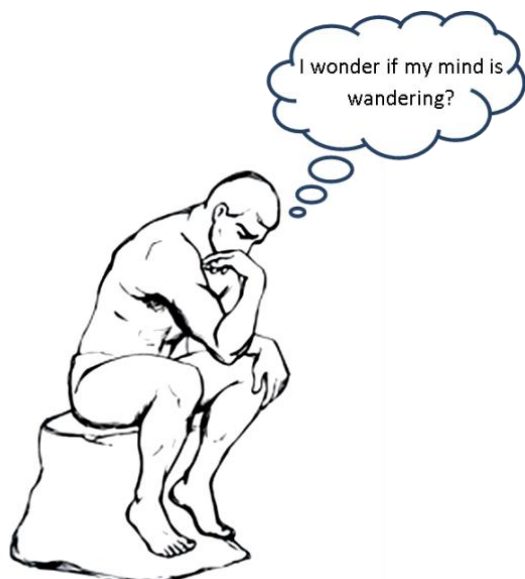


REVISED VERSION

Thinking about thinking

Malcolm Williamson



Reading Alexander's published letters (Mouritz 2020) we can see that he was always trying to make his work more readily understandable to both medical professionals and to the person in the street. It's also clear that Alexander placed great emphasis on thinking. His apocryphal remark, "This work is more mental than physical" is well known (see, for instance, Carrington, 19). Peggy Williams said he didn't say so much in lessons as he got older but tended to rely on his hands to give his pupils the experience of improved use and functioning. Alexander understood that sensation comes first. Sensations (sensory feelings) provide the raw material from which emerge all of our thoughts and emotional reactions (Restak, 40). It was John

Locke, the seventeenth-century English philosopher, who famously argued this point:

"He that should use the word RAINBOW to one who knew all those colours, but yet had never seen that phenomenon . . . would never make a blind man understand it; because . . . being such as he never received by sensation and experience, no words are able to excite [it] in his mind."¹

Echoing Locke's theory, William James wrote:

"A blind man may know all *about* the sky's blueness, and I may know all *about* your toothache, conceptually . . . [but] so long as he has not felt the blueness, nor I the toothache, our knowledge, wide as it is, of these realities, will be hollow and inadequate. Somebody must *feel* blueness, somebody must have toothache, to make human knowledge of these matters real. . . ." (James, II, 7)

The way our senses interact with environment doesn't just provide information to our brain; it helps to fashion how our brain responds. However, students of the Alexander Technique also need to know how to use their mental faculties; *how to think* and, in particular, how to prevent their habit of end-gaining through a "too quick and unthinking response to stimuli". (UCL, 80) No one can do our thinking for us and unless we can inhibit and direct we are for ever dependent on a teacher for gaining the new, reliable experiences.

Engaging in thinking includes our perception of sensory input and cognition or higher order mental processing in order to attend, identify and, most importantly, to act:

"Within the nervous system thinking is intimately linked with action. Indeed, you can consider thinking as the nodal point between sensation and movement" (Restak, 99).

¹ *Essay Concerning Human Understanding*, Vol II, Chapter 4: "13. Colours indefinable to the born-blind." <https://www.gutenberg.org/cache/epub/10616/pg10616-images.html>

We think about the things we perceive and it's no coincidence that "I see" also means "I understand". Thinking has important survival value. We have evolved to notice anything unusual that stands out from the background and to make quick decisions to avoid possible dangers. But the idea that we must also pay attention to how our body is functioning can seem at first bizarre.

Alexander proposed that in our modern 'civilized' age we can no longer rely on instinct:

"[Mankind] has continued to depend upon subconscious guidance in his endeavours to meet the demands of the civilizing plan, and to rely upon instincts which have [outlived] their usefulness" (CCC, 18).

We must, instead, reason out how to adapt reliably and acquire the new skills that our technologies demand of us. Just as we can choose wisely to avoid danger in the world around us, so we can attend to ourselves and prevent potentially damaging or self-limiting behaviour:

"[I]t is possible for a person to learn to give due attention continuously to – i.e., to "keep the mind" on [–] the "means-whereby" of the satisfactory use of the psycho-physical mechanisms, whilst employing these mechanisms in the round of daily life" (CCC, 174).

