



ANALYSIS 업무 몰입의 원인: 상황 및 개인적 영향.



Causes of Work Engagement: Situational and Personal Influences.

[1] Much research has been carried out on the causes of engagement, an issue that is important from both a theoretical and practical standpoint: identifying the drivers of work engagement may enable us to manipulate or influence it.

[2] The causes of engagement fall into two major camps: situational and personal.

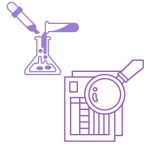
[3] The most influential situational causes are job resources, feedback and leadership, the latter, of course, being responsible for job resources and feedback.

[4] Indeed, leaders influence engagement by giving their employees honest and constructive feedback on their performance, and by providing them with the necessary resources that enable them to perform their job well.

[5] It is, however, noteworthy that although engagement drives job performance, job performance also drives engagement.

[6] In other words, when employees are able to do their jobs well – to the point that they match or exceed their own expectations and ambitions – they will engage more, be proud of their achievements, and find work more meaningful.

[7] This is especially evident when people are employed in jobs that align with their values.



01번 사건의 원인 규명을 위한 통제된 실험의 활용

The Use of Controlled Experiments to Identify Causes of Events

- [1] The fundamental nature of the experimental method is manipulation and control.
- [2] Scientists manipulate a variable of interest, and see if there's a difference.
- [3] At the same time, they attempt to control for the potential effects of all other variables.
- [4] The importance of controlled experiments in identifying the underlying causes of events cannot be overstated.
- [5] In the real-uncontrolled-world, variables are often correlated.
- [6] For example, people who take vitamin supplements may have different eating and exercise habits than people who don't take vitamins.
- [7] As a result, if we want to study the health effects of vitamins, we can't merely observe the real world, since any of these factors (the vitamins, diet, or exercise) may affect health.
- [8] Rather, we have to create a situation that doesn't actually occur in the real world.
- [9] That's just what scientific experiments do.
- [10] They try to separate the naturally occurring relationship in the world by manipulating one specific variable at a time, while holding everything else constant.



02편 지중해식 식사와 그 건강상의 이점

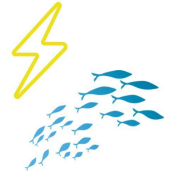


Mediterranean diet and its health benefits

- [1] Why do people in the Mediterranean live longer and have a lower incidence of disease?
- [2] Some people say it's because of what they eat.
- [3] Their diet is full of fresh fruits, fish, vegetables, whole grains, and nuts.
- [4] Individuals in these cultures drink red wine and use great amounts of olive oil.
- [5] Why is that food pattern healthy?
- [6] One reason is that they are eating a palette of colors.
- [7] More and more research is surfacing that shows us the benefits of the thousands of colorful "phytochemicals"(phyto=plant) that exist in foods.
- [8] These healthful, non-nutritive compounds in plants provide color and function to the plant and add to the health of the human body.
- [9] Each color connects to a particular compound that serves a specific function in the body.
- [10] For example, if you don't eat purple foods, you are probably missing out on anthocyanins, important brain protection compounds.
- [11] Similarly, if you avoid green-colored foods, you may be lacking chlorophyll, a plant antioxidant that guards your cells from damage.



03편 물고기의 전기적 의사소통



Electrical communication of fish

- [1] Electric communication is mainly known in fish.
- [2] The electric signals are produced in special electric organs.
- [3] When the signal is discharged the electric organ will be negatively loaded compared to the head and an electric field is created around the fish.
- [4] A weak electric current is created also in ordinary muscle cells when they contract.
- [5] In the electric organ the muscle cells are connected in larger chunks, which makes the total current intensity larger than in ordinary muscles.
- [6] The fish varies the signals by changing the form of the electric field or the frequency of discharging.
- [7] The system is only working over small distances, about one to two meters.
- [8] This is an advantage since the species using the signal system often live in large groups with several other species.
- [9] If many fish send out signals at the same time, the short range decreases the risk of interference.



04편 유전을 통한 직관적 음식 선호도



Intuitive food preference through heredity

[1] In the natural world, if an animal consumes a plant with enough antinutrients to make it feel unwell, it won't eat that plant again.

[2] Intuitively, animals also know to stay away from these plants.

[3] Years of evolution and information being passed down created this innate intelligence.

[4] This "intuition," though, is not just seen in animals.

[5] Have you ever wondered why most children hate vegetables?

[6] Dr. Steven Gundry justifies this as part of our genetic programming, our inner intelligence.

[7] Since many vegetables are full of antinutrients, your body tries to keep you away from them while you are still fragile and in development.

[8] It does this by making your taste buds perceive these flavors as bad and even disgusting.

[9] As you grow and your body becomes stronger enough to tolerate these antinutrients, suddenly they no longer taste as bad as before.



05편 적응의 성격

Adaptation
VS
acclimation

The nature of adaptation

[1] Adaptation involves changes in a population, with characteristics that are passed from one generation to the next.

[2] This is different from acclimation — an individual organism's changes in response to an altered environment.

[3] For example, if you spend the summer outside, you may acclimate to the sunlight: your skin will increase its concentration of dark pigments that protect you from the sun.

