INTRODUCTION (1994)

Thinking By Transferred Epithet

> A *picture* held us captive. And we could not get outside of it for it lay in our language and language seemed to repeat it to us inexorably. (Wittgenstein, 1953, p. 115)

Both biological and computational models of consciousness depend for their apparent plausibility upon the use of certain terms that have a multiplicity of meanings. These terms are popular with theorists because within the shades of their voluminous connotative folds, arguments that would not stand up in broad daylight may seem to carry conviction. The reader or listener, in allowing the use of the terms, does not know what he is taking on. The most important characteristic of these terms is that they have a foot in both camps: they can be applied to machines as well as to human beings and their deployment erodes, or elides, or conjures away, the barriers between man and machine, between consciousness and mechanism. The usual sequence of events is that a term most usually applied to human beings is transferred to machines. This begins as a consciously metaphorical or specialist use but the special, restricted, basis for the anthropomorphic language is soon forgotten: the metaphorical clothes in which thinking is wrapped become its skin. Machines described in human terms are then offered as models for mind (described in slightly machine-like terms).

To see what is wrong with the vast majority of philosophical discourse in the field of cognitive science, and what is amiss with physicalist accounts of the mind generally, we need to look particularly carefully at the first step: the application of human terms to machines. In most cases, as we shall see, the process of epithet transfer is no more valid (or no less metaphorical) than referring to the place used to house candidates for execution as 'a condemned cell'. When we hear of a man who has spent the last year in a condemned cell, we know that it is the man, not the cell, who faces execution. It is the man, not the cell, who should have right of appeal. It is the man, not the cell, on whose behalf we grow indignant. When we are told that a telephone receives

information, however, we fail to notice — or at least fail to be alerted by — the fact that it is we, not the telephone, who require, are able to receive, and are glad of, *information.[41] This is not because there is more justification in taking the transferred epithet literally in the case of the telephone than in the case of the prison cell but because '*information' has a multiplicity of meanings that 'condemn' does not. In the case of the telephone, the transferred epithet adopts a protective colouring to suit its new surroundings.

It is not too much of an exaggeration to claim that the greatest advances in breaking down the mind/body, consciousness/mechanism, man/machine barriers have come not from neurobiology or computer science but from the use of transferred epithets. The engineer's customary courtesy in his dealings with his machines (not qualitatively different from that which prompts sailors to refer to their ships as 'she') has permitted many assertions to pass 'on the nod' that would otherwise be challenged. Indeed, such courtesies have come so to dominate our language that it is almost impossible to look critically at the idea that machines have *memories, that they 'store *information' and do *calculations, or that different parts of the nervous system 'signal' to one another. We are so accustomed to hearing that radar 'sees' an enemy plane or that it 'hunts' a target that we have ceased to notice how we are conferring intentionality upon systems that are themselves only prosthetic extensions of the conscious human body.

Epithet transfer is, I have indicated, two-way: machines are described anthropomorphically and, at the same time, the anthropic terms in which they are described undergo a machine-ward shift. These same terms, modified by their life amongst the machines, can then be re-applied to minds and the impression is then created that minds and machines are one. To cross the machine/mind barrier, it is not sufficient to make the mind machine-like; one must do so using terms that have already unobtrusively mentalised machines. If you make machines into

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[41] The presence of an asterisk * indicates a technical term discussed in this Lexicon; see the alphabetical listing below.

minds by describing them in mental terms, you are already half way to making minds into machines. The awaiting terminology is more friendly. As a result, it is possible to overlook, for example, that seeing a computer as anything other than an unconscious automaton is crude animism.

This journeying of terms between the mental and the physical realms lies at the root of the myth that modern neurological science has somehow explained, or will explain, or has advanced our understanding of, what consciousness truly is. My concern is thus with the foundations of *neuromythology,* a pseudo-science that exploits the justified prestige of neuroanatomy, neurophysiology, neurochemistry and the other legitimate neurosciences. The terms that I have selected for this critical dictionary of neuromythology seem to me the most important among those that are responsible for carrying discourse painlessly — indeed almost unwittingly — across the man/mechanism divide. They are vital to the illusion that machine models of consciousness — whether wet biological or dry computational — have explanatory force. Indeed Janus-faced words like '*memory' and '*information' — which look in the direction of both man and machines — seem to dissolve the very problems that philosophically are most interesting. In consequence, most neurologically-based biological and computational explanations of consciousness begin beyond the point where the real questions are to be found. The terminology starts, as it were, on the far side of the answers. If this dictionary serves any purpose at all, I hope that, by showing the hollowness of the answers built into the terminology, it will restore the questions and the sense of the mystery of human consciousness.

One final preliminary point. At the time that this Lexicon was conceived, I had not read Peter Hacker's 1987 contribution to *Mindwaves*. On reading Hacker, I discovered that I was not unique in my critical attitude towards the language of neuromythology. His excellent piece, which makes many of the points covered in this dictionary, is strongly recommended. It should be compulsory reading for anyone — neurobiologist, cognitive psychologist or philosopher — proposing to mix neurology and metaphysics.