23. Cause and Effect | 원인과 결과/인과관계

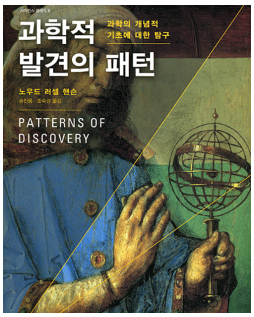
1. Advancement of Natural science

Natural science advances through a continuous, logical process: **1) observing phenomena, 2) finding patterns within the data, and 3) ultimately [covering/uncovering] the cause-and-effect relationships.**

1) The starting point of all science is observation.

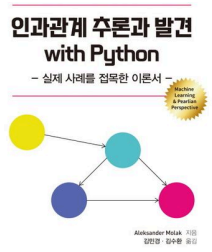
Researchers use their senses and measurement tools to record natural phenomena without bias, collecting objective and **[qualified/quantified]** data. The central question here is "**What** is happening?" The goal is to build a solid foundation근거 of factual information free from personal opinion.

2) Once enough data accumulates축적되다, scientists move to the next stage: finding patterns.



By comparing data and analyzing statistics, they identify식별하다/확인하다 recurring반복되는 cycles, **proportions**비율, and **[regularities**규칙성**/randomnesses**무작위성**]**, often framing them into mathematical formulas or empirical경험적인 rules. **Finding a pattern makes [it/this] possible to predict future outcomes by answering "How does it repeat?" [Therefore/However]**, it still does not explain "**Why** does it happen?"

3) The culmination of scientific progress is uncovering [causality/casualty].



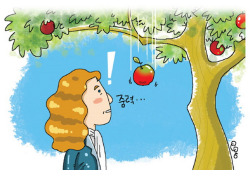
Through experiments and testing, researchers control **[constants**상수**/variables**변수**]** to identify the exact mechanism driving the observed pattern. Once the relationship between cause and effect is clearly proven, these empirical rules transform into a(an) **[apprehensive/comprehensive]**이해할 수 있는, **[specific/universal]**보편적인 scientific theory.

Ultimately, natural science evolves through this interconnected cycle: 1) observation gathers the facts, 2) patterns **[reveal/conceal]** the order, and 3) causality explains the **[underlying/undermining]** truth.

2. Cause and Effect 인과관계

원인과 결과의 관계가 아니다.

원인이 있었기 때문에 결과가 생겨났다.



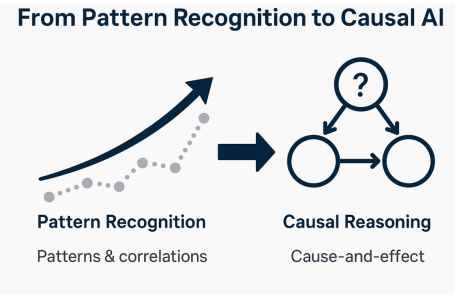
Cause and effect (cause-effect, cause and consequence, causality, causation, causal relationship, causal arrow, causative relationship) refers to언급하다 the philosophical concept of **[casualty/causality]**인과관계, **[which/in which]** an action or event will cause the action in the form of

another event. **The universe and everything in it are in flux**흐름**, [raising/arising] and [seizing**붙잡다**/ceasing**멈추다**/chasing**쫓다**], and appearing and disappearing, in an unending cycle of change by the law of causation**인과관계**.** All things **are [subject/object] to**~의 대상이 되다 the law of cause and effect, and **[subsequently**직후에**/consequently**결과적으로**]** nothing can exist **[dependently/independently]** of other things.

3. Natural Science & Cause and Effect 자연과학과 인과관계

Since the dawn도래 of civilization, man has been engaged in the process of discovery by **[veiling/unveiling]**드러내다 the mysteries of nature. This had led to an accumulation축적 of **the body of**많은 knowledge about nature through experiments and reasoning추론 called science. The word 'science' **[originated/was originated]** from a Latin word **scio**, which means "I know." **[Therefore/ In contrast]**, an originated effort to know about the things and happenings in nature is science. **Man has come to the conclusion [that/which] there cannot be any event in nature(effect)결과 without reason(cause)**원인**.** This is a(an) **[universal/particular]** law of "cause and effect." Thus, the function of science is to search for **[causes/effects]** of natural phenomena and other events. In this process of searching for knowledge and truth, man has accumulated축적하다 a vast knowledge known as **[science/superstition]**.

4. Pattern & Causal Link 패턴 & 인과관계



When causal mechanisms cannot be explained through natural laws, the brain resolves anxiety걱정/근심 by projecting투사하다 an "unseen **[intention/coincidence]** (evil spirits, luck, curses)" into the causal gap.

When the human brain "detects a pattern but fails to uncover a valid physical or logical causal link," the psychological and cognitive phenomenon of filling the void텅빈 **explanations with supernatural or [altruistic/arbitrary] explanations is precisely what we call Superstition.**

Evolutionary psychology and cognitive science explain this **not as** a mental defect결함, **but as** an evolutionary byproduct부산물 optimized최적화하다 for survival. The brain evolved to decode the intentions, minds, and desires바램/욕구 of other humans. **When confronted**직면하다 **with impersonal natural phenomena (thunder, droughts, epidemics), it overextends**과도하게 확장하다 **this capacity, interpreting events as if "nature, God, or the universe is communicating a message (a warning, a blessing, or a punishment)."** Evolutionarily, to evade danger, the brain adapted to "connect dots and believe the pattern first, even when the causal link is **[obvious/ambiguous]** (errors / false positives)."