



01편 인간의 협력적인 본성과 진화

The cooperative nature and evolution of man



[1] Many animals live a life that I would just as soon forgo, not because it ends in tragedy, but because their approach to living is one of endless conflict.

[2] Imagine being a seagull and spending your entire life fighting other seagulls for scraps.

[3] What makes us so lucky is the pure happenstance that we evolved to be (mostly) good to one another.

[4] Our cooperative nature also set the stage for the evolution of our amazing brain.

[5] Our sociality made us smarter individually, but, far more important, it connected our minds to others' minds in a manner that massively increased our knowledge and computing power.

[6] As a result, we long ago surpassed the predators that hunted us on the savannah, and are now holding most of the pathogens at bay that are a much greater threat than predators ever were.

[7] For the first time in history, we no longer bury almost half our children before they reach adulthood.

[8] Evolution is brutal, but those of us with the good fortune to live in established democracies have used the tools that evolution gave us to create unprecedentedly safe and satisfying lives.



02편 Jackson Pollock의 성공 비결

Jackson Pollock's Secret to Success



[1] Experts agree that Jackson Pollock had little native talent for art, and when you look at his early products, it showed.

[2] They also agree that he became one of the greatest American painters of the twentieth century and that he revolutionized modern art.

[3] How did he go from point A to point B?

[4] It's the result of hard work and dedication.

[5] Pollock was wildly in love with the idea of being an artist.

[6] He thought about art all the time, and he did it all the time.

[7] Because he was so enthusiastic, he got others to take him seriously and mentor him until he mastered all there was to master and began to produce startlingly original works.

[8] His "poured" paintings, each completely unique, allowed him to draw from his unconscious mind and convey a huge range of feeling.

[9] Several years ago, I was privileged to see a show of these paintings at the Museum of Modern Art in New York.

[10] I was stunned by the power and beauty of each work.



03편 동물들의 경계를 위한 상호 의존



Interdependence for animal boundaries

[1] Evolution has taught the animal kingdom plenty of labor-saving shortcuts.

[2] One of these is to remain sensitive to the alarm calls of other species.

[3] The most alert and insecure of woodland creatures form part of a network of alarms; the birds, squirrels and deer are all tuned into each other's transmissions.

[4] This codependency will be found all over the world.

[5] In the African savannah, wildebeest mix with zebras to share their awareness.

[6] The wildebeest have poor vision and a strong sense of smell, but the zebras have good vision and a weaker sense of smell.

[7] Together they notice more and alert each other to danger.

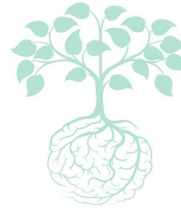
[8] We may think we are being very stealthy by creeping up on a deer from downwind, but if we behave in a way that worries the songbirds overhead, we will not get anywhere near the deer.

[9] Equally, a deer downwind of us may pick up our scent long before a wren in a low bush sees us, and his warning cough-like call will work perfectly well for the bird.



04편 뇌와 나무의 유사성

The similarity between the brain and the tree



[1] The idea that we can cultivate the soul or the self like a garden

goes back to ancient times and is beginning to be applied to

the brain in contemporary science.

[2] It is, of course, replacing one metaphor with another

but we cannot think in any sophisticated way without metaphors.

[3] Furthermore, this one is more accurate.

[4] The cells that create our neural networks grow in the form of

tree-like branching structures and were originally named dendrites

after the Latin word for tree because of their visual similarity to one.

[5] This resemblance, it has recently been discovered, reflects

the fact that neuronal arbours and plants grow according

to the operation of the same three mathematical laws.

[6] A deeper similarity can be found in the active process of pruning

and weeding that maintains the health of our neural networks

and is carried out by a group of cells which function as the brain's

resident gardeners.



05편 학생의 독립성을 점차 허용하는 수업

A class that gradually allows students to become independent



- [1] A director of a play has a peculiar job.
- [2] For weeks, she orchestrates every move made by various people in a variety of roles, from actors to support personnel.
- [3] Little happens without her intervention in one way or another.
- [4] When the play opens, however, the director is essentially useless.
- [5] If the cast and crew still need her, she is a failure.
- [6] Teaching is, or at least ought to be, like that.
- [7] Every day, the teacher should make himself increasingly useless in his students' lives.
- [8] These kinds of teachers do not provide solutions when students can figure things out for themselves.
- [9] They provide directions and guidelines for quality, but they leave some ambiguity, choice, and flexibility so that students have to make leaps of transfer and apply common sense.
- [10] They take careful measure of how much responsibility children can manage, making sure to give them that much – and coaching for a bit more as well.



06편 상황과 관련된 강점

Situational strengths



- [1] Strengths are contextual.
- [2] Any personal quality can be either an aptitude or a handicap, depending on the situation.
- [3] Let's say you have difficulty reading printed text.
- [4] This might understandably seem like a shortcoming, especially if you want to be a literary critic, a profession heavily dependent on the parsing of texts.
- [5] But if you want to be an astronomer, the same apparent shortcoming could turn into an unexpected strength.
- [6] The brains of many people who have trouble reading are better at detecting black holes and other celestial anomalies in astronomical images than the brains of individuals without reading difficulties.
- [7] A facility for empathy is an asset for a nurse, but a shortcoming for a military drone pilot.
- [8] Being tall is an advantage for an NBA player, but a disadvantage for a coal miner.



07편 신념의 특징

The characteristics of belief

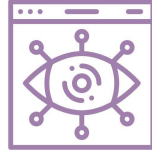


- [1] Convictions feel certain.
- [2] But not everything we feel certain about is a conviction.
- [3] I don't need conviction for anything I'm absolutely or logically certain about.
- [4] When Rene Descartes declared he was certain that he thinks and exists (popularly, but erroneously, understood as the inference "I think, therefore I am"), he meant he couldn't actively doubt he was thinking at that moment – because doubting is thinking.
- [5] But it would be odd to say this was Descartes's conviction.
- [6] Indeed, the interesting thing about convictions is that they are often formed in the face of opposite convictions.
- [7] Unlike logical certainties like 2 and 2 make 4, or philosophical certainties like Descartes's belief in his own existence, we generally know that others may oppose our convictions.
- [8] We are aware that our convictions can be doubted and challenged, even if we ourselves just cannot imagine that they are false.



08편 시각 이미지 해석과 기억

Visual Image Interpretation and Memory



[1] In daylight, we only perceive full colour and fine detail in the central region of our visual field, with less-defined vision and reduced colour perception from the outer region.

[2] Our brain then takes the relatively small amount of detailed colour imagery it is presented with and uses it combined with the less-colourful, less-defined peripheral imagery to interpret the image by comparison to memories stored throughout life.

[3] If we see a Y-shaped image on a page, for example, we can interpret it as a three-dimensional representation of a corner, which can in turn be perceived either protruding from the page or depressed within it.

[4] Most people see it as a projecting corner, perhaps recalling an early memory that a corner is hard and sharp, discovered when exploring on all fours as an infant.

[5] What is important to understand here is that our memory plays a critical role in the interpretation of the visual signals we receive from our photoreceptors.

[6] If we wish to become good at spotting things, we need to have built up a substantial store of imagery for comparison.





9번 사람마다 다르게 경험하는 시간의 흐름



The flow of time that people experience differently

[1] One of the most universal characteristics of the passage of time is that it's not universal: everybody experiences it a little bit differently.

[2] There's a physics sense in which that's quantifiably true, but most of the differences between our experiences of time are subjective.

[3] A full day of work can seem to fly by or drag on endlessly, depending on how you feel about the tasks at hand, and what seems to a parent like a perfectly reasonable wait for an amusement park ride will feel like HOURS to their young children.

[4] This difference in subjective experience is exacerbated by the fact that, particularly in the adult world, everybody keeps their own schedule.

[5] The person at the supermarket checkout fumbling to find the exact change for their purchases might see this as a good use of time because they have no pressing responsibilities at the moment, while the troubled person behind them is steaming because they're running late for a meeting.

[6] Everybody's doing their own thing, at their own pace, and when schedules bump up against each other it can create tension.



10편 질문의 유용성



The usefulness of a question

[1] I think intuitively my colleagues and I have gravitated toward the kinds of questions that knock down barriers by challenging past assumptions and create new energy for pursuing solutions along some new pathway.

[2] And if we have, it is probably in part because asking a question is a very effective way of introducing a novel way of thinking about something without exposing oneself to judgment.

[3] A question, after all, is not a declaration of opinion aggressive enough to draw fire.

[4] It is an invitation to think further within a different framing or along a divergent line.

[5] If that line of thinking isn't taken up, or fails to lead somewhere valuable, there is no reputational damage to the person who suggested it.

[6] And, therefore, a person is more likely to put it out there.