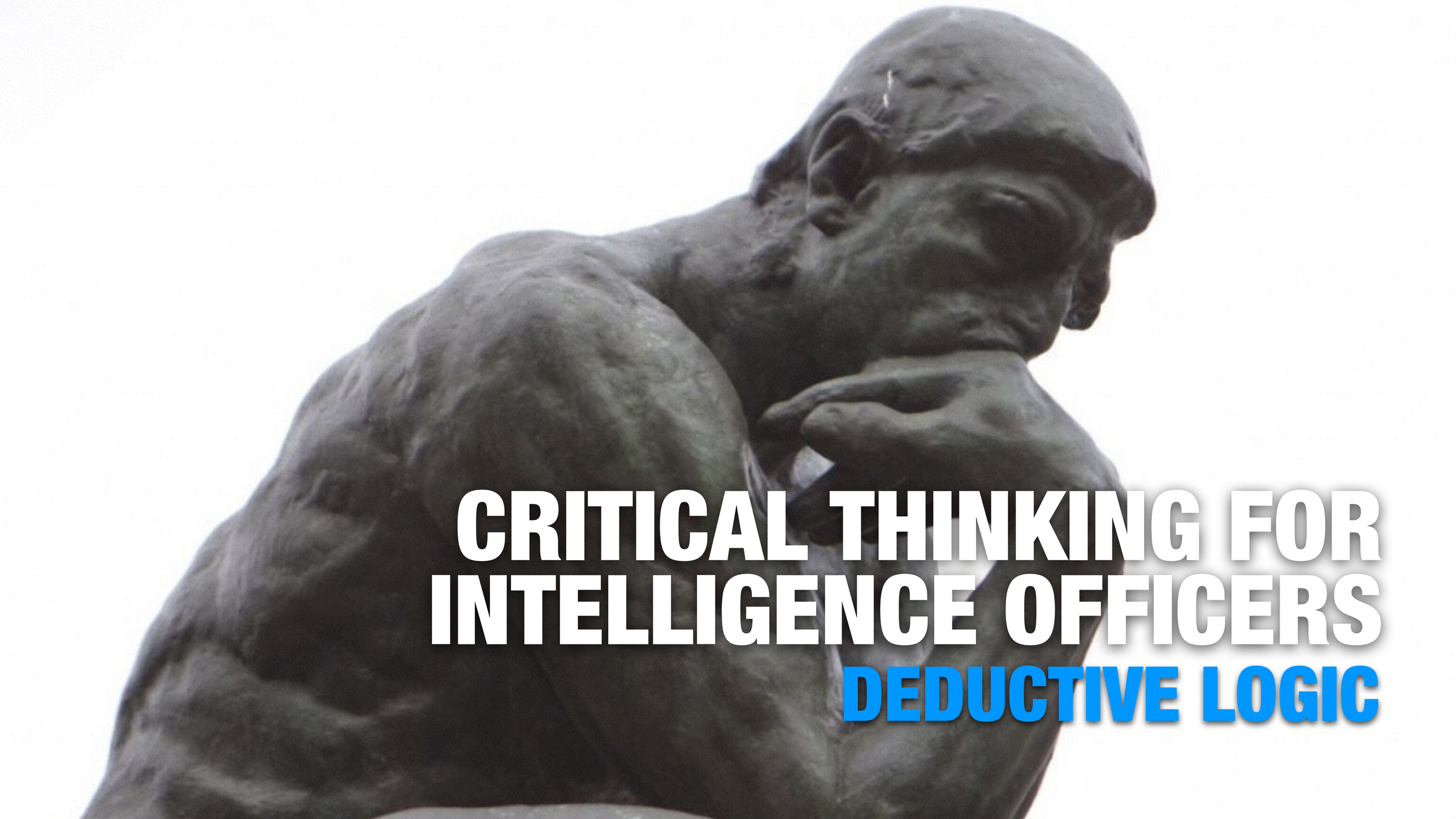


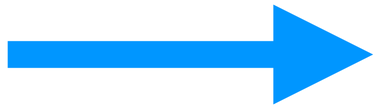
CRITICAL THINKING FOR INTELLIGENCE OFFICERS

DEDUCTIVE LOGIC

ASKING THE
RIGHT QUESTION

GETTING THE
RIGHT ANSWER

INFORMATION
EVIDENCE
PRIOR BELIEF



POSTERIOR
BELIEF

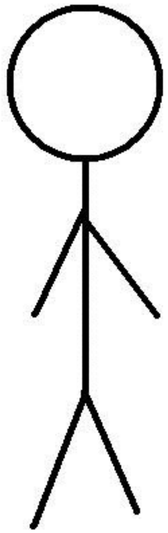
A
B

INFERENCE

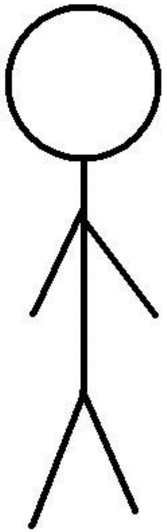
YOU'VE JUST ARRIVED IN THE AO & YOU NEED TO ASSESS THE QUALITY OF A NEW SOURCE OF INTEL.

SHE'S TOLD YOU THAT LOCAL CUSTOM REQUIRES ALL MEN OF TRIBE A TO WEAR A TALISMAN UNDER THEIR CLOTHES.

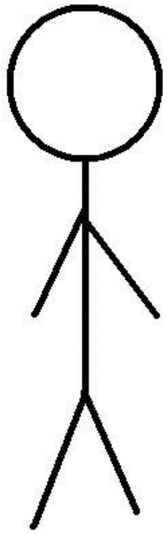
IF TRIBE A THEN TALISMAN



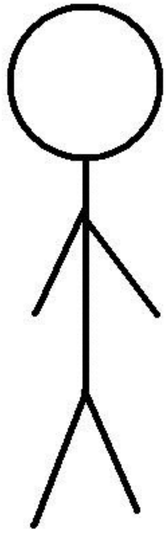
TRIBE A



TRIBE B



T



NO T

VERIFICATION IS DANGEROUS & EXPENSIVE.

WHICH PEOPLE MUST BE CHECKED TO TEST YOUR SOURCES CLAIM?

LESS THAN 10% OF SUBJECTS FOUND THE CORRECT SOLUTION

WASON, P. C. (1968). REASONING ABOUT A RULE. QUARTERLY JOURNAL OF EXPERIMENTAL PSYCHOLOGY, 20(3):273-281.

DEDUCTIVE INFERENCE ALLOWS US TO MOVE FROM EARLIER BELIEFS (**PREMISES**) TO LATER BELIEFS (**CONCLUSIONS**) WITH **CERTAINTY**.

ALL DOCTORS ARE GOLFERS

SALLY IS A DOCTOR

THEREFORE SALLY IS A GOLFER

ALL DOCTORS ARE GOLFERS

SALLY IS A GOLFER

THEREFORE SALLY IS A DOCTOR

ALL DOCTORS ARE GOLFERS

SALLY IS A GOLFER

~~THEREFORE SALLY IS A DOCTOR~~

ALL DOCTORS ARE GOLFERS

SALLY IS NOT A GOLFER

THEREFORE SALLY IS NOT A DOCTOR

DEDUCTIVE INFERENCE IS TRUTH PRESERVING

DEDUCTIVE INFERENCE IS NON-AMPLIATIVE

DEDUCTIVE INFERENCE IS MONOTONIC

YOU ARE ABOUT TO GO ON HOLIDAYS AND ARE COMPARING TRAVEL INSURANCE.

ONE POLICY PAYS $1,000,000 TO YOUR FAMILY FOR DEATH OF ANY KIND? ANOTHER COVERS THAT AND DEATH FROM A TERRORIST RELATED INCIDENT.

HOW MUCH MORE WOULD YOU PAY FOR #2?

“THE PRICE REPORTED FOR TERRORISM COVERAGE WAS MORE THAN TWICE FOR DEATH BY ANY CAUSE”

JOHNSON, E, ET AL. FRAMING, PROBABILITY DISTORTIONS, AND INSURANCE DECISIONS. SPRINGER NETHERLANDS, 1993.

GREED, LAZINESS, AND FEAR DRIVE US TO REASON BADLY

DEDUCTIVE REASONING HELPS US AVOID THOSE MISTAKES

COMMON FALLACIES

IF I'M A GENERAL, THEN I OUT RANK YOU.

I'M NOT A GENERAL

THEREFORE I DON'T OUT RANK YOU.

DENYING THE ANTECEDENT

IF THE WMD ARE HERE, THEN THEY WILL BE VERY DIFFICULT TO FIND.