Types of thinking

Recently, the title of an introductory textbook for cognitive psychology students caught my eye: *Types of Thinking* by S. Ian Robertson. It made me start wondering what types of thinking there are. Basically, we can distinguish between the everyday, problem solving or goal-directed type of thinking and the freely-associating sort of undirected thinking involved in dreaming and mind wandering. Of the two, it seems that 'thinking in activity' when we apply the Alexander Technique belongs to the everyday problem solving type, and it is with this that we are mainly concerned. Later in the process, there is another type of thinking – Conscious Control, maybe – that becomes available to us as a result of our improved standard of psychophysical functioning.² The ability to intuit and to choose different (more appropriate) options in how we respond follows on from the new experiences gained, and so I do not think this 'imaginative' but structured thinking is the same as unfocussed or random mind-wandering.

'Directing' – a special type?

As I write, it becomes clear to me that there's a type of purposeful thinking that is not always included in the psychologist's plan; the thinking Alexander teachers call 'directing'. In an interview, Marjory Barlow quoted her uncle, Alexander, "'This is an exercise in finding out what thinking is.' . . . By that word we mean to send a direction, [and] not to try and implement it, not to try and carry it out, not even a teeny weeny bit" (Davies, 130). Marjory made the analogy of forming new neural pathways to the laying down of rail tracks along which the train (motor impulses) will eventually travel. Alexander described it, linking the concepts of inhibition, new sensory experiences inspiring new "brain thoughts" (to use Margaret Goldie's expression), directing and giving consent:

² "I wish it to be understood that throughout this book I use the term conscious guidance and control to indicate, primarily, a plane to be reached rather than a method of reaching it" (CCC, 8–9 note; also UCL, 12).

“By steps more or less slow, according to the difficulties to be overcome, the pupil passes from the stage of preventing the repetition of the wrong employment of the primary control of the general use in such acts as sitting or standing to gaining those new experiences of use in which *the proper relativity* of the parts concerned is brought about. By the repetition of these experiences . . . little by little the new lines of motor and sensory communication are laid down along which he will sooner or later habitually project his messages. As long as he inhibits the sending of the old messages the old lines of communication are not used, and as he becomes more and more versed in the procedures of the technique the tendency to make use of them decreases, as does his dependence upon his feeling of rightness associated with them. . . .” (UCL, 83).

Similarly, Margaret Goldie described inhibiting and directing as “brainwork”, reminding pupils that “Brain activity should not involve muscle activity. Often it does, but it need not” (Robb, 40).

The distinction between thinking (framing a clear intention) and ‘doing’ (imposing extra tightness or stiffening) goes back to the beginning of the Technique and Alexander’s throat trouble. Marjory continued in the interview, “He [Alexander] used to say to us when he was giving the lessons, ‘You’re sound asleep. Wake up!’” Alexander saw direction as a particular vital energy (see CCC, 91) that we can conduct to the “psycho-physical mechanisms” of our primary control by thinking (wishing, willing) and thereby secure the conditions for optimal functioning in any skilled or normal everyday activity.

Returning to psychologists’ classification as set out by Robertson, in contrast to letting the mind wander, purposeful goal-directed thinking takes effort; depth, clarity and cohesion of thought require our focused attention and sufficient time to arrive at the solution to a problem (Restak, 96–97, 119). According to ideas prevalent when he was writing, Alexander identified distinct mental capacities such as starting out to learn something or learning to do something, reasoning, memorising, making a decision, and withholding and giving consent.³ Mind wandering was seen as a shortcoming. A lack of the necessary mental stamina to monitor and suppress a tendency to mind wander was blamed on an unsatisfactory standard of direction and control (CCC, 16; Restak, 110). Without having control of the psychophysical mechanisms at every stage of the process in gaining an unfamiliar end, there will be gaps in our plan. It’s like negotiating how to cross a stream where several stepping-stones are missing. Our mind has to search around to fill in the gaps, all the time hoping to land on a sure footing that will take us to the next step. Dewey described Alexander’s ‘means-whereby’ approach in his chapter on Habit:

“As soon as we have projected [an end] we must begin to work backward in thought. We must change what is to be done into a how, the means whereby. . . . Only as the end is converted into means is it definitely conceived, or intellectually defined, to say nothing of being executable” (Dewey, 36).

Mind wandering

Researchers at Harvard University have recently found that mind wandering is, in fact, perfectly normal and that we spend almost half our time – 46.9 percent – in this state:

³ “The traditional misuse of the word ‘mind’ can lead us into many wrong assumptions. As well as mistaking the mind for some phantom object separate from the flesh and blood workings of the brain, we make a similar error in talking about the different parts of the mind. We refer to memory rather than the act of remembering, to thought instead of thinking, to the inner voice instead of the act of speaking silently to oneself – and even to self-consciousness rather than the act of thinking about our own thoughts” (McCrone, 2–3).

