

## No 23a Frank Pierce Jones (1904-1975) (II)

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1. The last time I told you about Frank Pierce Jones' early life and how he came into the AT and became a successful teacher. But as he said, the more he worked with the Technique the more:

*It was increasingly frustrating for me that I was unable to produce any objective evidence for a principle that my senses told me was true and my experience convinced me was of fundamental importance.<sup>1</sup>*

2. No one was doing the scientific research Jones felt was needed and he found himself being driven towards doing it himself. The question was how to go about it.
3. He felt he had a choice between two basic approaches. One was do "before and after" clinical studies, using two groups. One group gets lessons and the other, the control group, does not and you see what is the difference between the two groups after a certain number of lessons.
4. This is the normal approach when new drugs or methods of medical treatment are being tested. It was, for example, the basis of the big study on the effect of the AT on low back pain carried out a few years ago. The results were published in the British Medical Journal in December 2008 which you can read about on the STAT website at [www.STAT.org.uk](http://www.STAT.org.uk)
5. While Jones did not dismiss this kind of study, he felt that it left too many loopholes for critics and sceptics. He quotes an experience of his own in which he taught a badly crippled girl of seventeen to walk. She had suffered from Still's disease at nine months – it's a form of rheumatoid arthritis. Her legs were desperately thin and she could only swing herself around on crutches.
6. Jones gave her lessons and she learned how to walk, first with the crutches and then without them. It happened in a large hospital and the process was observed by four doctors and several nurses. Everyone was delighted with the girl's progress but they couldn't accept that the Technique, as such, was making any physiological difference. They said that Jones had used suggestion to restore the girl's confidence in herself.<sup>2</sup>

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<sup>1</sup> Jones (1976)p105

<sup>2</sup> Ibid.p95

7. So, even strong positive results are not necessarily persuasive since they might be explained by improved motivation or the placebo effect or something else the person was doing.
8. Similarly, negative results, or the fact that no change occurred in a person after AT lessons, might not be a reflection on the Technique as such but on how well it had been taught or how well the person learned to apply it.
9. Given these problems, Jones felt it would be scientifically more convincing if he could find a way of identifying the actual physiological effects of the Technique in practice.
10. He went back to his own experience when AR Alexander had adjusted his head-neck relationship and took him out of the chair. He said:

*It was as if the act of rising, which I had always performed so laboriously before, was being done for me by a set of reflex machinery whose operation I knew nothing about.*<sup>3</sup>

11. It was true that when he tried to repeat the experience on his own he found he could not. It took him a lot more work with the Alexander brothers before he was able to assimilate this new way of using himself into his everyday patterns of activity and then learn how to pass on the experience to pupils.
12. But he was convinced that if he could identify what caused the sense of ease and lightness that he had experienced with AR and that he himself had learned to convey to his pupils, he would be on the way to a physiological understanding of what was going on when people have AT lessons.
13. It meant he had to devise a way of making objective measurements of what was happening in the neuromuscular system of people while they had such an experience of ease and lightness. He summed it up as studying *“the physiological correlates of the kinaesthetic effects that can be produced in a single lesson.”*<sup>4</sup>
14. This is much more difficult than before-and-after studies. But Jones felt that it would take him to the heart of the issue. His problem was that he had no background in experimental science.

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<sup>3</sup> Jones (1998)p221

<sup>4</sup> Jones (1976)p108

15. So he had to go back to the beginning, think up the kind of experiments he wanted to do, figure out a way to do them, then find the necessary experimental equipment and train himself in its use.
16. So when a pupil who had recovered from a serious heart condition gave him \$500 for research, Jones decided to spend it on a preliminary study using electromyography – the measurement of electrical impulses in muscles – to examine muscle activity when people sat in their “habitual slouch”, when “sitting straight up” and when “guided” in an Alexandrian way into a new sitting posture.
17. He did the work at the Tufts University Institute for Applied Experimental Psychology. It was a small beginning and though the results were not published, the project provided him with one of the research tools he needed.<sup>5</sup>
18. He then got another gift of \$500 for research from a pupil whose blood pressure, after thirty years of hypertension, had come down to normal. He used this to experiment with the use of various kinds of multiple-image photography to record patterns of movement in people.
19. He attached small lights or reflective tapes to people and as they did things like getting in and out of a chair in their normal way and under Alexandrian guidance, the camera recorded the successive stages of the actions. In this way he was able to show in a single picture what was happening when a particular action like getting out of a chair took place.
20. These pilot projects led to him being appointed as a Research Associate at Tufts and he went on to become a Professor of Psychology. He also managed to get a grant from the Carnegie Corporation which, in turn, led to support from the US Public Health Service for seven years.
21. When that came to an end, as he put it himself, he “accepted” a professorship in classics at Tufts and continued his research on a smaller scale through government contracts and gifts from pupils.<sup>6</sup>
22. Over the twenty-five period of his research career, Jones and his research assistants published the stream of papers that are reprinted in his *Collected Writings*. The papers can be divided

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<sup>5</sup> Jones (1998)p74

<sup>6</sup> Jones (1976)p108

into two categories: the description of scientific experiments and more generalised discussions of the AT and its principles.

