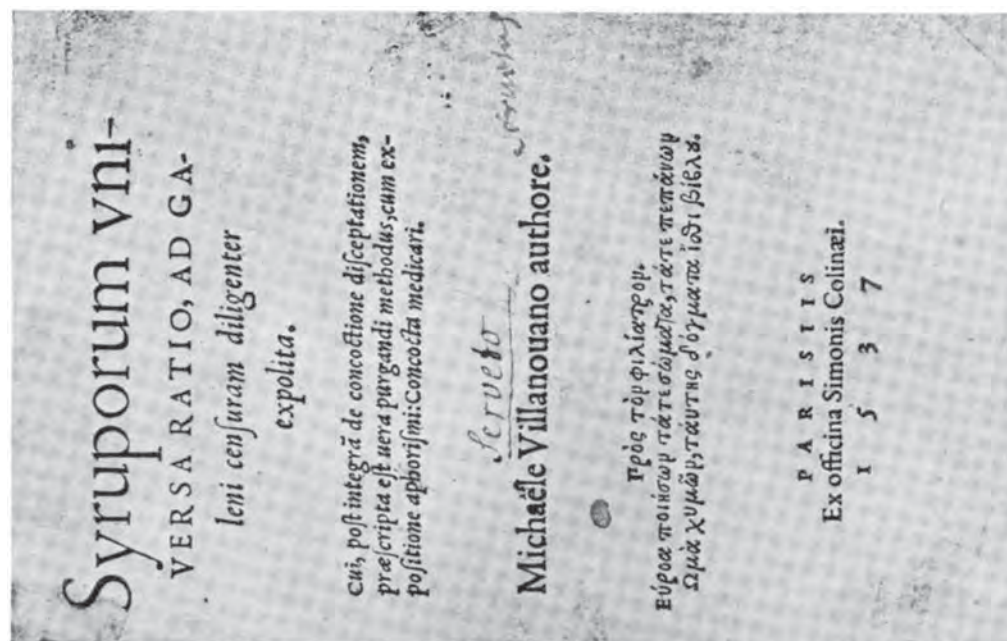


Fig. 5.



FIG. 4.

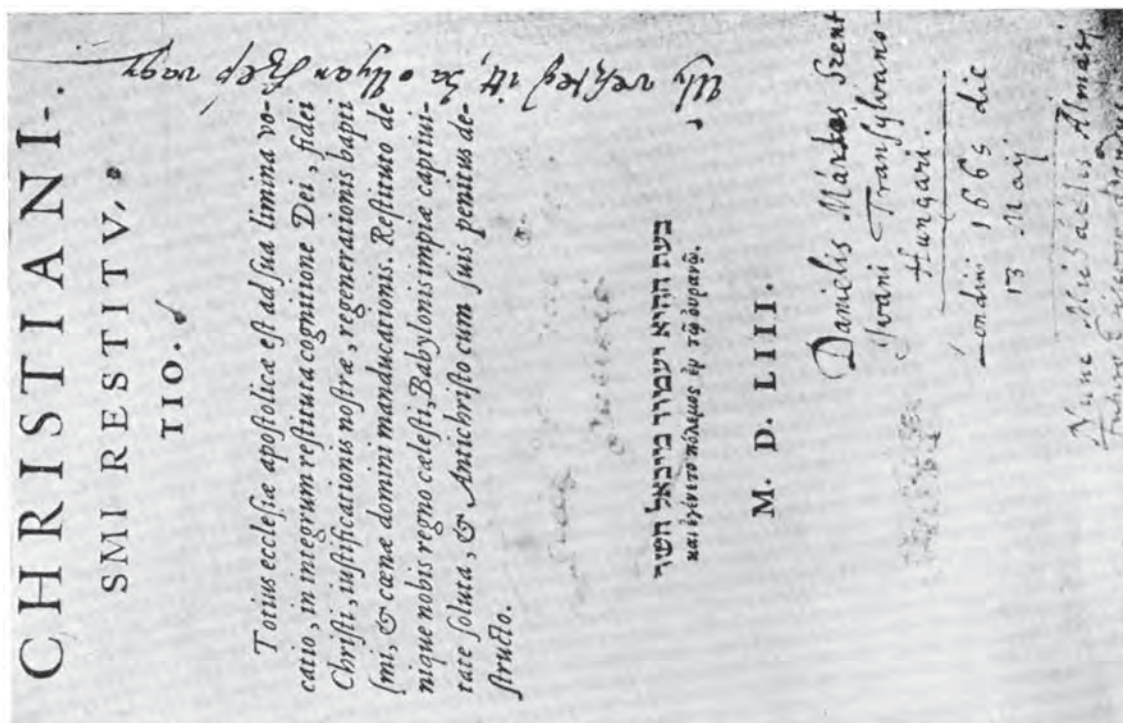


FIG. 7.



