

Metaphors of mind

LIKE any science, psychology depends on making links from the known to the unknown. Throughout the history of psychology, metaphors have proved an invaluable way of gaining purchase on the unobservables of human cognition. Indeed, a history of metaphors of mind might look very much like a history of psychology. In this article, I look at how psychologists' mind-metaphors overlap with, and diverge from, those used by other writers, and ask what we might gain from a closer examination of the metaphors that guide us.

Rendering the ineffable

One of the oldest tools for thinking about the mind is the *container* metaphor. Plato famously likened the space between our ears to an aviary, where items of thought are stored at greater or lesser levels of accessibility. Although Plato was making a serious philosophical point about the retrievability of mental content, the greater influence of Plato's aviary has been in cementing Western notions of mind as a physical entity that contains other entities in space: something that one is either inside or outside. As we shall see, this has turned out to be a persistent idea.

Another philosopher's writings exemplify the *essence* metaphor. Descartes' dualism, holding mind to be an essence separable from the physical reality of the body, is evident in much literary writing from the 17th century. Andrew Marvell (1621–1678) gives voice to this idea in his poem 'The Garden':

*Here at the Fountains sliding foot,
Or at some Fruit-trees mossy root,
Casting the Bodies Vest aside
My Soul into the boughs does glide:
There like a Bird it sits, and sings,
Then whets, and combs its silver Wings;
And, till prepar'd for longer flight,
Waves in its Plumes the various Light.*

As David Lodge notes in his 2001 novel *Thinks...*, this is dualism writ large. The



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mind soars while the body stays rooted. Thoughts are similarly unfettered in the writing of the Romantic period, such as in this interesting atomistic take on mind-as-essence from Coleridge's *Anima Poetae* (1811–1812):

*What a swarm of thoughts and feelings,
endlessly minute fragments, and, as it
were, representations of all preceding
and embryos of all future thought, lie
compacted in any one moment!*

For the last hundred years or more, with the waning of the most obvious forms of dualism, physical conceptions of mind have dominated. In his novel *The Gift*, Vladimir Nabokov employs a version of the container metaphor in describing the thought processes of his protagonist, Fyodor Godunov-Cherdyntsev: 'somebody within him... had absorbed all this, recorded it, and filed it away'. In this likening of the mind to a filing cabinet in which psychological truths can be stashed away, Freud's influence is clearly visible. Freud's passion for archaeology apparently furnished many of his metaphors for the psychoanalyst's task of excavating the unconscious (Draaisma, 2000). The idea of mind as a structured container overlaps with the metaphor of mind as a *landscape*, exemplified in Proust's *In Search of Lost Time*, in which the narrator Marcel's thoughts, 'hesitating at the threshold of times and shapes', embark on a journey through physical locations, a tour of a virtual city.

In another physical metaphor, Thomas Hobbes (1651) describes the function of speech as being 'to transferre...the Trayne of our Thoughts, into a Trayne of words'. Although William James (1892) argued later that a better metaphor was of mind as a *stream*, the two metaphors succeed in capturing the quality of constant change that characterises the flow of thoughts and impressions. Here is Thomas Mann's introduction to his protagonist, von Aschenbach, in *Death in Venice* (1912):

He was overwrought by a morning of

hard, nerve-taxing work, work which had not ceased to exact his uttermost in the way of sustained concentration, conscientiousness, and tact; and after the noon meal found himself powerless to check the onward sweep of the productive mechanism within him, that motus animi continuus in which, according to Cicero, eloquence resides.

In Kearns's (1987) insightful analysis, the second half of the 19th century saw the replacement of mind-as-entity conceptions with the arguably more satisfactory metaphor of mind as a *living being*. Thoughts and experiences form a 'sentient web', in George Henry Lewes's (1880) terminology, in a holistic pattern of interconnections far removed from the discrete, individuated impressions and ideas of Locke's literary heirs. Here, for

The mind – flowing stream, growing garden?

WEBLINKS

George Lakoff's conceptual metaphor home page:

<http://cogsci.berkeley.edu/lakoff/>

John Barnden's metaphor-of-mind databank:

www.cs.bham.ac.uk/~jab/ATT/Meta/Databank

example, is Isabel Archer in Henry James's *Portrait of a Lady*:

She had plenty to think about; but it was neither reflexion nor conscious purpose that filled her mind. Disconnected visions passed through it, and sudden dull gleams of memory, of expectation. The past and the future came and went at their will, but she saw them only in fitful images, which rose and fell by a logic of their own. It was extraordinary the things she remembered.

The stream of consciousness here becomes a living stream, intimately felt and following its own obscure though compelling logic.

Budding minds

Another class of mind-metaphors that necessarily incorporate this element of change are those used to describe development. Implicit in much writing on this issue is the idea of the developing mind as a flower, illustrated by the use of metaphorical verbs such as *emerge*, *grow*, *unfold*, and *bloom*. More static physical

conceptions have also been recruited to the task of describing development. The classic example is Locke's *tabula rasa*, the blank slate upon which experience inscribes its lessons. Dickens's David Copperfield begins his reminiscences with an appeal to this metaphor:

The first objects that assume a distinct presence before me, as I look far back, into the blank of my infancy, are my mother with her pretty hair and youthful shape...

Another version of the blank slate metaphor is found in Alexis de Tocqueville's memorable assertions, in Volume 1 of *Democracy in America* (1831), about how an individual's destiny is to be found in his or her early experience:

we must watch the infant in its mother's arms; we must see the first images which the external world casts upon the dark mirror of his mind; the first occurrences which he witnesses; we must hear the first words which awaken the sleeping powers of thought...

This also incorporates the idea of mind as an *optic*, through which experience is projected, more or less accurately, into the internal theatre (Draaisma, 2000).

In other literary treatments of mental development and education, it is the container metaphor that is called into service. In Dickens's *Hard Times*, Mr Gradgrind thinks of 'the little pitchers before him, who were to be filled so full of facts'. More recently, a Gary Larson cartoon shows a schoolboy raising his hand in class with the words, 'Mr Osbourne, may I be excused? My brain is full.' Despite the efforts of educationalists to have learning conceived as a process of active collaboration, the container metaphor still seems to have some presence in discourses about the classroom (Bereiter, 2002).

Naturally, literary treatments of education have told us much about prevailing conceptions of the workings of memory. Draaisma (2000) traces metaphors of memory from Plato's wax tablet to the 20th-century hologram models proposed to capture the brain's capacity for distributed representations. In Dante's *Vita Nuova* (1292–1294), memory is a *book*, the earliest pages of which are blank. The

paradox here is that human memory is something that is impressed upon by finite experience and yet is at the same time unlimited in capacity. As the Larson joke shows, container metaphors are not up to the job. One candidate for a system that can store information without running into problems of storage capacity is the connectionist network, whose image of interconnecting neurone-like elements dominates the modern search for the engram. Although the *brain* metaphor has not shown up much in contemporary literature, it has left us with a situation where the best metaphor for how the mind works is the physical entity that forms its substrate (Draaisma, 2000).

Mind, metaphor and cognitive science

The emergence of scientific psychology has brought its own set of metaphors. We need little persuading of the influence of the *computer* metaphor, which sees the components of our cognitive system as analogous to the central processor, storage devices and peripherals of a desktop computer. More generally, evidence for the modularity of psychological and neurological processes is reflected in the rise of metaphors of mind as a multi-purpose *tool*, a Swiss army knife packed with separate information-processing modules that have evolved independently for different cognitive tasks.