THE WMD ARE VERY DIFFICULT TO FIND.

THEREFORE, THE WMD MUST BE HERE.

ASSERTING THE CONSEQUENT

STRENGTHS

DEDUCTIVE INFERENCE IS PROVABLE

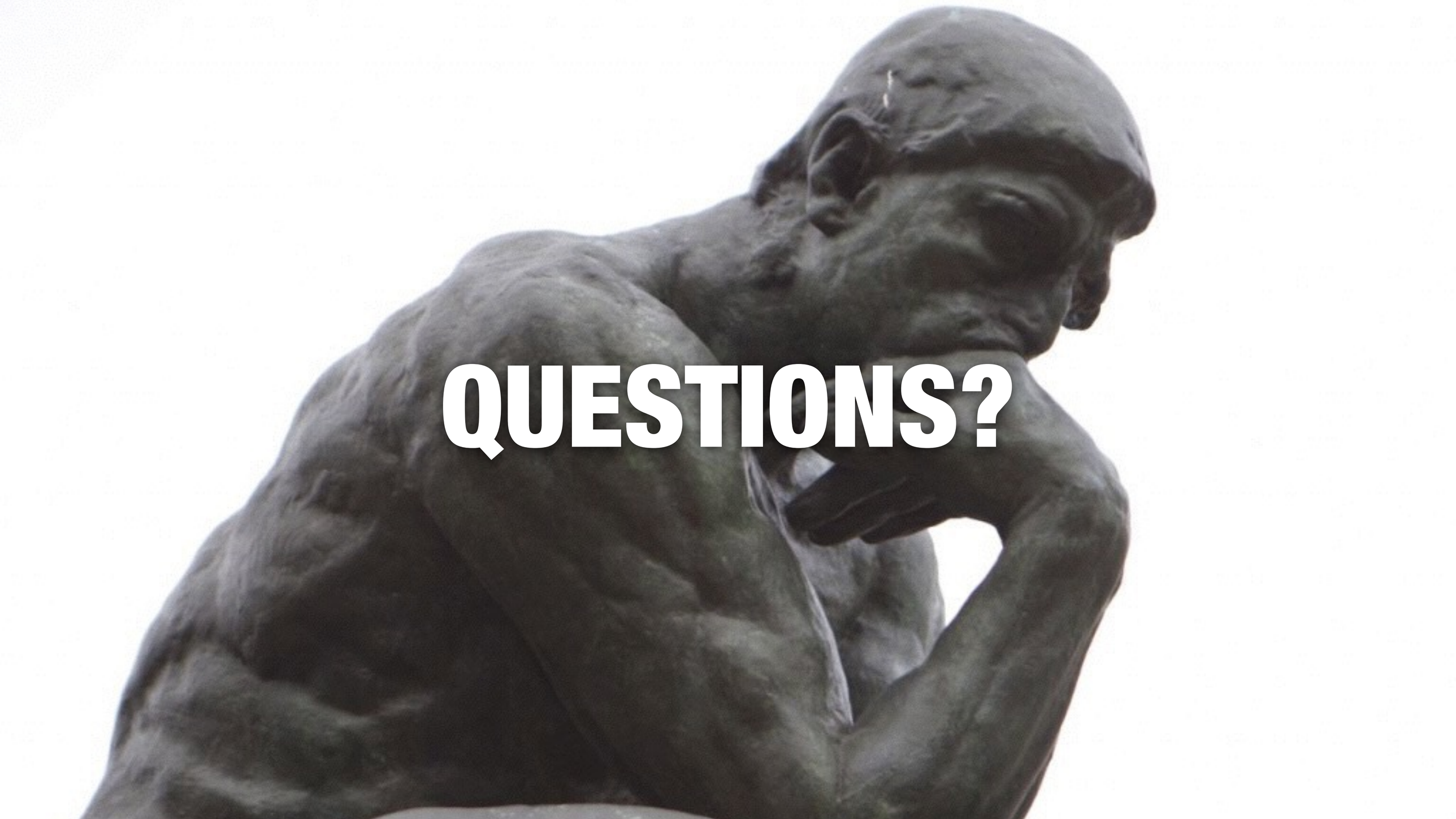
TRUTH PRESERVING

INDEFEASIBLE

WEAKNESSES

DEDUCTIVE INFERENCE IS NON-AMPLIATIVE

VALIDITY IS NOT ENOUGH


QUESTIONS?