FIG. 6.

but never lacking in assurance, he came before the world as a medical author in the little treatise on *Syrups and their use* (Fig. 5). Association with Champier, whom he had helped in an edition of his French *Pharmacopoeia*, had made him familiar with the subject. The first three chapters are taken up with the views on 'Concoctions' or 'Digestions', of which at that time a series, from the first to the fourth, was recognized. He pleads for a unity of the process, and, as Willis remarks, he makes the very shrewd remark at that day, 'that diseases are only perversions of natural functions and not new entities introduced into the body.' The greater part of the treatise is taken up with theoretical discussions on the opinions of Galen, Hippocrates, and Avicenna. The 'Composition and use of the Syrups' is deferred to the fifth and a concluding (sixth) chapter.

The little book appears to have been popular, and was reprinted twice at Venice, 1545 and 1548, and twice at Lyons, 1546 and 1547.

III

Whether the adverse decision of Parliament disgusted him with Paris, or whether through some friend the opportunity to settle in practice had offered, we next hear of Villeneuve at Charliu, a small town about twelve miles from Lyons, where he spent a year, or part of the year 1538-9. Here his old Paris friend Paumier sought him and induced him to settle at Vienne, offering him apartments in the palace, and an appointment as his body physician. After nearly ten years of wandering, at last, in a peaceful home in the fine old Roman city, with its good society, and under the protection of the Primate of all France, Servetus spent the next fourteen years as a practising physician.

Few details of his life are known. He retained his association with the Trechsels, the printers, who had set up a branch establishment in Vienne. In 1541 he brought out a new edition of Ptolemy, with a dedication to the Archbishop. From the preface we have a glimpse of a genial group of companions, all interested in the new studies. Several critical items in the edition of 1535 disappear in the new one of 1541, e.g. the scoffing remarks about Palestine; and in mentioning the royal touch, instead of, 'I have myself seen the King touching many with this disease (i.e. Scrofula), but I have not seen that they were cured,' he says, 'I have heard that many were cured.' Perhaps he felt it unbecoming in a member of an ecclesiastical circle, and living under the patronage of the Archbishop, to say anything likely to give offence.

In the following year he issued an edition of Pagnini's Bible in a fine folio (Fig. 6). Its chief interest to us is the testimony that Servetus was still deep in theological studies, for the commentaries in the work place him among the earliest and boldest of the higher critics. The prophetic psalms, and the numerous prophecies in Isaiah and Daniel are interpreted in the light of contemporary events, but as Willis remarks, 'These numerous excessively free and highly heterodox interpretations appear to have lost Villeneuve neither countenance nor favour at Vienne.'

For another Lyons' publisher, Frelon, he edited a number of educational works, and through him the Vienne physician was put in correspondence with the Geneva reformer.

A dreamer, an enthusiast, a mystic, Servetus was possessed with the idea that could but the doctrines of the Church be reformed the world could be won to a primitive, simple Christianity. We have already seen his attempt to bring the Swiss Reformers into what he thought correct views upon the Trinity. He now began a correspondence with Calvin on this subject, and on the question of the Sacraments. The letters, which are extant, in tone and contents shocked and disgusted Calvin to such a degree that in a communication to Farel, dated February, 1546, after stating that Servetus had offered to come to Geneva, he adds, 'I will not pledge my faith to him; for did he come if I have any authority here I should never suffer him to go away alive.'

For years Servetus had in preparation the work which he fondly hoped would restore primitive Christianity. Part of a MS. of this he had sent to Calvin. Having tried in vain to get it published, he decided to print it privately at Vienne. Arrangements were made with a local printer, who set up a separate press in a small house, and in a few months 1,000 copies were printed. The title-page here reproduced (Fig. 7) has the date 1553, and on the last page the initials of his name, 'M. S. V.'

He must have known that the work was likely to cause great commotion in the Church, but he hoped that the identity of the author would be as little suspected as that the Vienne physician, Michael Villeneuve, was Michael Servetus of the heretical *de Trinitatis Erroribus*. Intended for distribution in Germany, Switzerland, and Italy, the work was made up into bales of 100 copies for distribution to the trade. Probably from their mutual friend Frelon Calvin received a couple of copies. The usual story is that through one William Trie as a medium, Calvin denounced Villeneuve to the inquisition at Vienne. This was the view of Servetus himself, and is supported by Willis, Tollin, and others; but advocates of Calvin continue to deny that there is sufficient evidence of his active participation at this stage.

There was at this time at Lyons the well-known inquisitor Orry, who ten years before had brought Étienne Dolet to the stake. No sooner had he got scent of the affair than he undertook the prosecution with his customary zeal, and Servetus was arrested. The preliminary trial at Vienne is chiefly of interest on account of the autobiographical details which Servetus gives. The evidence against him was so overwhelming that he was committed to prison. Surrounded by his friends, who must have been greatly shocked and distressed to find their favourite physician in so terrible a plight, abundantly supplied with money, with the prison discipline very lax as the jailer was his friend, it is not surprising that the day after his commitment Servetus escaped, greatly no doubt to the relief of the Archbishop and the authorities. The inquisitor had to be content with burning an effigy of the heretic with some 500 copies of his work.

