His color was unnatural, his appearance feverish, and his manner disturbingly preoccupied. "What has happened, Will? What have you been doing to yourself?" He explained that the experiment to compress the fourth ventricle had just had its initial tryout. He told of lying down, his head in the V-shape headrest; of imposing compression by gradual tension of buckle and strap. He described the sensations he had experienced as he approached near-unconsciousness. And that although weakened he had succeeded in releasing the leverage strap. "A sensation of warmth followed," he explained. "And also a remarkable movement of fluid, up and down the spinal column, throughout the ventricles, and surrounding the brain." His physical experience he summed up in one word: "Fantastic!" During this experiment two surprises had occurred. One seemed to be a fluctuant movement of the cerebrospinal fluid as opposed to the orthodox belief that the movement is circulatory. "That certainly has to be investigated," he declared. Of the other surprise he exclaimed, "Believe it or not, there also was a movement of my sacrum! What are we getting into? Is there no end to this?" Not only had the fourth ventricle evidently been compressed, the results opened further provocative channels for exploration.

With Thinking Fingers
Ada Strand Sutherland
P40

Ultimately the purpose of the CV4 is to restore normal function.

The most immediate structures affected by this procedure are the Physiologic Centers in the Floor of the 4th Ventricle, affecting Cardiac, Respiratory, and Vasomotor activity.

INDICATIONS: GENERAL
- Comprehensive and Effective
- Disturbed Body Function
- No one is too sick for a CV4
  "If you do not know what else to do... compress the 4th ventricle"

- Circulatory Stasis - Blood, Lymph, Cerebrospinal Fluid
- Venous Congestion
- Infectious Disease with circulatory disturbance
- Shock
  - Increased capillary permeability
  - Decreased blood volume,
    Anoxemia
  - Lowered blood pressure
- Hypo-Pituitary States
CNS Disease of Unknown Etiology
Hypertensive States
Rheumatoid Arthritis - weekly tx clears thickened fluids, normalizes immunology
Elimination of Foreign Bodies
A Clearance of Secondary Lesions

TECHNIQUE:

Position of the Hands
1. Patient is supine with operator at the head
2. Operator cups one hand inside the other or interlaces fingers
3. Hold the thenar eminences and thumbs parallel, and about 2” apart.
4. The patient lifts the head for introduction of the cupped hands underneath the supraocciput.
5. The supraocciput should come to rest upon the thenar eminences medial to the occipital mastoid suture.

Observe Function
“Once in contact, we become observers of things as they are. We are passive and our attention is directed to perceiving and interpreting the activities within the head.”

Anne Wales, DO
The Management of the Cerebrospinal Fluid
1953 OCA Journal p36

Action of the Operator
Spring the Occiput
1. The operators hands are medial to the Occipitomastoid sutures...
2. Use the flexor profundus digitorum muscles only.
3. Compression is maintained throughout the entire procedure.
4. We will “deepen the saucer.”
5. Follow and encourage the occiput as the transverse activity recedes into the midline during extension
6. Discourage the transverse expansion across the Occiput during flexion.
Perceptions During Technique
1. The amplitude of the motion will become smaller and smaller...
2. As extension is gently encouraged, and flexion is subtly discouraged... a Still Point may eventually be reached:
3. A point of intense inner activity with little or no perceptible external cranial motion.

Conclusion of Technique
1. After feeling the changes, follow the mechanism for a few cycles gradually reducing the tension in your hands.
2. Be sure the mechanism is able to go through free flexion and extension

Considerations
1. Alternate Locations of Contact
   a. Parietals (posterior angles)
   b. Temporals (mastoid portions)
   c. Sacrum - acute trauma to head

2. Patient Enhancement
   a. Exhalation and holding breath to the limit of tolerance
   b. Extend the feet, to encourage sacrum and occiput toward extension

3. Severe Occipito-Mastoid Compression or Severe Extension Mechanism may need to be freed up prior to applying CV4

4. Following CV4... check for ease of motion. Compressions or Severe Extension may result from incorrectly applied forces.

End Point
“You have brought the body of cerebrospinal fluid to condition where the whole - all around the brain, within the brain, all around the spinal chord is simply quivering or vibrating. In the still point that arises... the motor is idling and there is an interchange between all fluids of the body.”

W.G. Sutherland, DO
Teachings in the Science of Osteopathy p176

“When you learn to control the tide by compressing the fourth ventricle, you can secure immediately a rhythmic balanced interchange between all the fluids of the body, and I mean all.”

W.G. Sutherland, DO
Contributions of Thought p336

“It is the stillness of the Tide, not the stormy waves that bound upon the shore...”