“Unlike other animals, human beings spend a lot of time thinking about what is not going on around them, contemplating events that happened in the past, might happen in the future, or will never happen at all” (Killingsworth and Gilbert, 932).

Furthermore, it’s been observed that when participants in psychological studies are instructed to rest between sessions, activity in certain parts of their brain actually increases.⁴ This has sparked interest in what the brain is doing when it’s not involved in a specific task. The theory is that there are two complementary neural networks within our brain. Alongside the attentional network for carrying out mental tasks that require us to focus on the environment (stimulus dependent thought) there is a Default Mode Network (DMN), which becomes more active when the brain engages in internally focused processes such as daydreaming, recalling memories, envisioning the future, and thinking about the intentions of others (Raichle in Restak, 106–107).

Speculation is that the DMN is important in the evolution of introspection and the physical location of our sense of self. So, John Locke was right!

“[A]ll the simple ideas we have are confined (as I have shown) to those we receive from corporeal objects by sensation, and from the operations of our own minds as the objects of reflection.”⁵

Importantly, when attention shifts from the ‘inner’ to the outward world and to specific goal-directed behaviours, the mind wandering network becomes less active (Raichle et al, 676; see Restak, 107).

When we apply the Alexander Technique, we aim for inclusive awareness of what Alexander termed “external” and “internal” activities in relation to specific non-doing or “withholding consent” (UCL, 101; also Jones, 177). So, when we attend to the supporting surface, orientate ourselves in the room, and give directions we suppress the DMN and prevent it from taking over our mind.

By working on ourselves in this way, we modify our ‘body schema’ – a dynamic mental (sensorimotor) representation of our body’s morphology that alters and adjusts throughout our lifetime – and implicit knowledge about the immediate ‘peripersonal’ space that surrounds our body.⁶ We refer to this ready-made model when planning and executing movements as well as in our social interactions.

Happiness

Returning briefly to the subject of mind wandering, the Harvard researchers concluded:

⁴ “This network includes part of the temporal lobe (important in memory) the medial prefrontal cortex (an area important in consciousness) and the posterior cingulate cortex (an integration centre)” (Restak, 106).

⁵ Locke Vol. II, Chapter 3: “23. First, One Cause of our ignorance Want of Ideas.”

⁶ Peripersonal space can be represented in the brain as a sensorimotor interface mediating physical and social interactions between body and environment. It seems to be related to Rudolf Laban’s concept of the ‘kinesphere’: “the sphere [of space] around the body whose periphery can be reached by easily extended limbs without stepping away from that place which is the point of support when standing on one foot.” *The Language of Movement*. Plays Inc. 1976: 10.

“A human mind is a wandering mind, and a wandering mind is an unhappy mind. The ability to think about what is not happening is a cognitive achievement that comes at an emotional cost” (Killingsworth & Gilbert).

Here, Alexander was prescient in his analysis of happiness:

“THE characteristic note of true happiness is struck when the healthy child is busily engaged in doing something which interests it” (CCC, 189).

When someone is fully engaged in the activities of the moment they are doing what sages and gurus have been saying for centuries – be here now.

Habit and routine

When it comes to making changes to the way we react, if we don't make a special effort then we'll do what we have always done before under the same circumstances. Habit and routine are the default state. The more engrained the habit – the more difficult the challenge – the more time is required for thinking through our new response (Restak, 102).

We now know that the brain's frontal and prefrontal lobes are involved with our ability to attend and work through a problem. These areas are not equally developed in all of us and, as with executive functions, focus and drive are unevenly distributed within the population.

Working memory

If there's one thing that makes the human brain special it's working memory: keeping one thing in mind while occupying ourselves with another mental project. This frontal lobe-based memory involves maintaining information 'online' for later retrieval while turning our attention to something else. Working memory is considered an essential component of general intelligence and reasoning ability. Our capacity for working memory, though, is limited and takes effort. So it's only sensible to save energy and to go with habit and routine whenever we can. Individually, our working memory capacity also varies with our mood, emotional state, tiredness, age, etc. When suffering from what psychologists call 'ego depletion' we are less mentally resilient and lack the forbearance to “say no” and to resist an unwanted urge from a powerful stimulus; to stick to a chosen course of action, or inaction.

Alexander identified an unsatisfactory level of working memory as the main obstacle to learning his technique: an inability “*to keep the three directions going as we proceed to gain the end*”. As he described it, the giving of directions must be “all together one after the other” (UoS, 42 and note).

