THE MEDICAL WORLD OF AUGUSTA, GEORGIA, 1830-1860

by

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ABSTRACT: This paper places the Augusta medical community and its journal in the context of nineteenth century medicine. In the early to mid-nineteenth century southern and western physicians were isolated geographically and in some regards isolated from major medical centers. The southern physicians in Augusta, Georgia sought to make their profession their own. They sought to connect to other physicians in the South and elsewhere. They furthered the mechanistic view of the body in medicine and used this mechanistic view to aid in medical treatment. The physicians of Augusta also used the mechanistic view of the body to develop new gynecological procedures for previously untreatable conditions, and for establishing their authority to enter the birthing room. The physicians of Augusta, Georgia, in the 1830’s forward, saw themselves as being on the frontier of American medicine and they actually were.

There are many areas of Southern medicine that have yet to be explored proclaimed the editors of Science and Medicine in the Old South. Numbers and Savitt invite scholars to further examine Southern medical history, including antebellum Southern hospitals, medical journals, and societies.

The place of medical societies and journals in the professional lives of southern physicians also deserves attention. It would be useful to know, for example, how popular they were, how they influenced medical practice, how they differed from those in other regions, and how they were used by the medically orthodox to combat the threat of irregular practitioners—another topic in search of a historian.

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2 Ibid., 151.
For Numbers and Savitt, Southern medical history is itself a frontier in need of a historian. Before the Civil War, many parts of the American South and West were frontier. They were removed from not only mainstream American life but also from mainstream American medical practice. Southern physicians, understanding, their perceived remoteness strove to create medical organizations and schools that would move Southern medicine from the backwoods and into the forefront of American medicine. One such organization was the Augusta Medical Society, established 1822 for the purpose of enhancing the medical education and knowledge of Southern physicians particularly those in Georgia. Out of this society came both the Medical College of Georgia, founded in 1829 and *The Southern Medical and Surgical Journal* founded in 1836, both of which sought to further medical education in the South. The College sought to provide students with a quality medical education. *The Journal*, which was originally edited by the founder of the Medical College of Georgia, Dr. Milton Antony, served as a locus for continuing medical education in the South. *The Journal* provided a place where Southern medical practices were written about by Southern physicians. It also provided a community where Southern physicians could learn from each other.

One Southern medical journal that has not been explored is the *Southern Medical and Surgical Journal*. *The Journal* shows that Southern medicine was practiced on the geographic frontier and it was also on the frontier of medical practice. *The Journal* was inline with the prevailing treads and beliefs of American medicine of the time. Southern medicine as seen in *The Journal* made inroads into the modern conceptions of the causes of diseases. It also made inroads into the workings of the human body. The grass roots of the modern twentieth century medicine can be found in the American South, in *The Southern Medical and Surgical Journal*. In *The Journal*, Southern physicians maintained connections to Europe through reviews of European medical works and correspondence with major European medical centers. This correspondence with Europe ensured that the Southern physicians who read *The Journal* were informed about medical developments in Europe. Southern physicians kept up with medical developments in Europe and in the rest of the United States and they made medical developments of their own. *The Journal*’s contributors, because of their increased mechanistic understanding of the human body, were able to perform surgical operations and to understand how the human body worked. Southern physicians in the *Journal* were able to make advancements in gynecological surgery because of their mechanical knowledge of the female body. These advancements in gynecological surgery helped Southern physicians to improve not only their knowledge of the body, but also the lives of their patients. In addition to performing pioneering surgeries, Southern doctors in Augusta and in

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3 Though *Science and Medicine in the Old South* is twenty years old, Numbers and Savitt’s call for Southern medicine, frontier medicine and the intellectual history of Southern medical journals to be explored has yet to be answered.
the rest of the South also performed experiments that furthered the development of scientific medicine and contributed to the prestige of the profession. Southern medical journals such as the *Southern Medical and Surgical Journal* allowed Southern physicians to be able to continue their education and to close the gap of their geographical remoteness that separated them from the rest of the country. *The Journal* from the 1830’s onward provided Southern physicians with a forum to show not only themselves but also the other American physicians how Southern physicians were on the frontier of medicine.

**American Physicians of the Nineteenth century**

American physicians, both in the North and in the South, took the European knowledge of the workings of the human body and further extended this knowledge to their medical practices. American physicians made many improvements in the practice of medicine in the early to mid-nineteenth century, including the development of gynecological surgeries to treat previously untreatable gynecological conditions, and the employment of ether in surgical procedures to reduce sensation and pain. As the nineteenth century progressed, American physicians were no longer being trained in Europe, but in American medical schools instead. American physicians did, however maintain familiarity with European medical developments. The exchange of medical information was by no means unidirectional: as the nineteenth-century, progressed American physicians began to share medical knowledge with the Europeans as well. *The Southern frontier*

The American South prior to the Civil War was still considered to be on the geographic frontier of the country. With few urban centers, the South was rural in comparison to the major population centers such as New York and Philadelphia. The practice of medicine in the South was also considered by the rest of the country to be rural, rudimentary, and backwards. Richard Dunlap in his *Doctors of the American Frontier* writes about the practice of medicine on the western frontier and how frontier doctors were used to making do. Even though the physicians who contributed to *The Journal* were not as geographically isolated as the doctors in *Doctors of the American Frontier*, the Southern physicians of Augusta and the surrounding areas, were still relatively isolated from major medical centers. Augusta at the time *The Journal* began had a small population in comparison with the population of New York or Philadelphia. At the time that The College and *The Journal* were founded,

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Augusta, Georgia must have seemed, to Northern physicians like an unlikely place to start a medical school, much less a medical journal. Dr. Antony created *The Journal* in part to help Southern physicians to be on the frontiers of medicine and not just to be on the geographic frontier of the country. With *The Journal* Southern physicians could share their frontier medicine including their creativity in their medical practices and their resourcefulness with their limited resources with other Southern physicians. This is similar to the frontier physicians that Dunlap discusses. They were able to share their medical experiences with other physicians. The contributors and the readers of *The Journal* were able to receive through *The Journal* an ongoing medical education in how those before them had practiced medicine and also how their contemporaries nationally and in Europe and in the South were practicing medicine. Richard Dunlop writes in his *Doctors of the American Frontier* that frontier physicians had to endure rugged conditions “At the end of a long and wearisome ride, the doctor set broken limbs, bound up wounds and injuries, delivered babies, fought smallpox, pneumonia, and diphtheria.” In these rugged conditions frontier doctor performed a wide array of medical procedures and cures. On the frontier there was no such thing as medical specialization. Ann Novotry agrees with Dunlop

As Americans moved West in increasing numbers in the first half of the 19th century, physicians, lured by the same prospect of adventure, glory and wealth, followed suit. The reality, however, showed a pioneer physician’s life to be one of peril, toil and privation. Conditions were primitive, and because manufactures medicine were often unavailable, doctors frequently concocted their own. Thus the “primitive” medicine of the frontier became the foundation on which a modern science was building.

