

*In God We Trust*

# PTE Magazine

Reading Fill in the Blanks **#RFIB**

Reading and Writing Fill in the Blanks **#RWFIB**

**V8.0**

## Summary of Changes:

- **V8.0:**
  - **101 New Real Exam Questions are added (403~503)**
  - **Incomplete Sentences Section is added (504~515)**
  - **New Real Exam Words/Phrases are highlighted**
  - **Minor Errors are removed**
- **V7.0:**
  - *61 New Real Exam Questions are added (342~402)*
  - *New Real Exam Words/Phrases are highlighted*
  - *Minor Errors are removed*
  - *"Practice Tests" Section is removed*
- **V6.0:**
  - *29 New Real Exam Questions are added (313~341)*
  - *New Real Exam Words/Phrases are highlighted*
  - *Minor Errors are removed*
- **V5.0:**
  - *44 New Real Exam Questions are added (269~312)*
  - *New Real Exam Words/Phrases are highlighted*
  - *Spelling Errors are removed*
- **V4.0:**
  - *172 New Real Exam Questions are added*
  - *New Real Exam Words/Phrases are highlighted*
  - *Spelling Errors are removed*
- **V3.0:**
  - *18 New Real Exam Questions are added*
  - *59 Practice Tests are added*

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## 1 Indian Onion

With its capacity for bringing down governments and scarring political careers, the onion plays an **explosive** role in Indian politics. This week, reports of rising onion prices have made front-page news and absorbed the attention of the governing **elite**.

The most **vital** / **staple** ingredient in Indian cooking, the **basic** element with which all dishes begin and, normally, the **cheapest** vegetable available, the pink onion is an **essential** item in the shopping basket of families of all classes.

But in recent weeks, the onion has started to seem an **unaffordable luxury** for India's poor. Over the past few days, another sharp **surge** / **increase** in prices has begun to unsettle the influential urban middle classes.

The sudden **spike** in prices has been caused by large exports to **neighboring** countries and a **shortage** of **supply**. But the **increase** follows a trend of rising consumer prices across the board — from diesel fuel to cement, from milk to lentils.

## 2 Kashmir Whispers of Rediscovered Appeal

Two decades ago, Kashmiri houseboat-owners **rubbed** their **hands** every spring at the **prospect** of the annual **influx** of **tourists**. From May to October, the hyacinth-choked\* waters of Dal Lake saw flotillas of **vividly painted** shikaras **carrying** Indian families, boho westerners, young travelers and wide-eyed Japanese. Carpet-sellers **honed** their skills, as did purveyors of anything remotely embroidered while the houseboats initiated by the British Raj provided unusual accommodation. The economy boomed. Then, in 1989, everything changed. Hindus and countless Kashmiri business people **bolted**, at least 35,000 people were killed in a decade, the lake **stagnated** and the houseboats rotted. Any foreigners **venturing** there risked their **lives** - proved in 1995 when five young Europeans were **kidnapped** and **murdered**.

\* The text uses a different word

## 3 Stress Knows Few Borders

Stress that tense feeling often connected to having too much to do, too many bills to **pay** and not enough time or money is a common **emotion** that knows few borders.

About three-fourths of people in the United States, Australia, Canada, France, Germany, Italy South Korea and the United Kingdom say they experience stress on a **daily basis**, according to a **polling**. Those anxious feelings are even more **intense** during the holidays.

Germans feel stress more **intensely** than those in other countries polled. People in the US **cite / cited** financial pressure as the **top worry**. About half the people in Britain said they frequently or sometimes felt life was **beyond** their control, the highest level in the 10 countries **surveyed**.

#### 4 Impressionism (1<sup>st</sup> Version)

Movement in painting that **originated** in France in the 1860s and had **enormous influence** in European and North American painting in the late 19th century. The Impressionists wanted to **depict** real life, to paint straight from nature, and to capture the changing effects of light. The term was first used **abusively** to describe Claude Monet's painting Impression: Sunrise (1872). The other **leading** Impressionists included Paul Cezanne, Edgar Degas, Edouard Manet, Camille Pissarro, Pierre-Auguste Renoir, and Alfred Sisley, but only Monet **remained** devoted to Impressionist ideas **throughout** his career.

The **core** of the Impressionist group **was formed** in the early 1860s by Monet, Renoir, and Sisley, who met as students and enjoyed painting in the open air — one of the **hallmarks** of Impressionism. They met other members of the Impressionist **circle** through Paris café society. They never **made up** a formal group, but they organized eight group **exhibitions** between 1874 and 1886, at the first of which the name Impressionism was applied. Their styles were **diverse**, but all experimented with effects of light and movement created with distinct brushstrokes and **fragments** of color dabbed side-by-side **on** the **canvas** rather than mixed on the **palette**. By the 1880s the movement's central impulse had **dispersed**, and a number of new styles were **emerging**, later described as post-Impressionism.

British Impressionism had a major influence on the more experimental and **progressive** British painters in the late 19th and early 20th centuries. Many of the painters were affected in the circle of Walter Sickert, who spent much of his career in France and was an influential **figure** who **inspired** many younger artists. His friend and exact contemporary Philip Wilson Steer is generally regarded as the most outstanding British Impressionist.