From April 7 until the middle of July Servetus disappears from view, and we next meet with him, of all places in the world, at Geneva. Why he should have run this risk has been much discussed, but the explanation given by Guizot is probably the correct one. At that time the Liberals, or 'Libertines', as they were called because of their hostility to Calvin, fully expected to triumph. 'One of their leaders, Ami Perrin, was first Syndic: a man of their party, Gueroult, who had been banished from Geneva, had been corrector of the press at the time when the *Restoration of Christianity* was published, and thanks to the influence of his patrons, the Libertines, he had returned to Geneva, and would naturally be the medium between them and Servetus. Taking a comprehensive view of the whole case and the antecedents of all those concerned in it, I am convinced that Servetus, defeated at Vienne, went to Geneva, relying on the support of the Libertines, whilst they on their side expected to obtain efficacious help from him against Calvin.' He seems to have been nearly a month in Geneva before his arrest on the morning of August 14.

The full account of this famous heresy trial has lost much of its interest so far as the doctrinal details are concerned. At this distance, with our modern ideas, the procedure seems very barbarous. Servetus was cruelly treated in prison, and there is a letter from him which speaks of his shocking condition, without proper clothing, and a prey to vermin. Mademoiselle Roch has well depicted this phase of the martyr's career in her fine statue which has been erected at Anamnese, and which is here reproduced (Fig. 8). The full report of the trial may be followed in the account given by Willis, and the 'Procès-Verbal' was in existence at Geneva in manuscript.

One thing seems clear, that while at first the accusations were largely concerned with the heretical views of Servetus, later the public prosecutor laid more stress upon the political side of the case, accusing him of conspiracy with the Libertines. The trial divided Geneva into hostile camps, and it sometimes looked as though Calvin, quite as much as Servetus, was on trial. To strengthen their hands the clerical party appealed to the Swiss churches. The answer, strong enough in condemning the heresy and blasphemy, refrained from specifying the kind of punishment.

Accustomed in France to hear the Swiss Reformers branded as the worst type of heretics, Servetus appears never to have understood why he should not have been received with open arms by the Protestants, whose one desire was the same as his own, the restoration of primitive faith and practice. He made a brave fight, and brought strong countercharges against Calvin, whom he accused specifically of causing his arrest at Vienne. He offered to discuss the questions at issue publicly, an offer which Calvin would have accepted had the syndics allowed. The whole city was in a ferment, and Sunday after Sunday Calvin and the other pastors thundered from their pulpits against the blasphemies of the Spaniard. After dragging its weary length for nearly two months, the public feeling veered strongly to the side of Calvin, and on October 27 the Council, by a majority vote, resolved that in consideration

of his great errors and blasphemies, the prisoner should be burnt alive.

Servetus appears to have been a curious compound of audacity and guilelessness. The announcement of the condemnation appears to have completely stunned him, as he seems never to have considered its possibility. He sent for Calvin and asked his pardon, but there was bitterness in the heart of the great reformer whose account of the interview is not very pleasant reading.

On the morning of the 27th, the Tribunal assembled before the porch of the Hôtel de Ville to read to the prisoner his formal condemnation, under ten separate heads, the two most important of which relate to the doctrine of the Trinity, and Infant Baptism. It is curious that under one of the headings he should be denounced as an arrogant innovator, and an inventor of heresies against Popery! The entreaty of Servetus for a more merciful mode of death (for which, to his credit, be it said, Calvin also pleaded) was in vain. The procession at once formed to the place of execution.

Nothing in his life, it may be said, became him like the leaving of it. As Guizot remarks, 'The dignity of the philosopher triumphed over the weakness of the man, and Servetus died heroically and calmly at that stake the very thought of which had at first filled him with terror.'

There will be dedicated next year at Vienne a monument commemorating the services of Servetus as an independent spirit in theology, and as a pioneer in physiology.

It has been said that Sappho survives because we sing her songs, and Aeschylus because we read his plays, but it would be difficult to explain the widespread interest in Servetus from any knowledge men have of his writings. The pathos of his fate, which scandalized Gibbon more profoundly than all the human hecatombs of Spain or Portugal, accounts for it in part. Then there is the limited circle of those who regard him as a martyr to the Unitarian confession; while scientific men have a very definite interest in him as one of the first to make a substantial contribution to our knowledge of the circulation of the blood. His theological and physiological views call for brief comments.

IV

Next to theology itself the study of medicine has been a great heresy breeder. From the days of Arnold of Villanova and Pierre of Abano, there have been noted heretics in our ranks. Bossuet defines a heretic as 'One who has opinions'. Servetus seems to have been charged with opinions like a Leyden jar. His most notable ones concerned the Trinity and Infant Baptism. Wracked almost to destruction in the third and fourth centuries on the subject of the Trinity, the final conquest of Arianism found its expression in that magnificent human document the Athanasian Creed, with which the Catholic Church has for ever settled the question, in language which sends a cold shudder down the backs of heretics. But there have always been turbulent souls who could not rest satisfied, and who would bring up unpleasant points from the Bible—men who were not able to accept Dante's wise advice:



FIG. 11.



FIG. 8—Servetus in Prison.

—'Mad is he who hopes that our reason can traverse the infinite way which one Substance as Three Persons holds. Be content oh human race with the Quia'.

The doctrine has been a great breeding ground of heretics, the smoke of whose burning has been a sweet savour in the nostrils alike of Catholics and Protestants. Even to-day, so deeply ingrained is the catholic creed, that nearly everything in the way of doctrinal vagary is forgiven save denial of the Trinity, which is thought to put a man outside the pale of normal Christianity. If this is the feeling to-day, imagine what it must have been in the middle of the sixteenth century!

Servetus wrote two theological works—*de Trinitatis Erroribus*, published in 1531, followed by a supplement in 1532. To these I have already referred. Living a double life at Vienne, to the inhabitants he was the careful and kind practitioner of medicine, to whom they had become devoted, but all the while, nourishing the dream of his youth, he had in preparation a work which he believed would win the world to Christ by purifying the Church from grave errors in doctrine.

I have already spoken of the printing of the *Christianismi Restitutio*. Mainly concerned with most abstruse questions concerning the Trinity and Infant Baptism, it is a most difficult work to read, and, as theologians confess, a still more difficult one to understand. Professor Emerton, in his article from which I have already quoted, gives in a few paragraphs the essence of his views. 'He finds the central fact of Christian speculation, not in the doctrine of the Trinity as formulated by the schools, but in the fact of the divine incarnation in the person of Jesus. He admits the divine birth, explaining it as in harmony with a general law of divine manifestation whereby the spiritual is revealed in the material. He would not accept the idea of an eternal sonship, except in this sense, that the divine Word, the Logos, had always been active as the expression in outward form of the divine activity. So, in the fullness of time, this same Logos produced a being from a human mother upon whom at the moment of his birth the divine Spirit was breathed. Obviously this is not the "eternal Son" of the creeds, and herein lay the special theological crime of Servetus. In his criticism of the church order, of the papal government, of the sacramental system, he does not differ essentially from the more radical of the reformers. On the essential matters of baptism and the Eucharist he goes quite beyond the established reforming churches. In both cases he invokes the principle of plain reason. He rejects Infant Baptism on the ground that the infant can have no faith, and that the practice is therefore mere incantation. He denies transubstantiation on the rational basis that substances and accidents may not be separated, and does not spare the reforming leaders for what seemed to him their half-hearted attitude on this point. His language throughout is harsh and violent, except where, as at the close of his chapters, he passes over into the forms of devotion and closes his diatribes with prayers of great beauty and spirituality.'

The Christian Church early found out that there was only one safe way of dealing with heresy. From the end of the

fourth century, when the habit began, to its climax on St. Bartholomew's Day, it was universally recognized that only dead heretics ceased to be troublesome. History affords ample evidence of the efficacy of repressive measures, often carried out on a scale of noble proportions. France is Catholic because of a root and branch policy; England's Protestantism is an enduring testimony to the thoroughness with which Henry VIII carried out his measures. As De Foe says in his famous pamphlet, *Shortest way with Dissenters*, if a man is obstinate and persists in having an opinion of his own, contrary to that held by a majority of his fellows, and if the opinion is pernicious and jeopardizes his eternal salvation, it is much safer to burn him than to allow his doctrines to spread! For 1,200 years this policy kept heresy within narrow limits until the great outbreak. The very best men of the day were consenting to the death of heretics. The spirit of Protestantism was against it; Luther nobly so. Judged by his age Servetus was a rank heretic, and as deserving of death as any ever tied to a stake. We can scarcely call him a martyr of the Church.—What Church would own him? All the same, we honour his memory as a martyr to the truth as he saw it.

Servetus was a student of medicine in Paris with Sylvius and Guinther, two of the most ardent of the revivers of the Galenic anatomy. More important still, he was a fellow student and pro-sector with Vesalius. He wrote one little medical book of no special merit. The works which he edited, which brought him more money than fame, indicate an independent and critical spirit. Vienne was a small town, in which we cannot think there was any scientific stimulus, though it was in a region noted for its intellectual activity.

In possession of a fact in physiology of the very first moment, Servetus described it with extraordinary clearness and accuracy. But so little did he think of the discovery, of so trifling importance did it appear in comparison with the great task in hand of restoring Christianity, that he used it simply as an illustration when discussing the nature of the Holy Spirit in his work *Christianismi Restitutio*. The discovery was nothing less than that of the passage of the blood from the right side of the heart to the left through the lungs, what is known as pulmonary, or lesser circulation.

In the year 1553 the views of Galen everywhere prevailed. The great master had indeed effected a revolution in the knowledge of the circulation almost as great as that made by Harvey in the seventeenth century. Briefly stated there were two bloods, the natural and the vital, in two practically closed systems, the veins and the arteries. The liver was the central organ of the venous system, the 'shop' as Burton calls it, in which the chylus was converted into blood and from which it was distributed by the veins to all parts of the body for nourishment. The veins were rather vessels containing the blood than tubes for its transmission—irrigating canals Galen called them. Galen knew the structure of the heart, the arrangement of its valves, and the direction in which the blood passed, but its chief function was not, as we suppose, mechanical, but in the left ventricle, the seat of life, the vital spirits

were generated, being a mixture of inspired air and blood. By an alternate movement of dilatation and collapse of the arteries the blood with the vital spirits were kept in constant motion.* Galen had demonstrated that the arteries and the veins communicated with each other at the periphery. A small quantity of the blood went, he believed, from the right side of the heart to the lungs, for their nourishment, and in this way passed to the left side of the heart; but the chief communication between the two systems was through pores in the ventricular septum, the thick muscular wall separating the two chief chambers of the heart.