Dunlop argues that for frontier doctors, geographic remoteness and the limited supplies did not hinder their creativity or their resourcefulness. In fact being on the frontier for Dunlop augmented the creativity and resourcefulness of frontier doctors.

Great medical scientists even arose in the dark forests of the American frontier. Ephraim McDowell in backwoods Kentucky braved a lynch mob and performed the first ovariectomy in medical history “The doctor was undismayed. His frontier medical practice had accustomed him to “making do.”

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8 Ibid.
9 Ibid. 190.
In *Science and Medicine in the Old South* edited by Ronald L. Numbers and Todd L. Savitt proclaimed that “Unlike science, which directly involved only a small percentage of antebellum southerners, medicine influenced the lives of virtually everyone in the Old South”. Southern physicians also believed that because of their frontier location that they could improve Southern specific medical knowledge from each other.

**Influencing Southern medical institutions**

The first medical school in the South was the Medical College of South Carolina. This School was founded by the Medical Society of Charleston and served as a guide for other Southern medical schools. In addition to Southern medical schools, local and sometimes state wide medical societies began to arise in the South. With the Georgia Medical Society being founded in 1808, in Savannah, Georgia and the Augusta Medical Society being founded in 1822, these medical societies served as organizations where local physicians could come together and discuss medical practice. These societies helped Southern physicians to continue their medical education and to improve their medical practice. The Medical Society of Augusta was, like other localized medical societies, founded under a *Constitution and Bylaws*. The constitution in its Preamble proclaims to purposes of the Society to be:

> When we reflect on the importance of the medical professions; when we consider the high rank it holds in the circle of the Science and Arts; when we take into view that the happenings and prosperity of society are intimately connected with its advancement; we are irresistibly impelled to make every exertion for its improvement, and to render it as perfect as possible. Also influenced by these considerations, and reflecting on the importance of having medical institutions among us.

The Medical Society of Augusta, Georgia issued another constitution in 1829 which gave more detail about how the society expected its members to behave and it also set standards for medical practice including consultations: “Consultations should be encouraged in difficult and frustrating cases, as they give rise to confidence, energy and more

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The founding of the Augusta Medical College

The Augusta Medical College was founded by Dr. Milton Antony with help from the town of Augusta and the Augusta Medical Society. Dr. Antony’s medical education was an apprenticeship under Dr. Joel Abbott in Washington, followed by the “University of Pennsylvania’s medical course in 1808, where Antony completed only one year of lectures”.  

Antony saw the need to have more formalized medical education in the South. Dr. Antony founded a school that would provide a good medical education which included anatomy, physiology, and chemistry for aspiring Southern physicians. For Antony, a complete medical education consisted not only of an apprenticeship but also of formalized learning. Dr. Antony sought to make the Medical College of Augusta an accredited medical school. Antony sought the aid of the Medical College of South Carolina in determining if the medical education the Augusta Medical College was at the same level.

12 The Constitution Rules and Bye Laws of the Medical Society of Augusta Georgia (Medical Society of Richmond Co Georgia 1829).
13 Ibid.
as that of the Medical College of South Carolina. “In addition, the secretary was instructed to send the rules and regulations to the Academy to the Medical College of South Carolina’s trustees to see if the Georgia diploma might be considered “as equivalent to one course of lectures in their school”. The Augusta Medical College adjusted its curriculum and hired new faculty so that it could become a legitimate medical school. The Augusta Medical College with its curriculum adjustments including a pioneering six month lecture term provided a quality medical education for its students. Phinizy Spalding in his *The History of the Medical College of Georgia* discusses the six month lecture term was employed by the founders of the Medical College of Georgia to improve medical education in Georgia and to combat the threat of non-regular medical practices.

The implication was that it was the new and vibrant Medical College, with its extended academic term and its emphasis on thorough educational planning that caused Georgia to be peculiarly effective in resisting the botanic blandishments of the herbalists. ... The school had tired, since 1830, to make its six-month term the norm instead of the traditional four.

While medical schools in the rest of the country had lecture terms that were four months long, the Augusta Medical College had six month long lecture terms. The extended terms allowed the students at the College to hopefully have a more complete medical education. This pioneering six month term and the desire to improve medical education continued with the founding the *Journal*.

### The founding of the Southern Journal of Medicine and Surgery

Dr. Antony, after the founding of the college saw the need for not only quality medical education but also for the continued medical education of Southern physicians. For this reason Dr. Antony started the *Southern Medical and Surgical Journal* in 1836 The *Journal* was published monthly by the physicians of the Medical College of Georgia and other contributors from all over the South. Antony started *The Journal* as a means for Southern physicians to communicate and learn from each other ways to improve and advanced medical practice in the South. *The Journal* included original articles by Southern physicians, as well as commentary on recent articles published both locally and nationwide. It also included commentary on medical articles that had been published throughout the country. *The Journal* also included reports on medical events throughout the United States and Europe. *The Journal* in addition to reporting national and international medical events, reported local medical events.

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16 Ibid., 27-28.
It provided Southern physicians a place to debate, and discusses not only their medical practices but the practices of other physicians as well. With *The Journal*, Southern physicians wanted to push medical frontiers. The common perception of Southern physicians practicing frontier medicine by themselves in rural locations is shattered by the ways in which *The Journal* demonstrates how Southern physicians were in communication with each other. Dr. Antony in his introduction to the first issue of *The Southern Medical and Surgical Journal* in June of 1836 lays out the purpose for the publishing of the journal.

