

**ESSAI OU DISCOURS HISTORIQUE ET CRITIQUE  
SUR LES DÉCOUVERTES FAITES EN ANATOMIE PAR LES ANCIENS &  
PAR LES MODERNES**

**By: PIERRE LASSUS**

**A TRANSLATION OF PAGES 137 - 148 BY PHIL LEAROYD**

A copy of the book 'Essay or historical and critical discourse on the discoveries made in anatomy by the ancients and by the moderns' by Pierre Lassus, published in Paris by M. Lambert and F. J. Baudouin in 1783, can be viewed or downloaded from:

<https://gallica.bnf.fr/ark:/12148/bpt6k9757774s.textelImage>

I have translated the 'transfusion section' (pages 137 – 148 inclusive) of this 350 page textbook from the original French into English in the hope that the content may be appreciated by a wider audience. Whilst I am obviously aware that instantaneous computer-generated translation is possible, this process struggles with specialist terminology and also produces a 'colloquial style' not always representative of the original text. I have tried to produce as accurate a translation as possible given that the printed text the use of the long-form version of the lower case letter s. The paragraph structure and use of italics in this translation is reproduced from the original publication. I have renumbered the references, which appear at the bottom of each page in the original, and placed them, as written, at the end of the translation.

As with any translation the wording may be purposely or inadvertently altered to 'make it read better' but in doing so there has to be an element of personal interpretation involving something on the lines of 'I believe that this is what the author is actually trying to say'. I wanted to avoid that as much as possible and try to present what the author actually wrote and as a result the reader may find that the English text does not 'flow' as well as it could. Although I have taken great care not to knowingly misrepresent the author's original meaning I cannot guarantee that this work does not contain 'translational errors' and the reader is recommended to check specific details against the original French text.

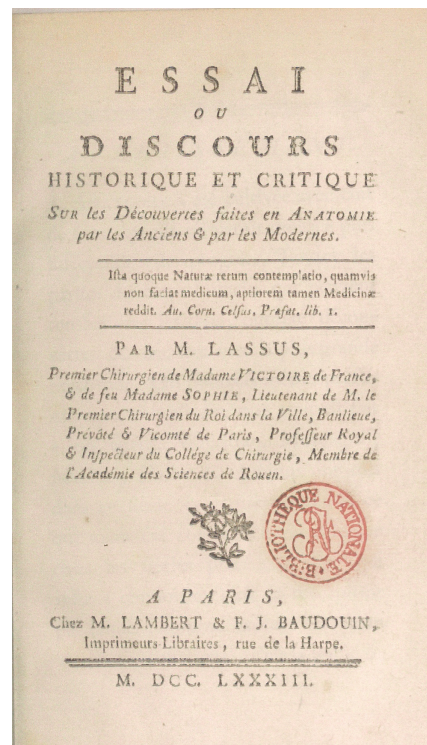
Although the section on transfusion is obviously a relatively small one within what is a general textbook on anatomy and surgery, the information contained within it is of interest relating to the history of blood transfusion for a number of reasons. The author starts the section on transfusion by providing a very brief overview of some of the infusion experiments that were performed by different researchers before then moving to the actual early blood transfusion experiments performed principally on dogs in England and France. Moving then to the first blood transfusions performed on humans, although a Frenchman, Lassus does not pamper to the 'partisan politics' of many other authors relating to who discovered transfusion and/or performed the first transfusion. In fact, he includes details of the transfusion of Arthur Coga in England first in his text, rather than concentrating on what actually was the first human transfusion performed by Denis and Emmerez in Paris, and in fact goes on to actually credit the first transfusion to the German chemist Libavius. The author then provides some interesting details regarding the transfusion of Antoine Mauroy and comments on the subsequent court case. These pages therefore contain a brief though interesting historical resume of blood transfusion as viewed by the author, presented just over one hundred years after the first human blood transfusion took place and when it had fallen as he states 'imperceptibly deeper into oblivion'.

## PIERRE LASSUS

Pierre Lassus was born on the 11<sup>th</sup> April 1741 in Ile-de-France, Paris. Appointed ordinary surgeon to Madame Victorie and Madame Sophie, the daughters of Louis XV of France. In 1779 he became the inspector and treasurer of the College and Academy of Surgery, and in 1794 the first professor of the history of medicine at the École de Santé (later Faculty of Medicine) in Paris, where he also held the chair of forensic medicine and then that of external pathology. He later became the librarian of the Institute. In 1802 he was appointed perpetual secretary of the physical sciences section at the Institute de France and in 1804 appointed consultant-surgeon to the Emperor Napoleon. He is the author and co-author of several books, particularly concerning the practice of surgery. He died on the 16<sup>th</sup> March 1807 at the age of 65.



