Boyle Lecture 2023

with Rowan Williams, "Attending to Attention"; John D. Teasdale, "Reshaping the Heart-Mind: A Response to Rowan Williams"; and Fraser Watts, "Rowan Williams on Attention and Intelligence in the Spiritual Life."

RESHAPING THE HEART-MIND: A RESPONSE TO ROWAN WILLIAMS

by John D. Teasdale

Abstract. This article suggests that themes in Williams' (2023) analysis of attention and contemplation resonate powerfully with current thinking in cognitive science. By changing how we pay attention, we can change the shape, or underlying configuration, of the heart-mind. This is the core process in mindfulness and contemplation. The Interacting Cognitive Subsystems (ICS) analysis suggests this involves a shift in the balance between conceptual knowing and holistic-intuitive knowing.

Keywords: attention; cognitive; conceptual knowing; contemplation; holistic knowing; interacting cognitive subsystems (ICS); mindfulness; science; science and religion; self-focus

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It is an honor and privilege to respond to the Boyle Lecture presented by the distinguished and respected figure, Lord Rowan Williams (2023). In this response, I aim to illustrate how Williams' analysis resonates powerfully and pleasingly with current thinking in cognitive science.

To begin, let us consider an intriguing idea proposed by Anil Seth, Professor of Cognitive and Computational Neuroscience at the University of Sussex. He suggests we can see perception as a form of controlled hallucination. He explains his view like this (Seth 2021, 82–83):

> the brain is constantly making predictions about the causes of its sensory signals, predictions which cascade down through the brain's perceptual hierarchies. If you happen to be looking at a coffee cup, your visual cortex will be formulating predictions about the causes of the sensory signals that originate from this coffee cup.

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> …. sensory signals – which stream into the brain from the bottom up or outside in – keep these perceptual predictions tied in useful ways to their causes. … By adjusting top-down predictions so as to suppress bottom-up prediction errors, the brain's perceptual best guesses maintain their grip on their causes in the world.
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> The most important ingredient in the controlled hallucination view is the claim that perceptual experience – in this case the subjective experience of "seeing a coffee cup" – is determined by the content of the (top-down) predictions, and not by the (bottom-up) sensory signals. We never experience sensory signals themselves; we only ever experience interpretations of them. ….
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> It *seems as though* the world is revealed directly to our conscious minds through our sensory organs. With this mindset, it is natural to think of perception as a process of bottom-up feature detection – a "reading" of the world around us. But what we actually perceive is a top-down, inside-out neuronal fantasy that is reined in by reality, not a transparent window onto whatever that reality may be.

Counterintuitive as it may seem at first glance, Seth's view resonates powerfully with Williams' conclusion that phenomenal experience is not simply the result of the mind passively registering the presence of preexisting objects. Rather, as Williams suggests, phenomenal experience is the outcome of a continuing dynamic interaction between, on the one hand, information arriving from the senses and, on the other, the interpretations our minds construct to make sense of that information.

The good news from both Seth's and Williams' views is that the substantial top-down, inside-out contribution to the way we see the world opens an exciting possibility. This is that we can develop new, more wholesome ways of seeing the world. And, as Williams suggests, one of the key vehicles for creating these new worlds of experience is attention.

It is a commonplace that we can change the information the mind processes by changing *what* we attend to. A more radical approach to developing new worlds of experience is to change *how* we attend. This is the thrust of Williams' (2023) discussion of Simone Weil's *attente*. Equally, a change in *how* we pay attention figures centrally in Jon Kabat-Zinn's (2003,145) widely quoted definition of mindfulness as "the awareness that emerges through paying attention in a particular way: on purpose, in the present moment, and non-judgmentally."

A study by Norman Farb and his colleagues (Farb et al. 2007) is highly relevant here. These researchers scanned volunteers' brains while they attended to self with either a narrative focus or an experiential focus. In the narrative focus condition, participants *thought about* the self, whereas in the experiential focus condition, they attended directly to the *experience* of self. These two different modes of self-focus were associated with quite distinct patterns of underlying brain activity. Further, and very importantly,

participants who had received eight weeks of mindfulness training showed a lasting shift in underlying brain activity in the direction of greater experiential focus. Farb's results suggest two key conclusions. First, changing *how* we attend to self can shift us from one mode of self-experience to another, each mode having its own distinct brain signature. Second, by learning how to pay attention mindfully, we can effect long-term changes in the way we experience self, measurable at the brain level.

Generalizing from these findings, we might say that, by learning *how* to attend differently, we can learn to shift the underlying configuration—or shape—of our minds at will. That sounds impressive—but why would we want to? Why would we want to shift from the shape of mind associated with narrative self-focus to a shape associated with experiential self-focus?