Cognitive scientists have become interested in the various ways we describe our own thought processes. In their renowned study of metaphor, Lakoff and Johnson (1980) argue that the metaphors we use for a thing dramatically constrain our freedom to think about it. A look at John Barnden's online metaphor-of-mind databank (see weblinks) suggests that physical, static conceptions (such as of ideas as possessions, or as manipulable external entities) still dominate contemporary discourse about the mind. Although Gentner and Grudin (1985) found a general dwindling of spatial and mind-as-living-being metaphors in their sweep of psychological studies published in the 20th century, container metaphors still abound. Theory-of-mind researchers, for example, refer to 'internal states' when describing thoughts and beliefs, while the troublesome notion of 'internalisation', often associated with Vygotsky's theory, seems to imply a boundary between internal and external that is coextensive

with the limits of the biological organism. In fact, Vygotskian theory entails that higher mental processes have their origins in mediated social activity, and thus extend beyond the 'container' of the biological organism, an idea that has recently been developed by cognitive scientists and philosophers such as Andy Clark.

Emotion and disorder

My focus here has been on representations of cognitive processes. Metaphors of emotion form an equally vivid, varied and theoretically ambiguous part of the literary record, from Cicero's 'diseases of the soul' (Averill, 1990), to the physical, spatial and geographical metaphors employed by contemporary novelists to express the inexpressible. Strictly a simile rather than a true metaphor, here nevertheless is Haruki Murakami's beautiful fusion of stream, landscape and emotion-as-meteorological-event in *Kafka on the Shore* (2002):

Your heart is like a great river after a long spell of rain, spilling over its banks. All signposts that once stood on the ground are gone, inundated and carried away by that rush of water. And still the rain beats down on the surface of the river. Every time you see a flood like that on the news you tell yourself: That's it. That's my heart. (p.9)

As the intimate linkages between emotion and cognition become an increasing concern for cognitive scientists, psychologists will be forced to examine their metaphors of emotion ever more critically.

When the focus turns to disordered minds, traditional metaphors undergo some interesting adaptations. Many modern examples of cognitive therapy, such as acceptance and commitment therapy (ACT), depend on clients being able to

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Can a change of metaphor change our ways of thinking about the mind?

Is it possible to think about the mind without using any metaphors at all?

How do metaphors of emotion differ from metaphors of cognition, and why?

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The metaphor of mind as a container has been challenged by both writers and cognitive scientists

separate out troublesome thoughts from the container of the self. A striking twist on the metaphor comes from seeing the mind as an infinite chessboard, upon which the client imagines negative thoughts (black pieces) fighting positive ones (white pieces). After saying where they think they themselves are positioned on the board, clients are told they are none of the pieces, but the chessboard itself. The result can be an effective way of distancing sufferers from the source of their distress.

The mind as a fiction

Mind-metaphors have always reflected dominant scientific ideas, and psychologists and cognitive scientists have always used metaphors in building their theories (Leary, 1990). During the heyday of behaviourism, when theorising about internal states was more-or-less taboo, the incidence of metaphors of mind in published psychological research dropped away accordingly (Gentner & Grudin, 1985). Metaphors of mind, both literary and scientific, can act as 'guide fossils' in reflecting the prevailing scientific orthodoxies of the eras in which they are found (Draaisma, 2000). What if these metaphors turn out to be wrong? What if the mind doesn't work that way?

If Lakoff and Johnson are right, tightening up our metaphors of mind should improve our thinking about its processes. The idea of mind as container,

of course, fits neatly with our modern emphasis on the primacy of the unitary, indivisible self – but this is an idea that has been challenged by both writers and cognitive scientists. Particularly important is the idea of mind as a *fiction*, the overwhelmingly compelling output of a storytelling machine. Although Dennett-like scepticism about the primacy of the individual consciousness has yet to catch on, many modernist and postmodernist writers have tried to capture the fragmentary nature of human experience. In this respect at least, they are in tune with recent findings from the neuroscience of vision, where a unified consciousness is seen as a relatively late contrivance of a modular visual system.

And what of those who write fictionally about the mind? Should writers adapt time-tested metaphors to reflect the findings of cognitive scientists? Writers' duties, of course, are to their readers, and if that means accurately reflecting everyday ways of thinking about cognitive processes, then the scientific validity of those metaphors may not be a concern. Those of us who study the mind professionally, however, might do well to bear in mind the provenance and implications of the metaphors we live by.

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