Pierre Lassus (1741-1807)  
(Image credit: Wikimedia Commons)



Title page of *Essai ou Discours Historique et Critique* (1883)  
(Image credit: gallica-bnf)

## ENGLISH TRANSLATION – PAGES 137 TO 148 INCLUSIVE

A new experience awakened all spirits, and gave blood circulation, which had been fought for forty years, a new support which it did not need. Doctor Wren, Professor of Astronomy in the University of Oxford, proposed, around the year 1660, to Boyle, to Wilkins, Bishop of Chester, and to some other scholars, to investigate what would be the effects of certain liquors on the blood and solid parts of a living animal. First, opium and an infusion of saffron of the metals were injected separately into the veins of several dogs. Opium made a dog stupid, and an infusion of saffron of the metals produced in another dog enormous vomiting which caused his death. Boyle reported on these experiments in his book of the Usefulness of Experimental Philosophy. He

reports there that a foreign ambassador who resided in London, had an infusion of saffron of the metals injected into the veins of a malefactor, who was one of his servants. The injection having begun, this unfortunate man had, for whatever reason, an profuse sweat which prevented the continuation of the experiment, of which no other sensible effect was observed. It was natural to think that injections of this nature should disturb the animal economy, and cause death: however, some physicians whose curiosity was not yet satisfied, proposed to inject the spirit of urine, deer's horn, of human blood, under the vain pretext that these spirits would be all the less harmful to our constitution, that they derived originally from our liquors: this reasoning did not appear bad, and it had approvers. (1)

A certain Fabrice, a doctor in Danzig, took it into his head to inject about two large [doses] of a laxative remedy into the vein of the arms of three patients. One of them was a strong and vigorous soldier, attacked by venereal disease. After the injection, he complained of severe pain in his elbows, his arms visibly swelled, and he had profuse vomiting. The remedy finally began to act and the patient was fortunately left with a violent evacuation. Two women, one of whom was 35 years old and the other 20 years old, who had had fits of epilepsy since birth, underwent the same ordeal. A laxative resin dissolved in a spirituous liquor was injected into their veins: these two women had very profuse vomiting, and passed copious stools; the youngest died of it; one, whose temperament was robust enough to resist the experiment, had, it is said, epileptic attacks a little less violent than before. (2)

The same spirit of dizziness suggested passing the blood of a healthy man through the veins of a sick man. This transfusion was advocated as a resource against disease and as the assurance of rejuvenation. It was believed that a man attacked by some disease caused by a blood defect, would be cured by exchanging his blood for that of another man who would be in good health: that a bold and courageous animal would become a coward, by making him receive the blood of a weak and timid animal. Lower, King and Cox in London, Gayant, Denys and Emmeres in Paris, made this experiment on different animals: some died, others escaped. Finally on 23 November 1667, Lower and King tried the transfusion of blood on the named Arthur Coga. The carotid artery of a young sheep being discovered, the vein in Arthur Coga's arm was opened, as in an ordinary bloodletting, and six or seven ounces of blood were drawn from him. A silver pipe was then introduced into the opening made for the vein, and two tubes were fitted, one of which was placed in the artery of the sheep, and the other in the vein of the patient, several feather pipes inserted into each other, to serve as a channel of communication. The sheep's blood flowed uninterruptedly, for at least two minutes, in the vein of the patient, who received about nine or ten ounces of it, without feeling any discomfort. People hastened to publish in France that the transfusion had been carried out successfully in London. Credulity spread this news, and flattered women and old men with the vain hope of rejuvenating by this operation, the usefulness of which was no longer disputed by the scholars, when they discovered that it had been indicated fifty years earlier by Libavius, a German chemist. (3)

Mr. de Montmor, Master of Requests, witness of the experiments made in Paris on animals, by Denys and Emmeres, proposed to them to try the transfusion on Antoine Mauroy, aged about 34, and attacked for seven to eight years with a madness that left him with a few dilucid [sic] intervals. Denys, despite all his ardour, did not dare promise a radical cure; he only believed that the blood of a calf, by its sweetness and its freshness, could diminish the heat and the boiling of that of the patient. After a mature examination, it was decided to have him transported to a private house, and they gave him for guard a strong and robust chair-bearer, who, for a rather modest sum, had offered himself, eight months previously, to endure the same operation. (4) On 19 December 1667, we did everything we could to dispose the patient to undergo the transfusion which we resolved to do the same day. A large number of people of quality attended with several doctors and surgeons.

Emmeres opened the crural artery of a calf, and made all the necessary preparations in their presence. After drawing about ten ounces of blood from the patient's right arm, he was only able to get him to receive five or six ounces from that of the calf, because the awkward posture and the crowd of spectators interrupted the operation. The patient felt a great heat along the arm and under the armpit: the blood was stopped, and the wound was closed at the very moment when he was ready to faint. Two hours later he had supper, and if we exclude some dizziness and a little drowsiness, he spent the night singing and whistling.

The next morning he seemed less extravagant, either in his actions or in his words, which made one think that by repeating the transfusion once or twice, a greater change might be noticed. It was indeed repeated. But as there was no appearance that this man, who was very thin, had too much blood, after three or four months of vigils, and after suffering hunger and cold, running the streets naked, without finding where to retire at night, only two or three ounces were taken from his left arm. Having put him in a more favourable position, they infused him with much more blood than the first time. After assessing approximately what was left of the calf, it was judged that the patient might have received more than a pound.