Gaining ends

According to current theory, we employ some kind of 'difference reduction' strategy to achieve our goals – we try to find some means of reducing the difference between where we are in a problem and

where we want to end up. When the difference is small – a matter of reaching out and taking a chocolate from the box in front of you – then you can just go ahead and do it. But when the difference is great – Walter Carrington gave the extreme example of wanting to be Wimbledon tennis champion – then the problem is more tractable if it can be broken down into smaller chunks or ‘sub-goals’. To do this we use ‘means-end analysis’.

By way of illustration, Robertson describes a familiar domestic scenario: You return home tired from a day’s outing and decide to sit down and watch television (your goal). But you notice the sofa is covered with dog hairs. This is a “constraint” or block to reaching your goal satisfactorily. Admittedly, it’s not a life-or-death issue but, if you have the choice of sitting on a clean sofa or one that’s covered in dog hairs, why would you choose the worse option? (Choosing the least satisfactory option is one definition of behaving irrationally.) So, you adopt a sub-goal to overcome the constraint. You go to the kitchen for a dustpan and brush but they’re not in the usual place. This is yet another constraint. A further sub-sub-goal is necessary. So you search around and find the dustpan and brush in the hall cupboard with the vacuum cleaner. Having completed this sub-goal, you can proceed to the next – brushing the dog hairs off the cushions. And when this sub-goal is accomplished, you are then free of constraints and can go ahead (“give consent to gaining your end”) – and sit down and watch the telly.

In this example, attention is focused on the external activity throughout the operation. It requires taking a further step to expand your attention and include the more fundamental aspects of how you are using yourself. You wish to sit down, but wait! Having framed and held your *intention* to sit down, before you go ahead you ask yourself, “Am I ‘pulling down’ or holding my breath?” In other words, before I gain my end I set myself a series of sub-goals to ensure the working of the ‘primary control of my manner of use’ so as to prevent any avoidable constraint on my body’s ‘total pattern’ organization. Again, you could ask, “Why bother? It doesn’t seem important.” But, as we know, added complication and strain can lead to lowered performance and all sorts of health issues if they become fixed habits. So, you remember to direct your head forward and up (a sub-goal to prevent causing unnecessary constraint) and allow your back to lengthen and widen (another sub-goal) as you sit down (ultimate goal).

So, one way of explaining to others what we do is to say we extend problem-solving thinking to our internal habits – habits of use. It’s always a good idea to seek the expert help and advice of others but when a change in our own thinking is needed the only person who can do that is ourselves. To quote Miss Goldie again: “I can indicate to you with my hands . . . and I can put a finger on your neck, but I can’t put a finger on your brain, can I?” (Robb, 84)

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References

Alexander, F. Matthias. 1985 (1932). *The Use of the Self*. London: Victor Gollancz.

Alexander, F. Matthias. 2000 (1942). *The Universal Constant in Living*. London: Mouritz.

Alexander, F. Matthias. 2004 (1923). *Constructive Conscious Control of the Individual*. London: Mouritz.

Carrington, Walter. 1994. *Thinking Aloud*. San Francisco CA: Mornum Time Press.

- Davies, Trevor Allan. 2002. *An Examined Life: Marjory Barlow and the Alexander Technique*. Berkeley CA: Mornum Time.
- Dewey, John. 1957 (1922). *Human Nature and Conduct*. New York: Random House Inc.
- James, William. 1950 (1890). *The Principles of Psychology*, Vol. II. New York: Dover Publications Inc.
- Jones, Frank Pierce. 'The Organization of Awareness'. A paper read at a conference on "Co-ordination in Music" in Michigan State University, May 18, 1967. In *Freedom to Change*. 1997 (1976). London: Mouritz: 174–181.
- Killingsworth, Matthew A. and Daniel T. Gilbert. 'A Wandering Mind is an Unhappy Mind'. *Science*, November 12, 2010, Vol. 330: 932.
- McCrone, John. 1999. *Going Inside*. London: Faber and Faber Ltd.
- Robb, Fiona. 1999. *Not to 'do'*. London: Camon Press.
- Raichle, Marcus E., Ann Mary MacLeod, Abraham Z. Snyder, William J. Powers, Debra A. Gusnard, and Gordon L. Shulman. 'A default mode of brain function'. *Proceedings of the National Academy of Sciences of the United States of America*, January 16, 2001 98 (2): 676–682.
- Restak, Richard M. 2012. *Mind: The Big Questions*. London: Quercus Editions.
- Robertson, S. Ian. 1999. *Types of Thinking*. London & New York: Routledge.