But although they have done and are still accomplishing much for the improvement of medicine, and are justly entitled to the gratitude of physicians, and the appellation of benefactors of mankind- the profession at the South have long regarded and anticipated, as a most desirable object, the establishment of a Journal that should collect and preserve the valuable discoveries and improvements of Southern practitioners relative to the nature and treatment of diseases incident to southern climates. Which for the want of some such convenient and suitable repository, are generally entombed with him with whom they originate, and thus forever lost to the world.\(^{17}\)

For Antony, the South needed a medical journal to further medical advancements and to provide a place where the specificity of Southern medicine could be discussed by southern medical practitioners. Antony next asks for his medical contemporaries to co-operate with him and his colleagues in the maintenance of *The Journal*:

> We offer to our contemporaries the pages of a monthly periodical, cordially inviting them to co-operate with us in the enterprise, and confidently trusting that they, with equal zeal and interest, will come to our assistance, and sustain a work so desirable, so important to science and to humanity\(^{18}\)

For Antony, *The Journal* will be essential to the continuation of the advancement of medicine in the South. Anthony next discusses how the format of *The Journal* will contribute to advancement in medical learning by Southern physicians:

> As the principal design for this Journal is to collate and communicate practical information; practical essays of all kinds, histories of epidemics, reports of cases, the application of new remedies, and all interesting medical facts and experiments will be thankfully received. Long theoretical disquisitions, and prolix

\(^{17}\) *Southern Medical and Surgical Journal*, (June. 1836.), Vol. I. No. I 2.

\(^{18}\) Ibid., 3.
discussions on controverted points, will be excluded from our number; place, however, will always be given to communications on the collateral sciences, and to all treatises that have a useful bearing, or that may be calculated to promote the grand object in view—the improvement of medicine\(^{19}\).

The format of The Journal indicated that Anthony and the other founders of The Journal were striving to push medical boundaries and to expand medical practice and knowledge and to build upon previous and current medical knowledge. The way in which The Journal was formatted indicates the kind of education and advancement in medicine that the founders of The Journal sought to encourage. As the founder of both the college and The Journal, Dr. Antony saw a need for continued medical education in the South and also he also saw a need for Southern physicians to have a forum for discussion and debate of medical practice. The Journal served to continue medical education and it also served to advance the practice of medicine in the South. The Journal itself was on the frontier because it filled a need for Southern physicians and it put their advancements in medical practice into a format that could be read both locally and nationally.

**Connections to Europe in the Southern Medical and Surgical Journal**

It has been said that American physicians before the mid-nineteenth century owed the majority of their medical knowledge and medical practices to European physicians and to the already existing and richly established European medical and scientific traditions.\(^{20}\) European medical traditions served as a building block for American medical training, knowledge and practice. American physicians even in the early to mid nineteenth century were becoming builders of a kind of medicine that by the twentieth century would be uniquely American. This being said the Southern physicians who contributed to and edited the Southern Medical and Surgical Journal sought to provide Southern physicians with not only regional medical education, but also with education in the classic and newer medical practices from not only the United States but also from Europe. Many members of the faculty of the College, who also wrote regularly for The Journal, had connections to Europe for example, Dr. Newton, Dr. Paul, Dr. Eve and Dr. Dugas had “extended and deepened their medical educations by periods of work in Paris, where much of the advanced research in medicine was being done”\(^{21}\) all these men brought to

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\(^{19}\) Ibid.  


\(^{21}\) Phinizy Spalding, *The History of the Medical College of Georgia* (Athens: The University of Georgia Press, 1987), 23
Augusta a kind of experience and background that was surprising in its
depth and must have inspired awe among the students at the College most
of whom came from rural Georgia or similar areas in South Carolina and
Alabama.” The connections to Europe that the faculty possessed helped
them to be on the frontier of medicine despite the remoteness of Augusta.
These connections also influenced the faculty of the school to each
contribute about 1000 dollars so that, in 1834 Dr. Dugas could acquire
classic medical texts from Europe. In this way, the library of The College
could be enriched and the students of the Augusta Medical College could
gain both a practical medical education based on the study of chemistry,
anatomy and physiology and a medical education in the classic texts from
Europe.

With an adequate room to house these volumes in the new building
and a place for museum space and reading as well, the Medical
College could boast an atmosphere that was conducive to study and
learning. Dugas acted as the librarian.

In the tradition of the College and the Medical Society of Augusta, the
Journal throughout its run, maintained close connections to Europe and,
the rest of the country. In The Journal, there are many examples of foreign
influence including monthly reviews of European medical discoverers and
reviews of the writings of European physicians. In the Monthly Periscope
of the July 1836 issue of the Journal an extensive review appeared of M.
Louis’s discoveries regarding the “Pathological Anatomy of Phthisis”:

Extremely accurate and minute observations of M. Louis on the
whole one hundred and twenty-three cases of his inspection, do not
confirm the observation of Laennec and others, of the existence of
cavities communicating with the bronchia, and lined, as in
tuberculous excavations of long standing...

The editors of The Journal feel it is not really possible that M. Louis’s
results deviated so much from the historic medical knowledge about
Phthisis:

We think it strange, but not impossible, that the observations of all
may have been correct, and that in Louis’ one hundred and twenty
three cases, there may have been none of those cicatrices which
were observed by others. But we would suggest a view of this
phenomenon, which may perhaps tend to reconcile these
apparently opposite observations. We are of the opinion that

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22 Ibid., 23.
23 Ibid., 33.
24 Ibid., 34.
25 “In the Monthly Periscope “Pathological Anatomy of Phthisis” Southern Medical and
Surgical Journal, (July 1836, 1836) 113.
abscesses do form in the lungs, a simple, and every way of the same
character as those which form in the superficial cellular tissue; that
they terminate by suppuration, and discharge thought the bronchi;
and entirely heal, and the patient recovers from all appearance or
evidence of disease.\textsuperscript{26}

The editors of The Journal have found a compromise between M. Louis’s
new discoveries and older established medical knowledge. In forming this
compromise the physicians of The Journal were using their anatomical
knowledge to critique and improve on medical research from France. This
willingness to challenge European conventions shows that the physicians
of The Journal were confident in their ability to add to medical knowledge.