#### 5 Edible Insects

FANCY A locust for lunch? Probably not, if you live in the west, but elsewhere it's a different story. **Edible insects** — termites, stick insects, dragonflies, grasshoppers and giant water bugs — are **on the menu** for an **estimated** 80 per cent of the world's population.

More than 1000 species of insects are **served** up around the world. For example, "kungu cakes" —made from midges — are a **delicacy** in parts of

Africa. Mexico is an insect-eating — or entomophagous — hotspot, where more than 200 insect species are **consumed**. **Demand** is so **high** that 40 species are now **under threat**, including white agave worms. These caterpillars of the tequila giant-skipper butterfly **fetch** around \$250 a kilogram.

Eating insects makes **nutritional** sense. Some contain more **protein** than meat or fish. The female gypsy moth, for instance, is about 80 per cent protein. Insects can be a good **source** of vitamins and minerals too: a type of caterpillar (Usta terpsichore) eaten in Angola is **rich** in iron, zinc and thiamine.

What do they taste like? Ants have a lemon tang, apparently, whereas giant water bugs taste of mint and fire ant pupae of watermelon. You have probably, inadvertently, already tasted some of these things, as insects are often **accidental** tourists in other types of food. The US Food and Drug Administration even issues guidelines for the number of insect parts **allowed** in certain foods. For example, it is **acceptable** for 225 grams of macaroni to contain up to 225 insect fragments.

## 6 Using Images in the Writing Process

It is the **assertion** of this article that students who use visual art as a pre-writing **stimulus** are composing their ideas both in images and in words. The result of the art creation process allows students the distance to **elaborate**, add details, and create more **coherent** text.

The process of writing is more than putting words on a piece of paper. Effective authors are able to create **imagery** and to **communicate** ideas using well-chosen words, phrases, and text structures. Emergent writers struggle with the **mechanics** of the writing process, i.e., fine motor **control** for printing **legibly**, recall of spelling patterns, and the use of syntax and **grammar** rules. As a result, texts written by young writers tend to be **simplistic** and **formulaic**. The artwork **facilitates** the writing process, resulting in a text that is richer in **sensory** detail and more **intricate** than the more traditional writing-first crayon drawing-second **approach**.

## 7 Black Diamonds from Outer Space

An **exotic** type of diamond may have come to Earth from outer space, scientists say. Called carbonado or “black” diamonds, the **mysterious** stones are **found** in Brazil and the Central African Republic. They are unusual for being the color of charcoal and full of frothy bubbles.

The diamonds, which can **weigh** in at more than 3,600 carats, can also have a face that looks like melted glass. Because of their odd **appearance**, the

diamonds are **unsuitable** as gemstones. But they do have **industrial applications** and were used in the drill bits that helped **dig** the Panama Canal. Now a team led by Stephen Haggerty of Florida International University in Miami has presented a new study **suggesting** that the odd stones were brought to Earth by an asteroid billions of years ago. The findings were published online in the journal *Astrophysical Journal Letters* on December 20.

The scientists exposed polished pieces of carbonado to extremely intense infrared light. The test **revealed** the presence of many hydrogen-carbon bonds, **indicating** that the diamonds probably **formed** in a hydrogen-rich environment—such as that found in space. The diamonds also showed strong **similarities** to tiny Nano-diamonds, which are frequently found in meteorites. “They’re not **identical**” Haggerty said, “but they’re very similar.”

Astrophysicists, he added, have **developed** theories predicting that Nano-diamonds form easily in the titanic stellar explosions called supernovas, which scatter **debris** through **interstellar** space.

The **deposits** in the Central African Republic and Brazil, he said **probably** come from the **impact** of a diamond-rich asteroid billions of years ago, when South America and Africa were joined.

## 8 The Snake Hears Sound

The **horned** desert viper’s ability to hunt at night has always **puzzled** biologists. Though it **lies with** its **head** buried in the sand, it can **strike** with great **precision** as soon as prey appears.

Now, Young and physicists Leo van Hemmen and Paul Friedel at the Technical University of Munich in Germany have developed a computer model of the snake’s **auditory system** to explain how the snake “hears” its **prey** without really having the ears for it.

Although the vipers have **internal** ears that can hear **frequencies** between 200 and 1000 hertz, it is not the sound of the mouse **scurrying** about that they are **detecting**.

“The snakes don’t have external **eardrums**,” says van Hemmen. “So unless the mouse wears boots and starts stamping, the snake won’t hear it.”

## 9 Technology Education

The first section of the book covers new modes of assessment. In Chapter 1, Kimbell (Goldsmith College, London) responds to **criticisms of** design programs as formalistic and conventional, stating that a focus on risk-taking rather than hard work in design innovation is equally **problematic**. His research contains

three parts that include preliminary exploration of design **innovation** qualities, **investigation** of resulting classroom practices, and development of evidence-based assessment. The assessment he describes is presented in the form of a structured worksheet, which includes a **collaborative element** and digital photographs, in story format. Such a device encourages **stimulating** ideas, but does not recognize students as design **innovators**. The assessment sheet includes holistic **impressions** as well as details about “having, growing, and proving” ideas.