The literature may be searched in vain for any other than the Galenic view up to 1553. Even Vesalius, who could not understand from its structure how even the smallest quantity of blood could pass through the septum dividing the ventricles, offered no other explanation. The more one knows of the Galenic physiology, the less one is surprised that it had so captivated the minds of men. The description of the new way which Servetus describes is found in the fifth book of the *Christianismi Restitutio*, in which he is discussing the nature of the Holy Spirit. After mentioning the threefold spirit of the body of man, natural, vital, and animal, he goes on to discuss the vital spirit, and in a few paragraphs describes the pulmonary circulation. 'Rightly to understand the question here, the first thing to be considered is the substantial generation of the vital spirit—a compound of the inspired air with the most subtle portion of the blood. The vital spirit has, therefore, its source in the left ventricle of the heart, the lungs aiding most essentially in its production. It is a fine attenuated spirit, elaborated by the power of heat, of a crimson colour and fiery potency—the lucid vapour as it were of the blood, substantially composed of water, air, and fire; for it is engendered, as said, by the mingling of the inspired air with the more subtle portion of the blood which the right ventricle of the heart communicates to the left. This communication, however, does not take place through the septum, partition, or midwall of the heart, as commonly believed, but by another admirable contrivance, the blood being transmitted from the pulmonary artery to the pulmonary vein, by a lengthened passage through the lungs, in the course of which it is elaborated and becomes of a crimson colour. Mingled with the inspired air in this passage, and freed from fuliginous vapours by the act of expiration, the mixture being now complete in every respect, and the blood become fit dwelling-place of the vital spirit, it is finally attracted by the diastole, and reaches the left ventricle of the heart.

'Now that the communication and elaboration take place

* So firmly entrenched was the Galenic physiology that the new views of Harvey made at first very slow progress. In Burton's *Anatomy of Melancholy*, which is a sort of epitome of medical knowledge of the seventeenth century, is the following description: 'The left creek (i. e. ventricle) has the form of a cone, and is the seat of life, which, as a torch doth oil, draws blood unto it begetting of it spirits and fire, and as a fire in a torch so are spirits in the blood; and by that great artery called aorta, it sends vital spirits over the body, and takes air from the lungs.'

in the lungs in the manner described, we are assured by the conjunctions and communications of the pulmonary artery with the pulmonary vein. The great size of the pulmonary artery seems of itself to declare how the matter stands; for this vessel would neither have been of such a size as it is, nor would such a force of the purest blood have been sent through it to the lungs for their nutrition only; neither would the heart have supplied the lungs in such fashion, seeing as we do that the lungs in the foetus are nourished from another source—those membranes or valves of the heart not coming into play until the hour of birth, as Galen teaches. The blood must consequently be poured in such large measures at the moment of birth from the heart to the lungs for another purpose than the nourishment of those organs. Moreover, it is not simply air, but air mingled with blood that is returned from the lungs to the heart by the pulmonary veins.

'It is in the lungs, consequently, that the mixture (of the inspired air with the blood) takes place, and it is in the lungs also, not in the heart, that the crimson colour of the blood is acquired. There is not indeed capacity of room enough in the left ventricle of the heart for so great and important an elaboration, neither does it seem competent to produce the crimson colour. To conclude, the septum or middle portion of the heart, seeing that it is without vessels and special properties, is not fitted to permit and accomplish the communication and elaboration in question, although it may be that some transudation takes place through it. It is by a mechanism similar to that by which the transfusion from the *vena portae* to the *vena cava* takes place in the liver, in respect of the blood, that the transfusion from the pulmonary artery to the pulmonary vein takes place in the lungs, in respect of the spirit' (Willis's translation). I here reproduce from the Vienna example the two pages from which the greater part of this description is taken (Figs. 9 and 10).

The important elements here are: First, the clear statement of the function of the pulmonary artery; secondly, the transmission of the impure or venous blood through the lungs from the right side of the heart to the left; thirdly, the recognition of an elaboration or transformation in the lungs, so that with the freeing the blood of 'fuliginous vapours', there was at the same time a change to the crimson colour of the arterial blood; fourthly, the direct denial of a communication of the two bloods, by means of orifices in the septum between the ventricles.

He had no idea of the general or systematic circulation, and so far as the left heart and the arteries were concerned he believed them to be the seat of the vital blood and spirits.

It is not hard to imagine how Servetus had become emancipated from the old views. A student at Paris at a most opportune period, when dissection had become popular, he had had as prosector to Guinther exceptional opportunities. But more important still, he had as fellow worker the anatomical arch-heretic, Andreas Vesalius, already imbued with the conviction that his teachers were wrong in regarding Galen as inspired and infallible. It was at this very period that Vesalius had

pointed out to his teacher Sylvius the error of Galen about the aortic valves; and when one considers the extraordinary rapidity with which Vesalius reformed human anatomy, before he had completed his twenty-eighth year, it is not surprising that his colleague and co-worker should have discovered one of the great truths of physiology.