W.G. Sutherland, DO
Teachings In The Science Of Osteopathy p173
Balanced Interchange of ALL Fluids of the Body.
   1. CSF, Lymphatic, Venous Stasis is overcome
   2. Vital Centers in Medulla, along Aqueduct, and in floor of 4th Ventricle are detoxified, nourished, stimulated
   3. CNS Vital Functions are normalized and restored
   4. Body Metabolism, Disease Resistance and Immunity is improved
   5. Pituitary Hypothalamic Complex is normalized.
   6. Lysis occurs in Fibrositis.

LAB:

HAND POSITION
   Supraocciput rests on Thenar Eminances - medial to O/M Suture
   The fingers are free and not pressing on the neck
SYNCHRONIZE with the cranial motion
DIAGNOSE - Rule out severe compressions, O/M restrictions.
   “SPRING” the occiput using light superior medial pressure
   MAINTAIN CONSTANT TENSION
   Encourage Extension/Exhalation... Gently discourage Flexion/Inhalation
WAIT / OBSERVE
   Amplitude of motion gradually decreases
   STILLPOINT (intense inner activity)
   Synchronized, smooth motion returns - “comes through”
   Signs of systemic change (diaphragmatic breathing, moisture on forehead)
END POINT - Motion Resumes... wait a few cycles to be sure mechanism is free

References:
3. Osteopathy in the Cranial Field. Harold I. Magoun Sr., DO; 1st and 2nd Editions.
2. Teachings in the Science of Osteopathy, Edited by Anne Wales, DO; 1990
4. With Thinking Fingers. Adah Strand Sutherland; 1962
Definition of Innovation:
Innovation is derived from the Latin *innovatus*, "to renew or change." which is derived from *in-novus* = "into the new". So, its central meaning is RENEWAL. Contrary to popular opinion, Innovation is not the introduction of something new. Rather, Innovation takes something that already exists and transforms it. Thus renewal requires that people choose to do things differently, outside of their norm. And this is exactly the story of Dr. Sutherland...

“The Cranial Thought belongs to Dr. Andrew Taylor Still, founder of osteopathy. The Old Doctor frequently referred to the osteopathic ‘squirrel in a hole in a tree.’ He had a grip on the squirrel’s tail, and we had to go on and pull it out. The cranial thought is simply a part of the process of getting the body of the squirrel out. The thought provides an avenue for ‘digging on’ through scientific research.”

Timeline:
1873: Birth in Portage County, WI. He lived in Minnesota and later in South Dakota.

1890 (17): He started working in his early teens to help to support his family financially. Worked his way up to foreman for the Blunt Advocate.

1893-1894/5: Attended Upper Iowa University. Then he returned to Mappleton, MN

1895: Worked as an Editor at the Austin Daily Herald (MN)

1897 (24): Dr. Sutherland first learned about Osteopathy and Dr. Still from his friend, Herschel Conner (who had relatives in Kirksville, close friends of the Still family). Conner had started at ASO that Fall. Sutherland visited the ASO and said “I think it likely that I will be back.”

1898-1900 (27-29): Attended ASO. Dr. Still was not actively engaged in the education of the students, but he was around, and exerted significant influence. Also of importance were the written publications of Dr. Still... These included:

*Autobiography*: Printed in 1897. All students in 1898 received a copy.


*Philosophy of Osteopathy*: Printed in 1899.

1899 (26): On his way to class he stopped before a display cabinet in the North Hall, that housed many of Dr. Still’s bone specimens.

His attention was drawn, as it often was, to a Beauchenne skull: a disarticulated skull with all the bones suspended in position.
“As I stood looking and thinking in the channel of Dr. Still’s philosophy, my attention was called to the beveled articular surfaces of the sphenoid bone. Suddenly there came a thought... I call it a guiding thought... ‘Beveled, like the gills of a fish, indicating articular mobility for a respiratory mechanism.’ ”

William Sutherland, DO
With Thinking Fingers p12-13

“I have frequently mentioned that the thought that came to me in 1898 was not mine. The thought of beveled articular surfaces in the skull and their indication of respiratory articular mobility seemed at the time as irrational to me as it does to many physicians in our profession today. However, there seemed to be a Presence nearby, the Creator of the cranial mechanism.”

William Sutherland, DO
Contributions of Thought 2nd Edition p228

What does it mean to be “looking and thinking in the channel of Dr. Still’s philosophy”? Today we speak of the Principles of Osteopathy:

1. Structure and Function are inseparable.
2. Function is Self Organizing: The Body Heals Itself.
3. Human Beings are a Dynamic Unity of Function.
4. Osteopathic Treatment is based on a rational understanding these principles.

Osteopathy is the expression of Natural Law in Human Form... ER Booth who wrote a history of osteopathy, said that you cannot understand osteopathy, without knowing Dr. Still... that’s quite a statement... So... looking at Dr. Still’s actual words:

“To obtain good results, we must blend ourselves with and travel in harmony with nature’s truths.”

Andrew Taylor Still
Mechanical Principles p17

“Your own native ability, with nature’s book, are all that command respect in this field of labor. Here you lay aside the long words, and use your mind in deep and silent earnestness; drink deep from the eternal fountain of reason, penetrate the forests of that law whose beauties are life and death.”

Andrew Taylor Still
Autobiography p152

“The human body is a machine run by the unseen force called life...”

Andrew Taylor Still
Autobiography p184

“We look at the body in health as meaning perfection and harmony, not in one part, but in the whole.”

Andrew Taylor Still
Mechanical Principles p44

“The God I Worship, Demonstrates All His Work.”

AT Still
Statue, Kirksville Mo.
This is the atmosphere in which Dr. Sutherland learned osteopathy. Dr. Sutherland stood in excellent company… Many of his classmates were greatly inspired and were themselves great explorers, including:

* E.P. Millard - who wrote Applied Anatomy of the Lymphatics, and
* Guy Dudley Hulett - a brilliant professor and author of a textbook of osteopathic principles.
* John Martin Littlejohn - founder of CCOM and BSO.

Why does Dr. Sutherland keep referencing this idea: ‘Beveled, like the gills of a fish, indicating articular mobility for a respiratory mechanism...’ as a “Guiding Thought?”

Dr. Sutherland said he didn’t do anything with it for quite a while.

The Early History of Dr. Sutherland’s Professional Life

A very brief format, presented by Dr. Sutherland’s 2nd Wife, Adah Strand Sutherland... Allows for insight into many intimacies, however, some information has been glossed over... for example, the details of Dr. Sutherland’s first marriage...

June 1900 (27): Dr. Sutherland graduates from ASO. Moves to Mankato, MN and sets up practice, and does quite well.

1901 (28): 1 year later. Moves to San Diego... following his inspiration to set up an osteopathic infirmary in California. Apparently, it didn’t go well.

1902 (29): 1 year later. He returned to MN. This time Duluth. But osteopathy was not well received in Duluth.

1905 (32): He marries.

1907 (34): He had a daughter. He moved to Mapleton and then back to Mankato, MN. Life does not appear to be very stable.

1920 (47): He divorces. His wife and daughter moved to California. Details of this time in Dr. Sutherland’s life are sparse.

1914-1925 (41-52 y/o): Several articles were written (see COT). None of them referenced any cranial thinking.

May 22, 1924 (51 y/o): He married Adah. During the years before their marriage (how many?), Dr. Sutherland gradually shared osteopathy and some of his ‘new’ ideas with her. She states that he had accepted the premise of cranial articular mobility by the time he first met her.

But, we don’t really know when Dr. Sutherland first decided to dig into this guiding thought of his.

1910-1920 (37-47) It was during this time period that he started to do something to get that crazy idea out of his head. He decided to to prove there was no mobility in the cranium. He went to the anatomical texts of the time and studied the cranial bones. He read of their shapes, their articulations, their various surfaces. But there was no information (at the time) that their articular surfaces indicated mobility. He took hold of the bones... just as Dr. Still had implored...
“When I commenced this study I took the human bones and handled them week in and week out, month in and month out, and never laid them down while I was awake for twelve months.”

Andrew Taylor Still
Autobiography p269

BONES & MEMBRANES

Guided by his crazy thought... He studied anatomy textbooks, and Nature’s Book. He needed to handle the bones of the cranium. He needed access to a disarticulated skull, and they were expensive. So he decided that old ‘Mike’ - his study skull - would have to be sacrificed. Instead of disarticulating by soaking a skull filled with beans, Dr. Sutherland used a small penknife, beginning with the Temporal Bone. This is a more difficult and meticulous process, requiring much skill, patience, and knowledge. He then developed an arrangement of screws and rubber bands to hold the bones together when he wanted to study the skull as a whole.

He started this process with the expectation of PROVING that there was NO MOBILITY between the bones of the skull. But as he disarticulated the bones he noted, first hand, the shapes and possible mechanical features of the various types of articular surfaces. They seemed to have too much purpose to be a part of an ‘inflexible dome’. In the various articulations he could see mechanisms for many different types of motion: gliding, rocking, rotation etc.

The question changed. It was no longer “Do these bones permit motion”, but “Are [these mechanisms] actively participating in the service of motion?” (WTF  p20)

He is beginning to see a larger context. Now he was thinking that there may be a mechanism of motion incorporating the skull as a whole.

Adah referred to this early period in their marriage the “Bone Period.” (With all this anatomic exploration, there were bones lying all over the house.) Engrossed in his study of Bones and Motion... Dr. Sutherland notes that the bones at the base of the skull are developed in cartilage, but that the bones of the vault originate in membrane. Though, this was familiar information, he read it with open eyes and he could see a new application or understanding from those familiar facts.

He saw a provision for FLEXIBILITY: “If there is articular mobility at the base of the skull, it has to be compensated for somewhere, somehow. And the vault bones could provide that compensation because they are formed in membrane.” (WTF p20)

The standard anatomy texts referred to the skull ossifying at the sutures starting at age 40 and continuing to age 80. Yet, he knew from his training with (and reading of) Dr. Still that living structure is very different from inanimate cadaver specimens.

Through the lens of his guiding thought, the study of bones and sutures reveals a Unified Theory of Osseous Function consisting of Cranial articulatory motion with an articular base, and a compensatory vault.

Next he looked to the STRUCTURE of the Dural Membranes, and their “reduplications” into the falx cerebri and tentorium cerebelli. He explored their attachments to the cranial bones, and postulated their FUNCTION, their role in cranial articular mobility, providing a regulatory tension, controlling boney movement.
He looked at these membranes as having a Unified Function, and he therefore referred to the whole of the dural membranes as a Reciprocal Tension Membrane.

He had two favorite ways of explaining their function:

1. “Visualize two upright poles with a wire stretched between them which is on continual tension. A pull on one pole causes the tense wire to pull the other pole in the same direction and to the same degree” WTF, p.31

2. Like... “the tension spring to the balance wheel of a watch which regulates and limits the to-and-fro movement of the balance wheel.” WTF, p.32

Each illustration deals with movement, controlled movement via a regulatory tension... for the purpose of maintaining mechanical balance.

So through the lens of a Guiding thought... and a study of dural membranous and cranial bones Dr. Sutherland realizes:

1. A Unified Theory of Osseous Function in the Cranial Articular Mechanism, and


Dr. Sutherland was adamant about applying his theories practically upon his own head... He sought DIRECT EXPERIENCE.

It’s now the late 1920’s: He has started experimenting on himself in his office when he wasn’t seeing patients. His first experiments (looking for evidence of flexibility within the living cranium) were a study of what occurs in the processes of yawning and mastication.

Though initially quite secretive, Dr. Sutherland eventually shared his learning, intimately, with his wife, Adah. He taught her several techniques that could be used, when he felt the need... and she would often participate in his experiments by applying gentle pressure on his head under his guidance while he was palpating for MOTION.

He would emphasize to her the need for lightness of touch. “Lighter, lighter...gentle...like the lighting of a bird upon a twig.” (WTF, p.34)

Dr. Still’s influence, of course was never far...

“An intelligent head will soon learn that a soft hand and a gentle move is the head and hand that gets the desired result.”

Andrew Taylor Still
Autobiography 2nd Edition p191

“Motion is the first and only evidence of life... by this thought we are conducted to the machinery through which life works to accomplish the results witnessed in 'motion'.

Andrew Taylor Still
Mechanical Principles p250
“The whole universe with all... forms and principles of life was formulated by the mind of an unerring God... He had placed all the principles of motion, life... inside the human body”

Andrew Taylor Still
Journal of Osteopathy, July 1897
1897 commencement speech
E.R. Booth PhD DO
History of Osteopathy p51

Adah described Wills pursuits being like... the putting the pieces of a jig saw puzzle together: “a little here, a little there... segments will combine into units... that will integrate into a meaningful whole with no gaps. Dr. Sutherland’s research was like that... but... he had no completed picture on a box cover to supply a preview. “He assembled parts for an unidentified goal, believing implicitly in the reality of its existence and merit.”

Dr. Sutherland’s ‘Guiding Thought’ continued to direct him. He devised tools to investigate the relevance of articular mobility upon his own mechanism. He did this in the privacy of his own office, initially without the knowledge of his wife, Adah... however...

“One day ...Will appeared... [with] his head lavishly swathed in a weird combination of heavy terry towels and clumsy leather straps. Realizing that his turban had not been removed, he confided, ‘I’ve started some experiments that I hope will verify some of my cranial theories.’ ” (WTF p33)

“He had arrived at a point where he must either establish or refute to his own satisfaction certain phases of his own reasoning, especially the physiologic involvements in the area of the fourth ventricle. He needed to learn through personal experience.” (WTF p38)

IN HIS WORDS:

“I have to be the guinea pig myself. It is the only way I can know. If the experiments are done on others, they will experience the sensations, feeling, reactions. They would interpret them for me, and I would have the information, yes. But still, but I would not know.” (WTF p38)

RESPIRATION

Dr. Sutherland had worked out the beveling of sutures for articular motion... and discovered the organizing dynamics of a RTM... but he instinctually knew there was more...

His guiding thought “like the gills of a fish... articular mobility for a RESPIRATORY MECHANISM.”

Dr. Sutherland felt: “There must be something else, something first... we must get back to the spark that ignites the motor... back to the central station.”

Always searching, always learning... he came upon new information... “All the physiological centers including that of respiration, are located in the floor of the fourth ventricle.”

“The same text referred to the medulla oblongata as the ‘floor’ and the cerebellum as the ‘roof’. So, in accordance with the cue of gathering information, I reasoned: If one were able to enter within the cranium and compress the cerebellum in the manner utilized in compressing the bulb of a sphygmomanometer, it would effect motility in the walls of the fourth ventricle with subsequent motion of the cerebrospinal fluid....I also reasoned that the compression would affect physiological centers in
the medulla oblongata, and in consequence, the secondary physiological activity throughout the body systems.”

So, here, in the 4th Ventricle was the primary physiologic center of respiration. Dr. Sutherland had found something behind thoracic respiration. He began to think of diaphragmatic breathing as Secondary, and the respiratory centers in the fourth ventricle as Primary. The seeds of Dr. Sutherland’s PRIMARY Respiratory Mechanism had begun to sprout.

Respiration was not just the breath of air…but approached his understanding of “The Breath of Life.” His was a strong spiritual focus, much as with Dr. Still. Will Sutherland would often stress his relationship to his Maker, using terms such as “the Breath of Life... That ‘spark of ignition’ which activates the motor (of the brain) into an animate mechanism that utilizes the breath of air in the service of respiration.” (WTF p.36) This focus was often met with criticism. He held his philosophy close and never defended it, he just stated it.

Aware of Dr. Sutherland’s intentions to compress his own 4th ventricle, Adah, was, of course, quite worried… “What if something critical might happen?” Will would respond, “Don’t you worry. I will know what to do.” “I am doing this because there is some reason why I must. I have been so the entire way, and this is but one more step. I have been taken care of and I know that protection will continue. Amazing things opening up. I haven’t been brought this far only to be let down. There is no need for fear or doubt. (WTF p54) Adah was keenly aware that the Sutherland Family Crest read SANS PEUR (meaning “Without Fear”).

In his experiments Dr. Sutherland laced together two catcher’s mitts, and attached a strap to one and a buckle to the other.

He laid his head in the V-shape head-rest and applied compression by gradual tension of the buckle and strap until:

(Just at this moment, Adah walks in... “The doing had been been done.”)

“His color was unnatural, his appearance feverish, and his manner disturbingly preoccupied. “What has happened, Will? What have you been doing to yourself?” He explained that the experiment to compress the fourth ventricle had just had its initial tryout. He told of lying down, his head in the V-shape headrest: of imposing compression by gradual tension of buckle and strap. He described the sensations he had experienced as he approached near-unconsciousness. And that although weakened he had succeeded in releasing the leverage strap. “A sensation of warmth followed,” he explained. “And also a remarkable movement of fluid, up and down the spinal column, throughout the ventricles, and surrounding the brain.” His physical experience he summed up in one word: “Fantastic!”

“During this experiments two surprises had occurred. One seemed to be a fluctuant movement of the cerebrospinal fluid as opposed to the orthodox belief that the movement is circulatory. “That certainly has to be investigated,” he declared.”

“Of the other surprise he exclaimed, “Believe it or not, there also was a movement of my sacrum! What are we getting into? Is there no end to this?” Not only had the fourth ventricle been compressed, the results opened further provocative channels for exploration.” (WTF p 40)
Dr. Sutherland further discusses this event in Contributions of Thought:

“My senses reached a stage of almost complete inanimation. Then followed an intense sensation, as though someone was milking or stripping the digits of my feet and hands towards the hips and shoulders together with a sensation throughout the entire body, organic and osseous... I managed to release the buckle of the leverage strap.

“The release was immediately followed by a sensation of warmth at the area of the cisterna magna and fourth ventricle and a remarkable movement of fluid became noticeable up and down the spinal column, throughout the ventricle and surrounding the brain. I interpreted this movement of fluid as a respiratory fluctuation of the cerebrospinal fluid.”

William Garner Sutherland, DO
Contributions of Thought, 2nd Edition, p230-1

This first CV4 experiment revealed

1. Involvement of the Sacrum:
   “While this fluctuation became noticeable, there was also an apparent movement of the sacrum between the ilia that was rhythmical with a definite movement of the bones of the skull.”

   Which lead to further experimentation upon the Sacrum, so that he may better understand its role in the motion of the cranium.

   “He would lie down and put a pad under the base of the sacrum which threw it into extension. He stated that he noted a curious restriction in the CSF and a ‘dull, heavy sensation’ in certain areas of his head.” (WTF p 43)

2. Motility of the CNS:
   “I also sensed an active motility of the brain and spinal cord, the latter shortening, drawing upward like a tadpole’s tail, followed by a reciprocal downward lengthening.”

