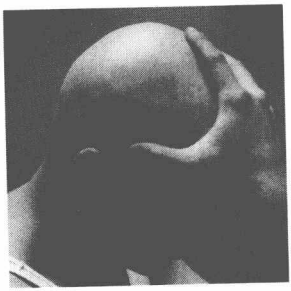
William Hughes

Critical Thinking

An introduction to the basic skills 3rd edition

critical thinking



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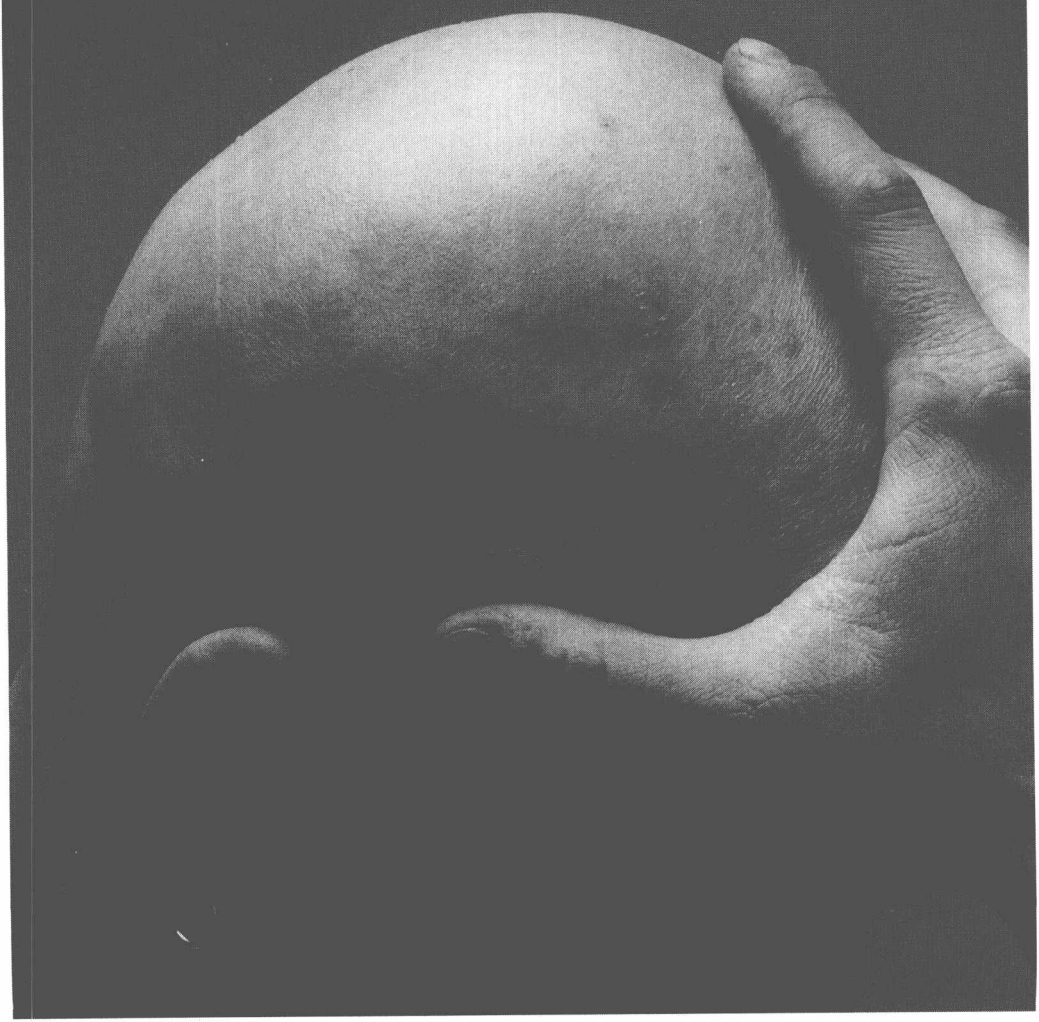
part one

introduction



Chapter 1

Reasoning and Critical Thinking

1.1 Reasoning

The ablility to reason is the fundamental characteristic of human beings. It has long been held that the capacity to reason is unique to human beings, but even if it is not – if it turns out, for example, that reasoning is a quality we share with dolphins or apes, or even computers – the capacity to reason is nevertheless central to what we are and how we think of ourselves. Virtually every conscious human activity involves reasoning: we reason whenever we solve problems, make decisions, assess character, explain events, write poems, balance chequebooks, predict elections, make discoveries, interpret works of art, or repair carburetors. We reason about everything from the meaning of life to what to have for dinner.

Of course, much of the time we are not engaged in conscious reasoning: often we simply listen to what others say, take note of things around us, experience feelings, daydream, listen to concerts, tell stories, or watch television. These activities need not involve conscious reasoning, but to the extent that we understand what is going on around or inside us we are not entirely passive. Some reasoning must be taking place even if it is at a pre-conscious level. To understand reasoning properly, however, we need to understand how it differs from mere thinking. When we are merely thinking our thoughts simply come to us, one after another: when we reason we actively link thoughts together in such a way that we believe one thought provides support for another thought. This active process of reasoning is

termed **inference**. Inference involves a special relationship between different thoughts: when we infer B from A, we move from A to B because we believe that A *supports* or *justifies* or *makes it reasonable to believe* in the truth of B.

The difference between mere thinking and reasoning or inference is easy to understand through examples. Consider the following pairs of sentences:

Alan is broke, and he is unhappy.
Alan is broke, therefore he is unhappy.

Anne was in a car accident last week, and she deserves an extension on her essay.
Anne was in a car accident last week, so she deserves an extension on her essay.

This triangle has equal sides and equal angles.
This triangle has equal sides; hence it has equal angles.

Notice that the first sentence in each pair simply asserts two thoughts but says nothing about any relationship between them, while the second sentence asserts a relationship between two thoughts. This relationship is signalled by the words *therefore*, *so*, and *hence*. These are called **inference indicators**: words that indicate that one thought is intended to support (i.e., to justify, provide a reason for, provide evidence for, or entail) another thought. Other common inference indicators are:

since
thus
implies
consequently
because
it follows that
given that

It is important to note that sometimes the inference indicator is missing; this can occur when a speaker thinks the inference is quite obvious. For example: