What is Abductive Reasoning?

Abductive reasoning is a reasoning process that undergird innovative behaviours and scientific discoveries.

Unlike the logical certainty of deductive reasoning, abductive reasoning involves the making of inferences, speculations, non-sequential logical leaps, the forming and testing of hypotheses that produces probabilistic conclusions.

Abductive Reasoning in 5 Steps

Stop 1	A pu	zzling	observation	is	made	in	the
steh T.	A puzzling observation is made in the Science domain.						

Step 2: Scientists make abductive speculations on the underlying pattern or natural mechanism.

Step 3: Empirical predictions are made, which are then tested.

Step 4: If the predictions hold, the hypothesis receives confirmation.

Step 5: If the predictions do not hold, a revised hypothesis is created and tested.

Abductive Reasoning

- 1. We start with a result. This is white.
- 2. We follow a rule. Chalk is white.
- 3. Infer a property of the case. This could be chalk.

Deductive Reasoning

- 1. We start with a rule. Chalk is white.
- 2. We notice a case. This is chalk.
- 3. We come to a deductive conclusion. Since chalk is white, and this is chalk, then this must be white.

Inductive Reasoning

- 1. We begin with a case. This is chalk.
- Investigate this case and note results.This is white.
- 3. Infer a rule that might not be conclusive.

Chalk could be, in general, white.

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