23. Just illustrate the breadth of his mind, one of them, called *A note on the Latinity of Sir Charles Sherrington*, points out an error Sir Charles Sherrington made in quoting from a paper in Latin by a 16<sup>th</sup> century physician.<sup>7</sup>
24. Another is a long literary review of Aldous Huxley's novel *Eyeless in Gaza*.<sup>8</sup> I think it's pretty dreadful as a novel but Jones is kinder and very constructively sees it in an Alexandrian framework.
25. As for his scientific results, he was able to show, through the use of multiple image photography, that the feelings of ease and lightness experienced when actions such as walking and getting in and out of a chair were carried out with Alexandrian guidance could be correlated with measurable changes in the way the body carried out the actions without the Alexandrian guidance.
26. They also used electromyography to measure changes in muscle tension. In one experiment, they measured the activity of the sternocleidomastoids and other shoulder-neck muscles of people sitting in a chair. They found that asking people to sit in their "best" posture involved increased muscular activity, whereas the "guided Alexandrian" posture involved no increase in muscle activity.
27. They also took x-ray photos to examine how the habitual head-neck relationship was changed when it was worked on by an Alexander teacher.
28. Jones says:

*The experimental (ie Alexandrian) posture is again distinguished by greater intervertebral distance...and greater distance between the markers indicating the length of the sternocleidomastoid muscle.*<sup>9</sup>
29. What Jones' x-ray photos were showing was a less compressed neck and less tightened sternocleidomastoids.
30. In other experiments they used a force platform – a sophisticated type of bathroom scales – to compare the force people exerted on the ground when getting up from a chair in

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<sup>7</sup> Jones (1998)p237

<sup>8</sup> Ibid.p315

<sup>9</sup> Jones (1976)p119

their habitual way and in a guided Alexandrian way. With one subject, they found that when the movement was guided, the force exerted was 25 lbs (about 11 kg) less than when the person heaved themselves out in their habitual way.

31. These experiments gave Jones a great deal of data on the difference between the habitual use patterns of the subjects and when they carried out the actions in an Alexandrian way. But he wanted something deeper.
32. What in neurophysiological terms did these changes mean? Why did having their head-neck relationship adjusted make such a difference to the ease and lightness with which a person performed these actions?
33. Here Jones went back to the work of Magnus and Sherrington on the postural reflexes.
34. He particularly focused on what are called "*the righting reflexes*". These are the reflexes that automatically restore an animal to its naturally balanced state when an action has been completed.
35. The most spectacular example is when a cat is held upside down by its legs and then let it go. The head turns, then the front and back limbs come round and the cat rights itself and lands on its four legs. This all happens completely automatically, in accordance with the cat's inbuilt reflex system.
36. Humans also have a series of reflexes which restore the body to its natural balanced posture. They are particularly triggered by the relationship between the head and the neck. One of Magnus' conclusions that we have adopted as our own is *The mechanism as a whole acts in such a way that the head leads and the body follows.*<sup>10</sup>
37. We can see this in action if we turn our head and then allow our reflex system to take over. We find that a cascade of reflex impulses is transmitted down through our musculature to bring it back into harmony. These are often referred to as the "*neck righting reflexes*"
38. Jones sums up his conclusions in what he calls a working hypothesis in which he says:

*...what Alexander discovered in himself and later demonstrated to others was a means for reintegrating the righting reflexes on a conscious level and releasing*

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<sup>10</sup> Magnus (1924)p536

*an 'attitude' or tensional pattern that had been imposed on the body by the displaced position of the head, a displacement which in his case became intensified under the stress of public speaking.<sup>11</sup>*

39. In the penultimate chapter of *Freedom to change* Jones says the same thing in a different way:

*In malposture, muscles in various combinations and degrees of tension have shortened, displacing the head or holding it in a fixed position. Head displacement would have an adverse effect on the rest of the body partly because of the added weight and strain put on muscles and ligaments, but largely, I believe, because of interference in the righting reflexes by abnormal pressure on the joints of the neck...<sup>12</sup>*

40. In simpler language, if we distort the head-neck relationship by pulling the head back and down, this interferes with our whole muscular mechanism. The Technique provides us with a means of getting the head-neck relationship right which allows the neuromuscular system to function as it should. Jones' work provides us with a way of describing this in scientific language.
41. Jones died as he was putting the finishing touches to his book so we will never know how much further he would have been able to take things had he lived. But he left us with quite a rich treasure trove of scientific insight.
42. For those of you who want a short-cut, the paper published in 1965 under the riveting title of *Method for Changing Stereotyped Response Patterns by the Inhibition of Certain Postural Sets* is probably the best summary of his experimental work and thinking about the AT.
43. A paper he wrote in 1953, called *Psychophysical Reeducation and the Postural reflexes* is shorter and easier. Another useful summary is in a 1963 paper called *The influence of postural set on pattern of movement in man*.
44. In his work, Jones made a deliberate choice to root the Technique firmly in the language and practice of science. I think Missy Vineyard neatly summed it up when she said he:

*...believed that the Alexander Technique contributed decisively to our knowledge of human behaviour and*

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<sup>11</sup> Jones (1998)p61

<sup>12</sup> Jones (1976)p148

*offered a new and more effective approach to maintaining health and enhancing wellbeing. He wanted the work to reach public awareness, and he wanted the scientific and educational communities to seriously consider its implications.*<sup>13</sup>

45. I agree with that. If we are to become as widely accepted as we wish and believe we deserve to be, it is important to be able to talk to the scientific and medical professions in a way that they feel comfortable with.
46. Looking back on Frank Pierce Jones' career, we can say in relation to the AT that he contributed to a deeper understanding of what we do. He also made it clear that the AT is a living and creative resource for how we go about living our lives and that we have to keep renewing it for ourselves.
47. He also expanded the way we can talk about it especially to scientists and medical people. These are two substantial achievements.
48. All round, he was quite a remarkable man. When he died of brain cancer in 1975, at the age of 70, he had become a full professor of psychology at Tufts, he was emeritus professor of classics, he could speak Greek and Latin and other languages fluently, he had an Alexander teaching practice and he had published twenty four scientific papers as well as numerous articles and a book on the AT.
49. We are lucky to be able to claim him as one of our own.

## **References**

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<sup>13</sup> Vineyard (2007a)