William Garner Sutherland, DO
Contributions of Thought, 2nd Edition, p230-1

This Guiding Thought has now led Dr. Sutherland to Discover

1. A Unifying Theory of Mechanical Articulatory Motion of the Cranial Bones.
2. A Unifying Theory of Function of the Dural Membranes as a Reciprocal Tension Membrane
3. The presence of an underlying Primary Respiratory Mechanism, preceding Pulmonary Respiration
4. A Fluctuant Activity in the CSF
5. An involuntary Mobility of the Sacrum between the Iliia...
6. An inherent motility of the CNS...

Adah described Dr. Sutherland’s emphasis upon research as “A response to underlying drive and intuitive sense of direction he could not disobey. It was an inner orientation, faith, self-discipline.
The Research continued...

While out and about, Will and Adah would always be observant of the multiple heads in view. He called this activity “Head Hunting.” They would note facial contours and cranial asymmetries. He would reason underlying cranial bone distortions, and their potential causations.

Dr. Sutherland would then apply devices to his own head...elaborate mechanism of straps, pulleys, pressure from his feet to induce a compressive force, and his own hands on the temporal bones. All to re-create these distortions within his own physiology... This proved to be one his more serious experiments, as he was deliberately compressing his own O/M sutures...

Adah recounts the following, after one of his experiments: He was not ‘himself’; he was nervous, tense and irritable which was opposite from his normal demeanor. His color was drained. He began seeing things. He intentionally stayed in this lesion pattern for a few days to fully experience it. He developed techniques to resolve these strains that he imposed upon himself. Essentially reversing the process gently and completely return to normal.

Using helmets and straps, Dr. Sutherland thoroughly reasoned out the processes of injury, as well as those of recovery. He created various strains on his own head. The effects of creating an EXTENSION STRAIN through his own SBS were particularly noticeable. His orbits became narrow, and his vision blurred myopically. Of particular interest was the SPHENOID... and its effects upon the orbit and face.

SUTHERLAND FULCRUM:
Dr. Sutherland would stand on his head and feel the tensions through his own membranous mechanism. He became aware of a point of focus in his head: A fulcrum, around which the entire membranous articular mechanism moved. He called this a Suspension-Automatic-Shiftign Fulcrum, located at the junction of the falx and tentoria at the straight sinus. His students would later call this the SUTHERLAND FULCRUM.

INSPIRATION

Each day, and this was frequent, he turned to what he alluded to as “Pause-Rest” periods of silence with no outward evidence of activity. This was done with utmost simplicity and naturalness. From these contemplative oases there came some of his most productive reasoning and results. It is why he said with entire sincerity, “This cranial thought is not mine.”

He liked the phrase: “Be Still and Know.” and “Closer is he than breathing.” and “Listening to silence.” He used as an analogy the composer who makes as powerful a use of silences as he does of sounds…. and referred to these as “Communicative Silences.”

Adah said: Dr. Sutherland had no denominational affiliation, but he was affiliated!
THE PRIMARY RESPIRATORY MECHANISM

Dr. Sutherland integrated this discoveries, into an understanding of a physiologic system he referred to as a Primary Respiratory Mechanism.

PRIMARY:
  Being first in importance, Underlying all life processes, Giving dynamism and form to anatomy and physiology

RESPIRATORY:
  Referring to the exchange of gases and other metabolites, with inhalation and exhalation phases of motion

MECHANISM
  All parts interdependent, working as a whole, like a machine

He described 5 components or phenomena of this Primary Respiratory Mechanism that he had discovered through his experimentation:

1. Articular Mobility of the Cranial Bones
2. Mobility of the RTM
3. Fluctuation of the Cerebrospinal Fluid
4. Articular Mobility of the Sacrum between the Ilia
5. Inherent Motility of the CNS

But he did not stop here...

PRACTICE & TEACHING

Like Dr. Still, Sutherland had a strong spiritual focus in his life, and he would speak of “The Breath of Life.”

“The spark of ignition that activates the motor (of the brain) into an animate mechanism that utilizes the breath of air in the service of respiration.”

All this experimentation, research, and clinical development took place between 1900-1930...

His anatomical research and disarticulation probably began in the 1910’s and the personal experiments started in the early 1920’s.

He had so much information and direct knowledge from direct experience on himself that he began to feel he’d reached a “Bridge of Obligation.” It was now necessary to start putting his understanding to the clinical test. So he began palpating heads and treating some select patients and family members. He initially used his “helmet bandage” as well as some of the manual techniques that he was starting to develop.

And Dr. Sutherland began to teach... timidly at first:

1929: He presented a talk on Bedside Technic with some references to cranium. There was no response. “I shot an arrow into the air, It fell to earth, I know not where.” There were limited responses to further presentation... “I don't know what that last part was about it was over my head.”

1930: A brief manuscript relative to the cranium sent to Kirksville. No response.
Letter sent to Still-Hildreth Osteopathic Sanitorium telling of his research and results in practice. Descriptions of bandage experiments: response was limited to the bandages: “how we could keep the bandage of that character on the heads of many of our kind of people.”

1931: The Northwest Bulletin of the Minnesota State Osteopathic Association. Skull Notions by Blunt Bone Bill. Aroused interest and curiosity. He was invited to present his cranial ideas at a few nearby state conventions, there was the printing of several cranial articles, and finally an invitation to present cranial material at the 1932 AOA convention in Detroit. Only 7 “listeners” showed up.

1934-1939: The Osteopathic Profession - articles that stirred healthy discussion through letters to the editor. Requests for advise. He could only generalize of course. He was becoming defined as a specialist… which was not his desire. This is not a specialty, this is osteopathy.

In three articles he used an illustration of the helmet-bandage arrangement, thinking this might spur interest in the underlying dynamic principles, and give credibility to his statements, however, his underlying reasoning was completely missed. “Would like to try your intracranial paraphernalia… Could you have one of those made for me, and what would it cost?” or he was berated for “betraying the osteopathic principles he was ‘supposed to represent’.” They assumed he was promoting an adjunctive device. In his desire to remove obstruction to receptivity, he unintentionally placed a stumbling block in the paths of some colleagues who judged without investigation…

Dissatisfied with his clinical progress during this phase of his study, and felt a compelling need to observe and analyze a greater variety of pathological conditions in infant and children, than his practice allowed for. He devoted 5 years of voluntary service to children at an eye and speech clinic in St. Paul / Minneapolis, two days per week for consultations on children with spasticity, hydrocephalus, cerebral palsy, and mental retardation.

1939 (66): Publication of The Cranial Bowl. A simple framework. He was convinced that the presentation of theory must precede all else. Declarations of clinical success were seen as ostentatious. Only a few copies sold. Additional mailers went out. Prices were lowered… twice.

In the latter part of 1939 Dr. Sutherland received a series of invitations for lecture appearances in 1940, including a discussion of “The Cranial Bowl” on 2 subsequent days at an eastern state osteopathic convention. Protests created cancellations.

1940 (67): Presentation before the International Society of Technicians were well received.

Gradually requests for cranial study came to his desk. Reports from other physicians having clinical success… as they “learned for themselves.”

1942 (69): A pivotal year. Lippincotts studied with him.

Perrin T. Wilson of Cambridge, MA developed a Tic Douloureaux after a dental procedure, and was able to treat himself, successfully. T.L. Northup of Morristown, NJ treated a case of long standing migraine successfully.

Invited Dr. Sutherland to present cranial concept to 6 physicians prior to the AOA convention in Chicago… officers and members of the soon-to-be Academy of Applied Osteopathy. This was the first time anyone with organizational status invited Dr. Sutherland to speak. Unanimous Approval.

1944 (71) First Basic Cranial Courses began in 1944: These first courses were two weeks long.

First Week: Anatomy by Paul Kimberly, D.O.
Second Week: Faculty was Drs. Sutherland, Howard and Rebecca Lippincott, Anne Wales, Harold Magoun, Sr., Rollin Becker, et al

1945: (72) Publication: Compression of the Condylar Parts of the Occiput.

1946: (73) Formation of Osteopathic Cranial Association (OCA)… “I am walking in a dream.” Started as and affiliate of the AAO, Later renamed The Cranial Academy, Recently renamed The Osteopathic Cranial Academy.


Move to Pacific Grove: 53 Asilomar Dr… The Fulcrum.

1953 (80): Formation of SCTF

Purpose:

1. To conduct research attendant to the cranial concept, on a scientific basis acceptable to others.
2. The continuance of instruction according to his original concept.
3. Because of perceived unsympathetic elements within the profession, that might obstruct cranial progress, the SCTF would operate independent of affiliation, so as not to implicate or embarrass either the AAO or its component, The Cranial Academy.

Dr. Sutherland’s health began to decline, but his innovative nature continued. During this period he created the Venous Sinus Drainage Technique, and taught it to visiting students, for his own treatment.

September 23, 1954 (81) William Garner Sutherland passes away. His grave is located, just a mile from his home in Pacific Grove, California… The only words on his grave: "BE STILL AND KNOW"

SUMMARY

Dr. Sutherland’s legacy, The Primary Respiratory Mechanism, provides an extraordinary expansion of osteopathic understanding.

1. Fluctuation of the Cerebrospinal Fluid and the Potency of the Tide

Though he explored bones first… Dr. Sutherland came to understand, and emphasize that The Fluctuation of the CSF and the potency of the Tide were the most important aspect of the PRM.

“I am making a special effort to stress the point that I consider the fluctuation of the cerebrospinal fluid to be the fundamental principle in the cranial concept.”

William Sutherland, DO
Teachings in the Science of Osteopathy p14

“Within that cerebrospinal fluid there is an invisible element that I refer to as the ‘Breath of Life’ …A fluid within this fluid, something that does not mix, something that has potency as the thing that makes it move… A potency, an intelligent potency, that is more intelligent than your own human mentality.”
“This potency is an invisible ‘fluid’ within the cerebrospinal fluid. The potency of the Tide is what we have to consider - something with more power in the reduction of membranous articular strains of the cranium than any force you can safely apply from the outside.”

2. Reciprocal Tension Membrane & Sutherland Fulcrum
The Dura Mater is understood as as single unit of function: The Reciprocal Tension Membrane with a Central Organizing Fulcrum in the Straight Sinus.

3. Inherent Motility of the CNS
The CNS is seen as having intrinsic motility, function giving rise to form.

“The mobility of the bones of the skull is accommodative to that mobility within the brain and spinal cord and to the fluctuation of the cerebrospinal fluid.”

“The motility of this neural tube begins to form osseous gears in the mechanism.

4. The Articular Mobility of the Cranial Bones
All Bones move with Primary Respiration all bones possess an intimate relationship with the motion of the Cerebrospinal Fluid, Reciprocal Tension Membrane, and the Central Nervous System.

Midline bones
  Flexion (Inhalation)
  Extension (Exhalation)

Paired bones
  External rotation (Inhalation)
  Internal Rotation (Exhalation)

5. The Articular Mobility of the Sacrum and the Core Link
The SACRUM is a midline structure... Which FLEXES (during INHALATION Phase) and EXTENDS (during the EXHALATION phase). Its movement is INVOLUNTARILY around a RESPIRATORY AXIS at S2. Its motion is intimately related to the CRANIUM via the SPINAL DURA... with functions as a CORE LINK

Dr. Rollin Becker, a very close student of Dr. Sutherlands, has written eloquently about the functional integration of this Primary Respiratory Mechanism:

“We cannot say whether the bone moves the membrane or the membrane moves the bone because this membrane is part of the bone - it is the inner lining of it.
In addition, the whole dura mater, including the spinal portion, is filled with a fluctuant cerebrospinal fluid and a motile nervous system. It is the *total unit* that is in motion, although in our palpation, we may focus on one part or another.”

Rollin E. Becker, DO
The Stillness of Life, p.125

“The primary respiratory mechanism is this complicated anatomicophysiological unit that is responding to the Breath of Life. The functioning of the primary respiratory mechanism is absolutely dependent upon the Breath of Life, the still point, the potency. And whereas we define the primary respiratory mechanism in terms of its various units, a series of units within units, there is one basic pattern of motion, of flexion and extension during inhalation and exhalation, as a result of a spark called the Breath of Life, which is transmuted into function within this very complicated mechanism.”

Rollin E. Becker, DO
The Stillness of Life, p.124

CLOSING

We are all the students of Dr. Still and Dr. Sutherland. It is our privilege to partake of this legacy. It is both exhilarating and humbling.

As the students of Dr. Still and Sutherland, each of us partakes in the constant renewal of osteopathy. We are, in fact, all innovators. For mastery in the Science of Osteopathy, requires each of us to discover it anew.

Dr. Still says:

“Osteopathy is a science that analyzes man and finds out that he partakes of Divine intelligence. It acquaints itself with all his attributes; and if the student of it does his work well, and goes out into the world with his brain full of its teachings, he will find by results that its principle is unerring. God manifests Himself in matter, motion, and mind. Study well His manifestations.”

Andrew Taylor Still

In Dr. Sutherland’s Words:

“In this cranial concept we have been thinking with Dr. Still in our endeavor to tap this great river of life, the cerebro-spinal fluid, and we hope you may understand how the cranial concept became a contribution of thought, directing attention to a hitherto unexplored area, or channel in the science of osteopathy.”

William Sutherland, DO
Contributions of Thought p188

“All that I have done is to pull aside a curtain for further vision.” (WTF p98)

William Sutherland, DO
With Thinking Fingers p98
References:

2. Teachings in the Science of Osteopathy, Edited by Anne Wales, DO; 1990
3. With Thinking Fingers. Adah Strand Sutherland; 1962
4. Autobiography: Andrew Taylor Still, 1897 & 1908
5. Philosophy and Mechanical Principles: Andrew Taylor Still, 1892 & 1986
6. Philosophy of Osteopathy: Andrew Taylor Still, 1899