The contributors to The Journal often when writing about various
medical topics give a history of the previous medical knowledge about the
topic. These histories include major European contributions to what ever
medical practice or procedure that the physician was writing about as is
evident in the case of the double inclined plane, where J.C. Nott, M.D.
reports that “Sir Salty Cooper, Dupuytren, Travers, Charles Bell... and
other surgeons of high repute in Europe, have recommended different
modification of the double inclined plane in certain cases of fracture”.\textsuperscript{27}
Nott like so many other physicians who wrote in the journal searched in
Europe for the history of the thing that he was writing about. They sought
at times to challenge, the conventions and confines of established
European medical traditions. It is because of these challenges that
Southern physicians were able to show that they were on the frontiers of
medicine.

**Southern Physicians and the Mechanistic man**

Southern physicians were greatly influenced by the European proponents
of the mechanized body. Though heroic medical practices based on
humoral theory was still part of medical practice for southern physicians
in the early to mid-nineteenth century. Southern physicians were
increasingly participating in a very nonhumoral in the mechanization of
the human body. The increased mechanization of the human body led not
only Southern physicians, but also physicians in the rest of the country
and Europe to gain intense knowledge of the workings of the human body.
This intense mechanical knowledge contributed to much medical
advancement in the early to mid-nineteenth century. Southern physicians
as expressed in The Journal were also increasingly viewing the human
body as working like a machine. When a part was broken that it could be
fixed and then the whole machine (body) would again be in working order.
The mechanistic view of the body was exemplified in Southern medical

\textsuperscript{26} Ibid.
\textsuperscript{27} J.C. Nott “The Case of the Double Inclined Plane” *Southern Medical and Surgical
Journal*, (May, 1839,)
452.
practice was in direct contradiction to the humoral theory of medicine because the mechanistic view of the body separates the disease from the patient and allows for the specific correction and treatment to specific diseases. The physicians who published in the *Southern Medical and Surgical Journal* increasingly described the workings of their patient’s bodies as mechanical. W.H. Robert, M.D., in his piece *Surgical cases occurring in the practice of L. A. Dugas, M.D. Professor in the Medical College of Georgia* discusses multiple surgical cases of Dr. Dugas. One such case is that of an Aneurism-Ligature of the Brachial Artery. Dr. Robert reports that Dr. Dugas wants to explain why the wrist of the patient experienced convulsions after the operation:

The only explanation we can offer for this is, that on the day after the operation, there existed a considerable degree of febrile action, by which the blood was propelled with more force through the new channels of circulation than subsequently when the excitement subsided, and that the heart’s ordinary impulse was again felt only when the anastomosing vessels has acquired an increased caliber.\(^{28}\)

Dr. Dugas was give the problem of unexpected convulsions after an operation comes up with a very mechanical possible explanation. Ideas of blood being propelled by large amounts of force are reminiscent of steam or water being forced through pipes in a locomotive which would cause the locomotive to shake or convulse. Dr. Dugas sees the human body as working like a machine and this helps him understand previously unexplained consequences of surgery. The hand of Dr. Dugas’s patient was not the only part of a body that was mechanized by the physicians who contributed to *The Journal*.

Not only were the bodies of the patients of Southern physicians, who wrote in *The Journal*, mechanized, but Southern physicians were pioneering the use of mechanical devices in their medical practices. These mechanical devises extended the physician’s mechanical knowledge of the workings of the body to the tools that they employed to correct conditions and diseases in the human body. The contributors to *The Journal* often wrote about machines that they used in their medical practices. Dr. Antony in his article “Cases of fracture of the Os Femoris –Adjustment by weight and fulcrum” discusses how fractures of the leg can be treated by the use of a simple machine. Dr. Antony describes the machine that was put in place to correct the fracture:

> A short roller bandage was then passed around the ankle and the bottom of the foot, where a string was attached, which, passing over the foot of the bed or platform about six inches beyond the heel, suspended a piece of brick, weighing about two and a half pounds.

\(^{28}\) W.H. Robert M.D. “Surgical cases occurring in the practice of L. A. Dugas, M.D. Professor in the Medical College of Georgia” *Southern Medical and Surgical Journal* (Feb, 1839), 295.
After adjusting the fragments by extension and counter-extension, made by the hands of assistants, four short splints made of veneering, were then placed on the thigh and secured by a many-tailed bandage, as snugly as possible without being uncomfortable.

Dr. Antony also describes why this procedure is important to medical practice.

Duty to the science of Surgery, as well as to the cause of humanity, seems to demand of me this exposition of my practice in cases of fracture of the femur, which establishes in the most satisfactory manner, the propriety of a plan of management at once calculated to ensure the best success, with the simplest apparatus and the least distress.

Antony has used his new understanding of the human body as well as his desire to further medical knowledge, to modify machines in order to fix broken legs that without the machine would not have been able to be repaired with the same results that Dr. Antony achieved. Dr. J.C. Nott of Mobile Alabama also used a machine to aid the treatment of a patient. Instead of using a weight and a fulcrum Nott used a truss and a plane to treat and correct a fracture of the femur. Nott wrote in his “The use of the Double Inclined Plane in Fractures of the Lower Extremities” that:

I am not so wedded to my own opinions or inventions as to believe that the apparatus I propose is perfect (for my objective has been to contrive the simplest one possible which would fulfill the indications,) but I assert boldly that all the fractures of the thigh

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30 Ibid., 285.
31 Dr. J.C. Nott wrote extensively about race and disease. He also theorized that mosquito as the vector for malaria and he also wrote about yellow fever. Nott is a controversial figure for his work on the racial differences that showed that African Americans were biologically different from whites and thus inferior. The work of Nott and others was used to justify not only slavery but also some of the racist attitudes that still persist today. Medically enforced racism is another topic in Southern medicine that has been heavily analyzed by historians of not only race but of gender also. While J.C. Nott is viewed as a perpetrator of scientific racism, his work in advancing a mechanistic view of the human body must not be underestimated. This understanding allowed Nott to use machines to aid in the medical practice and to advance Southern physicians abilities to treat patients. This mechanistic view of the body is inline with many other physicians who contributed to The Journal.; Reginald Horsman, Josiah Nott of Mobil: Southerner, Physician, and Racial Theorist (Baton Rouge, 1947).
and leg can be treated with more comfort to the patient less risk of deformity by some apparatus acting on the same principles\textsuperscript{32}.

