

틀리기 쉬운 유형편

1강

01

For decades, primatologists have reported on incidents in which apes and monkeys behaved with apparent

compassion.

The pioneering primatologist Nadezhda Ladygina-Kohts raised a young chimpanzee named Joni in her Moscow

home.

Joni liked to play on the roof of her house and often refused to come down.

Over time, Kohts found that the best way to get Joni to come down was to appeal to his emotions.

She would pretend to cry, and Joni would immediately rush to her side, look about suspiciously for an

offender, and comfort her by gently touching her face.

Chimpanzees sometimes appear to help one another as well.

Jaki, a seven-year-old chimp living at the Arnhem Zoo, in the Netherlands, observed an older caregiver named

Krom trying unsuccessfully to retrieve a tire that had been filled with water.

After Krom gave up in frustration, Jaki went over to the tire, removed the other tires that were blocking it, and

carried it over to Krom, being careful not to spill any water.

02

In the physical world, friends are people to whom we are attached by feelings, affection, or personal regard.

In the world of social networking, however, the definition and application of the term friend is much more

vague and loosely applied.

For example, an individual who you have just met for the first time at a social gathering might not pass the test of being a friend in the physical world, but increasingly this type of casual connection is more than enough to pass the friendship test in the virtual world.

Simply knowing a person's face, name, or possible association with another "friend" is usually enough for many to enter into an online friendship with an individual.

At other times, a simple friend request is sufficient, regardless of familiarity with the individual or any previous personal connection.

In respect to online security and privacy, the choices made when befriending people in the digital world and the content (i.e., profile information, pictures, status updates, etc.) shared with them should not be taken lightly as such choices can have negative consequences in the real world.

03

Gifted children of almost any age show longer attention spans — in the things they are interested in at the moment, not necessarily in what others think they should be interested in.

Many gifted children spend hours reading, building models, or drawing — "forgetting" their household duties and not even hearing you call their name.

Their concentration is intense, focused, and all-consuming; they will also notice details that others miss.

One 10-year-old boy, who had read the second Harry Potter book four times, proudly announced that he could name all of the numerous courses that Harry and his friends studied at their school.

In another example, a highly gifted three-year-old boy watched a basketball star make 20 baskets in a row on

television.

This boy became resolved to do the same thing, and he stayed with the task for nearly three hours until he finally did it.

Even using a child-size hoop, this was quite an accomplishment for someone so young. His determination to stick with it that long was quite remarkable.

Persistence is a long-lasting trait of gifted children and adults.

04
Life has rules and only the foolish person refuses to follow these rules at all.

However, sometimes we expand this "rule" approach to life to such a degree that we get locked into patterns that are no longer applicable to life and our creative juices get squeezed out.

Therefore, one way to enhance our creativity is to challenge the rules.

In the movie IQ, Walter Matthau played the part of Einstein.

Meg Ryan was Einstein's niece.

At one point in the movie, Einstein said to his niece, "Question everything!" That's good advice.

Every advance in history came from someone who challenged the rules.

Columbus discovered America because he challenged the rules of navigation.

Martin Luther started the Reformation because he challenged the rules of the church.

Einstein discovered the theory of relativity because he challenged the rules of Newtonian physics.

Sometimes creativity arises out of the awareness that we do not have to do things in the same way they have

always been done.

05

Parents sometimes try to justify a child's bad behavior with the rationale, "Robert was running around with the wrong crowd."

The implication is that Robert's behavior was influenced by or caused by the other members of the crowd.

This may sound good, and it may be a correct assessment as far as it goes.

But it leaves out the fact that Robert was also a willing, participating and contributing member of this crowd, and that he probably influenced the others to about the same degree that they influenced him.

Granted, crowds (e.g., gangs) sometimes do things collectively that the individual members may not do by themselves.

But blaming the crowd for bad choices and irresponsible behavior misses the point entirely:

First, friends, associates, crowds/groups are choices, and second, individuals influence and are influenced by those who make up the group.

This is one very good reason why friends and close associates should be chosen carefully, not simply encountered and accepted.

Over a period of time, it matters.

06

The principle of distinctiveness suggests that we make attributions about people based on whether their particular characteristics and actions are associated with specific outcomes unique to the situation.

Distinctiveness is the extent to which things occur only with each other and not with other things.

For example, if a student, who has a habit of submitting his assignments late, seems well liked by peers and professors but is clearly treated harshly by one of the professors, then the student seems to cause a distinctive reaction from this professor.

If the professor in question is consistently harsh with many other students, then the behavior is not distinctive to the late-assignment student; rather it is low in distinctiveness, and you will tend to consider the professor a harsh person.

If, instead, you see this professor being friendly with all students except the student with the late assignments, then the student seems to be unique or distinctive in eliciting this response from the professor.

In this case, the professor's behavior is high in distinctiveness and you are more likely to attribute the cause to the late student having done something to upset this professor.

07
Contemporary Western athletes speak in their own terms about time expansion.

Tennis great Jimmy Connors has described transcendent occasions when his game rose to a level where he felt he'd entered a "zone."

At these moments, he recalls, the ball would appear huge as it came over the net and seem suspended in slow motion.

In this rarified air, Connors felt he had all the time in the world to decide how, when, and where to hit the ball.

In truth, of course, his seeming eternity lasted only a fraction of a second.

Basketball chatter is also laced with mystical-sounding references to “getting into zones” where time stands still.

Players describe unexplainable occasions when everyone around them seems to move in slow motion.

During these moments they report a feeling of being able to move around, between, and through their

opponents at will.

08

Food is a common, though certainly not exclusive, vehicle for boycotts.

There are both pragmatic and cultural factors that contribute to this, reflecting the fact that food is both a

biological necessity and a powerful cultural symbol.

Food, of course, is a basic human survival need, but food production, distribution, and consumption are also

political, economic, and cultural activities.

Food carries social, emotional, and spiritual meanings and embodies complex ideas about individual and group

identity, justice, and ethics.

The way in which food is marketed can either affirm or conflict with such ideas and values.

Pragmatically, food is a high-volume, often perishable commodity that typically requires high turnover times on

the retail market.

Disruptions to this supply-and-demand chain, and the economic consequences for business, are felt very quickly.

Food boycotts thus have both practical and symbolic value.

09

For years, Dr. Michael Breed at the University of Colorado has studied various forms of recognition in social insects.

Focusing on neotropical ants in Panama, he has discovered that these ants have sentries posted at entranceways into their colonies.

The sentries perform a thorough "smell" check of each ant that enters the colony.

In many ways, these ants have evolved their own TSA agents whose smell check is as thorough as any whole body scan at any airport.

If the ant passes the test, it is allowed access to the colony, but if the wrong odor is detected, the sentries forcibly carry the offending individual out of the anthill to the outskirts of the colony's territory.

Each colony has its own odor, called a "label," and the odor can arise from a genetic basis; it may be given to the workers from the queen ant or may arise from specific foods that are present in a particular colony.

10

Curiously, for all the value we ascribe to our ability to speak, language could have a dulling effect on the rest of our perception.

Humans have developed and refined a communication system that can convey extremely specific information.

It's possible that as a result we have become less reliant on our other senses for gleaning information from our surroundings.

If I can verbalize my anxiety, what need have you to focus on my body language, smells, or other physical or psychological signs that might accompany these feelings?

If I tell you that I've just placed some fresh strawberries on the kitchen table, why should you have to detect their presence by sense of smell?

In the absence of spoken language, other animals have to rely on their senses to detect sensory cues or the emotional states of others.

It's one key reason why we may be less perceptive than many other animals.

11

Some medical schools offer electives in 'Poetry and Medicine'.

These courses expose students to the poetry about medicine and healing and also offer opportunities for the students to write their own poetry.

There is something surprising that arises when one is writing from the depths of one's own self rather than from the technical mind of the trained physician.

Things come together in a different way through the logic of emotion and the conflict of existential issues.

Learning and growth can occur in a way that is not linear and not technical.

Poetic self-expression reflects an experience of suffering, joy, humanity and even death that does not find its way into the medical chart or progress note.

Without the opportunity to learn and process the difficult material that arises during medical training in a different way, dimensions of the student's humanity become obscured and diminished.

12

The ownership manual, together with the car registration, completely specifies the contents, model, color, and

other relevant characteristics of the car.

On the car's registration document, the relevant authority confirms the owner's exclusive legal right to the car.

Therefore, no one else is allowed to use this car without proper permission from the owner.

Once an exclusive ownership is attained, it is in the owner's interest to adhere to a regularly scheduled

maintenance program for the car, since failure to do so would cost no one else but the owner.

Last but not least, the owner of the car can enter into voluntary trade or exchange of the car at any point in

time.

Furthermore, should the owner decide to sell the car, it would be in the owner's best interest to sell it at the

highest possible price.

The ultimate effect of this process is to assure that ownership of a car will gravitate toward those individuals

who value it the most.

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01

One particular kind of consistency that's important in science is the definition and use of terminology, and it's not something that seems to come easily.

Ordinary speech doesn't generally work that way.

For example, "The ball spent a lot of time in the air,"

"We've been angry, and it's time to clear the air,"

"Sshh! We're on the air!" etc.

In each case it seems clear what the speaker probably meant, and none of those meanings was of air as a form of matter.

Everyday language is flexible. In almost all situations, that's a very good thing:

The context provides lots of information, and communication is much more efficient when it makes use of that information.

So if you're sitting at a baseball game, and you hear someone say "the ball spent a lot of time in the air," it would be very strange for you to need clarification of which ball or the precise meaning of "air."

If you're in a lab looking at a tarnished bead of copper, you wouldn't need clarification either, but the meanings would be different.

02

In the early 1990s, when e-mail first began gaining popularity, it was exciting to receive messages from other

people and fun to write them back, knowing that our replies would reach them instantly.

At some point, e-mail shifted from being a new way of communicating to being an automated work assigner.

It became the way people would give us our daily tasks.

Soon, our bosses and coworkers were sending us messages such as, "I need the changes to these documents

right away,"

"Where is my report?" and "You didn't get back to my previous e-mail message."

E-mail became a little dictator.

Now, the first thing people do when they arrive at work is read their e-mail messages.

We all knew from the start that e-mail was meant to be a communication mechanism, but we didn't think it

would become another demanding part of our job.

Many people now use e-mail to structure their workday, even though they already know what their job is.

03

How we see ourselves, our life circumstances, the future, or even other people is never completely accurate.

Our past influences how we see the present and imagine the future.

Some people are by nature more positive and optimistic, tending to focus on their positive characteristics and

expecting that things will turn out fine.

Other people are by nature more negative and pessimistic, focusing on their negative characteristics and

thinking about the possibility of bad future outcomes.

Whichever group you fall into, the way you see yourself and the world can't be perfectly clear and precise.

We all see things through somewhat clouded lenses, and we naturally tend toward seeing either the rosy or
the darkly tinted side of things.

And as we process information and try to understand ourselves, the world around us, and our relationships, we
all make cognitive errors, or mistakes in our thinking.

These cognitive errors are especially evident when we are feeling down or depressed.

04

It takes no special talent to create academic writing that is complex.

All you have to do is throw a lot of big words at your topic, create overly complex sentences, dump
information all over the page, and use subject-specific jargon.

Anybody can do this. Textbooks and academic journals are often filled with this kind of writing.

However, this is NOT the mark of an effective academic writer.

An effective academic writer, like an effective teacher, makes complex things seem simple. In your academic
writing, always seek clarity and simplicity.

The purpose of writing is not to show how smart you are, how much you know, or how many big words you
can use; rather, it is to transmit an idea or convey meaning in the most efficient and effective way possible.

05

In recent times, biologists have begun to suggest that animals are brainy for social reasons.

Geoffrey Miller, now at Stanford University, suggests that clever creatures can attract more mates because they
are more inventive and creative than the average.

The British biologist Nick Humphrey (and, later, Robin Dunbar) has a broader thesis — that animals do well by living in big cooperative groups, and complex groups can cohere only if the individual members are socially aware.

They must know who's who, and remember everyone's personal history, and how they can and should behave toward their fellows.

They must know who they should defer to; who they should submit to; who they should avoid; who is worth mating with; and who they can reasonably hope to mate with, without being beaten up for their pains, either by the potential partner or by some superior.

06

Many parents want to be able to have access to their children via cell phones during the school day.

However, with the regulations that are present at most schools, contacting their children can seem impossible to parents.

While it is true that cell phones can be used improperly in a classroom, this problem can be avoided by establishing a clear set of rules.

Instead of banning cell phones completely in schools, school districts should impose limits.

These limits would help ensure that mobile devices are used for the right circumstances.

For example, students would not be able to use phones during classes.

They would, however, be able to use phones during breaks, such as lunch, and after school.

This limit would eliminate disruptive phone alerts during lessons but still enable appropriate use for students

who are able to follow the rules and thus earn the privilege of carrying a phone.

07

If you feel you are too short or too tall, there is nothing you can do about that.

You might as well learn to look at the advantages of being short or tall.

I saw Michael J. Fox interviewed on television early in his career.

The interviewer asked Michael about how he felt about being so short, just 5'4".

Michael became animated and shared how he has always seen his size as an advantage!

Most of us know someone with a "Napoleonic complex" or feelings of inadequacy directly related to being

short.

Those people usually try to compensate by driving big cars, having big desks or acting just plain nasty.

Instead, Michael J. Fox was proud of his height and shared how much he enjoys being smaller.

He said when he was younger and his family got locked out of the house, he was the one who could squeeze

through the basement window to let everyone in.

He has embraced a characteristic over which he has no control.

08

It's rare that both the pilot and copilot will become incapacitated, save for something truly nefarious such as a

hijacking.

One exception? Food poisoning.

As described by a New York Times article from March 1984, there have been numerous times when flights

were put at risk by contaminated food.

In 1982, for example, a flight from Boston to Lisbon had to return to Massachusetts after both the pilot and copilot (and six others) fell ill from eating bad pudding.

In 1975, roughly a third of a 364-person flight going from Tokyo to Paris became ill after eating eggs containing harmful bacteria.

The only reason the pilot and copilot didn't get sick?

Their internal clocks were on a different schedule, and instead of eating breakfast, they dined on steak—dinner.

The Times article advocated for rules that prevented pilot and copilot from sharing meals, something not regulated at the time.

09

One of the most important things on the part of the teacher is a willingness to show some humility, to reveal her struggles, and to attempt to make her life and her message congruent.

She doesn't have to be perfect, but she'll be a better teacher if she is using her own life as a laboratory for her ideals and methods.

The most superb teachers are the "wounded healers" — the ones whose wisdom is tested in reality.

Good teachers are always learning themselves, adapting what they know to a world that keeps changing.

There's nothing worse than listening to someone who has polished a personal growth speech or a spiritual sermon that remains static over the years.

While religious or academic training, degrees, books, and previous teaching positions are credentials that may

indicate a highly trained teacher or therapist, equally important are the ways in which this person continually tests her knowledge in the world around her.

10

Because parents are the intended users of ratings, the ratings should be clearly understandable and easy for parents to use, and should provide information that parents find useful.

Almost all parents agree that ratings are a good idea, but they are not as widely used as one might expect.

Over three quarters of parents say they use the movie ratings to guide their family's movie choices.

However, only about half of parents say they have ever used the music advisories, the video-game ratings, or the television ratings.

Among parents who own televisions with V-Chips, over half are unaware of that feature, and few parents actively use it.