**Colloquial** judgments are evident in terms such as “wow” and “yawn” and **reward** the quality and quantity of ideas with the term, “sparkiness”, which fittingly is a **pun** as the model project was to design light bulb packaging. In addition, the assessment focuses on the process of optimizing or complexity control as well as proving ideas with thoughtful criticism and not just generation of novel ideas. The **definitions** for qualities such as “technical” and “aesthetic” **pertaining** to users, are too narrow and ill-defined. The author provides **examples** of the project, its features and structures, student’s notes and judgments, and their sketches and photographs of finished light bulb packages, in the Appendix.

## 10 Personal Politics

The morality of the welfare state **depends** on contribution and responsibility. Since some people don’t **contribute** and many are **irresponsible**, the choice of those who do contribute and are responsible is either to **tolerate** the **free riders**, refuse to pay for the **effects** of their irresponsibility or trust the state to **educate** them.

## 11 Jean Piaget

Jean Piaget, the pioneering Swiss philosopher and psychologist, spent much of his professional life listening to children, watching children and **poring over** reports of researchers around the world who were doing the same. He found, to put it most **succinctly**, that children don’t think like grownups. After thousands of interactions with young people often **barely** old enough to talk, Piaget began to **suspect** that behind their cute and seemingly illogical **utterances** were thought processes that had their own kind of order and their own special logic. Einstein called it a **discovery** “so simple that only a genius could have thought of it.”

Piaget’s insight **opened** a new window into the inner workings of the mind. By the end of a wide-ranging and remarkably **prolific** research career that spanned nearly 75 years--from his first scientific publication at age 10 to work

still in progress when he died at 84--Piaget had **developed** several new fields of science. Developmental psychology, cognitive theory and what came to be called genetic epistemology. Although not an educational reformer, he **championed** a way of thinking about children that provided the foundation for today's education-reform movements. It was a shift comparable to the displacement of stories of "noble savages" and "cannibals" by modern anthropology. One might say that Piaget was the first to take children's thinking seriously.

## 12 Exploring the Deep Ocean Floor

The ocean floor is **home** to many unique **communities** of plants and animals. Most of these marine **ecosystems** are near the water surface, such as the Great Barrier Reef, a 2000-km-long coral **formation** off the northeastern coast of Australia. Coral reefs, like nearly all complex living communities, depend on **solar** energy for growth (photosynthesis). The sun's energy, however, penetrates at most only about 300 m below the surface of the water. The relatively **shallow** penetration of solar energy and the sinking of cold, subpolar water combine to make most of the deep ocean floor a **frigid** environment with few life forms.

In 1977, scientists discovered hot springs at a depth of 2.5 km, on the Galapagos Rift (spreading ridge) off the coast of Ecuador. This **exciting discovery** was not really a **surprise**. Since the early 1970s, scientists had **predicted** that hot springs (geothermal vents) should be found at the active spreading centers along the mid-oceanic ridges, where magma, at temperatures over 1000 °C, **presumably** was being **erupted** to form new oceanic crust. More exciting, because it was totally **unexpected**, was the discovery of **abundant** and unusual sea life – giant tube worms, huge clams, and mussels — that **thrived** around the hot springs.

## 13 Hip and Back Pain-Remedy

Icing and anti-inflammatories will help **with** the pain and swelling. Vigorous massage **of** the knot **in** the muscle will help it **to** relax and ease the pain. Meanwhile, work **on** strengthening and stretching your hip, hamstring and lower-back muscles. **For** stretching, focus on the hamstring stretch, the hip and lower-back stretch, and the hamstring and back stretch. For strengthening, try side leg lifts.



## 14 Estee Lauder – A Biography

Leonard Lauder, chief executive of the company his mother founded, says she always thought she “was growing a nice little business.” And that it is. A little business that **controls** 45% of the cosmetics market in U.S. department stores. A little business that sells in 118 countries and last year grew to be \$3.6 billion big in **sales**. The Lauder family’s **shares** are worth more than \$6 billion.

But early on, there wasn’t a **burgeoning** business, there weren’t houses in New York, Palm Beach, Fla., or the south of France. It is said that at one point there was one person to answer the telephones who **changed** her voice to become the shipping or billing department as needed. You more or less know the Estee Lauder story because it’s a chapter from the book of American business **folklore**. In short, Josephine Esther Mentzer, daughter of immigrants, lived above her father’s hardware store in Corona, a section of Queens in New York City. She started her **enterprise** by selling skin creams **concocted** by her uncle, a chemist, in beauty shops, beach clubs and **resorts**.

No doubt the **potions** were good — Estee Lauder was a quality **fanatic** — but the saleslady was better. Much better. And she simply **outworked** everyone else in the cosmetics industry. She **stalked** the bosses of New York City department stores until she got some counter space at Saks Fifth Avenue in 1948. And once in that space, she utilized a personal selling approach that proved as **potent** as the **promise** of her skin regimens and perfumes.

