No 39 Walking revisited

Gerald Foley CTC 31 March 2015

1. Today I thought it would be useful to have another look at walking which we were exploring in our games some time ago.
2. The particular thing I am interested in is the problem of freeing one leg to take a step and standing on the other without lurching over towards the stiff leg.
3. As I was thinking about it, I could see that it tied in with the whole issue of the working on the head-neck junction we were looking at earlier. So as you head off on your walking holiday and whatever you are doing for Easter, I thought it was not a bad topic to finish the term on.
4. When you think about it, it is easy to see how the whole question of how to walk in a smooth and graceful way ties into the broader question of the dynamics of head-neck relationship. You cannot walk gracefully with a stiff neck and your head pulled back and down – try it and see
5. What is a bit more surprising is how central an issue it actually is and that Rudolph Magnus (1873-1927) had seen it as a crucial question when he started looking into body posture in the early 20th century.
6. When he was presenting his results in a lecture he gave in Edinburgh University in 1926, he described it as one of the postural puzzles that he had set out to solve in his work. He said:

   > *The limbs of mammals, as of other vertebrates, are built up of bony segments, linked by a complicated arrangement of ligaments and moved and fixed by muscles…The whole system is easily movable in different directions. Our problem is to explain how such a movable limb is at times used as an instrument for very different purposes (such as scraping, scratching, fighting &c.) and moved freely at all joints, whereas at other times it is transformed into a stiff and strong pillar, which gives the impression of being one solid column, able to carry the weight of the body.*[1]

7. He could see it was a problem that vertebrates of all kinds were perfectly able to solve. Whether they were two or four-

[1] Magnus (1926a)p531

legged, each kind of vertebrate creature had their own distinctive way of freeing the leg to be moved and taking the weight on the other leg or legs.

8. It did not require any particular degree of deep and thoughtful intelligence since dogs, cats, horses, rabbits, guinea pigs, and humans from an early age did it automatically as they went about their daily business.
9. In other words it happened automatically or reflexly without any intervention by the conscious brain and did not require any intervention by the conscious will. The baby human or the baby giraffe do not need to say – "must stiffen the supporting leg or legs before I lift the stepping foot."
10. The question Magnus was interested in was how in neurological terms they did it.
11. So he and his team of researchers set to work with their various types of animals. I have told you what they did. They went into the brain of these animals and removed the cerebrum – the top thinking part of the brain.
12. That left the lower brain in place. This is sometimes called the reptilian brain, because in evolutionary terms it was there before the higher brain functions evolved. In evolutionary terms, we were able to walk before we could talk.
13. The research approach was to start with the simplest postural functions, as displayed in an animal from which the whole brain, from the top of the spinal cord upward, had been removed or isolated from connection with the rest of the body; this was termed a *spinal animal*.
14. It is all rather grim stuff to read about and must have been quite horrible to do. But at least the animals did not have the thinking and awareness part of the brain working and could not feel anything. They were as near automata –machines - as it is possible to get.
15. By doing this and seeing what these spinal animals were able do, the researchers were able to establish which reflexes were controlled from the spinal cord alone.
16. Next, by making surgical cuts at successively higher levels in the brainstem and then at higher levels in the lower brain, they established which additional reflexes came into action as more of the brain was allowed to function as it should.

17. In this way, they were able to identify in which parts of the lower or subcortical brain the control centres for the various postural functions were located.

18. You might wonder what is the point of these rather grisly studies. It is, in fact, the sort of research that modern surgeons and prosthetic designers have been able to use in the amazing progress they have made in dealing with spinal injuries and designing prosthetics. So apart from adding to the pure knowledge of how we work, the research has had a very practical dividend.

19. The result of the studies was that Magnus' initial idea that walking and running are governed from the non-thinking lower brain was correct. When you are a baby or if you happen to be a cat or a dog, you have a free easy natural way of walking which is highly efficient and makes the best use of your muscles and the rest of your body.

20. But when you involve the thinking brain, things get complicated. The brain gives you the option of interfering with the way you walk naturally. The old Monty Python sketch, the Ministry of Silly Walks, provides a clear scientific demonstration of what is possible when the thinking brain interferes with the lower brain..