In a recent review of television policy, the Federal Communications Commission concluded that the "evidence clearly points to one conclusion:

the V-Chip is of limited effectiveness in protecting children from violent television content."

11

One objective factor in determining whether an argument is a good one for a person concerns whether the person is ignoring evidence that they already have, refusing to believe what the evidence clearly points to, or failing to seek out evidence that they could readily acquire if only they checked.

People often don't want to look for evidence for something they don't want to believe.

Maybe they fear they have a serious illness, but instead of having the doctor run tests, they refuse to even see

a doctor.

Some people react to threats to their worldviews by burying their heads in the sand.

But that doesn't absolve them from criticism for holding the typically false beliefs they end up with — for

example, that I'm perfectly healthy, that my friends won't be hurt if I lie to them, and so on.

12

Values provide ideals or beliefs about behavior but do not state explicitly how we should behave.

Norms, on the other hand, do have specific behavioral expectations.

Norms are established rules of behavior or standards of conduct.

Prescriptive norms state what behavior is appropriate or acceptable.

For example, persons making a certain amount of money are expected to file a tax return and pay any taxes

they owe.

Norms based on custom direct us to open a door for a person carrying a heavy load.

By contrast, proscriptive norms state what behavior is inappropriate or unacceptable.

Laws that prohibit us from driving over the speed limit and "good manners" that preclude you from talking on

your cell phone during class are examples.

Prescriptive and proscriptive norms operate at all levels of society, from our everyday actions to the formulation

of laws.

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01

Believe it or not, even in this computerized world there are still many situations where a sheet of paper and a pencil are the best tools for the music composer.

Many important modern composers, especially those born before 1940, won't work with anything but paper and pencil.

So, never think you are too advanced for these humble tools.

Writing music with only paper and pencil has some amazing advantages to composing at a piano or other instrument.

For one thing, many composers find the actual sound of the instrument itself interruptive to the composition process.

Just imagine yourself deep in thought, hearing the perfect sequence of notes in your head, when suddenly, your finger touches the actual piano key, and it doesn't sound exactly like you imagined.

Real sound is harsh, and hearing even the first note of your imagined phrase before you've written it down can cause you to lose an entire piece of music.

02

After you have a body fatness estimate, the question arises:

What is the "ideal" amount of fat for a body to have?

This prompts another question: Ideal for what?

If the answer is "society's perfect body shape," be aware that fashion is fickle, and today's popular body shapes
are not achievable by most people.

If the answer is "health," then the ideal depends partly on your lifestyle and stage of life.

For example, competitive endurance athletes need just enough body fat to provide fuel, insulate the body, and
permit normal hormone activity but not so much as to weigh them down.

An Alaskan fisherman, in contrast, needs a blanket of extra fat to insulate against the cold.

For a woman starting pregnancy, the outcome may be compromised if she begins with too much or too little
body fat.

03

What is the Zeigarnik effect?

If you've ever watched the season finale of a TV series like "West Wing" or "Friends," the cliffhanger episode is
a good example of the Zeigarnik effect.

When the ending leaves questions unanswered, it creates a tension in the viewer's brain.

It seems that it's the nature of people to be tormented by incomplete information.

It is this torment that will cause them to loyally tune in to the next episode — to get the questions answered
and relieve the tension.

Here's another example: If you've ever heard teasers for the 11 o'clock news that say something like,

"What is President George W. Bush's secret agenda against the terrorists that he's not telling the American
people? The answer will shock you. News at eleven."

That's the Zeigarnik effect at work. It compels people to tune in just to find out the answer to the question.

04

When the ego cannot deal with information about itself, it will block out the information, thereby effectively

blocking out a part of the self from the ego.

That part does not cease to exist, but it is no longer allowed outside, visible for others.

Now sometimes you meet another person who does allow that characteristic to be visible.

That will lead to strong feelings of irritation, sometimes even of wishing the other person removed from your

life.

This is what the Medusa myth was all about.

Medusa was a Gorgon who looked so terrible with snakes around her head, that if you looked at her directly

you would turn into stone.

The only way you could look at Medusa was if you looked at her in a mirror.

Medusa is a symbol for that part of your self that you cannot meet.

You have once decided that it was impossible for you to be like that and you blocked that part of yourself

out.

So you can only see that part of yourself in the mirror, reflected in the irritating behavior of another person.

05

Ambiguity can occur when people refer to groups.

Sometimes when you mention the name of a group, you intend to refer to parts of the group.

At other times, you intend to refer to the group as a whole.

The group as a whole often includes the parts and the structural arrangement of the parts.

Suppose your chemistry major roommate excitedly announces that he has a beaker with some hydrogen atoms in it and he knows there's oxygen in the room since you are both breathing.

You have what it takes to make H₂O.

But do you have any water? No.

To become water, hydrogen and oxygen have to be put together in a particular structure.

The parts of a group may not have the same features as the group.

Hydrogen and oxygen are gases when they appear alone, but a liquid when they combine to become water.

Water is wet. Hydrogen and oxygen are not.

06
It is the interplay between rules and randomness that will determine outcomes.

Since rules are deterministic, their presence promotes regularity and thus the ability to predict outcomes.

Randomness, on the other hand, imposes limits on our ability to predict.

The interplay of rules and randomness will result in something in between.

When the interaction is weak, rules tend to dominate and predictions are accurate.

For example, because the earth goes around the sun very obediently and fairly undisturbed by its environment, summer will happen at the expected time every year.

When, however, the interaction is strong, predictions are not to be trusted.

For example, whether it is going to rain at a given place on a summer day depends greatly on the environmental conditions, which change greatly from day to day.

As a result, one cannot be confident that rain will fall at a given place in a given day.

This is why natural phenomena may repeat themselves but not exactly in the same way.

07

There are indications that the development of a new medium does not occur in a vacuum unrelated to the old media developments that have already taken place.

It is tempting to accept the proposition that because they are "old," the old media have been developed by some point in time and do not change thereafter.

Of course, this is untrue.

Each of these old media is constantly evolving over time.

For example, party lines in telephony give way to private lines as technology continually evolves.

And the fact that old media change over time leads to the proposition that the old media "interact" with the new media during the process of the new media's development to make the new medium something other than it might have been in the absence of the old media types.

For example, Standage, a journalist and author from England, mentioned that the telegraph was a precursor to the Internet in terms of its two-way wired communication.

08

We should all agree that "The Scarlet Letter" is literature and that the latest sensational novel is not — but are

we sure what makes the difference?

We know that Shakespeare wrote poetry and Tupper doggerel, but it by no means follows that we can always distinguish doggerel from poetry; and while it is not perhaps of consequence whether we are able to inform others why we respect the work of one or another, it is of much importance that we be in a position to justify our tastes to ourselves.

It is not hard to discover whether we enjoy a book, and it is generally possible to tell why we like it; but this is not the whole of the matter.

It is necessary that we be able to estimate the justice of our preferences.

We must remember that our liking or disliking is not only a test of the book — but is a test of us as well.

There is no more accurate gauge of the moral character of a man than the nature of the books which he really cares for.

He who would progress by the aid of literature must have reliable standards by which to judge his literary feelings and opinions.

09

Slogans intensify the memory images.

People frequently pick up slogans and headlines and repeat them during the course of conversation.

Clever slogans like "There is no substitute for wool", "It pays to advertise", etc., frequently creep into general conversation.

What happens, of course, is that the reader unconsciously repeats the name or slogan each time he reads the

advertiser's announcements.

And the more times he reads it, the greater will be the repetitive effect on his pattern of thought and action.

As he reads a passage he tends to form the sounds of the words with his lips.

Seeing a slogan or catchphrase repeated several times in the papers and on the hoardings causes the reader unconsciously to recite the words, either silently or aloud, and this physical movement of the mouth materially assists in the retention of the words in memory.

Names of products are repeated and remembered in this way.

10

The international economic institutions currently lack the enforcement mechanisms to prevent the dominant Western elect bodies from manipulating the rules of the free-market system to their advantage.

However, as the forces of globalization gain strength and momentum, such violations of the philosophical formulation of the free market inevitably will diminish.

In due course, the fundamental competitive dynamic of the global free-market system will compel all regimes to conform to free-trade rules.

The impressive rise of China, India, and Brazil in the global marketplace signals a shift in global influence.

When their economies and domestic consumer markets mature, they will be in a strong position to insist that Western elect bodies abide by the principles of the free-market system or be denied access to the extraordinarily lucrative trade and investment opportunities they have to offer.

A globalizing world will require the redesign of prevailing international institutions, which are currently

dominated and governed by the interests of superpowers, into global institutions based on cooperation among equals and which benefit all societies equally.

11

A need can be defined in relation to a social standard.

Since all people have a biological need for food in order to survive, this need may be seen as being

independent of any social standard — but only if a person is considered simply to be a biological organism.

But biological existence is not equivalent to human life.

When socially organized efforts are undertaken to feed starving people, the efforts are not made merely to

maintain the number of live human organisms on earth.

Rather, they are undertaken because of the perception that it is worth helping people to stay alive; human life

has a moral value that justifies the effort.

To be human is to participate, in one way or another, in society, and to feed starving people is to

acknowledge that their need for food is not merely a need to remain alive but a need to continue their

participation in human society.

Human beings seek to survive not merely as biological organisms but as individuals who can function in the

society in which they live.

12

Although prices in most retail outlets are set by the retailer, this does not mean that these prices do not

adjust to market forces over time.

On any particular day we find that all products have a specific price ticket on them.

However, this price may be different from day to day or week to week.

The price that the farmer gets from the wholesaler is much more flexible from day to day than the price that the retailer charges consumers.

If, for example, bad weather leads to a poor potato crop, then the price that supermarkets have to pay to their wholesalers for potatoes will go up and this will be reflected in the prices they mark on potatoes in their stores.

Thus, these prices do reflect the interaction of demand and supply in the wider marketplace for potatoes.

Although they do not change in the supermarket from hour to hour to reflect local variations in demand and supply, they do change over time to reflect the underlying conditions of the overall production of and demand for the goods in question.

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01

Never-married people tend to be more willing to date than people who have lost spouses, and they tend to be more open to dating diverse partners.

For example, in a sample of over 3,000 40- to 69-year-old middle-aged single people, never-married singles, especially men, were more willing to date someone in general, as well as date a person of another race, religion, and socioeconomic status than themselves.

Over half of the never-married singles were willing to reach out and date those different from themselves.

Fitzpatrick and her colleagues suggest two reasons for the never-marrieds' open-mindedness.

First, they could be unconventional people since they are willing to forego the traditional societal expectation of marriage.

Second, they could have been willing to broaden their pool of eligibles because they had not been able to find a spouse within their own social circles.

02

One of the oldest relationships on Earth is that between fact and fiction.

It has not always been a happy one but over the centuries it has become apparent that one needs and inspires the other in more ways than we ever believed.

The fact-loving subject of science is one of the most exciting disciplines in the world.

The analytical nature of science gives us the ability to perceive the anatomy of the Universe and every

molecule in it, but it is the human imagination that gives it life.

Descriptions of the history of the Earth, the stars sparkling across the cosmos, worlds so far away we may

never see them and the wonderment of what life forms potentially exist out there, contain more exotic

characters and magical realms than any fictional tale.

By using storytelling, the walls of science are being broken down and a self-conscious reading public, aware of

and excited by its own progress and the rapidly changing world around it, can finally engage with a subject

that makes the existence of such entities entirely possible.

03

Compared to their parents, baby boomers want to retire earlier, expect to live longer, and want to do more in

their golden years.

However, all of these goals require assets to replace the income they will leave behind when they stop

working.

The boomers are notoriously poor savers.

Fewer than 35 percent of all tax filers make a Registered Retirement Savings Plan (RRSP) contribution.

The median RRSP account holds less than \$50,000, and there is next to no savings in non-registered assets.

The main reason for boomers making an RRSP contribution is to get a tax deduction, not to accumulate

retirement savings.

As they progress into the greying years, the generation that was going to change the world, and to some

degree did, is realizing that just like their parents they are moving through to old age and many have not

prepared properly for this time in their life.

04

The extremely widespread view that the market only produces low quality mass culture is based on a

misunderstanding of the way the market works.

The market is an institution which responds to demand: if low quality art is asked for, it produces low quality

art — but if high quality art is asked for, it produces high quality art.

There is no reason to assume that such a demand for high quality culture does not exist.

In reality, we observe that there are indeed persons spending money to enjoy good art.

A case in point is the many art festivals (including film festivals) where art of the highest quality is performed.

Some of these festivals cater for a small minority of lovers of a particular art form such as modern music,

which does not find a sufficiently large audience in the established artistic venues.

The market thus does not require a mass audience.

The general and wildly popular statement that “ the market produces bad art” is untenable.

05

One of the basic things that a well-designed place does is help people complete the task at hand.

If your plans include cooking dinner, the space that you are in must provide a mechanism to prepare the food

you have collected in the manner you intend.

It is hard to cook a roast in a bathtub or to walk on slick floors dotted with puddles.

It is difficult to write a complex report in the waiting room at a train station.

It is impossible to relax when you are in a space that has so much going on visually that your eyes race from one visual element to the next.

A well-designed space also puts you in the sort of mood that's appropriate for the task at hand — a good mood when broad thinking is desired, a not-so-good mood when more straightforward thinking would be best.

06

The potential benefits of a close, enduring relationship with a mentor are suggested by research indicating that children and adolescents who feel a sense of connection with a supportive adult engage in fewer health-risk behaviors.

Similarly, studies consistently find that youth who show healthy adjustment despite environmental adversity are distinguished by the reliable presence and support of at least one caring adult.

Support for youth mentoring as an intervention has been provided by rigorous evaluations demonstrating improvements in youth competencies and reductions in problem behaviors and by meta-analytic results substantiating the general effectiveness of mentoring across a range of programs and studies.

However, research also points to the potentially harmful consequences of short-lived mentoring relationships characterized by conflict and disappointment.

07

The way of learning the sport of rock climbing has changed considerably in past decades.

While 20 years ago the first steps toward climbing were taken almost exclusively on natural rock surfaces — on crags, also called climbing gardens — nowadays the beginner uses mainly an indoor-climbing gym: available at

all times and in any weather, always safe but still exciting.

Eventually, however, almost every one of those indoor climbers feels the urge to combine climbing fun with nature.

They want to swap the plastic grips for the varied structures of real rock and not be limited by the ceiling, but rather view the unending sky above them and experience the impressive feeling of looking down from on high.

Because there are many climbing gardens and well-established climbing crags about, the first step out of the climbing gym and onto the rocks — apart from the journey to get there — is nowadays easy.

08

The electromagnetic force works between any two things that have electric charge.

The more charge, the stronger the force.

And, like gravity, the force depends on the separation between the objects.

The further they are apart, the weaker the force.

But unlike gravity, electromagnetism can be both attractive and repulsive; it can pull things together and push them apart.

Opposite charges, one positive the other negative, attract.

Like charges, both positive or both negative, repel.

This means that a composite object that has an equal amount of positive and negative charge will push and pull in equal amounts and consequently experience and exert no electromagnetic force at all.

This balance, the result of charge neutrality, can never happen with gravity.

There being no negative mass, there is no possibility of a mass-neutral object.

You can't neutralize gravity as you can the electromagnetic force.

This is why it is ever-present in our experiences.

09

The skills exhibited in golf are based on our unique physical ability to maintain a highly stable upright stance

while the arms and upper body perform powerful athletic tasks.