## 15 Power Drinking in Iron Age Europe

By the Bronze Age drinking **vessels** were being made of sheet metal, primarily bronze or gold. However, the peak of feasting — and in particular, of the “political” type of feast — came in the late Hallstatt period (about 600 — 450 BC), soon after the foundation of the Greek **colony** of Massalia (Marseille) at the mouth of the Rhine. From that date on, the blood of the grape began to make its way north and east along major river systems together with imported metal and ceramic drinking vessels from the Greek world.

**Wine** was thus **added** to the list of mood-altering **beverages** — such as mead and ale available to establish social networks in Iron Age Europe. Attic pottery **fragments** found at hillforts such as Heuneburg in Germany and luxury goods such as the monumental 5th century Greek bronze krater (or wine mixing vessel) found at Vix in Burgundy supply archaeological evidence of this **interaction**. Organic **containers** such as leather or wooden wine barrels may also have travelled north into Europe but have not survived. It is unknown what goods were **traded** in return, but they may have included salted meat, hides, timber, amber and slaves.

## 16 The Genetically Engineered Foods Question

Genetically modified foods provide no direct **benefit** to consumers; the food is not **noticeably** better or cheaper. The greater benefit, proponents argue, is that that genetic engineering will play a **crucial** role in feeding the world's **burgeoning** population.

Opponents **disagree**. Asserting that the world already grows more food per person than ever before—more, even, than we can consume.

## 17 Farming

In the last years of the wheat boom, Bennett had become increasingly **frustrated** at how the government seemed to be encouraging an **exploitive** farming **binge**. He went directly after his old employer, the Department of Agriculture, for **misleading** people. Farmers on the Great Plains were working against nature, he **thundered** in speeches across the country.

## 18 Entrepreneurs

Entrepreneurs **seek** the best **opportunities** for production and **coordinate** all the other resources in order to carry them out. An entrepreneur **visualizes** needs and **takes the necessary actions** to **initiate** the **process** by which they will be **met**. This often means **classifying** / **innovating** and **taking** risks.

## 19 Development Strategy

The principal and most consistently **articulated** recommendation of the world conferences was that countries must take full responsibility for their own development. National responsibility for national development is the necessary consequence of **sovereignty**. The Monterrey Consensus states that 'Each country has **primary** responsibility for its own economic and social development, and the role of national policies and development strategies cannot be **overemphasized**. National development strategies and policies are therefore critically important. This was reflected most recently at the 2005 Summit when Member States agreed on a target date of 2006 for all developing countries to **adopt** and start to **implement** / **start implementation** of these strategies to achieve the internationally agreed development **goals** and **objectives**, including the MDGs.

The automatic **corollary** of that principle is that each country must be free to determine its own development strategy. It is essential that all **donors** and **lenders** accept the principle of country **ownership** of national development strategies. This **implies** the acceptance of the principle that development strategies should not only be **attuned to** country circumstances, but also be

prepared and implemented under the leadership of the governments of the countries themselves. The 2005 World Summit also acknowledged, in this regard, that all countries must recognize the need for developing countries to strike a **balance** between their national policy priorities and their international commitments.

## 20 Australian Overseas Departure

Over the past ten years, Australian overseas **departures** have grown from 1.7 million to 3.2 million. This **represents** strong average, annual growth of 6.5 per cent. This paper **analyses** **outbound** travel demand to each destination country using the travel demand models of short-term resident departures. The models are specified in terms of a double logarithmic linear functional form, with overseas departures as the dependent **variable** and real household disposable income prices of travel and accommodation in Australia, and overseas and the exchange rate as **independent** variables.

The models were **estimated** using historical time series data from 1973 to 1998. The data were **obtained** from several sources such as the World Tourism Organization, Australian Bureau of Statistics, World Bank and International Monetary Fund. The results suggest that the estimated elasticity **parameters** are **consistent** with standard economic theory. The number of short-term resident departures is positively influenced by per capita real household disposable income; and the price of **domestic** travel and accommodation are **negatively** influenced by the price of travel and accommodation overseas. The estimated demand models were used to develop the Tourism Forecasting Council's **long run** forecasts. The forecasts suggest that the number of short-term resident departures will increase strongly over the next ten years, largely due to the strength of the Australian economy, competitive travel prices, and Australian's interest in **experiencing** different cultures and lifestyles.

## 21 Thea Proctor

Thea Proctor was just sixteen when her **entry** at the Bowral Art Competition **caught** the eye of the judge, Arthur Streeton. It was the first of many **associations** with art world **recruits**. The next year saw her at the Julian Ashton Art School in the **illustrious** company of Elioth Gruner, Sydney Long and George Lambert, for whom she often posed and **remained** her great friend until his death in 1930.