21. But when we deliberately do these silly walks, or enter for an Olympic walking race, we are aware of what we are doing. John Cleese was able to stop doing silly walks.

22. The problem is that for an awful lot of the time we are not aware of how we are distorting our natural way of walking and getting ourselves into the habit of doing our own silly walks.

23. One of the ways humans learn to do things is by copying. Babies copy their parents and siblings immediately they start walking. It is fascinating to watch how early it starts. Each of us in our own way develops a style of walking. We are able to recognise people by the way they walk

24. What we know from our experience as AT teachers is that a high proportion of these copied ways of walking interfere with the head-neck relationship. As Alexander found, they involve tightening as well as pulling the head back and down.

25. This brings all kinds of damaging consequences – including interfering with the sub-occipital muscle system – as we were looking at a while ago. The most common results of this

misuse are back-ache and neck-ache. And we know that it can also bring wider psychological consequences.

26. So what do you do about it? I think Magnus provides us with the clue.

27. He said:

> *The mechanism as a whole acts in such a way that the head leads and the body follows.*[2]

28. And that brings us back to the problem we started with which is how to manage the transition between a flexible limb and a rigid one without lurching about like a farmer in wellingtons in a muddy field.

29. It is not that it is that important in itself to be able to walk without lurching about. It is just that it is a symptom of some deeper problem with the head-neck junction.

30. Once we move away from the natural reflex way of walking, we are interfering with our head-neck junction.

31. I think it is worth looking at something Walter Carrington says in the short paper he wrote in 1950 and which was published by STAT in 1994 with Walter's approval. The forty-four years of teaching experience between the initial writing and the publication had not made him change his mind.

32. In that paper, he gives us what I think is one of the best short summaries of the AT. He said:

> *The whole basis of Mr Alexander's Technique is the teaching of how to eliminate interference with the autonomic functioning of the organism.*[3]

33. So coming back to the head-neck relationship, if we are not interfering with it, our autonomic or reflex system will manage the business of stiffening our supporting leg as soon as release the other knee. There is no need for us to think about it.

34. But we do think about it and the more we think about not thinking about it, the more we do think about it. So how do we go about it?

35. It is not that easy so don't feel you are being stupid if you don't get it straight away. I don't think I ever managed it during my training. My problem was that as an engineer, I knew I had

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[2] Magnus (1926b)p588
[3] Ibid.p52

to get the weight over on to the supporting leg before I could free the other one to bend at the knee.

36. I was thinking too much about it. As Hamlet said:

    The native hue of resolution Is sicklied o'er with the pale cast of thought and enterprises of great pith and moment turn awry.

37. So suppose you are an Alexander teacher and you have to deal with the engineer whose native hue of resolution is sicklied o'er by the pale cast of thought and he cannot bend his knee without leaning over to one side.

38. The very first thing is to get him or her in balance, to get the muscles acting calmly and quietly, so that he or she is standing as naturally as possible.

39. This may take longer than you think it should. Plenty of heels on the ground, and freeing of ankles, knees and hips. Not pulling the head back and down. Keeping the gaze horizontal and the eyes moving freely in their sockets.

40. This is allowing the standing reflexes to take over. It is allowing the neck to be free. And if the neck is free, and the muscles aren't tightening, we are going up.

41. It may take time, because we are dealing with the conscious mind thinking I am going to have to shift my weight. That is logical but it is not correct because what goes on at a reflex level is much more complicated

42. As you think of yourself going up and your head going forward and up and one leg being free, the supporting leg stiffens of its own accord and in ways that are more subtle than if we try to do it.

43. Because there is no weight on it, we can allow the knee of the free leg to go forward and the other leg continues to carry the weight.

44. We can let the free leg swing forward and land on the ground and if we continue to move forward the process is reversed and the leg that has gone forward and the other becomes free.

45. So it is our intellect keeps getting in the way – and our faulty sense of engineering.

46. Animals with no brains are able to do it. Small children are able to do it. Cats are able to do it.

47. Our task as teachers is to make sure that our pupil is in balance and going up. You will find either as a pupil or a teacher that simply the knowledge that one knee is going to become free allows the other leg to turn into a pillar.

48. But once you try to reason it out you start to do something about it. And mess it up.

49. The interesting thing is that such a simple game as this touches on so many absolutely fundamental points.

References

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