Nott next describes how the double inclined plane is constructed:

The apparatus was constructed in the simplest manner. We procured two pieces of white pine board, five inches wide, and long enough when placed under the limb, to reach from the tuberosity of the ischium three inches below the sole of the foot. One of the boards was then sawed in two, exactly opposite the knee joint. We thus had at once, a thigh piece, a leg piece, and a horizontal piece to rest on the bed and support the other two—the thigh and leg pieces were then hinged together with leather and tacks and the tight piece was fixed...\textsuperscript{33}.

In describing the double inclined plane, Nott sounds more like an engineer or a mechanic than a physician but his description of the double inclined plane can be attributed to his mechanical understanding of the human body and how he has extended comprehension to the machines that he uses to fix broken bodies. Nott’s willingness to use machines for medical purposes demonstrates that Southern physicians were willing to expand their medical frontiers by expanding their mechanical understanding of the human body. The aforementioned use of the truss and plane (or the double inclined plane) to mend broken legs, which was pioneered by Dr. Nott, is still being used in various forms today for the same purpose. Dr. Nott’s double inclined plane is just one of many examples of how Southern physicians were willing to experiment with mechanical tools and these experiments resulted in different ways of correcting conditions.

\textit{Pioneering surgeries}

Not only did Southern physicians in \textit{The Journal} employ machines to aid in the treatment of their patients, in pioneering ways, they also began to use their mechanistic knowledge of the human body to perform surgeries that previously not been able to be performed. Southern physicians who were writing in \textit{The Journal}, when they encountered seemingly incurable conditions and diseases often used their new found mechanical knowledge of the human and in this case female, body to push the boundaries of medical practice. It was also at this time that American medicine was developing specializations in medical practice. The contributors to \textit{The Journal}, who were becoming increasingly specialized, sought like physicians in the rest of the country to make medical advancements. One of these specializations was the participation of American physicians in general and Southern physicians in particular in the treatment of gynecological conditions and female diseases. The


gynecological medicine that was being developed in the early to mid-nineteenth century by Southern physicians not only included the development of new gynecological surgeries but also the participation of Southern physicians in prenatal care and the attending of births. Since Southern physicians were attending more births, they wrote in The Journal about the ones that they found to be unusual and thus medically interesting, so that other physicians might benefit from how the Southern physicians handled the unusual cases. Dr. Antony wrote in his article “Contributions from the Obstetric record” about how physicians nationally and also in the South were increasingly entering into obstetric practice. Antony states that because physicians were relatively new to obstetric practice they needed to learn as much about it as they could about female anatomy and the birthing process.

That is to this preparatory knowledge, as that of chemistry, anatomy, physiology, &c. is to the business of curing diseases. The practitioner must learn thoroughly, healthy, healthy, natural labor with all its circumstances and characteristics, before he can be supposed in possession of ability of proper diagnosis a science itself, in importance, not less to the regarded, studied, and values in obstetrics, then in general pathology. And he must learn to determine, not only the phenomena which characterize those labors which nay need no more than ordinary friendly services in the lying- in room, but also all those which distinguish the various deviations there from.34.

Antony also writes about the merits of having a physician accoucheur instead of a mid wife:

Here is the merit of the accoucheur. Familiar with all ordinary and all extraordinary occurrences and with knowledge of the physiological and pathological nature of each, and their deviations from one another, he is at once prepared for efficient action, or prudent inaction, according to the real demands of the case.35

Antony is acknowledging not only the shift from midwives to physicians when it came to the attending of births but is also acknowledging that southern physicians, because of their understanding of the female body and the birthing process, as authorities in gynecological medicine:

Most of these births went normally following the natural progression of birth while others did not. The Southern physicians wrote in the journal about the cases of unusual births because they wanted to seek advice from their medical community as to, best handle regular and

34 Southern Medical and Surgical Journal Vol., I Jan, 1838 No. I 331.  
35 Ibid. 332
non regular births. One physician wrote about a case of a child that was born after the mother had died:

All of the bones of the head were removed, and the child shill did not advance. The uterus was in a very unfavorable condition for and operation of this kind, and the patient suffered so much, and was so much exhausted, that we thought it most prudent to desist for the present... She had become distended to fully twice her natural size with gas—not only the abdomen and thorax, but the head, neck, and extremities. I have no doubt that the child was forced out by this extrication of gas.36

Since the physician knew that a baby could not be born after its mother was deceased. The physician was able to use his mechanical understanding of the female body and the birthing process to determine a mechanical explanation for the unusual birth. Included in these births were those that were unusual due to anatomical anomalies in the mother. Professor Meig wrote about a very unique anatomical anomaly that he encountered when he was attending two separate births. The first case occurred in October of 1846 after observing that a mother was having great difficulty with a birth Dr. Meigs proceeds to manually determine why the birth is not proceeding normally:

It was but as moment that I indulged the idea of a rupture of the cervix, for upon pushing the index farther, and flexing the finger. I found I could draw the point of it outwards, pulling along with it the bridle in question. Still I did not understand the case until, having withdrawn the indicator. I examined with it the structure of the external parts, and then learned that the lady was possessed of a double vagina.37

Dr. Meigs, after discovering that his patient had the double vagina, had to perform surgery in order for the woman to be able to give birth. Dr. Meigs found it necessary to use his mechanical knowledge of the birthing process and of female anatomy to correct an anatomical anomaly and to deliver the fetus safely. Southern physicians in The Journal also wrote about unusual births that included twins and triplets. One case in particular involved the delivery of triplets two of which were head locked in the vagina making the delivery of all three babies incredibly difficult.” On this examination the doctor discovered the head of a third child below the superior strait, whilst the head of the second, whose body was delivered, was still above the same strait, constituting a case of locked head.”38

36 Southern Medical and Surgical Journal Vol., I May 1839 No.III 461 J.C. Nott.
38 Southern Medical and Surgical Journal Vol., I Oct, 1837 No. I 181
order to deliver the triplets the physician had to use his knowledge of the normal birthing process and his experience with abnormal births to determine the best course of action. The physician had to know the limits of the human machine and his own limits as to how much he could interfere and impact the mechanical process an abnormal birth. These records not only show that Southern physicians were attending more births, but that they were needed as medical professionals to perform deliveries of infants, that midwives might not have not been able to. By writing about these unusual births in The Journal, the physicians who had attended the births were trying to advance the medical practices of other southern physicians. These advancements led to a better understanding of birth and augmented the physicians’ mechanical understanding of the body. The gynecological articles in The Journal further the continued desire of the editors and contributors to The Journal to further the continued education of the readers of The Journal.

Southern physicians and birthing

Southern physicians were often also called into births that had started normally, but ended abnormally, thus going beyond the expertise of the midwives. One such case involves the failure of the placenta to be expelled with the fetus. In this case the placenta was retained for thirteen days and then expelled. The physician combined his mechanical understanding of the human body with heroic medical practices, the administration of ergot, and manual manipulation of the uterus, in which he attempted to manually remove the placenta that natural labor had failed to remove.

Having secured it there, the index finger of my right hand was introduced, per vaginam, slowly and cautiously. The complaints of the patient were boisterous during the stage of the examination, and when my finger reached the os uteri her agony seemed very great. I examined it, however, in the most gentle manner possible.

The physician is using his own hands as mechanical objects to aid in the mechanization of birth. This case once again demonstrates that not only were southern physicians attending more and more births but they were using anatomical knowledge to help correct gynecological conditions that sometimes resulted from those births.

Childbed convulsions

Southern physicians were also interested in finding a treatment for childbed convulsions that sometimes occurred after a birth and were one of the contributing factors for high post-partum mortality rates. One physician was able to stop childbed convulsions in one patient when he manually created convulsions of the uterus thus stopping the convulsions of the whole body. This physician was pioneering a new medical technique and was making advancement in gynecological medicine.

The uterus was immediately grasped and agitated repeatedly through the abdominal parietes until its contractions could be distinctly perceived to return with increasing strength, every four or five minutes. From the first application of the hand, no other paroxysm returned, and after about fifteen minutes from the commencement of this operation. The apoplectic symptoms disappeared, and she opened her eyes with intelligent expression.41

This physician also used his hands as a kind of machine and thereby was able to help the mechanical body of his patient work better. Southern physicians used not only their mechanical understanding of how the body worked in their medical practices, but they also employed tools such as the forceps and the speculum to aid in the deliveries they participated in and also in the gynecological surgeries that they performed.

Southern physicians, as the nineteenth century went on, performed more and more gynecologically-based surgeries, which became increasingly advanced and diversified as the nineteenth century went on. These surgeries were largely corrective in nature and demonstrate how Southern physicians were pioneering in a largely new field. One surgery that was increasingly performed was the correction of the prolapsed uteri. Another Southern physician writes to Dr. Antony about one of the cases of Prolapsus Uteri that he encountered in order to seek Dr. Antony’s advice about how to go about treating the painful condition:

But as uterine—i.e. prolapsus uteri as the original disease, and dysmenorrhoea, & c., as consequences of the primary displacement. To verify my diagnosis, I requested and was primary displacement. To verify my diagnosis, I requested and was permitted to make a vaginal examination, and thus found the os uteri resting on the perineum: its lips anterior and posterior, and its neck enlarged, indurated, and painful.42

The ability to correct gynecological conditions such as the Prolapsus Uteri was a new advancement physician. Such new developments in gynecological surgery, reported in The Southern Medical and Surgical

41 Ibid. 25.
42 Southern Medical and Surgical Journal Vol., I April, 1839, No. I 426. Vol.III. Augusta GA. Printed by Guieus & Thompson McIntosh street

Journal represent just another medical frontier that Southern physicians were blazing.

**Medical experimentation and the development of scientific medicine in the South**

The contributors to The Journal were not only performing pioneering surgeries but also participated in experimentation for the purpose of expanding their medical knowledge. This experimentation took several forms and further shows the eagerness of Southern physicians to advance medical knowledge and to report these advancements for the benefit of other in The Journal. It also shows that Southern physicians were advancing the development of scientific medicine. One area where the physicians of The Journal performed experiments and made medical discoveries was with regards to Galvanism. Southern physicians performed experiments to determine the medical usefulness of Galvanism. The contributors to The Journal had high expectations for Galvanism:

> We look with pleasure to the day when galvanism will become one of the most important and agreeable agents at the command of the practitioner for the regulation of excitement, especially local excess and deficiencies. We have witnesses for many years its decided power of lessening action at one pole and increasing it at the other—thus proving its power of translation or revulsion.\(^{43}\)

These high expectations led the physicians of the journal to perform experiments using galvanism to treat a variety of medical conditions. In the September 1839 issue The Journal once again discusses the medical benefits of Galvanism. Dr. J.A. Hamilton of Waynesboro Georgia writes that:

> I applied the box once, and let it remain fixed to the knee for one hour: at the end of which time, he was able to extend his leg nearly to its greatest length.... The next day, however, I found him, when sitting, or in a recumbent posture, able to extend the limb perfectly; but when in an erect posture, he was only able to bring the toes of the diseased limb to the floor. The Box was now applied again, and in one hour he was able to stand firmly on his feet. Two days after this second application, I saw him again, and was happy to learn that he had suffered no return of pain, and was able to pronounce himself perfectly well.\(^{44}\)

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\(^{43}\) “Medical Application of Galvanism Part III.-Monthly Periscope” *Southern Medical and Surgical Journal*, (Aug. 1836),183

\(^{44}\) “Medical Electricity” *Southern Medical and Surgical Journal*, (Sept. 1839), 764-765.
Dr. Hamilton has used the Electrical box, or Box of Sousselier which he had just obtained to treat a patient who had always suffered from bad health. Hamilton’s experimentation with the box does not contain any of the data collection that is now associated with experimentation but it is still a physician experimenting with an unknown tool. At a time when Galvanism and the nature of electricity in and outside of the human body were still being discovered, Southern physicians like Hamilton were using it with success to treat patients. However, Dr. Hamilton was not the only Southern physician experimenting with Galvanism E. L’Roy Antony, M.D. in his article “Hemiplegia: Notes on the Application of Galvanism with Sherwood’s Vibrating Battery.” Describes the mechanical electrical working of the human body:

That the human organism was nothing more or less than an electrical machine—that the various functions, secretion, assimilation, conception, &c., were only the results of the diversified plays of electricity under various forms and circumstances—that the “vis nervosa,” with its hundred cognomena, was electricity, galvanism, magnetism, or any other name, but still the same active and all pervading agent—that the nerves were only telegraphic wires, holding in communication the capital and every extremity of the empire- that animal life, in short, was only a result of its affinities! 45

Dr. Antony places his research with galvanism in the context of his training, which taught him to look at the human body working not just as a machine but as an electric machine. The electro-mechanical conception of the body prompted Dr. Antony to experiment using Galvanism to treat a variety of conditions including paralysis, Rheumatism and pleuritis. 46 The contributors to The Journal recognized they were in a unique position to expand to potential for medical practice. Southern physicians with their medical experiments regarding Galvanism generated a jumping-off point for further exploration and experimentation of the effects of electricity on the human body. This pioneering research provided insights into the electrical workings of the human body which is still being studied in modern medicine. Because Dr. Antony and the other contributors to The Journal wrote about their experiments, their results could be compared with the results of other physicians using Galvanism across the country. Also because the access to the machines used in Galvanism and the knowledge of how to use the machines was somewhat limited. The physicians who wrote about their experiments with Galvanism in The Journal were pioneers and provided examples for other Southern physicians, who would not have been able to be educated about

46 Ibid., 83.
the potential benefits of Galvanism any other way. The experimentation of the physicians of *The Journal* on Galvanism expanded scientific knowledge and it expanded scientific medicine in the South. This research into the use of Galvanism increased medical knowledge about the electromechanical workings of the human body and contributed to many modern medical developments including pacemakers.

*Southern medical experimentation with anesthetics*

Up until the mid-nineteenth century, the possibility of eliminating or reducing pain or sensibility during surgery had eluded physicians and surgeons. 47 With the discovery of ether and chloroform a whole surgical frontier was opened. The first physician to employ ether in a surgical procedure was “Without question the first individual to use ether as a surgical anesthetic was Dr. Crawford W. Long (1815-78) of Jefferson, Georgia (a Southern physician) …On March 30th, 1842, he removed a small wen or tumor from the neck of one James Venable while the patient was under the influence of ether”48. Dr. Long, a physician who practiced medicine on the American frontier was inventive in his medical practice by employing ether in his medical practice he was able to alleviate pain. Though Dr. Long was the first recorded use of ether in surgery, the first published surgery performed with ether was performed by Dr. Morton and Dr. Warren. Jacob Bigelow (1818-1890) in his article “Insensibility during Surgical Operations Produced by Inhalation” describes the first publicized surgery that was performed while the patient was under the influence of ether.

On the 16th of Oct., 1846, an operation was performed at the hospital, upon a patient who had inhaled a preparation prepared by Dr. Morton, a dentist of the city, would be alleged intention of producing insensibility to pain. Dr. Morton was understood to have extracted teeth under similar circumstances without the knowledge of the patient. They present operation was performed by Dr. Warren and, though comparatively slight, involved an incision near the lower jaw of some inches and extent. During the operation, the patient muttered, as in a semi-conscious state, and afterwards stated that the pain was considerable, though mitigated.49

Because of the use of ether, surgery started to become no longer a last resort for patients. Before discovery of the use of ether, patients usually only opted for surgery if they had conditions that that they were most likely going to die from if they did not have surgery.


With this opening of a surgical frontier, surgeries began to be considered as viable medical treatments and were no longer the last resort of desperate physicians. Another area where Southern physicians experimented was in anesthetics. In the late 1840’s Southern physicians began to employ chloroform and ether in their medical practices. Though the usage of chloroform had been started in Europe it was tested in surgical cases that were reported in The Journal. In the medical intelligence section of the February 1848 issue the editors report that:

The announcement of a new anesthetic agent, by Prof. Simpson of Edinburgh, has created quite a sensation in the medical profession of Europe. Etherization has been far more generally employed abroad than in the United States. It is there used extensively in the practice of Surgery and Midwifery, The distinguished Professor of Obstetrics in the Scottish capital, Dr. S., has been pursuing this subject like a true philosopher: and having satisfied himself and other that chloroform possesses decided advantages over ether, he has like Jenner, presented in it an invaluable agent to the medical profession- a great boon to the suffering humanity.\(^{50}\)

The editor has declared the discovery of chloroform to be a monumental medical advancement. The editor in the educational spirit of The Journal sought to inform his readers of the potential uses of chloroform. The physicians of The Journal did not leave the discovery of the potential medical uses for chloroform to the Europeans, but performed their own experiments with both ether and chloroform:

Jan 5\(^{th}\) Amputation of the Leg, for necrosis – complete insensibility was produced by the inhalation of sulphuric ether. The patient was a youth; aged 20,.... He had to be urged for several minutes to breathe the ether; experienced disturbed dreams, but states he knew nothing of the operation.\(^{51}\)

Jan 29\(^{th}\) Amputation partial of the foot—complete, death-like insensibility produced by chloroform. ... A sponge saturated with chloroform was forcibly held to her nose and mouth, and in a few seconds she was rendered insensible. She remained so for more than half an hour after the operation was performed and the dressing applied.\(^{52}\)

The editors of The Journal after performing their experiments proclaimed that:

\(^{50}\) Medical Intelligence: Medical and Surgical Journal Edited by Paul F. Eve MD Vol. IV 1848 New Series (Augusta: James McCafferty printer and publisher February, 1848), 122.

\(^{51}\) Ibid., 187.

\(^{52}\) Ibid., 187.
The chloroform acted promptly and efficiently in all the cases to which it was applied, giving entire satisfaction; but the insensibility was not continued long enough in one case, on account of the limited supply of it. We give out decided preference to chloroform, over ether.\(^{53}\)

The editors, like physicians in the rest of the country, performed scientific experiments in order to determine the usefulness of both ether and chloroform in surgical operations. The editors after seeing the benefits of anesthesia to surgical patients proclaimed that in surgical operations particularly birth that ether or chloroform should be employed:

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\text{Whether we shall be ‘justified’ in using this agent under the circumstances names, it will become, on the other hand, necessary to determine whether, on any grounds, moral or medical, a professional man cold deem himself ‘justified’ in with holding and not using any such safe means, as we at present presuppose this to be,) provided he had the power, by it, of assuaging the pangs and anguish of the last stage of natural labour.}^{54}\]

In sharing the results of experiments in surgeries using ether and chloroform in *The Journal* the editor is encouraging his readers to make experiments themselves and to develop their own conclusions based on their own experiments on the medical usefulness of ether and chloroform. The editor is encouraging his reader to practice scientific medicine and to be on the frontier of medical practice. The editor is also encouraging the readers to make strides in the continuation of the medical education of the readers of *The Journal*.