Lambert's paintings and sketches of Proctor **emphasize** the elegance of her dress. A keen **interest** in fashion was just one **aspect** of her **fascination** with design, and she saw herself as an early style guru on a **quest** to **rid** Australian art of "its lack of imagination and inventive design". Skilled in watercolors and

drawings, Proctor did not **limit** herself to paper, canvases or to her popular magazine **illustrations**; she designed theatre sets and a restaurant interior and wrote on a range of subjects from flower arranging to the colors of cars. It made for a busy and **varied** life but, as she said she was not the **sort** of person "who could sit at home and **knit** socks."

## 22 Children-Centered Mothers

The conducted study serves three objectives. The first objective is to reveal the values loaded to the child by the child centric mother's **attitude** and the **behavior** about the effect of 5-6 aged **nursery** school children on the purchasing decision of the families who belong to high socio-economic class. The second objective is to develop child centricity **scale** and the third objective is to examine the attitude and behavior differences between low child centric and high child centric mothers. Analyzing the data gathered from 257 mother **respondents**, the researchers have found out that the lowest influence of child upon the purchasing decision of the family are those which carry high purchasing risk and used by the whole family, whereas the highest influence of the child **upon** the purchasing decision of the family are the products with low risk and used by the whole family. Findings also reveal that there are **statistically** significant differences between the high child centricity and low child centricity mothers regarding the purchasing products that are highly risky and used by the whole family.

## 23 Funerary Violin

In the 250 years of its active evolution Funerary Violin moved from the formal to the personal. It is clear from the earliest **accounts** / **consciousness** of the form that its role during the sixteenth and seventeenth centuries was largely **heraldic**: to **exemplify** the **continuity** of the social **structure**. The few works that have survived from this period are often **surprisingly** unemotional and at times **overtly grandiose**.

## 24 The Role of a Doctor

In the fast-changing world of modern healthcare, the job of a doctor is more and more like the job of chief executive. The people who run hospitals and physicians' practices don't just need to know **medicine**. They must also be **able** to **balance** budgets, **motivate** a large and **diverse staff** and **make** difficult marketing and **legal decisions**.

"The focus in medical school is to train good doctors, but part of being a good doctor is being a good manager," says Fawaz Siddiqi, a neurosurgical resident

at the London Health Sciences Centre in Canada. "It's having a core undresting of how to work within the **context** of an organization."

The desire to be a "good manager" is precisely the reason Dr Siddiqi, who aspires one day to run a hospital, decided to go back to school. This past autumn he enrolled in a health-sector MBA programme at the Ivey School of business at the University of Western Ontario.

## 25 The Market for Vegetarian Food

Mintel Consumer Intelligence **estimates** the 2002 market for vegetarian foods, those that directly replace meat or other animal products, to be \$1.5 billion. Note that this excludes traditional vegetarian foods such as produce, pasta, and rice. Mintel **forecasts** the market to nearly **double** by 2006 to \$2.8 billion, with the highest growth coming from soymilk, especially refrigerated brands.

The Food and Drug Administration's 1999 decision to allow manufacturers to include heart-healthy claims on foods that deliver at least 6.25 grams of soy protein per **serving** and are also low in **saturated** fat and cholesterol has **spurred tremendous** interest in soymilk and other soy foods. A **representative** of manufacturer Food Tech International (Veggie Patch brand) reported that from 1998 to 1999, the percentage of **consumers** willing to try soy products jumped from 32% to 67%. Beliefs about soy's **effectiveness** in reducing the symptoms of menopause also **attracted** new consumers. A 2000 survey conducted by the United Soybean Board showed that the number of people eating soy products once a week or more was up to 27%. Forty-five percent of **respondents** had tried tofu, 41% had sampled veggie burgers, and 25% had experience with soymilk (Soy-foods USA e-mail newsletter). Mintel estimates 2001 sales of frozen and refrigerated meat **alternatives** in food stores at nearly \$300 million, with soymilk sales nearing \$250 million.

## 26 A Big, Bad Idea

In their paper in BioScience, the two researchers showed that **reintroducing** the wolves was **correlated** with **increased** growth of willow and cottonwood in the park. Why? Because **grazing** animals such as elk were **avoiding** sites from which they couldn't easily escape, the scientists **claimed**. And as the woody plants and trees grew taller and thicker, beaver **colonies** **expanded**.

## 27 Does Space Travel Damage Eyesight?

Researchers already know that spending long periods of time in a **zero-gravity environment** — such as that inside the International Space Station (ISS) - results in loss of bone **density** and **damage** to the body's muscles. That's partly why

stays aboard the ISS are **capped at** / **restricted to** six months. And now, a number of NASA astronauts are reporting that their 20/20 **vision faded** / **deteriorating** after spending time in space, with many needing **glasses** once they returned to Earth.

## 28 DNA Barcoding

DNA barcoding was invented by Paul Hebert of the University of Guelph, in Ontario, Canada, in 2003. His idea was to **generate** a unique identification tag for each species based on a short **stretch** of DNA. Separating species would then be a simple task of **sequencing** this tiny bit of DNA. Dr. Hebert **proposed** part of a gene called cytochrome c oxidase I (CO1) as **suitable** to the task. All animals have it. It seems to vary enough, but not too much, to act as a **reliable marker**. And it is easily **extracted**, because it is one of a **handful** of genes found outside the cell **nucleus**, in structures called mitochondria.