Studies of mind wandering—the streams of thinking that fill our minds when they are not otherwise engaged—suggest an answer. Investigations that have probed the content of these thought streams reveal the unsurprising finding that they are predominantly focused on thoughts about the self. In the words of Dan Goleman and Richie Davidson (2017, 151): "our minds wander mostly to something about ourselves- *my thoughts, my emotions, my relationships, who liked my new post on my Facebook page* – all the minutiae of our life story. .. Those reveries knit together our sense of 'self' from the fragmentary memories, hopes, dreams, plans and so on that center on I, me and mine." In other words, mind wandering is dominated by narrative self-focus—we dwell, and are often lost, in thinking centered on our self. And a well-known study of mind wandering suggests this is a problem.

In 2010, Harvard psychologists Matthew Killingsworth and Daniel Gilbert published a paper titled *A Wandering Mind Is an Unhappy Mind*. Participants had been contacted at random intervals during their everyday lives and asked what was on their minds at that moment and how they were feeling. Their minds were not on what they were doing—their minds had wandered to something else—a striking 47% of the time. And at these times, participants rated themselves significantly less happy than when their minds were on what they were doing. Crucially, this was not simply because they were thinking unhappy thoughts—they were also less happy when their minds wandered to neutral topics. There is something about mind wandering itself—with its narrative self-focus—that makes us less happy.

These findings suggest a huge potential opportunity to increase the sum total of human happiness—if we can reduce mind wandering, we will feel happier. How then are we to reduce mind wandering? An exhaustive review of relevant evidence highlighted an obvious candidate for the job: "Practices that encourage individuals to be mindful of the present are currently the most empirically validated technique for minimizing the disruptive effects of mind wandering" (Smallwood and Schooler 2015).

We noted earlier Farb's study suggesting mindfulness training increases *experiential* self-focus. This points to the possibility of increasing happiness by learning to pay attention in a different way, switching out of our default *narrative* self-focus to a more *experiential* form of self-focus.

Evidence suggests narrative and experiential focus have a reciprocal relationship, each interfering with the other (Teasdale 2022, 148–57). Such a reciprocal relationship has been widely recognized in meditative and contemplative paths for many years. We see it in Williams' (2023) description of *attente* as "that quality of awareness of what is other that necessarily 'suspends' the self-preoccupation of the ego so as to allow the independent reality of the other to be fully received." And anyone who has practiced mindfulness will be very aware of the barrage of inner mental chatter that hinders their best attempts to cultivate direct experiential awareness. On the other hand, the inner silence to which Martin Laird (2006) points in the title of his book on Christian contemplation, *Into the Silent Land*, is one that transcends this chatter and opens us to direct experience at progressively deeper levels of being.

John Teasdale's (2022) *What Happens in Mindfulness: Inner Awakening and Embodied Cognition* offers a way to understand the reciprocal relationship between narrative and experiential modes of mind and why narrative self-focus makes us less happy. To do so, it uses a particular cognitive science framework: Interacting Cognitive Subsystems (ICS for short) (Barnard 1985; Barnard and Teasdale 1991; Teasdale and Barnard 1993).

ICS recognizes two distinct kinds of meaning and knowing: a conceptual and a holistic-intuitive. These ways of knowing have different evolutionary histories and underlying structures, and served different evolutionary functions. They are linked to different core affects, different ways of paying attention, and create different worlds of experience (Teasdale 2022, 57–61).

ICS suggests that an ongoing conversation between these two ways of knowing underpins what psychologists call the mind's *executive resources*—resources that support the conscious processing required in novel, complex, or difficult situations. As in many conversations, at any one time, one or the other partner will tend to dominate the course of the interaction. Executive resources are limited and our two ways of knowing compete for those limited resources. The way of knowing that wins that competition controls attention, the shape of the mind, and molds our world of experience in each moment. This competition underpins the reciprocal relationship between narrative and experiential focus we have noted. When conceptual knowing is in control, our moment-to-moment experience is of *thinking*. By contrast, when holistic-intuitive knowing is in control, our moment-to-moment experience is of a spacious receptive engaged *awareness*.

There is good evidence that conceptual knowing underpins mind wandering (Teasdale 2022, 147–48). The pervasiveness of mind wandering reflects the fact that, in our present culture, our default mode of mind is one where a conceptually dominated quest to find happiness by achieving self-related goals wins the competition for the mind's executive resources. We can shift the outcome of that competition, and achieve greater wholeness and happiness, by deliberately cultivating modes of mind with holistic-intuitive knowing in control: receptive awareness, mindfulness, contemplation.

Some years ago, Williams (2012) suggested; "contemplation is the only ultimate answer to the unreal and insane world that our financial systems and our advertising culture and our chaotic and unexamined emotions encourage us to inhabit." In his Boyle lecture, he eloquently reminded us of the crucial role of attention in contemplation. Concluding, he expressed the hope that what he very modestly called his very preliminary thoughts would serve to broker further the conversation between scientific discourse and the world of religious reflection and discipline. I share that hope and deeply appreciate Williams' contribution to that ongoing, very live conversation.

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