[4] This is a temporary change, and you won't pass the temporary change on to future generations.

[5] However, the capacity to produce skin pigments is inherited.

[6] For populations living in intensely sunny environments, individuals with a good ability to produce skin pigments are more likely to thrive, or to survive, than people with a poor ability to produce pigments, and that trait becomes increasingly common in subsequent generations.

[7] If you look around, you can find countless examples of adaptation.

[8] The distinctive long neck of a giraffe, for example, developed as individuals that happened to have longer necks had an advantage in feeding on the leaves of tall trees.



00핀 온도와 빛나는 물체의 색 사이의 관련성



The relationship between temperature and the color of a glowing object

[1] One way of measuring temperature occurs if an object is hot enough to visibly glow, such as a metal poker that has been left in a fire.

[2] The color of a glowing object is related to its temperature:

[3] as the temperature rises, the object is first red and then orange, and finally it gets white, the "hottest" color.

[4] The relation between temperature and the color of a glowing object is useful to astronomers.

[5] The color of stars is related to their temperature, and since people cannot as yet travel the great distances to the stars and measure their temperature in a more precise way, astronomers rely on their color.

[6] This temperature is of the surface of the star, the part of the star which is emitting the light that can be seen.

[7] The interior of the star is at a much higher temperature, though it is concealed.

[8] But the information obtained from the color of the star is still useful.



07편 책을 대신한 정기 간행물의 출현



The emergence of periodicals in place of books

[1] In the early stages of modern science, scientists communicated their creative ideas largely by publishing books.

[2] This modus operandi is illustrated not only by Newton's Principia, but also by Copernicus' On the Revolutions of the Heavenly Spheres, Kepler's The Harmonies of the World, and Galileo's Dialogues Concerning the Two New Sciences.

[3] With the advent of scientific periodicals, such as the Transactions of the Royal Society of London, books gradually yielded ground to the technical journal article as the chief form of scientific communication.

[4] Of course, books were not abandoned altogether, as Darwin's Origin of Species shows.

[5] Even so, it eventually became possible for scientists to establish a reputation for their creative contributions without publishing a single book-length treatment of their ideas.

[6] For instance, the revolutionary ideas that earned Einstein his Nobel Prize — concerning the special theory of relativity and the photoelectric effect — appeared as papers in the Annalen der Physik.

[7] His status as one of the greatest scientists of all time does not depend on the publication of a single book.



08편 스포츠 클럽의 고정된 생산 능력



The fixed production capacity of a sports club

[1] A supply schedule refers to the ability of a business to change their production rates to meet the demand of consumers.

[2] Some businesses are able to increase their production level quickly in order to meet increased demand.

[3] However, sporting clubs have a fixed, or inflexible (inelastic) production capacity.

[4] They have what is known as a fixed supply schedule.

[5] It is worth noting that this is not the case for sales of clothing, equipment, memberships and memorabilia.

[6] But clubs and teams can only play a certain number of times during their season.

[7] If fans and members are unable to get into a venue, that revenue is lost forever.

[8] Although sport clubs and leagues may have a fixed supply schedule, it is possible to increase the number of consumers who watch.

[9] For example, the supply of a sport product can be increased by providing more seats, changing the venue, extending the playing season or even through new television, radio or Internet distribution.



09편 임무 종료된 인공위성의 처리



Processing of mission-ended satellites

[1] The United Nations asks that all companies remove their satellites from orbit within 25 years after the end of their mission.

[2] This is tricky to enforce, though, because satellites can (and often do) fail.

[3] To tackle this problem, several companies around the world have come up with novel solutions.

[4] These include removing dead satellites from orbit and dragging them back into the atmosphere, where they will burn up.

[5] Ways we could do this include using a harpoon to grab a satellite, catching it in a huge net, using magnets to grab it, or even firing lasers to heat up the satellite, increasing its atmospheric drag so that it falls out of orbit.

[6] However, these methods are only useful for large satellites orbiting Earth.

[7] There isn't really a way for us to pick up smaller pieces of debris such as bits of paint and metal.

[8] We just have to wait for them to naturally re-enter Earth's atmosphere.



10번 위험을 해소하는 방법



How to Deal with Risks

- [1] Risk often arises from uncertainty about how to approach a problem or situation.
- [2] One way to avoid such risk is to contract with a party who is experienced and knows how to do it.
- [3] For example, to minimize the financial risk associated with the capital cost of tooling and equipment for production of a large, complex system, a manufacturer might subcontract the production of the system's major components to suppliers familiar with those components.
- [4] This relieves the manufacturer of the financial risk associated with the tooling and equipment to produce these components.
- [5] However, transfer of one kind of risk often means inheriting another kind.
- [6] For example, subcontracting work for the components puts the manufacturer in the position of relying on outsiders, which increases the risks associated with quality control, scheduling, and the performance of the end-item system.
- [7] But these risks often can be reduced through careful management of the suppliers.



10번 객관적인 증거를 통한 검증이 가능한 믿음

A verifiable belief through objective evidence

- [1] Most beliefs – but not all – are open to tests of verification.
- [2] This means that beliefs can be tested to see if they are correct or false.
- [3] Beliefs can be verified or falsified with objective criteria external to the person.
- [4] There are people who believe the Earth is flat and not a sphere.
- [5] Because we have objective evidence that the Earth is in fact a sphere, the flat Earth belief can be shown to be false.
- [6] Also, the belief that it will rain tomorrow can be tested for truth by waiting until tomorrow and seeing whether it rains or not.
- [7] However, some types of beliefs cannot be tested for truth because we cannot get external evidence in our lifetimes (such as a belief that the Earth will stop spinning on its axis by the year 9999 or that there is life on a planet 100–million light–years away).
- [8] Also, metaphysical beliefs (such as the existence and nature of a god) present considerable challenges in generating evidence that everyone is willing to use as a truth criterion.



12번 액체가 파괴적인 이유



Why liquids are destructive

[1] Liquids are destructive.

[2] Foams feel soft because they are easily compressed; if you jump on to a foam mattress, you'll feel it give beneath you.

[3] Liquids don't do this; instead they flow.

[4] You see this in a river, or when you turn on a tap, or if you use a spoon to stir your coffee.

[5] When you jump off a diving board and hit a body of water, the water has to flow away from you.

[6] But the flowing takes time, and if your speed of impact is too great, the water won't be able to flow away fast enough, and so it pushes back at you.

[7] It's that force that stings your skin as you belly-flop into a pool, and makes falling into water from a great height like landing on concrete.

[8] The incompressibility of water is also why waves can have such deadly power, and in the case of tsunamis, why they can destroy buildings and cities, tossing cars around easily.



13번 구매 결정에 중요한(important) 요소와 중추적인(pivotal) 인 요소

important
vs
pivotal

Important and Pivotal factors in purchasing decisions

[1] Some resources, decisions, or activities are important (highly valuable on average) while others are pivotal (small changes make a big difference).

[2] Consider how two components of a car relate to a consumer's purchase decision: tires and interior design.

[3] Which adds more value on average? The tires.

[4] They are essential to the car's ability to move, and they impact both safety and performance.

[5] Yet tires generally do not influence purchase decisions because safety standards guarantee that all tires will be very safe and reliable.

[6] Differences in interior features — optimal sound system, portable technology docks, number and location of cup holders — likely have far more effect on the consumer's buying decision.

[7] In terms of the overall value of an automobile, you can't drive without tires, but you can drive without cup holders and a portable technology dock.

[8] Interior features, however, clearly have a greater impact on the purchase decision.

[9] In our language, the tires are important, but the interior design is pivotal.



14번 컴퓨터와 인간의 강점과 시너지



Synergy with Computer and Human Strengths

- [1] It is important to remember that computers can only carry out instructions that humans give them.
- [2] Computers can process data accurately at far greater speeds than people can, yet they are limited in many respects —most importantly, they lack common sense.
- [3] However, combining the strengths of these machines with human strengths creates synergy.
- [4] Synergy occurs when combined resources produce output that exceeds the sum of the outputs of the same resources employed separately.
- [5] A computer works quickly and accurately;
- [6] humans work relatively slowly and make mistakes.
- [7] A computer cannot make independent decisions, however, or formulate steps for solving problems, unless programmed to do so by humans.
- [8] Even with sophisticated artificial intelligence, which enables the computer to learn and then implement what it learns, the initial programming must be done by humans.
- [9] Thus, a human- computer combination allows the results of human thought to be translated into efficient processing of large amounts of data.



15번 비언어적 신호의 사용



The use of nonverbal signals

[1] For hundreds of thousands of years our hunter-gatherer ancestors could survive only by constantly communicating with one another through nonverbal cues.

[2] Developed over so much time, before the invention of language, that is how the human face became so expressive, and gestures so elaborate.

[3] We have a continual desire to communicate our feelings and yet at the same time the need to conceal them for proper social functioning.

[4] With these counterforces battling inside us, we cannot completely control what we communicate.

[5] Our real feelings continually leak out in the form of gestures, tones of voice, facial expressions, and posture.

[6] We are not trained, however, to pay attention to people's nonverbal cues.

[7] By sheer habit, we fixate on the words people say, while also thinking about what we'll say next.

[8] What this means is that we are using only a small percentage of the potential social skills we all possess.



10편 인간의 창의력과 기계 능력의 경계



The boundary between human creativity and mechanical ability

[1] The boundary between uniquely human creativity and machine capabilities continues to change.

[2] Returning to the game of chess, back in 1956, thirteen-year-old child prodigy Bobby Fischer made a pair of remarkably creative moves against grandmaster Donald Byrne.

[3] First he sacrificed his knight, seemingly for no gain, and then exposed his queen to capture.

[4] On the surface, these moves seemed insane, but several moves later, Fischer used these moves to win the game.

[5] His creativity was praised at the time as the mark of genius.

[6] Yet today if you program that same position into an ordinary chess program, it will immediately suggest the exact moves that Fischer made.

[7] It's not because the computer has memorized the Fischer-Byrne game, but rather because it searches far enough ahead to see that these moves really do pay off.