The increased experimentation with regards to chloroform, ether, and Galvanism is in line with feelings all over the South at the end of the 1840’s of heightened excitement about the progress of medicine at the time. This excitement was paired with a common desire to continue to improve and change medical practice. In his introductory address Dr. Daniel Drake addressed the incoming class at the University of Louisville in 1847. Dr. Drake encourages the students to advance the science of medicine.

Our students do not propose to themselves, that they will strive to enlarge the boundaries of our science. But why should they not? The American mind is not inferior in strength or invention to that of Europe\(^{55}\).

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\(^{53}\) Medical Intelligence: Medical and Surgical Journal Edited by Paul F. Eve MD Vol. IV 1848 New Series (Augusta: James McCafferty printer and publisher February 188)

\(^{54}\) Ibid., 191.

\(^{55}\) Daniel Drake M.D. *Strictures on some of the defects and infirmities of intellectual and moral character, in students of medicine; and introductory lecture, delivered in 1847.* Published by Prentice and Weissingger Louisville Ky. 1847) 15.
For Dr. Drake, Southern medical students should expand medical science. Also for Drake American medicine was becoming distinctive from European medicine. Dr. Drake hope for the future of American medicine was it would continue to push the boundaries of medical science. Dr. Drake also hopes for the continued medical education of Southern physicians through Southern medical schools, societies and journals. Drake was not the only physician who saw the potential for American (Southern) medicine to make its own frontiers. In his introductory statement to the 1850 edition of *The Journal* the new editor I.P. Garvin M.D. says

The medical profession in the south contains within its ranks as much intellect and scientific attainments as that of any other section, and an effort is all that is necessary to secure that place in the public estimation to which it is justly entitled. Already many of the contributors to this Journal have made themselves favorably know to their brethren throughout our country, and we hope that many more through the same agency, will obtain a like honorable distinction.\(^{56}\)

Garvin wants to continue in *The Journal*‘s tradition of advancing medical knowledge in the South. He also wants southern physicians to seek to further scientific medicine and he sees great possibly for this in not only the *Southern Medical and Surgical Journal* but in other Southern medical journals as well. Gavin sees that *the Journal* will continue in the mission of its founder Dr. Antony for medical advancement and exploration of medical frontiers. The physicians who wrote in the *Southern Journal of Medicine and Pharmacy*, which was published in Charleston and was edited by J. Lawrence Smith, M.D. and S.D. Sinkler M.D. also called for their readers to expand medical science. They characterize medical practice in the South as pioneering:

In our section of the country, something has been and may still be done, in aid of the advancement of medicine, which during the present age, has progressed with far more rapidity than could have been anticipated by the most sanguine of its professors. The microscopist and the chemist are now among the most conspicuous of its friends, and their labors have left and indelible stamp upon the future study of medicine.\(^{57}\)

By their journal, as with *The Southern Medical and Surgical Journal* they hoped to continue to advance medical knowledge in the South and to

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continue to encourage southern physicians to make and explore their own medical frontiers.

The excitement of the Southern physicians for the possibility of further medical advancement who wrote in *The Journal* corresponded with the national excitement of physicians across America. With the formation of the American Medical Association and meetings of the National Medical Convention in 1848, American physicians had high hopes that they would be able to solidify their professional imminence as the primary providers of health care in America. The struggle for professionalization for American, both northern and southern, physicians had been going on since colonial days. Southern physicians like physicians in the rest of the country knew of the lower-than-desired public opinion of physicians and that Northern physicians and others, sometimes viewed the Southern practice of medicine as backward because of its geographic remoteness. Southern physicians also knew that they were not backward and that they could be on the geographic and medical frontiers of the country. In order to expand the medical frontiers of nineteenth century American medicine, Southern physicians built on European traditions and used their European connections to further their understanding of the human body. Southern physicians expanded on and challenged European medical advancements. This desire to advance medicine throughout the South was facilitated in part by the increased mechanistic understanding of the working of the human body that the contributors to *The Journal* employed in their medical practices and then shared this mechanistic understanding of the human body with other physicians through *the Journal*. Southern physicians used their mechanistic understanding of the body to develop pioneering surgeries including gynecological ones. These surgeries led to the correction of previously uncorrectable corrections. They also used the new paradigm to employ machines in their medical practices, which, like the surgeries, corrected conditions that without the machines not have healed as well as they could have. Southern physicians continued to push the frontier of medicine with their experiments with Galvanism and anesthesia. The *Southern Medical and Surgical Journal* provided Southern physicians a place to report and discuss their pioneering medical findings and practices. *The Journal*, just like the findings contained within, was itself pioneering. I.P. Garvin M.D. in 1850 in a letter to the subscribers to *The Journal*, when he took over as editor outlines the purpose for *The Journal* and that purpose is to continue to be pioneering:

The legitimate object of the medical press is not the advancement of pecuniary interests, or the gratification of personal ambition- it had higher ends and nobler aims in view: therefore, among them can be now rivalry, but rather a noble emulation to excel each other in

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efforts to advance the cause of medical science, and thus to promote the physical welfare of their fellow man.\textsuperscript{59}

For Dr. Garvin and the other editors and contributors to The Journal, it would serve to encourage not only physicians in the South but also all American physicians to be pioneers on the frontiers of medicine. As the editors of Science and Medicine pointed out, Southern medical journals, like The Southern Medical and Surgical Journal, are calling out to be explored both for what they can teach us about medicine in the South and are also calling out to be explored for what they can teach us about the American medical frontier of the nineteenth century. The physicians who contributed to The Journal were aware of their potential contributions to the science of medicine, paradoxically in the modern day, the Southern Medical and Surgical Journal and others like it, Southern medical practice and the medical world of the nineteenth century are still wild frontiers that have only just started to be explored.