The *Christianismi Restitutio* was never published, and the discovery of Servetus remained unrecognized until the attention of Wotton was called to it by Charles Bernard, a St.

clearly described. It is impossible to say that he had added anything to the account just given, and the far-fetched view has been maintained that Italian students at Paris had acquainted Servetus with the views of Colombo. It is claimed for Colombo also that he had a better idea of the function of respiration in the purification of the blood, by its mingling with the air, but Servetus distinctly states that the mixture takes place in the lungs, not, as was usually understood at the time, in the heart itself.

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lẽ, quã nunc audies. Hinc dicitur anima esse in sanguine, & anima ipsa esse sanguis, siue sanguineus spiritus. Non dicitur anima principaliter esse in parietibus cordis, aut in corpore ipso cerebri, aut hepatis, sed in sanguine, vt docet ipse Deus genef. 9. Leuit. 17. et Deut. 12.

Ad quam rem est prius intelligenda substantialis generatio ipsius vitalis spiritus, quẽ ex aere inspirato & subtilissimo sanguine componitur, & nutritur. Vitalis spiritus in sinistro cordis ventriculo sua originẽ habet, iunãtibus maxime pulmonibus ad ipsius generationem. Est spiritus tenuis, caloris vi elaboratus, flauo colore ignea potentia, vt ait quasi ex puriori sanguine lucidus vapor, substantiam in se continens aquæ acis & ignis. Generatur ex facta in pulmonibus mixtione inspirati aeris cũ elaborato sublimi sanguine, quẽ dexter ventriculus cordis sinistro communicat. Fit autem communicatio hæc, non per partem cordis mediũ, vt vulgo creditur. Sed magno artificio a dextro cordis ventriculo, longo per pulmones ductu, agitur sanguis subtilis: a pulmonibus præparatur, flauus efficitur: & a vena arteriola in arteria venosam transfunditur. Deinde in ipsa arteria venosa inspirato aëri miscetur, & expiratione a fuligine repurgatur. Atque ita tandem a sinistro cordis ventriculo totum mixtum per diastem atrahitur, apta suppellex, vt fiat spiritus vitalis.

Quod ita per pulmones fiat cõcatio, & præparatio, docet cõiunctio varia, & cõcatio, venæ arteriosæ cũ arteria venosa in pulmonibus. Oõfirmat hoc magnitudo insignis venæ arteriosæ, quæ nec talis, nec tãta facta esset, nec tãta a corde ipso vim purissimi sanguinis in pulmones emitteret, ob solũ eorũ nutrimentum, nec cor pulmonibus hac ratione seruiret: cũ præsertim antea in embryo tollerent pulmones ipsi aliunde nutriri, ob membranulas illas, seu

valuu

FIG. 9.

Bartholomew's Hospital surgeon.* Meanwhile it had been rediscovered, and among the many vagaries with which the history of the circulation of the blood is marked, not the least striking is the attempt to rob Servetus of his credit. In 1559 there was published a work by Realduo Colombo,* a student of Vesalius and his successor at Padua, in which the circulation of the blood from the right side of the heart to the left is

* William Wotton, *Reflections upon ancient and modern learning*, 1697, page 229.

* *De re Anatomica Venetiis*.

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valuuas cordis, vsq; ad horã natiuitatis nõdũ apertas, vt docet Galenus. Ergo ad alium vsũ effunditur sanguis a corde in pulmones hora ipsa natiuitatis, & rã copiosus. Ite, a pulmonibus ad cor non simplex aer, sed mixtus sanguine mittitur, per arteriam venosam: ergo in pulmonibus fit mixtio. Flauus ille color a pulmonibus datur sanguini spirituosus, non a corde. In sinistro cordis ventriculo non est locus capax tantæ & tam copiosæ mixtionis, nec ad flauum elaboratio illa sufficiens. Demum, paries ille medius, cũ sit valorum & facultatum expers, non est aptus ad communicationẽ & elaborationẽ illam, licet aliquid re sudare possit. Eodem artificio, quo in hepate fit transfusio a vena porta ad venam cauam propter sanguinem, fit etiam in pulmone transfusio a vena arteriosa ad arteriam venosam propter spiritum. Si quis hæc conferat cum ijs quæ scribit Galenus lib. 6. & 7. de vsu partium, veritatem penitus intelliget, ab ipso Galeno non animaduersam.

Ille itaq; spiritus vitalis a sinistro cordis ventriculo in arterias totius corporis deinde transfunditur, ita vt qui tenuior est, superiora petat, vbi magis adhuc elaboratur, præcipue in plexu reiformi, sub basi cerebri sito, in quo ex vitali fieri incipit animalis, ad propriam rationalis animæ sedem accedens. Iterum ille fortius mentis ignea vi tenuatur, elaboratur, & perficitur, in tenuissimis vasis, seu capillaribus arterijs, quæ in plexibus choroidibus fixæ sunt, & ipsissimam mentem continent. Hi plexus intima omnia cerebri penetrant, & ipsos cerebri ventriculos interne succingunt, vasa illa secum complacata, & contexta seruantes, vsque ad neruorum origines, vt in eos sentiendi & mouendi facultas inducatur. Vasa illa miraculo magno tenuissime contexta, tametsi arteriæ dicantur, sunt tamen fines arteriarum, tendent

FIG. 10.