Barcoding has taken off rapidly since Dr. Hebert invented it. When the idea was proposed, it was expected to be a **boon** to taxonomists trying to name the world's millions of species. It has, however, proved to have a far wider range of uses than the **merely** academic—most promisingly in the **realm** of public health.

One health-related project is the Mosquito Barcoding Initiative being run by Yvonne-Marie Linton of the Natural History Museum in London. This aims to barcode 80% of the world's mosquitoes within the next two years, to help control mosquito-borne diseases. Mosquitoes are **responsible** for half a billion malarial **infections** and 1m deaths every year. They also **transmit** devastating diseases such as yellow fever, West Nile fever and dengue. However, efforts to **control** them are **consistently undermined** by the difficulty and expense of identifying mosquitoes—of which there are at least 3500 species, many of them hard to tell **apart**.

## 29 Empty Lecture Halls

Richard Morris, of the school of accounting at the University of NSW, which requires an **entrance** score in the top 5 per cent of students, says **attendance** has been a problem since the late 1990s.

"Sometimes in the lectures we've only got about one third of students **enrolled** attending," he said." It **definitely** is a problem. If you don't **turn** up to class you're missing out on the whole richness of the **experience**: you don't think a whole lot, you don't engage in debates with other students - or with your teachers."

It is not all **gloom**, said Professor John Dearn, a Pro **Vice-Chancellor** at the University of Canberra, who said the internet was **transforming** the way students **access** and use information. "It is strange that despite all the evidence as to their ineffectiveness, **traditional** lectures seem to persist in our universities."

### 30 Foreign Student's English Standards

Federal Education Minister Julie Bishop says she has seen no **evidence** that foreign students are graduating from Australian universities with **poor** English skills.

Research by Monash University academic Bob Birrell has found a third of foreign students are graduating without a **competent** level of English.

But Ms. Bishop says Australian universities only **enroll** foreign students once they have achieved international standards of language **proficiency**.

"This has been an extraordinary attack by Professor Birrell on our universities," she said. **International** students must meet international **benchmarks** in English language in order to get a place at a university in Australia and they can't get into university without reaching that international standard."

University of Canberra vice chancellor Roger Dean also says international students are required to sit an English test before being **admitted** to nearly all Australian universities. "There are, of course, intercultural difficulties as well as language difficulties," he said. "There are, of course, also many Australian students who don't speak such **fantastically** good English either.

"So we're trying to **push** the standard even higher than present but it's a very useful one already." Ms. Bishop says Australia's university system has high standards.

"I've seen no evidence to suggest that students are not able to complete their courses because they're failing in English yet they're being passed by the universities," she said. "I've not seen any **evidence** to back that up."

"International education is one of our largest exports, it's our fourth largest export and it's in the interest of our universities to **maintain** very high standards because their **reputation** / **recognition** is at **stake**."

### 31 Stream Plants and Animals

Plants & Animals are a Montreal-based indie rock **trio** that began playing together as kids. Touring **arduously** for about five years after their proper full-length **debut** in 2008, they pretty much made their records on the go until 2013. So the band's decision to be slow, **deliberate**, and thorough on their latest offering, *Waltzed in from the Rumbling*, represents a major change of **pace**.

Finally sleeping in their in own beds while recording, the band assembled the album **over the course of** nine seasons.

It's a return to their origins, but it also pushes audaciously forward.

The **aesthetic** varies wildly and wonderfully from track to track, each song having its own **hermetic seal** but somehow still **melding cohesively** as a body of work. Jangling guitars, drums leaning toward the off-kilter swing of J Dilla, found sounds, a hint of shoegaze, and unorthodox instrumentation come together to keep the ear constantly **engaged with** a feeling of **constant evolution**. They found an **antique** guiro next to a broken VCR and recorded both. They made an empty fridge sound like a timpani drum. They recorded gossip on a city bus. They brought in classical string **flourishes**. They sometimes left mistakes if they felt they were perfectly imperfect. It's truly DIY, but with a feel of big production value that makes the album **soar**.

**Contemplative** lyrics **anchor** the album through all the **exploratory wandering**. The words are delivered melodically, belying their **potency**, but listening beyond the pretty aesthetic reveals **piercing observations** and an undeniable translation of feeling. The simplicity of the penetrating **refrain on** the three-part mini opus "Je Voulais Te Dire" is a paragon of how the lyrics effortlessly cut through the instrumentation. Guitarist/vocalist Warren Spicer sings "It's only love, but you want it bad," **encompassing** how we try to avoid and downplay our desire for love and affection, but ultimately search and **long** for it anyway.

### **32 Arabic MBA Course**

HERIOT-WATT University in Edinburgh has become the first in Europe to offer an MBA in Arabic. Arab students will be able to **sign** up to study at a **distance** for the business courses in their **own** language. The Edinburgh Business School **announced** the project at a **reception** in Cairo on Saturday. It is hoped the course will improve **links** between the university and the Arab business world. A university spokeswoman said: "The Arabic MBA will **raise** the profile of Heriot-Watt University and the Edinburgh Business School among businesses in the Arabic-speaking world and will create a strong network of graduates in the **region**." The first **intake** of students is expected later this year. Professor Keith Lumsden, director of Edinburgh Business School, said: "Arabic is a major **global** language and the Arab world is a center for business and industrial development. We are proud to work with Arab International Education to **meet** the demands of the region."



