

**CATEGORICAL INFERENCE (CI)**  
**OTHERWISE KNOWN AS “COMMON SENSE THINKING”**  
**THE VERY VERY SIMPLE VERSION**

As far as I can see Common Sense Thinking (CST henceforth) works like this: we all get ideas, they constantly bubble unasked to the surface of the mind; the real challenge is to decide which ones are sound. To determine that we look for evidence (clues) bearing on our idea or hypothesis H and place each clue in one of only 5 categories (This is the Principle of Animal Wisdom, or PAW):

TABLE (5:1) The Weights of Clues bearing on Idea H

Clue	Weight	Symbol
	Strongly in favour of H	s
	Weakly in favour of H	w
	Neutral towards H	n
	Weakly <i>against</i> H (underlined)	<u>w</u>
	Strongly <i>against</i> H (underlined)	<u>s</u>

We then combine (symbol ★ ) the Weights in obvious ways thus:

$$w \star w = s$$

$$w \star \underline{w} = n$$

$$s \star s = ss$$

$$s \star \underline{w} = w \quad \text{and so on.}$$

And we finally decide to act on H only when the combined evidence reaches either sss [decide for H] or s s s [decide against H]. This is a precautionary measure which saves us from making premature, possibly fatal decisions based on only two strong clues, one of which might be unsound.

## SIMPLE EXAMPLE

A detective is having to decide whether to charge X with a crime [her hypothesis is ‘X is guilty’. Her thinking, based on the available evidence, might look like this:

TABLE (5:2) DETECTIVE’S THINKING

Clue	Her Weight	Accumulated Weight	Outcome
Motive	s	s	
Opportunity	w	ws	
Alibi	<u>w</u>	s	
Witness A	w	ws	
Witness B	<u>s</u>	w	
Witness C	w	s	
Witness D	s	ss	
Forensics	s	sss	Charges X

My scheme is nothing more than the systematic Association of an Idea H with different clues, combined with a simple precautionary mechanism for avoiding overhasty decisions. I suspect such CI is our main survival mechanism with roots that go back a billion years. You won’t find it in text-books on Inference or Logic; they appeal instead to notions such as Probability Theory, Bayes’ Theorem and Parsimony. The problem is that their authors disagree violently among themselves – so something must be seriously wrong. That’s why scientists ignore them and go on using Common Sense CI to progress.

Notice three important features of this scheme:

- (i) The more evidence the better. With a sufficiently long string of clues, even when they conflict, we can eventually reach a decision [sss or s s s] about

H, one way or the other, provided (a major proviso) a record has been kept of the incoming clues, together with their Weights. For instance I was eventually able to bring my own tangled research project to a triumphant conclusion but only after using writing to compound 25 separate clues, some in stark conflict with the rest. This means the scheme can be used, but only by the literate, to handle highly complex tasks such as voyaging to the Moon

- (ii) The process is open-ended; there is always room to add new evidence to the tally whenever it is found. Thus it is Provisional in nature, and even after a decision to act has been taken there must be room for a change of mind – in other words to Adapt.
- (iii) Rather than remember these unfamiliar symbols it turns out to be much easier to use betting Odds and replace “combine” by the multiplication sign  $\times$ , ‘n’ by the number 1, s by 4, w by 2, underlined-w by  $\frac{1}{2}$ , and underlined-s by  $\frac{1}{4}$ . Then a decision in favour takes place when the Odds are 64 to 1 on or better, and against at Odds of 64 to 1 against or worse. In future that is what we do.

NB. This extract was taken from Chapter 5 of my book “*History of the Brits*” where it is later be used to tackle some very thorny issues such as ‘Is America Britain’s friend or enemy?’, or ‘Would the Scots have been better off Independent’ and ‘Is mass immigration good or bad for Britain?’.