Caesalpinus (1569), for whom elaborate claims are made, also knew of the pulmonary circulation, but he thought part of the blood went through the median septum. A more important claim is made for him of the discovery of the general circulation, but it is remarkable that any one knowing the history of the subject could read into his physiology anything more than the old Galenic views.

The history of the circulation bristles with controversy and widely divergent opinions are held as to the merits of the different observers. That Servetus first advanced a step beyond

Galen, that Colombo and Caesalpinus reached the same conclusion independently—all three recognizing the lesser circulation, is quite as certain as that it remained for Harvey to open an entirely new chapter in physiology, and to introduce modern experimental methods by which the complete circulation of the blood was first clearly demonstrated.²

A word about the book *Christianismi Restitutio, liber inter rariores longe rarissimus*. Only two complete copies are known, one in the Bibliothèque Nationale, Paris, and the other in the Imperial Library, Vienna, from which I was very kindly permitted to have the photographs of the title-page and the pages describing the circulation of the blood which are here reproduced. A third copy, imperfect, with the first sixteen pages in MS., is in the University Library, Edinburgh. The Paris copy is of special interest, as it belonged to Dr. Richard Mead, the distinguished physician and book collector, by whom it was exchanged with M. de Boze for a series of medals. In 1784 it was secured for the Royal Library. It may now be seen in one of the show cases of the Bibliothèque Nationale, of which it is one of the rare treasures. An added interest is in the fact that on the title-page occurs the name 'Germain Colladon', the Geneva barrister, who prosecuted Servetus; and it is in the highest degree probable that this was the identical copy used at the trial. In one place the book is stained, some suppose by moisture; others think it possible this was the very copy bound upon the victim himself, and snatched from the flames by some one who wished to preserve so interesting a record of the great heretic. The question has been examined carefully by the late Professor Labourene and M. Hahn, the distinguished librarian of the Paris Faculty of Medicine, both of whom are in favour of fire, not moisture, as the cause of the staining.

In 1791 the Vienna copy was reprinted at Nuremberg in facsimile, page for page, but Dr. de Murr, who was responsible for the reprint, very wisely put the date 1791 at the bottom of the last page. Copies of this edition are not uncommon in the larger libraries. In 1723 Mead attempted to have a reprint made from his copy, but when nearly completed the Bishop of London had it suppressed, and (it is stated) the copies were burnt. A few, however, escaped, and Willis says that he saw one in the library of the London Medical Society. I regret to say that the librarian informs me that this no longer is to be found. A copy of the Mead partial reprint is in the Bibliothèque Nationale, and two copies are in the British Museum.

A last word on the attitude of John Calvin towards Servetus. Much scorn has been heaped upon the great reformer, and one cannot but regret that a man of such magnificent achievements should have been dragged into a miserable heresy hunt like a common inquisitor. Let us not estimate him by his century, as his friends plead, but frankly by his life, and as a man of like passions with ourselves. He had bitter provocation. Flouted for years by the persistent assaults of Servetus,

and shocked out of all compassion by his blasphemies, is it to be wondered that the old Adam got the better of his Christian charity? Not only is it impossible to acquit Calvin of active complicity in this unhappy affair, but there was mixed up with it a personal hate, a vindictiveness unbecoming in so great a character, and we may say foreign to it. But let the long record of a self-denying life, devoted in an evil generation to the highest and the best, wipe for all reasonable men this one blot. Let us, if we may judge him at all, do so as a man, not as a demi-god. We cannot defend him, let us not condemn him; let his one grievous fault, even though we may fear he never repented of it, be the shadow which throws into stronger relief the splendid outlines of a noble life. In his defence,³ the original edition of which I have here, and which is concerned largely with doctrinal questions, not only are there no expressions of regret for the part he played in the tragedy, but the work is filled with insults to his dead enemy, couched in the most vindictive language. On the spot where Servetus was burnt there stands to-day an expiatory monument (Fig. 11), which expresses the spirit of modern Protestantism. On one side is the record of his birth and death, on the other an inscription, of which the following is a translation: 'Duteous and grateful followers of Calvin our great Reformer, yet condemning an error which was that of his age, and strongly attached to liberty of conscience according to the true principles of the Reformation and the Gospel, we have erected this expiatory monument. Oct. 27, 1903.'

The erection next year at Vienna of a quatercentenary monument will complete the recognition by the modern world of the merits of one of the strangest figures on the rich canvas of the sixteenth century. The wandering Spanish scholar, the stormy disputant, the anatomical pro-sector, the mystic dreamer of a restored Christianity, the discoverer of one of the fundamental facts of physiology, has come at last to his own. There are those, I know, who feel that perhaps more than justice has been done; but in a tragic age Servetus played an unusually tragic part, and the pathos of his fate appeals strongly to us.

These, too, are days of retribution, of the restoration of all things, the days of the opening of the fifth seal, when the souls under the altar see their blood avenged, when we clothe in the white robes of charity those who were slain for the testimony which they held, little noting whether the martyr was Catholic or Protestant, caring only to honour one of that great company which no man can number, 'whose heroic sufferings,' as Carlyle says, 'rise up melodiously together to heaven out of all lands and out of all time, as a sacred Miserere, their heroic actions also as a boundless everlasting Psalm of Triumph.'

Note.—The Servetus bibliography is fully given to 1890 in Professor A. V. D. Linde's *Michael Servetus*, Groningen, 1891. My personal interest dates many years back when Pastor Tollin's delightful sketches enlivened the numbers of Virchow's *Archives*. No one has ever had a more enthusiastic biographer, and to the writings of the Magdeburg clergyman we owe the greater part of

² John C. Dalton's *History of the Circulation*, 1834, gives by far the best and fullest account of the whole subject in English.

³ *Defensio Orthodoxae*, &c., 1554.

our modern knowledge of Servetus. The best account in English is by Willis—*Servetus and Calvin*, 1877. A German translation of the *Christianismi Restitutio* by Dr. Bernhard Spliss appeared in 1895 (2nd edition, Wiesbaden, Chr. Limbarth). I am indebted to Professor Harper of Princeton for an historical drama, *The Reformer of Geneva*, by Professor Shields (privately printed, Princeton University Press, 1897), which gives an admirable picture of

Geneva at the time of the trial. From Chéreau's *Histoire d'un Livre*, 1879, I have 'cribbed' the idea of the introduction. The name of Mosheim must be mentioned, as his writings were for years the common tap from which all Servetus knowledge was derived. The Servetus portrait, of which Mosheim speaks, has disappeared; I have reproduced the engraving from Allworden's *Historia* (1727), also the Roch statue at Anamnese.

REMARKS ON THE OCCASION OF THE DEDICATION OF THE NEW HALL OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

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To bring the greetings of the Medical and Chirurgical Faculty of Maryland to its older sister, The College of Physicians of Philadelphia is an honor and a pleasure. But perhaps, after all, 'tis not as a sister that it should greet you but rather as a child. For a large number, more than a quarter of the one hundred and one founders of our Faculty gained their inspiration in Philadelphia from study with men who were founders or members of this honorable institution. And from that day to this, we in Maryland have ever sought refreshment from the quickening current which has flowed from the lips of your students and philosophers and poets.

Among the charter members of our Society was John Archer who, in the year 1768, received from the College of Medicine of Philadelphia the first medical diploma awarded in America after a course of study; and 'tis a significant fact that in the one hundred and ten years of the life of our Society nearly one-half of its honorary members have received their medical education in Philadelphia.

In another sense 'tis with a feeling of peculiar pride that one enters the abode of this most distinguished and representative body. Nowhere has the physician, from the beginning, occupied so important a position in the community as here. In the past the title Doctor of Medicine has had, in many regions, an humble significance. In Philadelphia, however, from the earliest times, the social sphere of the physician has been larger and fuller than in almost any other spot in the world; and few, if any cities can point, among the annals of their practitioners and teachers and students, to so long a line of men of broad general culture, who have not only contributed to the advance of the science and art of medicine, but have been scholars in a larger sense and true leaders of men.

Here in Philadelphia more than in almost any other city, physician has been synonymous with gentleman and scholar. And who more exemplifies what the physician may be, how many sided and diverse may be his interests and his influence, in science, in culture and in letters, than your honored member to whose fine words we listened but a few months ago in Osler Hall?

The foundation of a body such as this in 1787 is a striking evidence of the character of the medical profession in Phila-

delphia over one hundred and twenty years ago. How much this college has done to elevate and uphold the standards of medicine needs no comment.

The library early became an important feature of your organization and the influence which this admirable collection has had upon medicine not only in this city but in the country at large, is not to be overestimated. Next to the Surgeon General's Library, this institution is probably mainly to be thanked for a most honorable and I think one of the most characteristic features of the better American Medical Literature. I refer to that broad familiarity shown, almost always, by the investigator with the contributions to literature of students from all parts of the world. The facilities offered for the study of the original communications of foreign authors by the accumulation of libraries such as this, and especially by the establishment of that inestimable blessing the Surgeon General's Library, have been of incalculable benefit to American medicine. It is largely through the opportunities afforded by these institutions and through the foundation of the Index Catalogue and the Index Medicus, that the American student has learned so well how and where to seek for the literature upon any question in which he is interested; and this knowledge and these opportunities have gone far toward delivering us from vain contentions as to priority as well as from that medical Chauvinism which is so dangerous an enemy of the cause of truth.

At one of the earliest meetings of this college Benjamin Rush speaks thus of the benefits which may follow its foundation: "By stated meetings as a college we may promote enquiries and observations upon the prevailing diseases of the city. Here the timid may be encouraged and the sanguine may be taught to doubt." (What a happy phrase!) "Here the young practitioner may profit by the experience of the old, and the old by the boldness of enquiry, and modern improvements of the young. Here uniformity in principle and practice in medicine will gradually insinuate themselves. Nor will the advantages of our conferences end in the acquisition of knowledge. The heart will naturally interest itself in the pursuits of the head. Here friendships will be contracted and cemented, and occasional and unavoidable suspicions or disputes may be accommodated by explanation or mediation. By these means we shall become not only the