### 33 Edison

Thomas Alva Edison was **both** a scientist and an inventor. When he was born in 1847, Edison would see **tremendous** change take place in his lifetime. He was also to be **responsible** for making many of those changes **occur**. When Edison was born, society still thought of electricity as a **novelty**, a fad. By the time he died, entire cities were **lit** by electricity. Much of the credit for that progress goes to Edison. In his lifetime, Edison **patented** 1093 inventions, earning him the nickname "The Wizard of Menlo Park." The most famous of his inventions was an incandescent light bulb. **Besides** the light bulb, Edison **developed** the phonograph and the "kinetoscope," a small box for viewing moving films. He also **improved** upon the original design of the stock ticker, the telegraph, and Alexander Graham Bell's telephone. He believed in hard work, sometimes working twenty hours a day. Edison was quoted as saying, "Genius is one percent inspiration and 99 percent **perspiration**." In **tribute** to this important American, electric lights in the United States were **dimmed** for one minute on October 21, 1931, a few days after his death.

### 34 Chomolungma

Called Chomolungma ("goddess mother of the world") in Tibet and Sagarmatha ("goddess of the sky") in Nepal, Mount Everest once went by the pedestrian name of Peak XV among Westerners. That was before surveyors **established** that it was the highest mountain on Earth, a fact that came as something of a **surprise** - Peak XV had seemed lost in the crowd of other formidable Himalayan peaks, many of which gave the **illusion** of greater height.

In 1852 the Great Trigonometrical Survey of India measured Everest's **elevation** as 29,002 feet above sea level. This figure remained the **officially** accepted height for more than one hundred years. In 1955 it was **adjusted** by a mere 26 feet to 29,028 (8,848 m).

The mountain received its **official name** in 1865 in honor of Sir George Everest, the British Surveyor General from 1830-1843 who had mapped the Indian subcontinent. He had some **reservations** about having his name bestowed on the peak, arguing that the mountain should **retain** its local appellation, the standard policy of geographical societies. Before the Survey of India, a number of other mountains ranked **supreme** in the eyes of the world. In the seventeenth and eighteenth centuries, the Andean peak Chimborazo was considered the highest. At a relatively unremarkable 20,561 feet (6,310 m), it is in fact nowhere near the highest, **surpassed** by about thirty other Andean peaks and several dozens in the Himalayas. In 1809, the Himalayan peak Dhaulagiri (26,810 ft.; 8,172 m) was declared the ultimate, only to be shunted aside in 1840 by

Kanchenjunga (28,208 ft.; 8,598 m), which today ranks third. Everest's status has been **unrivaled** for the last century and a half, but not without a few threats.

### 35 Language

If after years of Spanish classes, some people still find it impossible to understand some **native** speakers, they should not worry. This does not **necessarily** mean the lessons were **wasted**. Millions of Spanish speakers use neither standard Latin American Spanish nor Castilian, which predominate in US schools. The confusion is partly political - the Spanish-speaking world is very **diverse**. Spanish is the language of 19 separate countries and Puerto Rico. This means that there is no one standard dialect.

The most common Spanish dialect taught in the US is standard Latin American. It is sometimes called "Highland" Spanish since it is generally spoken in the **mountainous** areas of Latin America. While each country **retains** its own accents and has some unique vocabulary, residents of countries such as Mexico, Colombia, Peru, and Bolivia generally speak Latin American Spanish, especially in urban centers. This dialect is noted for its **pronunciation** of each letter and its strong "r" sounds. This Spanish was spoken in Spain in the sixteenth and seventeenth centuries, and was **brought** to the Americas by the early colonists.

However, the Spanish of Madrid and of northern Spain, called Castilian, developed **characteristics** that never reached the New World. These include the pronunciation of "ci" and "ce" as "th" In Madrid, "gracias" (thank you) becomes "gratheas" (as opposed to "gras-see-as" in Latin America). Another difference is the use of the word "vosotros" (you all, or you guys) as the informal form of "ustedes" in Spain. Castilian sounds to Latin Americans much like British English sounds to US residents.

### 36 Tall Building

The Eiffel Tower was the tallest building in the world when it was completed in 1889. It was built for the World's Fair to **demonstrate** that iron could be as strong as stone while being infinitely lighter. And in fact the wrought-iron tower is twice as tall as the masonry Washington Monument and yet it weighs 70,000 tons less! It is repainted every seven years with 50 tons of dark brown paint.

Called "the father of the skyscraper," the Home Insurance Building, **constructed** in Chicago in 1885 (and demolished in 1931), was 138 feet tall and 10 stories. It was the first building to effectively employ a supporting **skeleton** of steel beams and columns, allowing it to have many more windows than traditional masonry structures. But this new construction method made people

worry that the building would fall down, leading the city to halt construction until they could **investigate** the structure's **safety**.