This allowed our earliest ancestors to throw stones and swing sticks with great precision; and later to wield

hammers, axes, and even golf clubs with precise purpose.

Children as young as four have an innate ability to perform these tasks.

Some with exceptional athletic ability can drive a golf ball after watching a skilled golfer perform the task.

Most can throw balls quite accurately underarm; by the age of six, without instruction, they naturally apply a

stiff-arm swing, thereby reducing the number of degrees of freedom for increased repeatability when asked to

throw underarm at targets.

A precisely repeatable swing is of course of little value without the stability of the stance; in fact, none of the

primates with much greater strength and agility, but without a stable upright stance, can accomplish any of

these tasks.

This is the essence of the golf swing and the putting swing.

10

The U.S. federal government and every state have separate written constitutions that set forth the organization,

powers, and limits of their respective governments.

Constitutional law is the law expressed in those constitutions.

State constitutions vary; some are modeled closely after the U.S. Constitution, and others provide even greater rights to their citizens.

The U.S. Constitution, the supreme law of the United States, was adopted in 1787 by representatives of the 13 newly formed states.

Initially, people expressed fear that the federal government might abuse its power.

To alleviate such concerns, the first Congress approved 10 amendments to the U.S. Constitution, commonly known as the Bill of Rights, which were adopted in 1791.

The Bill of Rights limits the powers and authority of the federal government and guarantees many civil (individual) rights and protections.

11

There is a problem with skimpy eating.

The body gets ready to take maximal advantage of any food source it finds.

When food becomes available, there is a tremendous tendency to binge, in what is known as the restrained-eater phenomenon.

You know the pattern.

You have been dieting for several days, and suddenly someone brings home a carton of ice cream.

A little bit won't hurt, you decide, and before you know it you are scraping the bottom of the carton and

digging around the cracks for every last bit.

You then scold yourself for your “lack of willpower.”

The truth is that the problem was not willpower at all, but the innate biological programming of the human body.

The diet turned on the “anti-starvation” plan that is built into every human being.

Your body assumed that any food in front of you might be the only calorie source you might have for a while, so it demanded a binge.

12

We have entered a very exciting era for behavioral and mental health care.

The world has done basically nothing to address climate change.

The reasons are obvious: The threat of climate change is really a threat to future generations, not the present one, so actions taken by our generation will mostly benefit them and not us.

Moreover, such actions may be expensive — reducing emissions means rebuilding our energy infrastructure, and we have no idea how much that will cost.

In such a situation, it is easiest to do nothing and wait for disaster to strike — which is why dams are frequently built after the flood, not before.

Nevertheless, pushing this problem off onto future generations is a poor strategy.

The impacts of climate change are global and mainly irreversible; by the time we have unambiguous evidence that the climate is changing and its impacts are serious, it will be too late to avoid these serious impacts.

[1단계] 일문일해 부교재
수능특강 틀리기 쉬운 유형편

각! 개! 격! 파!

[괄호 안 숫자 → 「영어만능문법사전」 페이지]

영어내신 1등급 비법!

The only hope that future generations have to avoid serious climate change is us.

틀리기 쉬운 유형편

5강

01

At its very heart, scientific methodology is an exercise in rational thought and critical thinking.

The development of critical thinking skills is an important and lasting benefit of a college education.

Such skills enable people to evaluate, compare, analyze, critique, and synthesize information so they won't accept everything they hear at face value.

A good example of the need for critical thinking in everyday life is how we evaluate advertising claims.

For example, people spend billions of dollars every year on "natural" dietary supplements, basing their purchasing decisions on marketing claims that in fact may not have been tested.

So when a salesperson tells you that, for example, extracts made from the roots of echinacea help prevent colds, ask if that statement has been scientifically tested — and if so, how, when, and by whom and how valid and reliable the test results are — before you decide to try this herbal remedy.

02

Doctors are human, health care is complex, and time spent with each patient is restricted.

As an e-Patient, you must assume an appropriate level of responsibility for your care.

You should come to the office visit prepared to provide a complete list of medications that you are currently taking, as well as up-to-date information on other providers you have seen and issues you have been dealing with.

You must ask for explanations and guidance when your doctor's diagnosis or orders are confusing or

contradictory.

You must follow through with those orders, including taking and finishing all medications in the manner they are prescribed and complying with your doctor's request to keep records of your blood pressure or blood sugar.

Increased sugar levels in blood change the behavior of blood vessels making them contract more strongly than normal, which could result in high blood pressure and also increase the risk of heart attack. It is important to be frank, even if it involves embarrassing personal issues.

03

A village in ancient India was being terrorized by a cobra whose attacks had resulted in the deaths of several people.

(B) Villagers tried unsuccessfully to capture the creature.

Frustrated and desperate, they asked a holy man to intervene.

The holy man was also a gentle man, in whose presence even wild animals felt comfortable and safe.

(C) So, in no time at all, he located the cobra and spoke to it:

"You must not injure people anymore. This is not right. It is against the law of the gods."

The cobra was contrite, promising not to harm any more villagers.

However, the next time the villagers spotted the cobra, they attacked it with sticks and stones, nearly beating it to death.

(A) The cobra crawled away and found the holy man, to whom it complained:

"Look at me! Because of your advice I am nearly dead. How can that be the law of the gods?"

The holy man replied, "I said you were not to bite people anymore. I never said you couldn't hiss to scare them away."

04
Most of the conventional household cleaning products used today are toxic.

They leave behind chemical trails and traces that stay in our homes for hours, and, sometimes, days.

Further complicating matters is the fact that we often unintentionally mix cleaners — the glass cleaner we spray on the bathroom mirror falls onto the sink where it reacts with the cleaner we use to scrub that area, and these unintended combinations actually react to create another toxic compound.

Researchers theorize that the average house contains gallons and gallons of toxic materials — and the fact that there is no law that requires manufacturers to list their ingredients or to test their products for safety means that protecting our health is up to each individual consumer.

Though many cleaning products list warnings of being poisonous or toxic, most of us assume that those warnings only apply if one is not using the product properly or if it is accidentally ingested.

But as it turns out, most cleaning products are toxic even when used "safely."

05
Those who argue against keeping animals as companions argue that the practice is motivated by a selfish human need to dominate and control members of other species.

To support their argument, opponents of companion-animal keeping point to the many instances where people

treat their animals in a patronizing or controlling manner, substitute animal affection for human affection, or use an animal as a surrogate child.

That many animals are abused and/or neglected by their "owners" is a documented fact.

The view that keeping animals as companions may violate the right of animals is further supported by the fact that the laws in most societies regard animals as property.

The manner in which animals are kept and treated is considered to be largely within the discretion of the "owner," and there are few legal limits placed on how humans treat the animals they "own."

06

Over half the human population of the planet now lives in cities, and the proportion is likely to continue to increase in the foreseeable future.

Building in cities is becoming more and more important, and urban form and urban architecture are the focus of much debate.

Some architects have decided to respond to what they perceive to be the potentially formless and anonymous nature of the city by creating buildings that are obviously strange and are intended to become urban landmarks.

One of the simplest ways of making a building look unusual is to break the normal rules of structure — or at least make it seem as if gravity is of no consequence.

The architect's goal is to create an environment, both indoors and outdoors, which will provide complete human comfort.

Such buildings make difficult demands on structural engineers, who have to make paradoxical forms work while concealing how the trick is pulled off.

07

It was believed prior to the 1970s that chimpanzees were primarily vegetarian and that they might occasionally eat a small animal or bird but would not deliberately and systematically kill larger animals for meat.

(B) However, as Goodall witnessed, they not only eat and relish meat but also hunt for meat.

In particular, they hunt monkeys, which are not easy to catch for the larger and more terrestrial chimps.

(C) Hunting such prey requires cooperation and coordination, foresight and planning.

The hunters usually divide the assignment between those who will give chase through the branches and those who will pursue along the ground below.

(A) Together they try to steer the prey to a congenial spot for capture.

A successful hunt is often followed by sharing with the resultant meat.

08

For nonscientific audiences or short pieces where a term would be used only once, avoid jargon altogether.

There is little benefit to introducing new vocabulary or notation if you will not be using it again.

And for nonstatisticians, equations full of Greek symbols, subscripts, and superscripts are more likely to reawaken math anxiety than to promote effective communication.

The same logic applies to introductory or concluding sections of scientific papers.

Using a new word means that you must define it, which takes attention away from your main point.

If you will not be using that term again, find other ways to describe numeric facts or patterns.

Replace complex or unfamiliar words, acronyms, or mathematical symbols with their everyday equivalents, and

rephrase complicated concepts into more intuitive ones.

틀리기 쉬운 유형편

6강

01

Each dolphin has its own vocalization that is referred to as a signature-whistle, and it will remain relatively unchanged throughout the animal's relatively long lifetime.

Research has revealed that dolphins can remember at least eight different signature-whistles and playback experiments suggest that they can use them to reliably discriminate between individuals.

The whistles are used in a variety of behavioral contexts, but during studies of captive animals Vincent Janik and Peter Slater have shown that they are particularly commonly heard in situations where an animal has become isolated from the other members of its pod.

It is supposed that these animals effectively call out their "name" when they emit their signature-whistle and thereby broadcast their identity and give away their location.

Once the separated animals are reunited signature-whistle broadcasting stops.

So at least one function of the whistles is the maintenance of group cohesion.

02

E-mail is not radically different from traditional written business correspondence.

Rather, e-mail employs an electronic medium to convey the message instantly.

For the busy reader, short sentences are easier to write and read.

Long sentences take more time and have a greater tendency to bury or delay main messages and details.

Readers are more likely to "trash" e-mail that never gets to the point or is characterized by excessive

mechanical errors and confusing meaning.

The problem with e-mail correspondence is that you never know how long a reply will take to arrive.

Clarity, precision, and appropriate tone are essential to ensuring that your e-mail is well-received and

understood by all readers.

Before sending any e-mail message, whether internal or external, always take the time to edit for content and

structure.

03

One day, I lost my smartphone.

At first, I found it hard to adjust to the loss.

I kept reaching for it to check social media messages, e-mails, and texts.

(B) Not having my "mini-computer" made me feel like I had lost a part of me.

After a day or so, I started to adapt.

If I left school, I made sure my office staff knew where I would be and gave them a phone number in case of

an emergency.

(A) I couldn't check e-mail messages regularly, yet I didn't fall behind in my correspondence.

When I visited a classroom, I felt more attentive during the learning activities.

(C) There was no gadget to distract myself with when I found my attention waning. After almost a week, our

school social worker found my smartphone in our staff resource room.

I was a bit hesitant to take it back.

04

Even though many of our memories are vivid and some may even be accurate, most of what we remember of our daily lives is neither exact nor rich in detail.

There is overwhelming neuropsychological evidence that evolution did not design our memories to be video cameras faithfully and precisely recording our daily experiences.

For example, a key memory system in the brain is specifically structured to extract from experience unconscious rules and abstractions that allow organisms to deal with the everchanging world that surrounds them in an expedient and self-serving manner.

There is also evidence that we may change our memories, if only a little, each time we recall them.

The fluidity of memory may reflect the challenges inherent in engineering brains able to make life-and-death decisions at a moment's notice in noisy, uncertain, and ever-changing environments.

Memory is about survival, not accuracy.

05

One of Japan's biggest cosmetics companies received a serious complaint that a consumer happened to purchase a soapbox that was empty.

Immediately the authorities isolated the problem to the assembly line, which transported all the packaged boxes of soap to the delivery department.

For some reason, one soapbox went through the assembly line empty.

Management asked its engineers to solve the problem.

The engineers worked hard to devise an X-ray machine with high-resolution monitors manned by two people

to watch all the soapboxes that passed through the line to make sure they were not empty.

No doubt, they worked hard and fast but they also spent a huge amount of money to do so.

But when a rank-and-file employee in a small company was posed with the same problem, he did not get into

complications of X-rays, etc.

Instead, he came out with another solution.

He brought a strong industrial electric fan and pointed it at the assembly line.

He switched the fan on, and as each soapbox passed the fan, it simply blew the empty boxes out of the line!

06

The saying "The grass is always greener on the other side of the fence" comes from the idea of someone

looking over a fence and thinking their neighbor's yard is greener, healthier, and more beautiful than their own.

This proverb is used when we think someone else's life is better than ours, but it's always understood as a

misperception.

Standing directly in our own lawn, we can see all its flaws.

Synthetic fertilizers used for lawn care generally end up harming the soil and polluting the water supply

because they are too quickly dissolved and move rapidly through the soil.

From a distance, across the fence, the neighbors' lawn appears perfect.

But getting closer, we see their weeds, dry spots, bugs, and bare patches, just like ours.

07

Self-control can involve choice between a smaller sooner punisher and a larger later punisher — in this

instance it is selection of the smaller sooner alternative that is most beneficial.

(B) In deciding whether to go to the dentist, for example, we choose between enduring a small amount of discomfort in the near future (from minor dental treatment) and risking a large amount of discomfort in the distant future (from an infected tooth).

(A) Unfortunately, the prospect of experiencing discomfort in the near future (from a visit to the dentist) might exert such strong control over our behavior that we avoid going to the dentist, with the result that we suffer much greater discomfort later.

(C) Likewise, a rat given a choice between accepting a small shock immediately and receiving a strong shock 10 seconds from now might choose the latter, with the result that it experiences a considerably stronger shock than it had to.

08

In cultures where circular time is given as much attention as linear time, people's lives are far more relaxed and stress-free.

Most traditional aboriginal people work far fewer hours, at most two or three days out of each week.

And this is not working as we understand it; they visit, hang out, talk and gossip, ensuring that the social cement that holds their society together is in good order.

To live with circular time is to let go of deadlines.

Circular time encourages meditation, idling, play.

It is often one of the biggest surprises for people who take their foot off the pedal, to find a richer, simpler

and more rewarding life.

Their bodies are rested, they enjoy better health and they smile more.

More often they create and play and remember what it was like to be a child, where the journey from A to B

was seldom straight and never narrow.

Their ability to access subtle details increases.

They breathe in the world.

틀리기 쉬운 유형편

7강

01

Due to the variability in responses for mail-in surveys, it's often necessary to send follow-up mailings.

Such mailings may be administered in several ways.

In the simplest, nonrespondents are simply sent a letter of additional encouragement to participate.

A better method, however, is to send a new copy of the survey questionnaire with the follow-up letter.

If potential respondents have not returned their questionnaires after two or three weeks, the questionnaires

have probably been lost or misplaced.

Receiving a follow-up letter might encourage them to look for the original questionnaire, but if they can't find

the questionnaire easily, the letter may be good for nothing.

The methodological literature strongly suggests that follow-up mailings provide an effective method for

increasing return rates in mail surveys.

In general, the longer a potential respondent delays replying, the less likely he or she is to do so at all.

Properly timed follow-up mailings, then, provide additional stimuli to respond.

02

To balance energy in with energy out, eating behaviors must be counterbalanced with ending each meal and

allowing periods of fasting between meals.

Being able to eat periodically, store fuel, and then use up that fuel between meals is a great advantage.

Relieved of the need to constantly seek food, human beings are free to dance, study, converse, wonder, fall in

love, and concentrate on endeavors other than eating.

The between-meal interval is normally about 4 to 6 waking hours — about the length of time the body takes to use up most of the readily available fuel — or 12 to 18 hours at night, when body systems slow down and the need is less.

These trends have included a significant decrease in outdoor recreation, sleep, and healthy eating opportunities and now promote an increased dependence on electronic media and sedentary activities.

As is true for the “go” signals that stimulate food intake, a series of many hormones and sensory nerve messages along with products of nutrient metabolism send “stop” signals to suppress eating.

03

Colleges use price discrimination.

In 1995, for example, Johns Hopkins University began offering aid according to the student’s price elasticity of demand for attending the university.

(C) Johns Hopkins wanted to attract academically gifted students who would major in humanities but might attend other universities.

These students had relatively elastic demand curves for education at Johns Hopkins, given the availability of substitute universities.

(B) By granting them an extra \$3,000 in aid, the university was able to increase enrollment in that group by 20 percent.

However, Johns Hopkins did not worry about losing prospective pre-med students, whose demand curves for

education at Johns Hopkins were relatively inelastic.

(A) Because most of these students were already hooked on its pre-med program, a price increase would not knock many out.

Johns Hopkins cut this group's aid by \$1,000 per student and still increased net revenue.

Today, this pricing strategy is being tried out at colleges and universities all over the nation.

04

Learning about color is a step-by-step process of observation, memory, and training that teaches us that seeing is a creative process involving the entire mind.

What is ultimately learned is that color continues to be personal, relative, elusive, and hard to define.

How we see a color is as varied as its context because our perception of color is seldom as it actually appears in the physical world.

A change in a color's neighbor results in us seeing that color differently because of the mutual influences that colors have on one another.

This means there can be no orthodox rules of color.

We may know the actual wavelength of a certain color, but we will hardly ever perceive the color as it physically is.

When a group of people simultaneously looks at the same color, there is no way to know how each individual actually perceives the color.

05

The quality of entertainment is often measured by an audience to the degree that it invokes an emotional response among that audience — this leads to opinion.

The degree to which we are emotionally affected by entertainment typically influences our opinion of how good or bad we think it is.

If after watching a stand-up comedian a member of the audience stated 'that was really funny', it would suggest that the person thought the comedian was good, which contains a suggestion of recommendation.

By watching a show that is 'labelled' a comedy, this person expected to feel positive emotions, including happiness, amusement, and joy.

These emotions are then physically transformed by the audience into laughter and applause; a comedian that doesn't invoke an emotional response among the audience that results in laughter and applause is usually considered as being 'not funny' and therefore a 'poor' comedian — or low quality entertainment in the opinion of that audience.

06

For many years, geologists and other scientists pursued methods and processes to measure the age of the Earth.

Many realized the various layers of sediments, minerals, and rocks are exposed as outcroppings as the Earth rose and settled over many thousands of millennia.

Some of the early techniques such as reading the growth rings of the cross-section cuts of trees are somewhat useful for determining climate changes, but they only indicated periods of a few hundred to a few thousand

years of the Earth's history.

More accurate techniques have since been devised to read further back into geological time, so that events can be arranged in the order of their occurrences (age) and for specific spans of time.

But there are still natural disasters that come up rather unexpectedly, such as earthquakes, wildfires, landslides, or even volcanic eruptions.

Modern geologists have combined some older concepts into a relative time scale, while developing newer techniques that provide an absolute time scale.

07

The final stage of waste-water treatment is disinfection, which kills harmful bacteria and viruses. Most commonly this is accomplished by adding chlorine.

(C) However, in recent years, there has been concern about some of the side effects of this process.

Chlorine can react with organic material to form dangerous organochlorine compounds.

(A) A number of studies found that chlorinated waste-water effluent is acutely lethal to fish in the area immediately around a sewage treatment plant outfall, and causes changes in the aquatic community further downstream.

Canada now classifies chlorinated waste-water effluent as toxic.

(B) Likewise, in the UK, the National Rivers Authority decided that 'there is clear evidence that dangerous substances are created by chlorine sewage disinfection, and the UK is committed to the elimination of these substances from the water environment'.

These effects could be reduced or eliminated by dechlorinating the effluent before releasing it.

08

Earth creates the real wealth on which human life and well-being depend. We humans convert it to our use

and consume it.

During the twentieth century, we humans perfected powerful technologies to accelerate the rate of conversion

by several orders of magnitude.

We thought we had mastered the secrets to creating wealth without limit.

In truth, we were not accelerating the creation of wealth so much as we were accelerating its consumption by

drawing down the natural wealth and living capital of the planet.

We similarly failed to recognize that the profligate lifestyles of the world's consumer class that we had taken to

be a measure of our economic and technological genius were unsustainable and more accurately represented a

measure of our capacity for shortsighted self-delusion.

We are now on the threshold of a serious reality attack.

틀리기 쉬운 유형편

8강

01

We can identify one very important difference between the way property rights and patent rights are implemented.

This difference concerns the "notice function" of property.

An efficient property system notifies non-owners of property boundaries.

For example, land rights have a well-developed and efficient system to notify third parties of boundaries.

Because of this, only rarely does someone invest millions of dollars constructing a building that encroaches on someone else's land without permission.

Far more typically, would-be investors "clear" the necessary rights before investing.

They locate markers, check land deeds, conduct surveys, and so forth, in order to determine the adjacent boundaries.

They then either negotiate rights to the needed land or design the building to avoid encroachment.

02

Parenthood has become a more intense and expensive experience.

Today's parents devote more time and money to the parenting enterprise than did earlier generations.

In the United States, it is estimated that residential mothers and fathers now spend 50 percent more time with their children than they did in 1975.

In other words, children's observations of their parents in various contexts can influence the children's own

social problem-solving skills.

According to 2008 figures from the U.S. Department of Agriculture, the average family spends \$221,190 on each child, up from \$183,509 in 1960.

At the same time, as parenthood is starting later, people are having smaller families, and people are living longer, the intense experience of being a parent of children in the home now covers a smaller portion of the adult life course than it once did.

03

Why, of all the things that might occur to us when we think of childhood, do we mention a few particular memories?

Why, of all the things that happened to us as children, do we rehearse and remember the stories and images that we do?

(B) One answer is that the memories we produce constitute a personal narrative that makes sense of our lives.

Good feelings and positive events, on the one hand, can be placed in a context that makes them seem as if we deserved them and as if they help define who we are.

(A) Such a context may also include important information about how to repeat desirable experiences.

If we constantly feel bad in some way, on the other hand, then it exacerbates our anxiety not to have any explanation or reason for it.

(C) A personal narrative can provide a reason for bad feelings, whether by assigning blame for them or by deriving a lesson from them.

Whether accurate or wholly idiosyncratic, an explanation can reduce anxiety if it helps us to “resolve
puzzlement.”

04

Noise control is one of the defining factors in regard to locating spaces in the library.

At one time, libraries were considered to be quiet spaces, with noise confined, for example, to the meeting
room.

Now, many library users have new attitudes about what is an acceptable noise level in a library.

Extensive use of computers in libraries has resulted in more conversation between staff and users and between
several users collaborating at a single computer.

In determining adjacencies, consideration should be given to locating noisy library functions next to each other:
circulation desks, browsing areas where users select audiovisual materials, and, possibly, the entrance to the
children’s area.

Quiet areas, such as reading and study space and periodical areas, are located away from the noisy functions.

Computer-free rooms, quiet reading rooms, and individual study rooms placed in adult areas offer spaces where
users can read in a quiet environment.

05

Over three million shipwrecks are at rest on the ocean floor, many laden with priceless art treasures and
artifacts from thousands of years ago; their fate is uncertain as the technology of underwater exploration
improves.

Back on land, museums ringing the Mediterranean, the Black Sea, and countless other bodies of water are crammed with unphotographed objects lacking scientific documentation.

The legal case for a source country retaining all objects found within that nation's borders is clear.

What's not so obvious is what is best for those objects.

If existing museum basements are full, yet most of the ancient world is still underwater and underground — a good part of Pompeii awaits excavation — how will the resources be found to safeguard, document, and share the importance of tens of millions of as-yet-undiscovered artifacts?

06

Emotion seems to assert itself most powerfully in the realms of mass media entertainment.

Entertainment is a performance or other presentation intended to induce enjoyment, an emotional condition.

If we are comfortable associating pieces of music with emotions, then we will be even more inclined to do the same in the case of the expressive and immersive medium of film.

According to film theorist Annabel Cohen, "Emotion characterizes the experience of film, as it does the experience of music."

What is said of film likely applies to other dramatic narrative forms, including documentary, news reports, reality television shows, soap operas, cartoons, sports, game shows, and computer games — anywhere there is narrative, plot, character, and scenery.

The adaptation of any written narrative to film raises complex theoretical issues and often poses complicated practical problems.

This is where emotion creeps in to almost every corner of design and creative production — through the back door via the mass media.

07

The recorded observations related to various electrical events and facts are found dating back to the fifth century BC.

The lightning in a stormy night, or the attraction between a rubbed amber and cat's fur has always provoked human curiosity.

(B) But it was merely a subject of the philosopher's mind, rather than the business of technology.

It was only in the mid-sixteenth century that scientists developed techniques to store electrical charge.

Suddenly, like a flash of lightning, everything was changed.

(C) We were able to convert a spontaneous event into a continuous operation.

The technology had shifted from the era of the mechanical intentions to the era of electrical progression.

We can call it a paradigm shift of technology.

(A) Like any other paradigm shift, this change did not occur overnight.

We have achieved the great electrical inventions through gradual efforts by scientists.

Different theories and formulae had made it possible.

08

A key aspect of an informed decision is an understanding of what is a realistic timeframe.

By having a realistic long timeframe, it is more likely that the objective will be achieved.

Too often in sports, individuals are given unrealistically short time horizons and can be fired before they have a chance to achieve their targeted objective.

A club-owner building a club that aims to consistently challenge for the championship each year, and yet has hired and fired five coaches in an eight-year period, is very likely operating with very unrealistic timeframes.

Of course, coaches, when hired by such an owner, likely have sizable information about the low likelihood of being the coach at that club for the next five years.

One informed coach, who accepted the position in these circumstances, demanded and received a five-year guaranteed contract at several million dollars each year.

The point here is that a potential coach could still agree to terms with the owner with a "hire and then fire" reputation by making his own informed decision.

틀리기 쉬운 유형편

9강

01

Metaphors are pervasive in every language and throughout human thought, whether you come from Mongolia

or Tierra del Fuego.

And they are wired into the human brain as early as infancy and toddlerhood.

The linguist Mark Johnson calls this process "conflation."

Babies, he says, are not mentally capable of fully avoiding the experience of one thing that is often associated

with something else in their lives.

For example, the affection an infant experiences is usually associated with the warmth and security of being

physically held, so she "conflates" the two experiences — being close to someone physically conflates with the

security that closeness creates.

Later in life, of course, we learn that affection and physical warmth are not the same thing, but because they

were in our infant experience, we cease to link them conceptually.

02

You may be thinking that one aspect of development that is not influenced by culture is motor development.

However, even motor development varies, depending on one's culture.

Children with African origins typically are more advanced in motor development than children with European

origins: they throw farther, balance better, and run better.

The reasons for these differences are varied and complex.

Genetic factors may play a role, specifically in influencing the length and proportions of arms, legs, and the overall body size.

Cultural factors — including parenting practices, nutrition, and the perceived importance of motor skill development — also play a role, however.

Mothers in Nigeria, Uganda, Sierra Leone, India, and Pakistan encourage their children to walk and stand up more quickly and train them in motor development.

For instance, Nigerian and West Indian mothers use passive stretching movements, massage, and active encouragement in the first year of a child's life to promote motor development.

03

By 2030 most cars will be completely or partially driverless, depending on the rate of unmanned technology adoption.

This means that by then, the special relationship that bonds fast car owners with their vehicle will have totally disappeared for a simple reason: car performance directly associated with acceleration and speed will have definitely vanished from a driverless environment and with it the values associated with fast or powerful cars.

Furthermore, around 2020, speed will most likely be automatically monitored or controlled, taking away some of the risks but also the feeling of freedom that drivers still enjoy.

Then safety will remain a strong selling feature.

Comfort and more generally the traveling experience will become increasingly important.

What is interesting to notice is that when we look more carefully to these key selling features, they look

strangely like values that a bus or train operator is promoting.

This is to say that more and more the difference between public and private transport will shrink.

04

Most people believe that it's important to wash regularly and to keep clean.

Is this a perfectionistic belief or realistic high standard?

For most people, the standards for cleanliness are defined in a way that can be met with little effort, and, for

most people, keeping clean has more benefits than costs.

For example, with minimal effort, keeping clean makes it more likely that others will want to spend time with

you.

Most people are also able to be flexible regarding their standards for cleanliness.

Surgeons may raise the standard and wash their hands more carefully before doing surgery, whereas people

who are camping in the wilderness may lower their standards and tolerate being less clean.

In contrast, a person who has perfectionistic thoughts about cleanliness may have excessive beliefs that are

inaccurate, inflexible, and cause more harm than good.

For example, in our clinic we see some individuals who wash their hands hundreds of times each day.

This repetitive washing may be triggered by perfectionistic beliefs about avoiding contamination from germs,

toxins, and other substances.

05

Following feelings, impulses, and impressions is fashionable today.

Some people go so far as to say that feelings are a better guide than thoughts.

This is a comforting idea, but in order to believe it you have to overlook the many times when feelings led you astray.

Consider a time when you were trying to lose weight and your feelings said, "Order the double hot fudge sundae."

Or another time when you felt the urge to tell your instructor or the boss what you really thought of her.

Or occasions when you felt the impulse to go to a party instead of studying for a test, charge an expensive item you didn't need and couldn't afford, or drive 30 miles an hour over the speed limit to avoid being late.

No doubt you can think of many additional examples of feelings that, if followed, would have caused you pain or misfortune.

06

Not only did agricultural man add grains and beans to his diet, he began to domesticate animals and milk also became a regular part of his diet.

The expansion of farming meant that he could lead a more sedentary existence than his hunter-gatherer ancestors had done.

As this took place, civilization fostered art, science and philosophy as part of the process.

But these wonderful gifts were not without significant cost to human health.

The human body lost as much as six inches in stature compared to our hunter-gatherer ancestors.

For the first time, infections began to appear, and tooth decay, until then unknown, appeared.

Even more amazing, archaeologists examining corpses from this period discovered that the first traces of cardiovascular disease started to show up.

07

Finkenauer and Rimé investigated the memory of the unexpected death of Belgium's King Baudouin in 1993 in a large sample of Belgian citizens.

The data revealed that the news of the king's death had been widely socially shared.

By talking about the event, people gradually constructed a social narrative and a collective memory of the emotional event.

At the same time, they consolidated their own memory of the personal circumstances in which the event took place, an effect known as "flashbulb memory."

The more an event is socially shared, the more it will be fixed in people's minds.

Social sharing in this way may help to counteract some natural inclination people may have.

Naturally, people should be driven to "forget" undesirable events.

Thus, someone who just heard some bad news often inclines initially to deny what happened.

The repetitive social sharing of the bad news contributes to realism.

08

The term stacking the deck derives from card games in which the dealer arranges the cards to cheat one or more of the players.

This form of manipulation often occurs on TV talk shows about controversial issues.

A typical format features a host and two guests with different views of an issue.

Fairness demands that the host remain neutral and give each guest an equal opportunity to present his or her case.

Sometimes, however, the host will become a participant in the discussion, thus creating a two-against-one situation.

Even more unfair is the practice of choosing guests of unequal stature and ability — in other words, inviting a well-known, highly accomplished person to represent the favored view and a relative unknown to represent the unfavored view.

If, by chance, the relative unknown seems to be excelling in the discussion, the host will give him or her less time to speak.

틀리기 쉬운 유형편

10강

01

One of the most destructive myths of all is the one that tells us intelligence is innate and fixed.

It has been widely believed for centuries, and still is, that a person is either born smart or not, that education,

opportunity, motivation, and hard work can only carry one so far because most intellectual ability is tightly

confined by inherited or genetic restraints.

Worse, these limits are believed to be identifiable by a test, a few report cards, or maybe by nothing more

than a mere glance at one's physical appearance.

Alfred Binet, the French psychologist who developed the intelligence quotient (IQ) test in the early 1900s,

would surely be one of its most vocal critics today if he were still alive.

He created the test specifically for the purpose of identifying children who suffered from severe mental

problems or learning disabilities so that they could receive special attention early on.

Binet never intended or imagined that his test would be seen as a valid way to measure innate intelligence

and grounds for making sweeping assumptions about the innate intelligence of large groups of people.

02

I am sure you can recall in childhood bargaining with a friend using the "taking turns" method.

It is perhaps the easiest way of resolving conflict and should be considered as a first alternative.

In fact, sometimes you cannot come up with a compromise that includes important components of each of

your desired outcomes because the outcomes are so mutually exclusive.

For example, if Kyle wanted to vacation in Hawaii and Rachel wanted to be with her parents in Florida over the same 10-day vacation, it would be impossible for the two to co-occur.

So an accommodation would be necessary: Rachel gets to achieve her outcome this time since it is so important to her and her father is ill.

In return, it is mutually agreed that the upcoming summer vacation the couple usually takes will be Kyle's choice (providing no health emergency exists for Rachel's father).

Accommodation is a kind of delayed "quid pro quo": in the long run things even out.

03

In a cognitive experiment, children were tested on four sorting tasks.

Initially they were asked to put photographs of the fourteen toys they would later encounter in the playroom into two boxes painted to look like houses with the picture of a girl fixed on the door of one and the picture of a boy on the other.

Subsequently, they sorted six red and blue geometric shapes, and photographs of six cats and dogs, six boys and girls, and six men and women.

Each of the four sorting tasks was scored in one of four categories — totally successful, nearly successful, minimal attempt or failure.

Performance improved with age, and children found it easier to sort for colour and species (cats and dogs) than to sort people or toys according to gender.

Of the thirty children in the youngest group, only one was totally successful in sorting colour, one in sorting

species, but no one managed to sort people by gender.

In the oldest group 63 percent of children sorted people correctly by gender; 83 percent were successful with colour and 90 percent with species.

04

Considerations about print size may eventually become outmoded because of the rise in availability of talking books or the talking text option found in some e-books.

For example, Bouchard Ryan and her colleagues observed that older adults with visual problems were more likely to change from reading newspapers and magazines (which typically have small print and poor contrast) to listening to talking books.

They also noted that about a quarter of their sample used computer technology to enlarge print.

However, although talking books offer a solution to people with sight difficulties, they are not, as is commonly supposed, a direct substitute for reading.

Two reasons can be cited.

First, the narrator will almost certainly place emphases upon what is being read out that may not match what the listener would emphasize were he or she reading for themselves.

Second, in reading it is easy to move back over a passage of print just read, or to skim through a section of prose.

This is either very difficult or impossible to do when using a talking book.

05

Differentiated instruction can provide students with the opportunities needed to succeed in a fast-paced class in spite of any learning deficiencies.

The essence behind differentiated instruction is to provide multiple avenues for a student to learn content that considers the uniqueness of each individual student.

It is based upon the premises that no two students are identical even when similar in interests, appearance, culture and surrounding environments.

Students at various academic levels within the classroom can be provided with alternative assignments that allow students to perform at their current level.

Differentiated instruction is effective because it expels the myth and practice of "preaching to the choir" and "cookie cutter education."

It provides students with the opportunities to demonstrate the skills they have without being penalized for the ones they do not have.

06

The arrival of the steam engine extended our radius of activity.

We built steamships that moved more people much more quickly across the oceans.

Later, we developed engines and turbines.

Our means of transport evolved from the coach to the train and from the sailboat to the steamship.

Then came the airplane, and nowadays, we even travel into space.

Travel used to be something that special people did for special reasons; today, everyone travels to the far

corners of the earth without giving it a second thought.

In the early 1900s, people who travelled to New York by steamship reckoned on staying a lifetime.

They packed up all their possessions in cabin trunks and took them along.

Today, we go to New York for the weekend, carrying only a small piece of hand luggage.

07

The thousands of infants who will be born today across the world will experience very different environments in

their first two years.

Some will be cared for by grandmothers or older sisters; some will attend day care centers; some will remain

at home with their mothers.

Some will have many toys; some will have not one.

Some will spend the first year in a dark, quiet hut wrapped in old rags; some will crawl in brightly lit rooms

full of toys, picture books, and television images.

But despite these differences, excluding the small proportion with serious brain damage or a genetic defect,

most will speak before they are two years old, become selfconscious by the third birthday, and be able to

assume some family responsibilities by age seven.

The psychological differences among these children are trivial when compared with the long list of similarities.

The prevalence of serious mental disorders like schizophrenia and depression, as well as the less impairing

anxiety disorders, is surprisingly similar around the world, even though children are being reared in different

environments.

08

How nurses saw their work was often at odds with how others viewed it.

Many physicians insisted on a distinct separation between their work and nurses' work, and a privileging of one over the other.

Even the slightest suggestion that some nurses, such as nurse administrators, might exert control over medical work elicited stinging blame.

At times, nursing work seemed to prioritize the order of the hospital ward over patient comfort.

One example comes from a poem written by a nurse bemoaning that good nursing before the 1970s usually meant running a ward with neatly made beds, uncluttered bedside tables, uniformly drawn window shades, and "the patient clean, quiet and dependent."

When a 1950s study asked student nurses about the importance of "tender, loving care" as a technique in good nursing care, the majority responded that it "ought not to be overdone" and perhaps reserved for only some patients.

This suggests that the students equated caring with sentimentality.

But whatever the students' analysis, they clearly rejected caring as the first or most highly valued aspect of nursing.

틀리기 쉬운 유형편

11강

01

What do you do when you know there is a weakness in your argument?

Do you wait to see if someone will bring it up?

Research says no.

As long as it does not completely destroy your point, beating others to the punch actually gives you more credibility.

Stealing thunder is a tactic whereby you are the first to introduce information that is injurious to your position.

It is shown to successfully lessen the impact of negative information.

Interestingly, one such study, utilizing a mock trial, found that only one thing invalidated the effectiveness of this technique: when the opposing counsel revealed to the mock jurors that the stealing thunder tactic had been used on them.

The success of this technique depends on our integrity as evidenced by the fact that in the interest of true justice, we are bringing up, ourselves, information that hurts our own case.

However, when this tactic is exposed, it has a boomerang effect, and this very credibility is undermined because the other party feels manipulated.

02

Public opinion polls are snapshots of opinions and preferences at a specific moment in time and as expressed in response to a specific question.

Given that definition, it is fairly easy to understand situations in which the polls are wrong.

For example, opinion polls leading up to the 1980 presidential election showed President Jimmy Carter

defeating challenger Ronald Reagan.

Only a few analysts noted the large number of “undecided” respondents a week before the election.

Those voters shifted massively to Reagan at the last minute, and Reagan won the election.

The famous photo of Harry Truman showing the front page of the newspaper that declared his defeat in the

1948 presidential election is another tribute to the weakness of polling.

Again, the poll that predicted his defeat was taken more than a week before Election Day.

Truman won the election with 49.9 percent of the vote.

03

Framing of health messages influences how persuaded people are to engage in health promoting behaviors.

In one study, Meyerowitz and Chaiken gave women pamphlets on breast self-exam that included either

positively or negatively framed information (e.g., “Research shows that women who do breast self-exam have an

increased chance of finding a tumor in the early, more treatable stage of the disease,” versus “Research shows

that women who do not do breast self-exam have a decreased chance of finding a tumor in the early, more

treatable stage of the disease”).

Women who were exposed to the negatively framed message expressed the most positive attitudes and

intentions about engaging in breast self-exam and were more likely to report performing breast self-exams

every four months.

Similar results are found with use of mammograms, skin cancer detection, and HIV testing.

04

A study that makes claims contrary to the existing consensus needs to provide sufficiently strong evidence to meet the burden of proof established by that consensus.

For example, people who claim there are sasquatches or that the Loch Ness Monster exists must provide considerable evidence to overturn the current view that there are no such creatures.

The responsibility is on the believer in such curious creatures to come up with evidence, not on the skeptic to “disprove” the existence of such creatures.

Often the responsibility is on the person who claims the existence of something because it is usually much easier to prove that something exists (if it does!) than to prove that it doesn't exist.

All it would take would be to find and display a sasquatch to prove the existence of one; but even a great deal of looking in the right sort of places and failing to find that creature still leaves open some reasonable doubt: maybe we haven't looked enough.

05

Researchers in psychology follow the scientific method to perform studies that help explain and may predict human behavior.

This is a much more challenging task than studying snails or sound waves.

It often requires compromises, such as testing behavior within laboratories rather than natural settings, and asking those readily available (such as introduction to psychology students) to participate rather than collecting

data from a true cross-section of the population.

It often requires great cleverness to conceive of measures that tap into what people are thinking without altering their thinking, called reactivity.

Simply knowing they are being observed may cause people to behave differently (such as more politely!).

People may give answers that they feel are more socially desirable than their true feelings.

But for all of these difficulties for psychology, the payoff of the scientific method is that the findings are replicable; that is, if you run the same study again following the same procedures, you will be very likely to get the same results.

06

It is commonly believed that play is an essential part of developing and honing future predatory skills, but experiments have shown that this is not necessarily true.

Cats become competent predators through a variety of different experiences, and many different factors contribute to the development of predatory skills.

Some kittens take a long time to become good at catching prey, and others are skilled predators from an early age, but these individual differences do not generally continue throughout life, and kittens that are poor predators have generally caught up by the time they become adults.

Experiments have shown that predatory skills can be improved by early experience, and for a kitten to learn to kill prey, the experience does not necessarily have to be "hands on."

It seems that simply watching the mother or another cat kill a rat is enough to teach a kitten how to deal

with live prey.

This observational learning is facilitated if the cat performing the act is familiar to the observer cat.

When dealing with live prey, kittens tend to follow their mother's selection, and willingness to try new foods is also strongly influenced by the mother.

07

Most of us are limited in our linguistic fluency.

While we may have some acquaintance with languages other than our native tongue, few would claim mastery of more than a handful of the world's languages.

But, through art, we have before us an avenue for understanding and appreciating the extraordinary diversity of thoughts, feelings, and cultures in the world.

Taken together, the visual arts and music of a culture, which are not tied as directly to narrative and, therefore, to language as literature and theater, comprise an integrated cultural style that is accessible to the outsider.

There is a potential for cross-cultural understanding and appreciation inherent in each culture's artistic expression.

While the key elements of a culture can be understood intuitively through its arts, a more structured understanding of the major themes of artistic expression can help add depth and order to this understanding.

08

In the United States, we tend to equate creativity with novelty and originality.

But the high value that we place on novelty is not shared universally in all cultures.

In performance, for example, we find that in almost all cultures — including our own — improvisation is

allowed only in informal performances; in formal settings, in contrast, improvisation is not allowed.

Formal performances must follow the movements of the dance or the words of the script.

In most cultures, rituals forbid improvisation.

This seems to be related to the power of ritual; a ritual can only perform its supernatural function if performed

exactly, and a divergence from the appropriate dance or script would result in an ineffective ritual.

In a traditional U.S. Christian wedding, the religious official is expected to say “I now pronounce you husband

and wife”; an unexpected creative improvisation such as “I exclaim that you are now joined for life” or even

“From now on you will be married” would be disturbing, generally not welcomed by the participants and

audience.

틀리기 쉬운 유형편

12강

01

Friendship depends almost exclusively on the ongoing emotional links between us.

This spontaneity is part of friendship's charm.

Friends don't have to keep in touch; friends choose to spend time together.

Our relationship grows and deepens not because it should but because we both genuinely want it to.

But this lack of structure can also imperil our relationship.

Responsibilities at work or in our marriage and family seem clearer and more compelling than the demands of friendship.

The claims of other commitments easily crowd out the time we might spend with friends.

Absorbing energy and attention, these concerns leave us drained when we do find time to be together.

Friendship then becomes a refreshing diversion from "real life," with no legitimate demands of its own.

02

Have you ever gone from a bright sunny afternoon into a dark motion picture theatre?

Once inside, you are not surprised to find that you're practically blind for a while.

After about 5 minutes, you'll find your sight returning, with colors becoming more visible as your cones adapt to the darkness.

Over the course of approximately 30 minutes, your rods attain their full sensitivity.

Slight improvements in your dim-light vision may continue for a considerable length of time after that.

The adjustment of the rods to dim light is caused by the production of a chemical called rhodopsin or “visual purple.”

The amount of this substance in your rods determines how sensitive they are to light.

Exposure to bright light fades rhodopsin out of the eye and causes it to become temporarily less sensitive to light.

03

A Chicago restaurant owner was having trouble with “no-shows.”

People would make dinner reservations, but fail to appear for dinner.

Additionally, they would not call to cancel their reservations.

At this restaurant, it was common for the receptionist to take the reservation by phone and then say, “Please call if you change your plans.”

For months, the no-show rate at this restaurant was approximately 30%.

As part of a behavioral science study, researchers conducted a study, whereby they instructed the receptionists to stop saying, “Please call us if you change your plans,” and start saying, “Will you please call us if you change your plans?”

Furthermore, the receptionist was instructed to intentionally pause and wait for the caller to respond.

What do you think happened by simply adding two words to the script and ending with a question mark?

Amazingly, by making these simple and almost effortless changes, which made callers make a commitment —

either yes or no, the no-show rate at this restaurant dropped a whopping 20 percentage points, from 30% to

10%.

04

In 1938, a Nazi psychologist named Erich Jaensch published *Der Gegentypus*, an odious text in which he described certainty as a sign of mental health.

To Jaensch, the very tolerance of doubt was evidence of psychological illness.

After the war, Else Frenkel-Brunswik, a psychologist at the University of California, introduced the concept of ambiguity intolerance.

In one experiment, she showed subjects a progression of images, starting with a sketch of a dog.

The images gradually morphed slide by slide into the image of a cat.

Subjects intolerant of ambiguity — people who tended to see the world in rigid categories — would insist stubbornly that the image was still a dog.

Neatly reversing Jaensch, Frenkel-Brunswik suggested that the intolerance of unclear information was what characterized the unhealthy mind.

05

Ever since I became interested in politics, my parents, my brother, and I have had many political disagreements that were never left un-debated.

In fact, our dinner table has seen its fair share of heated arguments.

Interestingly, our debates rarely centered around electoral politics — for reasons that I still don't understand, my father was never willing to reveal who he was voting for.

However, he and my mother never hesitated to express policy preferences, with which I often disagreed.

And my brother was not always on my side!

While often quite animated, these dinner debates were never unpleasant, and they taught me to believe that disagreement serves a useful purpose.

They forced me to think carefully about my own policy positions, and about the way that I present these positions to others.

Occasionally, they made me change my mind.

In a sense, our dinner table was a small pluralist society and it undoubtedly inspired me.

06

Biological control has a long history of success in developing, emerging and well-developed countries.

In classical (= importation) biological control, almost 2,700 natural enemies have been introduced in 196 different countries or islands to control insects, weeds, plant pathogens and other pests.

In addition, more than 440 species of natural enemies are currently produced and sold for augmentative biological control worldwide.

Nevertheless, biological control is not a long, calm river.

Researchers and practitioners have made some mistakes, the most obvious one being the introduction of a few exotic natural enemies into new areas where they became an ecological problem, mostly because they were not specific to the target pest.

However, the science behind biological control has made remarkable progress during the past 50 years,

changing from a trial and error method to a more predictive approach based on theories of predator-prey interactions and population dynamics.

Such a rigorous research-based activity should help to prevent further errors from the past.

07

We typically associate procrastination with laziness or avoidance behavior, but it can just as easily spring up in people who are trying earnestly and enthusiastically to get things done as quickly as possible.

In a 2014 study led by Penn State's David Rosenbaum, for example, participants were asked to bring either one of two heavy buckets to the opposite end of a hallway.

One of the buckets was right next to the participant; the other was partway down the hall.

To the experimenters' surprise, people immediately picked up the bucket near them and lugged it all the way down — passing the other bucket on the way, which they could have carried a fraction of the distance.

As the researchers write, "this seemingly irrational choice reflected a tendency to pre-crastinate, a term we introduce to refer to the hastening of subgoal completion, even at the expense of extra physical effort."

Putting off work on a major project by attending instead to various trivial matters can likewise be seen as "the hastening of subgoal completion."

08

On a trip to the grocery store, a shopper may not be interested in locating new produce that has just started to be distributed locally or other new foodstuffs that have been introduced.

Instead, this shopper may simply exploit existing knowledge about what already-known food is appropriately

nourishing, inexpensive, and pleasing to the taste.

Such a shopper would probably be able to remember where such foods are located within the store, allowing a supply of groceries to be quickly gathered.

The result is efficient, but we should not expect culinary breakthroughs or novelty in diet from a person who always makes full use of existing knowledge in this way.

A shopper who does not wish to look around even within a store, and certainly not beyond that store to a new farmer's market or specialty shop, will be good at continuing past successes (and failures) and will also have a harder time discovering new options.

Mini Test 01

01

Dear Ms. Gordon,

I would like to meet with you soon so that we can work together to resolve a problem my son Brian is having this year.

As you know, he is a conscientious student.

But he seems to be overwhelmed by the workload, and specifically the amount of time he spends on homework.

He comes home from school and sometimes spends as much as two hours a night on homework, and then he worries whether he should do more.

I believe he brings on much of this pressure himself, but I need your help in getting him to understand that he is doing well and does not have to be so hard on himself.

I'm sure we agree that we don't want to discourage a good student who has a great deal of potential, but we also want to allow a young child to enjoy school and his life outside of school.

Please call me at your earliest convenience so that we may set a time to get together.

Sincerely, Karen Kim

02

The boy crawled close to the tree and leaned against it.

Chills wracked him, giving place now and then to feverish heat.

He must be ill, and it became plain to him that he could go no further; he must stay where he was until the

fog lifted.

At least he was on firm ground and as dry as any place could be in the thick mist.

He might call and shout for help; possibly some peasant would hear him and come to his aid.

But no, the village folk went mostly in another direction, to the peat bogs.

Still, he would try.

He shouted with all his strength, then listened.

No sound at all; even his own voice seemed muffled in the gray air.

The cold shook him so he could scarcely think; when he tried to consider his position clearly, fear gripped him again.

03

At the heart of the art-craft-design dilemma has always been the issue of utilitarianism.

The functionality of a piece of work often determines which category is used to describe it and therefore its worth.

In our society, artistic value has been placed on objects that are seemingly useless.

Their purpose has been to enhance, not to serve any directly necessary function.

Those that do — useful vessels, architectural plans — take on different and, in the romantic hierarchy of values, lesser meaning.

They can be artful but they are not “art.”

They intersect too directly with daily existence.

But some questions must be asked.

Are great designers, potters, and architects not artists because their work has a functional application?

Are the criteria really in the object?

When talented architects and artists choose to make a functional product, is it not art?

How do we categorize Frank Lloyd Wright's chairs, Dali's stage sets, and Barbara Kruger's T-shirts?

04

Robert Boice has conducted detailed analyses of the work habits of faculty members, distinguishing those who

are productive writers from those who are not.

A major finding was that productive faculty tended to engage in short, consistent writing sessions spread

throughout the week, while nonproductive faculty tended to engage in intermittent "binge" episodes of writing

spread far apart — that is, they frequently procrastinated, and then, when they did write, they wrote intensively

for long periods of time.

Although the procrastinators believed that long, intense writing sessions were necessary to be productive, Boice

concluded that binge writing itself was part of the problem.

However invigorated one might feel during an intense session of writing — and procrastinators often reported

this — this pattern of work is so effortful that one soon starts to avoid it.

In essence, binge writing sessions are sufficiently aversive that they punish the act of writing.

05

There is ample though indirect evidence that sharing information about third parties is essential to communal

life.

In F. C. Bartlett's classic studies of memory, he showed that when people pass on stories within a community, the stories get revised, ever so slightly, in each retelling.

By the time a story has been passed around a group of friends, it has changed in ways that reflect the community's biases, codes of conduct, and worldviews.

His main point was that remembering is a social process.

But his data and theory rest on an equally fundamental idea — that passing on stories about one another is central to community life.

Everyone does it, all of the time, at the bus stop, the water cooler, the grocery line, the little league game, and of course, on the Internet.

Gossiping, as a form of social glue, is one of our oldest accomplishments.

Robin Dunbar, a British anthropologist and evolutionary psychologist, argues that once humans evolved language, gossip replaced grooming as a way for us to bond together.

06

In order to promote optimal muscular and skeletal health and function, the body needs to direct the muscular skeletal stress caused by holding itself up against the force of gravity down the spine and out the feet.

The biomechanics of the foot play a crucial role in determining how well the body dissipates this stress.

The foot needs to slide forward and the toes need to spread out as your body weight propels you forward.

Enough room is required in the toe box in order to perform this function.

If the shoe is too short or narrow, the toes get “jammed” and the forward and outward energy flow is disrupted.

Instead of moving energy and stress down, through, and out the body, this “toe jamming” ricochets the energy off the front of the shoe and back up the skeletal system.

Shoes that are too small and narrow do not encourage optimal biomechanical function of the foot, disrupting the natural energy flow of the body and potentially causing injury and discomfort.

07

Abu Bakr Muhammed ibn Zakariya al-Razi, born in the Persian city of Rai, was the first great writer in Islamic medicine.

He was famous as a physician in both the East and the West, where he was known as the Arabic Galen.

He studied in Rai and became the director of a hospital there.

He later headed the hospital in Baghdad, where students came from a distance to study with him.

He is credited with 232 works, of which most are lost, including all of his philosophical writings.

The most important of his surviving medical works is al-Hawi, known in its Latin translation as Continens, the longest Arabic work in existence on medicine.

His paper on smallpox and measles, known in Latin as De peste, was translated into English and other Western languages and published in forty editions between the fifteenth and the nineteenth centuries.

08

Both the budget deficit and federal debt have soared during the recent financial crisis and recession.

During 2009-2010, nearly 40 percent of federal expenditures were financed by borrowing.

The huge recent federal deficits have pushed the federal debt to levels not seen since the years immediately following World War II.

The rapid growth of baby-boomer retirees in the decade immediately ahead will mean higher spending levels and larger and larger deficits for both Social Security and Medicare.

Moreover, more than half of Americans age 18 and older derive benefits from various transfer programs, while paying little or no personal income tax.

All of these factors are going to make it extremely difficult to slow the growth of federal spending and keep the debt from ballooning out of control.

Projections indicate that the net federal debt will rise to 90 percent of GDP by 2019, and many believe it will be even higher unless constructive action is taken soon.

09

In order to be persuasive and to increase self-confidence in the job application process, it is generally necessary to do a thorough self-inventory.

A self-inventory involves listing all of the skills, experiences, and abilities you have that may be transferable in a workplace situation.

For those who have held relevant jobs, this process can be relatively simple, since they should have many of the skills that are needed if they are applying for a similar position.

However, for those entering the professional workplace or changing jobs, this task can be more challenging.

It is not uncommon for first-time applicants to believe they have little to offer beyond some attractive personal characteristics and the proper college degree.

However, performing a thoughtful self-inventory can often illuminate other needed skills and abilities.

10

A cocoa bean farmer in the Dominican Republic walked into the OTF (On The Frontier) project office in Santo

Domingo and said, "My grandfather built my family's farm.

He became wealthy growing and selling cocoa beans.

My father inherited the farm from him and since then he has passed it on to me.

Why can't I be like my grandfather and earn a decent wage growing cocoa?"

The answer to this farmer's question was that his grandfather didn't become wealthy because he grew cocoa beans.

He became wealthy because he was an astute businessman and an entrepreneur who saw cocoa farming as an opportunity.

He became wealthy by building relationships with the suppliers of his raw materials and the distributors of the beans allowing his business, at that specific moment in time, to be competitive.

The world has changed.

The Dominican cocoa farmer needs new strategies and new networks of relationships to create wealth.

11

I was once in the office of a manager when the phone rang.

Immediately, he bellowed, "That disgusting phone never stops ringing."

He then proceeded to pick it up and engage in a fifteen-minute conversation while I waited.

When he finally hung up, he looked exhausted and frustrated.

He apologized as the phone rang once again.

He later confessed that he was having a great deal of trouble completing his tasks because of the volume of

calls he was responding to.

At some point I asked him, "Have you ever considered having a certain period of time when you simply don't

answer the phone?"

He looked at me with a puzzled look on his face and said, "As a matter of fact, no."

It turned out that this simple suggestion helped him not only to relax, but to get more work done as well.

Like many people, he didn't need hours of uninterrupted time, but he did need some!

12

People have always told stories about the beginnings of the world, the birth of humanity and the adventures

of the gods and heroes.

These tales were born of the impulse to understand the place of humanity in the world; they were not literally

true, but they filled a more important function than simply depicting actual events.

Gods and heroes were brought into being because, over time, empirical truth gives way to moral truth —

actual events become less important than the symbolic value they hold for those who come after.

Almost all belief systems place human existence within a much greater story of creation, growth, decline and

death, and in this way myths, like other forms of art, make a bridge between the human search for meaning and the essential meaninglessness of the world.

The writing of history, in our modern sense of the word, came from the same impulse, and in time documentary history replaced the telling of myths as the way of understanding the past.

13

Advertising remains an enigma in spite of its 100-year history of practice, thought, theory and research.

Its social role, for good or ill, is hotly contested.

Even though most of us are very used to seeing advertisements, some advertisements still have a capacity to generate offence and provoke debate around advertising's moral values and social influence.

As consumers, we do not agree about advertising.

From the practitioner's side, too, there are obvious disagreements about how, and indeed if, advertising 'works'; in what ways it influences consumers (or doesn't); and on how advertising budgets should be spent most efficiently.

Academic theories tend to complicate rather than clarify practitioner debates about advertising's practical consequences.

It must be admitted, though, that the advertising industry has enjoyed global growth and influence on a huge scale in spite of uncertainty about its theoretical foundations.

14

You have certainly noticed that most science curricula have a series of "critical" activities in which students

participate and which supposedly lead to an understanding of a particular concept. In most cases, there is an assumption that students share a common view or a common set of preconceptions about the concept so that the activities will move the students collectively, from one point to another, hopefully closer to the accepted scientific view.

This is a particularly dangerous assumption since research shows us that students enter into learning situations with a variety of preconceptions.

These preconceptions are not only well ingrained in the students' minds but are exceptionally resistant to change.

Going through the series of prescribed activities will have little meaning to students who have brought to the lessons conceptions that have little connection to the planned lessons.

15

The human-animal bond is something that continues to evolve as the role of companion animals plays a more integral part of human life.

Human perceptions of just what role these animals play are extremely diverse, yet it is very apparent that many people in our society have shifted from a "backyard dog or wandering tomcat" mentality regarding pets to one of family member status.

Studies have shown significant health benefits from people who have positive interactions with animals, such as petting a dog or even watching fish in an aquarium.

In general, cats have daily requirements that are less demanding than those for dogs, because cats do not

need to be walked outside on a scheduled basis.

Rehabilitation therapy using animals for physical, emotional, and addictive health problems is becoming more widely accepted as it becomes more successful and as the bond between humans and companion animals strengthens.

By choosing the appropriate companion animal, you can greatly influence how strong this bond becomes and what role the animal will serve in your life.

16

The technologies that are used for learning about the physical geography of our planet are rapidly changing.

The abilities of computer systems to capture, process, model, and display spatial data — functions that can now be performed on a personal computer — were only a dream 30 years ago.

Continuous satellite imaging of Earth has been ongoing for more than 30 years, which has given us a better perspective on environmental changes.

Using various energy sources to produce images from space, we are able to see, measure, monitor, and map processes and the effects of certain processes, including many that are invisible to the naked eye.

Globes are better for looking at the entire world because they do not distort the size and shape of Earth's surface like maps do.

Graphic displays of environmental data and information are becoming more vivid and striking as a result of sophisticated methods of data processing and visual representation.

Increased computer power allows the presentation of high-resolution images, three-dimensional scenes, and

animated images of Earth's features, changes, and processes.

17

An emotional society considers that an element of communication is to show one's emotions.

Members of such a society believe that using their emotions is an important aspect of self-expression, so they

use their voice, eyes and arms in a more demonstrative way.

(C) A neutral society is exactly the opposite because it believes that it is important to control your emotions, to

keep a straight face without expression and to restrict your body language while using neutral language.

(A) The most emotional societies are the Mediterranean and the Latin American cultures.

Examples of neutral societies include those of Japan and Northern Europe, including the British with their

supposedly famous 'stiff upper lip'.

And the style of communication you use can cause a number of different reactions.

(B) To a neutral communicator, an emotional communicator may possibly convey unreliability, while to an

emotional communicator, a neutral communicator may run the risk of conveying a lack of clarity and even

possible dishonesty.

18

Is reading about the negative side of life necessarily a negative experience?

Some readers, in their role as citizens, define as an obligation the reading of articles and books about

problematic current events and situations.

(C) Such reading may be both utilitarian and fulfilling: utilitarian because the material informs the readers about

the nature of the problem and its possible solution; fulfilling because it increases their knowledge and understanding of the world in which they live.

(A) At the same time, such knowledge and understanding can be highly unsettling.

Thus, a deeper appreciation of global warming gained by perusing a scientifically credible book on the matter will probably increase the anxiety of people living in areas subject to tornados and hurricanes.

(B) In short, reading some material can have both a positive and a negative effect on its readers.

Moreover, such activity may be understood by them as both a kind of leisure and an instance of nonwork obligation.

19

It is a common misconception among many adults that picture books are the best books to give a child who is just learning to read.

It is true that some picture books have characteristics that make them accessible to beginning readers.

But most picture books are written at a reading level that is much higher than that of a child in first grade since they are intended to be read aloud to children.

There are, however, books expressly written for children who are learning to read that use simple vocabulary, large typeface, and short sentences.

These are called easy readers, beginning readers, or simply readers.

One step up from readers is another category of books that are most commonly called transitional books.

These books feature simple sentences and short chapters, and serve as a bridge between easy readers and

longer chapter books.

20

When you hear someone tell you outright that they need help after just informing you of her tendency toward

seizures, it is a bit hard to imagine that you wouldn't notice or be aware that she was in trouble.

Nevertheless, the presence of others can prevent us from helping.

This is because of a powerful effect that groups can have on us, known as diffusion of responsibility.

For a victim to receive help, someone needs to decide that it will be his or her responsibility to act.

When you are responsible, the moral thing to do is to help.

When you are the only witness, the burden clearly rests on your shoulders.

But when others are present, it is easy to imagine that someone else should or has already taken action.

In fact, even being primed to think about being part of a group can make people feel less personally

accountable and less likely to donate money or stay to help out an experimenter.

Mini Test 02

01

Dear Mr. Brown,

On August 23, I purchased a sports coat in your men's department for \$99.95 plus tax.

After taking the coat home, I decided I did not particularly like the fabric and attempted to return the purchase on August 30.

Much to my surprise, the manager refused to accept the return.

I now understand your company has a five-day return policy.

I was not aware of your store's policy at the time of this purchase, nor had I had any occasion to inquire about your policy any of the other times in the past when I purchased goods at your store.

Because I have been a faithful customer for several years, I believe an exception should be made in this instance, and I ask that my money in the amount of \$107 be returned immediately.

Thank you, and I look forward to hearing from you within the next two weeks and receiving a check for \$107.

Sincerely, Jake Blackwell

02

A bell chimed in the building: "Ting ting ting."

That's how Billy Deal described it.

And there was an unintelligible announcement.

He thought that the store was closing so he looked at his watch.

It was 8:05 p.m. Yes, it must be a closing announcement, he thought.

But then a strange thing happened.

A young man on a forklift jumped off the vehicle and cried, "My God, it's a fire!"

And he took off running. Billy looked around.

He couldn't see what the young man was getting excited about. There was nothing.

But suddenly some people ran through the fire door and yelled, "Get outta here! There's a fire!"

Billy peered through that door, that fireproof barricade, toward the west side of the store, and he saw a big cloud of smoke in the center of the space.

He ran toward the south fire door searching for Ada and Matthew, and when he got there the cloud behind him had turned into a wall, a wall of very black smoke.

03

Whenever we buy the latest lotion, we assume that people who make it have only good intentions in mind.

We assume that our governments regulate cosmetic makers and demand vigorous safety testing.

We assume that cosmetic makers consciously avoid making products that contain ingredients with questionable safety records.

Perhaps it is time to stop assuming anything.

The chemical industry works nonstop.

The amount of synthetic chemicals in use all over the world has increased twofold over the last ten years.

Today, we have more than 100,000 chemicals in use in different areas of our lives, and less than 5 percent of these chemicals have been thoroughly tested for their long-term impact on human health.

Even proven toxins, such as lead and mercury, were presumed innocent for years — until dozens of

well-documented cases of serious adverse health effects piled up, thus prohibiting the use of these chemicals in

paints, household items, and cosmetics.

04

Slow ageing seeks to redefine ageing as a positive growth experience, rather than one linked with decrepitude,

degeneration and decline.

The anti-ageing movement generally seeks to position 'getting old' as something to be avoided at all costs.

It feeds on people's fears and typically doesn't provide real solutions.

This is unrealistic and unnecessary.

We want to slow ageing, not fear it.

Attitude is the single most important factor in healthy ageing.

A positive attitude drives healthy behaviour and gives us control over our lives.

It can more than compensate for a number of other things that may be failing.

Ageing needs to be re-positioned as an experience of value, not only for ourselves as individuals, but for our

society.

It is possible to LOVE the ageing process, to re-frame ageing as a positive experience and take control so we

age with pleasure, resilience and growth.

05

Youths, particularly those completing college degrees, are increasingly pressured to undertake unpaid

internships.

In a book suggestively entitled "Intern Nation: How to Earn Nothing and Learn Little in the Brave New Economy", Ross Perlin reports that the percentage of college graduates doing internships has tripled in less than two decades (from 17 percent in 1992 to 50 percent in 2008), and that this is a mass labour exploitation that, in the USA, saves firms more than \$600 million annually.

In Canada, Andrew Langille, a lawyer who does research on the topic, contends that unpaid internships are replacing entry-level jobs, that they rarely lead to permanent work, and that most of them (95% in the case of Ontario) are exploitative and illegal because interns are doing work typically performed by paid employees.

In the context of the current economic recession and high unemployment rates, young graduates are forced to compete with each other and improve their resume in order to gain an advantage in the job market.

06

Higher density living in cities means that fewer people have their own garden spaces and that gardens in modern homes are constantly becoming smaller.

This is one reason for the importance of maintaining public gardens and integrating garden spaces into new developments.

Many of the benefits provided by gardens are available for all to enjoy in public gardens and parks and these venues are often the scene of weddings, parties, and family get-togethers of all sorts.

Public gardens provide us with opportunities for recreation, contemplation, education, and inspiration.

Their importance to the community and to the environment cannot be overstated and will only grow as higher

density living deprives more people of private garden spaces.

Whether it's as a venue to socialise with friends, play sport, practise yoga, meditate, picnic, explore, play, or

learn about the natural world, your local park has much to offer, even if you do have your own garden.

07

Scientists estimate that passenger pigeons in North America were the most abundant bird species on Earth,

approximately 5 billion birds, before the arrival of the Europeans.

The pigeons lived in enormous flocks; the largest flock, of 2 billion birds, darkened the sky for several days as

it flew overhead.

Up to 100 nests were built in a single tree.

Because they lived so close together and were slow flyers, passenger pigeons were extremely easy to hunt.

Pigeon meat was so cheap that it was fed to pigs and slaves; the meat also became popular in large cities.

Although everyone could see that the population was declining, no one thought that the birds were at risk for

extinction because no one anticipated that as their numbers fell, the pigeons would stop breeding.

Scientists now think that the pigeons' mating instinct was triggered by the presence of a great flock.

As the flocks were decimated, so was the birds' desire to reproduce.

The last remaining flock, approximately 250,000 birds, was killed by sport hunters in a single day in 1896.

The very last passenger pigeon died in captivity in 1914.

08

The external triggers of depressed mood can be like tigers hiding in the grass: You may hardly be aware of

their effect on your mood because you're unaware of them or you've become used to them.

Or maybe you don't fully appreciate their negative effect; you know these problems exist, but you

underestimate their negative impact on you.

Or you may be very aware of your depressed feelings, but what is causing them may not be nearly so

obvious.

And some external triggers can simply be subtle and transitory.

It can be easy to be aware that a fight with your spouse or a poor performance review at work got you down,

but much harder to see that a scratch on a new piece of furniture or an unkind comment by a close friend

really got to you.

Also, a trigger may not have occurred just now, but instead may be caused by thinking back to a past

negative event.

09

After all the work you have gone through writing it, you may feel "married" to the first draft of your paper.

However, revision is one of the most important steps in ensuring your paper's success.

Although unpracticed writers often think of revision as little more than making sure all the i's are dotted and

t's are crossed, it is much more than that.

Revising is reseeing the essay, looking at it from other perspectives, trying always to align your view with the

one that will be held by your audience.

Research indicates that we are actually revising all the time, in every phase of the writing process, as we reread

phrases, rethink the placement of an item in an outline, or test a new topic sentence for a paragraph.

Subjecting your entire hard-fought draft to cold, objective scrutiny is one of the toughest activities to master,

but it is absolutely necessary.

You have to ensure that you have said everything that needs to be said clearly and logically.

One confusing passage will deflect the reader's attention from where you want it to be.

10

Jim believes that he has been a very good and caring brother to Jacob.

Throughout their growing up, Jim, as the older brother, has looked out for Jacob and believes he has "been

there" for his brother each and every time he was asked to help.

Now he asks Jacob to loan him \$1,000 until payday so that Jim can pay his mortgage on time following a

major and unexpected car expense.

Jacob says he wishes he could help, but he and his wife, Jane, have decided that they will not loan money to

friends or relatives as a matter of policy.

Jacob is apologetic but firm that he cannot help.

Jim immediately feels crushed by Jacob's statement, angry and confused that Jacob could let him down when

he really has done so much for him.

As he hangs up the phone, he feels almost out of breath, his heart is pounding, and he is suffused with

feelings of disappointment and intense anger at his brother.

11

If the dream you had last night perfectly predicted something unusual that actually happened today, put it in

proper context.

How many dreams have you had in your lifetime that failed to predict events accurately?

You also have to think of all the other people on Earth who had a dream last night that didn't come true.

The odds are that somebody's dream would hit the mark just by chance.

It's like the lottery: the odds of winning may be low, but somebody does win.

So, if billions of people are having dreams every night, shouldn't it be expected that some of them will "come

true" just by chance?

If millions of people buy lottery tickets, don't we expect that someone out of the crowd will pick the winning

numbers?

If we want to think clearly, we have to accept the fact that coincidences happen all the time.

In isolation, many of them can seem eerie and supernatural.

Placed into proper context, however, they usually seem inevitable more than anything else.

12

A good image of what we mean by decision making is of a person pausing at a fork in the road, and then

choosing one path — to reach a desired goal or to avoid an unpleasant outcome.

The most important evolutionary situations that selected our basic decision-making capacities probably involved

physical approach or avoidance — which waterhole, field, fruit tree, cave, stranger, mate, and so forth, to

approach and which to avoid. In prehistoric times, bad decisions were punished in a dramatic manner; as the

philosopher Willard van Orman Quine commented, "Creatures inveterately wrong in their inductions have a pathetic but praiseworthy tendency to die before reproducing their kind."

In other words, animals, including humans, that make bad predictions of the future and consequently bad decisions tend to die before they can pass their genes on to the next generation; this is one reason that we, and other animals, are good at making survival decisions.

13

The advantages of personal contact include experiences we can't consciously register. In a shared space, people plug into what the psychologist Daniel Goleman has called "neural WiFi," "a feedback loop that crosses the skin-and-skull barrier between bodies."

When scientists videotape conversations and slow them down to watch frame by frame, they detect synchronies between nonverbal elements.

A shared rhythm very much like the beat that guides an improvisation in jazz.

The movements themselves are coordinated to within a fraction of a second.

Our brains are taking in data on the order of milli- or microseconds.

But conscious processing of information happens in the comparatively sluggish scale of seconds.

When two people talk to each other, writes Goleman, "our own thoughts can't possibly track the complexity of the dance."

14

In 2003, on their Showtime television series, the team of magicians, Penn & Teller, demonstrated how bottled

water marketing itself impacts not only consumers' expectations but their actual perceptions of how water tastes.

In a hilarious segment, the guys took over a trendy California restaurant, installing their own made-up "water steward," a fake employee who visited each table and presented diners with a menu of exotic and refreshing-sounding waters from around the world.

What patrons didn't know was that all of the bottles had been filled from the same hose out back behind the restaurant.

Based on the images on the made-up labels, the prices of the waters, and the stories told by the water steward, diners actually believed they could taste differences among the various waters and were shocked to finally learn that all of the waters were nothing more than Los Angeles tap water.

15

The sound of a bat, like the sound of a club or a racquet, has a strong psychological influence on a player.

A ball impacting a wood bat makes a nice "crack" sound when hit properly, while a hollow bat "pings" like a bell.

Some players prefer to play in wood bat leagues simply because the crack of the bat sounds more like the real thing, or more like the bat used by a Major League player.

Similarly, professional tennis players are very fussy about the sound of the shot.

About half of them use string dampeners to change the ping to a thud, and the other half don't, depending on what they are accustomed to hearing.

When racquet handles are in poor condition, it is possible for players to lose their grip during a stroke and
the racquet can hit another player.

It makes no difference to the performance of the racquet, but if the shot sounds "wrong" then it won't "feel"
right.

16

Experimental bias refers to the researchers' possible bias toward the expected or hypothesized results, a
violation of the objectivity required in experimental research.

(C) Control of this threat to validity can be addressed by using an experimenter who is unaware of the
anticipated results to administer the intervention(s) or treatment.

Similarly, attitudinal effect refers to the possible perception by either group that they may be receiving special
attention, which may affect the results of the study.

(B) Double-blind studies address both researcher bias and attitudinal effect.

For example, if researchers were interested in the effect of a drug on the hyperactivity of children, they could
avoid experimental bias by using research assistants who were not privy to the identity of the experimental or
control group members.

(A) The assistants could be instructed to give an unmarked pill to each participant each day and to record data
relative to the participant's behavior.

The participants would not know if they were assigned to the experimental or control conditions either.

Thus, neither the researcher's bias nor the attitudinal effect of participants could influence the outcome of the

study.

17

Flagship species are charismatic animals that tend to evoke emotional responses including affection and sympathy, and thus are likely to arouse public support for their conservation.

(B) While biodiversity and ecosystem protection can be vague concepts that are not easy to promote for public awareness and support, these flagship species are readily identifiable animals whose lives, difficulties, and survival resonate with the general public.

Unlike ecologically significant classifications like "keystone" and "umbrella," flagship species are not necessarily critical to an ecosystem's function.

(A) Instead, their importance is defined by their appeal to human audiences.

Because flagship species are not always ecologically vital, some experts believe that funding dedicated to their conservation and protection would be better allocated to species that have potentially more significant impacts on their ecosystems.

(C) The utilization of flagship species can also present a challenge to conservation as a whole, particularly if a flagship species becomes extinct or extirpated from part of its range where conservation strategies had been in place.

This could lead to damaged attitudes and involvement of local people, conservationists, and the general public that supports species-specific conservation campaigns.

18

Sometimes different species adopt the same camouflage to suit a specific environment.

For example, floating masses of Sargassum seaweed support a whole community of animals that drift along with the weed in the Atlantic Ocean.

Within the confines of their seaweed home, kept afloat by numerous gas-filled bladders, the animal residents must live, mate, feed, and avoid being eaten.

There are no holes to hide in and no rocks to slip underneath, so most of the inhabitants are camouflaged to resemble the seaweed in color and shape.

As a result, animals as varied as shrimps, crabs, and fishes all wear the same colors, and are mostly yellow and brown.

The speckled color and slow movements of a filefish, for instance, help it blend in as it hunts for worms.

Irregular seaweedlike skin flaps on the body and fins of the Sargassum fish make an excellent disguise.

19

According to Tolstoy, artistic creations are art only if they serve brotherhood in uniting the people of the world.

Otherwise, they do not qualify as art.

On these grounds, he asserts that the artists, whose works serve anything but that, are counterfeit artists, and are thus disqualified.

Even from this perspective, one would think that at least Symphony No. 9 from Beethoven should qualify, because it was composed exactly for the brotherhood of humans.

And probably he did not approve of Shakespeare's great writings because his works take no position for or
against anything.

He never tries to promote or discourage any idea or ideology, or tries to teach anything to anyone, but rather,
reflects the nature of interaction among humans in different realms of tragedy, history and comedy.

And probably this is one of the material elements that augments the beauty in his writings.

But according to Tolstoy, his writings do not even qualify as art, and one after another, he denounces and
dismisses almost everything that we consider to be great art.

20

In October 2014 three researchers won the Nobel Prize in Physics for their work on LEDs (light-emitting
diodes).

In announcing the award, the Swedish Academy of Sciences noted that "replacing light bulbs and fluorescent
tubes with LEDs will lead to a very great reduction of electricity requirements for lighting."

This statement triggered a lively debate about the "rebound" effect — the increase in consumption of energy
services that often occurs as new and efficient technologies are adopted.

In response, David Goldstein from the Natural Resources Defense Council retorted that good energy-efficiency
policy can deliver the opposite of rebound, where a little energy efficiency leads to more and more reductions
in usage and pollution.

Consider the state of California, where vigorous energy-efficiency policies have been in place for decades,
resulting in actual reductions of energy use that are far larger than a simple projection of savings.

Thus, the overall goal of energy efficiency — to use energy more productively and cleanly — has not lost its effect by the rebound effect.

Mini Test 03

01

Dear Committee Members,

You know that last year your sharing the spirit of this season resulted in 2,765 children receiving a Christmas gift.

And this year we are aiming to make sure that 3,500 children in our area are greeted with a surprise gift on that special day.

This year on December 5, 4:30 p.m., at Riverdale Preschool, all of us will bring together the gifts we have collected, and we will all wrap gifts and divide them for distribution by the appointed elves.

As usual, this will be a very merry workshop experience and celebration for all of us.

Barry McCullom will lead the music, and La Petite, a superb caterer, is supplying box lunches for all of us.

We look forward to seeing you again this year for this very special time of celebration.

Sincerely, Patti Reeves

02

As they went into the theatre, Billy said, "It's a ballet about Charles Lamb's policeman brother by a guy called Leo Debility."

Laura looked puzzled for a moment.

Then her eyes sparkled and she burst into laughter.

"Coppélia by Léo Delibes. You are a bit stupid, aren't you?"

"At last you've realized it," he grinned.

The theatre lights dimmed, the orchestra struck up and they sat fascinated by Delibes' music and the superb choreography of the visiting Sadler's Wells company.

From time to time, Billy glanced at Laura's smiling face as she followed every movement of the dancers and took in every nuance of the music.

A shiver of joy ran down his spine and he felt a bliss he had never known.

If only time could stand still.

Making this girl by my side happy, he thought, will be my life's ambition.

03

The demand for art fluctuates according to the state of the economy.

When economic growth is strong, galleries can be full of buyers, but these soon disappear when economic times are hard.

During the recession in the early 1990s, one commentator reported that 'buyers had gone into hibernation' and many art galleries were forced out of business.

A major factor in this is the high fixed costs that galleries face, which can be easily accommodated when sales are strong.

But the point about fixed costs is that they cannot be changed in the short term.

If demand falls suddenly, they can force a gallery into bankruptcy since they must still be paid even when there are few or no customers.

Galleries are located in prime locations and so their major fixed costs are rent and property taxes.

In addition, galleries typically produce three or four catalogues a year, with a typical cost of US\$10,000 per edition.

04

Readers have a right to expect that the quotations used in news stories will fairly depict the range of viewpoints on the subject.

Unbiased reporters strive to meet that standard.

However, biased reporters try to advance their own personal opinions.

One way is to include numerous strong quotations on their side of the issue and only one or two, preferably weak, quotations on the other side.

A more blatant approach is to include no opposing quotations at all and thus create the impression that no responsible person would take the opposing side of the issue.

The most dishonest approach is to twist a quotation so that it seems to say something very different.

For example, if the quotation were "I initially had some reservations about the program, but after examining it closely I believe it is excellent," a dishonest reporter might merely say that the person expressed "some reservations" about the program.

05

Imagine a toddler going to his mother, tugging on her sleeve, and when he gets her attention saying, "I need you to watch me so I can do this all by myself."

The mother chuckles inwardly and then watches her son build a toy tower.

Perhaps you, too, smiled at the child's apparent self-contradiction: How can the child do it "all by myself" and need someone to be part of the doing?

Because autonomy is achieved only within relationship, Winnicott called it "the experience of being alone while someone else is present."

This being alone in the presence of someone else is a pattern that continues throughout life.

Adults do not achieve individuation from their parents by walking away and never needing them again but rather by using their parents as a secure base from which to explore.

Autonomy is not a negation of needing others but a capacity that arises from that need being met.

06

Watch any couple who are getting on well.

What do you see? If one leans forward and smiles, so does the other.

If one talks in a hushed tone, the other does too.

She crosses her legs and folds her arms, so does he.

He smiles and shakes his head and, guess what? She does too.

The couples aren't deliberately mimicking each other.

It's just that when people are getting on well with someone else they subconsciously adopt similar non-verbals.

Emulating another's body language and speech patterns is a sure-fire way to deepen your relationships.

Subtly adapt your breathing patterns, pace of speech, tone of voice, posture, body language and facial

expression to the other person's.

Borrow their words and expressions.

This must of course be done skillfully, or they'll think you are ridiculing them.

The last thing you want is to come across as a parrot, but with practice you'll be able to do it without any hint of mimicry.

07

Ezer Weizman, Israel's seventh President, was born in Tel Aviv in 1924 and was the nephew of Israel's first President, Chaim Weizmann.

Ezer Weizman served as a fighter pilot with the Royal Air Force during World War II.

Weizman helped establish what would become the Israel Air Force.

He served as a fighter pilot during the War of Independence and was named head of operations of the Air Force in 1950.

He became commander in chief of the Israel Air Force in 1958.

He retired from the army in 1969 and was elected chairman of the Herut Party in 1971.

Weizman was elected president in 1993 and reelected in 1998.

In 2000, Weizman resigned as president under pressure due to the public revelation that he failed to declare a substantial sum of money that he received from a friend while serving as an elected official.

08

Hypotheses that have passed many supportive tests are often called theories.

A theory is an explanation that summarizes a hypothesis or a set of hypotheses and has been supported with

repeated testing.

Theories have a great deal more supportive testing behind them than do hypotheses.

Suppose your new hypothesis is "wooden objects burn."

You will find this hypothesis more satisfactory since all of the wooden objects you try will burn.

You can see from this example that the hypothesis does not become what we think of as a "fact" but rather a

tentatively accepted theory, which must undergo continuous testing and possible adjustments.

Even if your theory seems successful, you might be ignoring other types of combustible materials, such as a

large stack of old car tires, objects made of fabric or paper, or perhaps containers of petroleum.

You can see that even though you are quite satisfied with your theory because it does the job you want it to

do, you actually do not have a complete statement on all the properties that make objects burn.

09

Hiding behaviors are common among people with dementia.

Hiding is an attempt to safeguard belongings by placing them in "secret places."

Often, however, the person with dementia forgets where she placed important possessions.

Jan's seventy-five-year-old mother, Rita, started showing signs of cognitive decline about a year before Jan

brought her into the university health center for an evaluation.

Her mother wasn't driving anymore and therefore requested that Jan take her to the bank every three or four

days.

Rita continually explained to Jan that she wanted to have cash on her "in case of an emergency," and she

withdrew hundreds of dollars at a time.

Jan had no idea what Rita did with the money.

Occasionally, Rita wrongly accused Jan of stealing cash from her, which greatly pained Jan.

When Rita entered a nursing home several months later and Jan cleared out her house, she wondered whether she would come across her mother's money but never did.

Jan had no idea what happened to the tens of thousands of dollars that Rita likely withdrew over time and theorized that she might have hidden the cash too well somewhere in the house.

10

Various efforts are being made to halt desertification in the sandy lands, including planting of trees as shelter belts to stop the wind, the growing of crops that tolerate extreme arid sandy conditions, and restrictions on grazing.

Many of the trees have died — and in any case they are proving ineffective in stopping the movement of mobile dunes.

Yuanchun Shi, former President of China Agricultural University, suggests another solution, namely that 'over-cultivation, grazing and logging must be restrained in the source area of desertification.

Grazing should be forbidden in those seriously degenerated and desertified grasslands... The purpose of stopping cultivation and grazing is to activate the ecosystem's selfrepair function, so that vegetation cover and soil conditions can be improved on a large scale'.

In a few exceptional cases, the exclusion of grazing has resulted in grassland regeneration; however, this

outcome appears to be the exception rather than the rule.

Where soil conditions are less favourable, keeping the animals away has not resulted in significant recovery.

11

Learning to grasp objects has an important effect on an infant's interest in and knowledge about the physical world.

First, infants who more actively explore the environment with their hands are also advanced in their ability to perceive object boundaries, noting where one object ends and another begins.

We know this because infants at 3 and 4 months who were more actively engaged with teething toys during a pretest phase were more likely to show surprise when two objects moved together than when they moved separately, whereas less active object explorers showed the opposite pattern.

This suggests that interacting with objects may confer important knowledge of the physical world and how objects should behave.

Several researchers have noted that once infants begin to reach for objects, they show increased interest in the world of objects, and such interest could be the basis of later knowledge.

12

While being an introvert comes with its challenges, it definitely has its advantages as well.

For example, an introvert is far less likely to make a mistake in a social situation, such as inadvertently insulting another person whose opinion is not agreeable.

An introvert would enjoy reflecting on their thoughts, and thus would be far less likely to suffer from boredom

without outside stimulation.

The only risk that you will face as an introvert is that people who do not know you may think that you are aloof or that you think you are better than them.

If you learn how to open up just a little bit with your opinions and thoughts, you will be able to thrive in both worlds.

You can then stay true to your personality without appearing to be antisocial.

13

Declining fertility is a wake-up call showing that governments need to do more to support working mothers if they want young women to keep on having enough babies to stave off rapid population aging.

But supporting work-family reconciliation policies also matters from the point of view of overall social equality.

States that rely on markets to provide care services without providing government subsidies are counting on the availability of a large cohort of workers who will provide care for low pay.

But those who are getting paid the least also have children who need to be taken care of, and their care solutions may be quite limited by lack of resources.

This can result in children who do not receive excellent care or a great start in life.

When countries provide affordable high-quality care to all children, they help to equalize the chances that all children will be cared for well, talked and read to, and given a start that sets them up to flourish emotionally and intellectually.

14

The world has made huge investments in the facilities that extract fossil fuels from the ground and burn them

— mines, oil wells, power stations, hundreds of thousands of ships and aircraft, a billion motor vehicles.

Leaving aside the political lobbying power that such investment can command, there would be a limit to how

quickly that much kit could be replaced even if there were perfect substitute technologies to hand that simply

needed scaling up.

If the world had the capacity to deliver one of the largest nuclear power plants ever built once a week, week

in and week out, it would take 20 years to replace the current stock of coal-fired plants (at present, the world

builds about three or four nuclear power plants a year, and retires old ones almost as quickly).

To replace those coal plants with solar panels at the rate such panels were installed in 2013 would take about

a century and a half.

That is all before starting on replacing the gas and the oil, the cars, the furnaces and the ships.

15

Historically in the United States, prevention hasn't been prioritized, and, furthermore, virtually no attention has

been paid to fostering a systematic, quality prevention approach.

For decades, the national prevention model relied primarily on educating people about health and safety risks,

hoping they would magically change their behavior.

As well intended as educational efforts are, they can never be very effective without simultaneously changing

home and community environments, social norms, policies, and institutions.

Establishing a broader view — “beyond brochures,” we might say — is critical.

Research has shown it is unrealistic to expect that simply warning people about a danger will be sufficient to help them change their long-standing habits or avoid unhealthy exposures on their own.

Investment in teens' health, safety, education and rights empowers them to reach for their dreams and build better lives for themselves and their communities.

A quality prevention approach is one in which education is part of a well-designed, sustained, comprehensive effort to broadly improve community environments, social norms, institutional practices, and policies.

16

Sport plays many roles in societies around the globe.

At the most visible level from a media perspective are events where elite athletes are paid to perform at the highest levels with highly paid coaching staff, and where audiences can pay sizable amounts to witness the spectacle.

Here, athleticism, entertainment, and community are key dimensions to the sporting experience.

Social media has altered the relationship between sports teams and their fans, and smart brands are making it a part of their overall marketing strategy.

At the other end of the spectrum, there are many events and games, such as weekend children's sporting competitions with parents and friends watching from the sidelines or training sessions with voluntary coaches.

These two extremes illustrate the very diverse roles for sport in society, including physical and mental health-building and personal development, as well as entertainment and community-building.

17

Anyone who wants to improve his or her health can benefit from the diet simply by following its general guidelines for better nutritional choices.

There's no rigid formula.

You don't have to sign on for a complicated program with steps and levels and layers.

(B) At the same time, though, anyone with specific concerns can follow the diet's more directed recommendations and use it preventively to lower the risk of a specific disease long before any symptoms become apparent.

And those hoping to reverse specific disease processes can use the plan in an even more targeted and nuanced fashion.

(C) In postmenopausal women, for instance, vitamin D deficiency can lead to osteoporosis and a greater likelihood of fractures, so increasing supplemental and dietary intake of vitamin D will help most women decrease the risk for fractures. But not all women.

(A) Differences in genetic makeup mean that not every postmenopausal woman has the same vulnerability. So increasing the amount of vitamin D should not be a blanket recommendation for all women.

18

How well can you figure out, navigate, control, and modify an online environment?

This is the key question concerning its interactive dimension.

The more readily you can immerse yourself into an online domain, the more quickly it becomes an extension of your mind.

The more customizable it is, the more you can express your identity, shape your experiences, and feel

emotionally invested in that place.

A purely informational website page would have little or no interactivity, although even the addition of links

between sections of the site enables you to personalize your journey through the information.

By contrast, very sophisticated gaming and avatar worlds produce complex interactivity in the many

opportunities people have to create visual representations of themselves, to venture through all the lands within

the world, and even to construct their own objects and dwellings.

The interactive dimension also includes our attitudes toward cyberspace in general: how we feel we can control

it, or how it controls us.

19

On an unrecorded day in the 1760s, the last Steller's sea cow died.

Before eighteenth-century human hunters began killing it, this gigantic manatee — up to thirty feet long and

covered with thick layers of fat — had lived in the shallow bays of two small islands in the North Pacific, and

nowhere else.

Its ancestors had once inhabited the seas from Baja California, Mexico, to Kamchatka, Russia — but with

climate change and human predation, its numbers had dwindled to several thousand by the middle of the

eighteenth century.

Despite this decline, on isolated, uninhabited Bering and Copper Islands the last members of the species might

have survived indefinitely had a floodtide of empire not suddenly swept them away.

Russian explorers discovered the sea cow in 1741, and in less than thirty years the fur traders who followed up on this discovery had hunted the animal to extinction.

By the nineteenth century, the descendants of the sea cow's killers were wondering what animal could have left behind the gigantic bones lying on the shoreline.

Even the memory of the sea cow had vanished.

20

Many people in the nineteenth century considered head size a valid measure of intellectual merit.

This emphasis on head size was rooted in attempts to scientifically justify colonialism and legitimize racial oppression by white Europeans.

Similarly, as sociologist Jerome Karabel shows, prior to the 1920s, admission to Harvard, Princeton, and Yale was based largely on subject tests and demonstrated intellectualism.

Yet as Jewish enrollments grew and anti-Semitism increased, definitions of merit shifted.

To exclude Jewish students and secure advantages for white Anglo-Saxon Protestants, the emphasis on intellectual prowess gave way to a focus on personal "character," as demonstrated by applicants' involvement in sports, extracurricular activities, and perceived "manliness."

This focus on character and well-roundedness persists in college admissions today.

Thus, merit is an ever-evolving, moving target that simultaneously shapes and is shaped by power relations in a given society.