This second transfusion being stronger, its effects were more prompt and more sensible. The heat of the arm and the armpit was the same: the pulse rose, and the face was covered with an abundant sweat. This man complained of great pain in the kidneys, stomach, and considerable choking. They quickly withdrew the tube which led the calf's blood into his vein, and while he was closing his wound, he vomited what he had eaten half an hour before, felt an urgent need to urinate, and asked to have a bowel movement. They put him to bed, and after vomiting for two hours, he fell asleep, and did not wake up until the next morning. When he awoke, he spoke of his pains and the great weariness he felt in all his limbs: he filled a large vase with urine as black as if it had been mixed with chimney soot.

We were in the time of the Jubilee. Mauroy wanted to do it, and asked for a Confessor to prepare for it. Mr. de Veau confessed it, and publicly testified to the good sense of his penitent, whom he even judged capable of receiving the sacraments, if he persisted in his devotion. He was drowsy for the rest of the day, spoke little, filled another vase with urine as black as that of the day before, and bled copiously from the nose, which led to drawing a little blood from his arm; on 24 December, Christmas Eve, Mauroy wanted to go to confession again, to prepare for Communion. Mr. Bonnet confessed him and administered the Sacraments to him. That same day his urine cleared up and gradually regained its natural colour.

The calm he enjoyed made some people believe that he was completely recovered. But Denys, who was not as satisfied as the others, still wanted to make a third transfusion, in order, he said, to complete what the first two had begun. Nevertheless, postponing the execution of this project from one day to the next, he noticed such a great change in the mind of his patient, that he entirely renounced this plan.

Two months having elapsed, Mauroy had a burning fever. His wife urged Emmeres and Denys to try the transfusion a third time. To satisfy her, one of them put a tube in the vein of the patient's arm; and as it was deemed necessary to draw blood from him before infusing it, the vein in his foot was opened. But a violent attack and a tremor of all the limbs having seized him at this moment, the blood did not come out either from the foot or from the arm, which made it necessary to withdraw the tube without opening the artery of the calf, and consequently without transfusion.

He died the following night. Immediately the opponents of the transfusion published libels against Emmeres and Denys. Three Doctors accused them in court of having contributed by this operation to the death of Mauroy. His widow was accused in her turn of having made her husband secretly take a powder which might have hastened his death. Denys lodged a complaint with the Criminal-Lieutenant

against doctors, whom he accused of having wanted to give money to this woman, to induce her to say that the transfusion had killed her husband; they were decreed a personal adjournment. A witness testified that one had come on behalf of one of these doctors to offer twelve louis d'or to the one who wanted to assure that Mauroy had died in the operation of the transfusion. (5) It was decided that in future it could only be done on men with the approval of a physician from the Faculty of Paris. Seven or eight approved of it, others condemned it with more reason. The case having been brought to the Grand Chamber of the Parliament of Paris, the son of Mr. de Lamoignon, First President, was Denys's lawyer. His plea, the first he had made, favourable to the transfusion, obtained the votes of the audience, made up of all the friends of the family, the Duke of Enguien, the Dukes of Luynes, Mortemart, Chaulnes, and many other good people. A man and a woman were brought before the hearing, who claimed to have been cured by the transfusion, after having been abandoned by the doctors. In a word, all sorts of means were employed to justify the usefulness of this new experience. Despite the efforts of Denys and his supporters, it could not be so in the eyes of reason, which proscribed it as a murderous ordeal. The almost sudden death of some people who had submitted to it, completed to undeceive the minds warned by the blind zeal of some fanatical doctors. (6) Women were made to understand that it was absolutely impossible to make them younger. Denys left his position as Professor of Philosophy, and became Ordinary Physician to the King: his adversaries, no longer seeing him occupied with the transfusion, kept silent: she had the strength of all human things, and fell imperceptibly deeper into oblivion.

## REFERENCES

(1) Purman, Chirurgien de Breslaw, eut la témérité de se faire injecter dans les veines une liqueur spiritueuse, pour se guérir de la galle. Attaqué long-temps après d'une fièvre continue, il se fit injecter de l'eau de chardon béni, & eut le bonheur d'en réchapper. Voyez son Ouvrage intitulé *Chirurgischer Lorbeercran. Halbestadt. 1684, in-4°. Append. part, 2.*

(2) *Transact. Philosoph.* an. 1665, No. 7.

(3) Adsit juvenis robustus, sanus, sanguine spirituosus plenus: adstet exhaustus viribus, tenuis, macilentus, vix animam trahens. Magister artis habeat tubulos argenteos inter se congruentes, aperiat arteriam robusti & tubulum inserat munitaque: mox & aegroti arteriam findat & tubulum foemineum insigat, j'am duos tubulos sibi mutuo applicet & ex sano sanguis arterialis, calens & spirituosus saliet in aegrotum, unaque vitae fontem àfferet, omnemque languorem pellet. Defens. Syntagm, Aream. Chymic. Francofurti, 1615, in-folio.

(4) Voyez le Journal des Savans, ann. 1667

(5) Voyez la Sentence rendue au Châtelet de Paris le 17 Avril 1668, à l'occasion de la transfusion, & imprimée dans le second tome de la Collect. Acad. p. 144, part. estrang.