In 1929, auto tycoon Walter Chrysler took part in an intense race with the Bank of Manhattan Trust Company to build the world's tallest skyscraper. Just when it looked like the bank had captured the **coveted** title, workers at the Chrysler Building jacked a thin spire hidden inside the building through the top of the roof to win the contest (subsequently losing the title four months later to the Empire State Building). Chrysler also **decorated** his building to mirror his cars, with hubcaps, mudguards, and hood ornaments.

### 37 The UN

Founded after World War II by 51 "peace-loving states" **combined** to oppose future **aggression**, the United Nations now counts 192 member nations, **including** its newest members, Nauru, Kiribati, and Tonga in 1999, Tuvalu and Yugoslavia in 2000, Switzerland and East Timor in 2002, and Montenegro in 2006. United Nations Day has been **observed** on October 24 since 1948 and celebrates the Objectives and accomplishments of the organization, which was **established** on October 24, 1945.

The UN **engages** in peacekeeping and humanitarian **missions** across the **globe**. Though some say its **influence** has **declined** in recent decades, the United Nations still plays a tremendous role in world politics. In 2001 the United Nations and Kofi Annan, then Secretary-General of the UN, won the Nobel Peace Prize "for their work for a better organized and more peaceful world."

Since 1948 there have been 63 UN peacekeeping **operations**, 16 are currently under way. Thus far, close to 130 nations have **contributed** personnel at various times; 119 are currently providing peacekeepers. As of August 31, 2008, there were 16 peacekeeping operations underway with a total of 88,230 personnel. The small island nation of Fiji has taken part in **virtually** every UN peacekeeping operation, as has Canada.

### 38 C. S. Lewis

C. S. Lewis, or Jack Lewis, as he preferred to be called, was born in Belfast, Ireland (now Northern Ireland) on November 29, 1898. He was the second son of Albert Lewis, a lawyer, and Flora Hamilton Lewis. His older brother, Warren Hamilton Lewis, who was **known** as Wannie, had been born three years earlier in 1895.

Lewis's early childhood was relatively happy and carefree. In those days Northern Ireland was not yet **plagued** by bitter civil strife, and the Lewises were comfortably off. The family home, called Little Lea, was a large, gabled house

with dark, narrow passages and an overgrown garden, which Warnie and Jack played in and **explored** together. There was also a library that was crammed with books - two of Jack's favorites were Treasure Island by Robert Louis Stevenson and The Secret Garden by Frances Hodgson Burnett.

This somewhat **idyllic** boyhood came to an end for Lewis when his mother became ill and **died** of cancer in 1908. Barely a month after her death the two boys were sent away from home to go to boarding school in England.

Lewis hated the school, with its strict **rules** and hard, **unsympathetic** headmaster, and he missed Belfast terribly. Fortunately for him, the school closed in 1910, and he was able to return to Ireland.

After a year, however, he was sent back to England to study. This time, the **experience** proved to be mostly positive. As a teenager, Lewis learned to love poetry, especially the works of Virgil and Homer. He also **developed** an interest in modern languages, mastering French, German, and Italian.

### 39 Defining a Country?

When people ask how many countries there are in the world, they **expect** a simple answer. **After all**, we've **explored** the **whole** planet, we have international travel, satellite navigation and plenty of global organizations like the United Nations, **so** we should really know how many countries there are! **However**, the answer to the question **varies** according to **whom** you ask. **Most** people say there are 192 countries: but **others point** out that there could be more like 260 of them.

So why isn't there a straight **forward** answer?

The problem **arises** because there isn't a universally **agreed** definition of 'country' and because, for political reasons, some countries **find it convenient** to recognize or not **recognize other** countries.

### 40 Space and Time

Surely, reality is what we think it is; reality is **revealed** to us by our experiences. To one **extent** or another, this view of reality is one many of us **hold**, if only **implicitly**. I certainly **find** myself **thinking** this way in day-to-day **life**; it's easy to be **seduced** by the face nature **reveals** directly to our senses. Yet, in the decades since first **encountering** Camus' test, I've learned that modern science **tells** a very different story.

#### 41 “Mud Volcano” in Indonesia Caused by Gas Exploration

Gas drilling on the Indonesian island of Java has **triggered** a “mud volcano” that has killed 13 people and may **render** four square miles (ten square kilometers) of countryside **uninhabitable** for years.

In a report released on January 23, a team of British researchers says the deadly **upwelling** began when an **exploratory** gas **well** punched through a layer of rock 9,300 feet (2,800 meters) below the surface, allowing hot, high-pressure water to **escape**.

The water carried mud to the surface, where it has **spread** across a region 2.5 miles (4 kilometers) in diameter in the eight months since the **eruption** began.

The mud volcano is similar to a gusher or blowout, which occur in oil drilling when oil or gas **squirt** to the surface, the team says. This upwelling, however, spews out a volume of mud **equivalent** to a dozen Olympic swimming pools each day.

Although the eruption isn't as violent as a **conventional** volcano, more than a dozen people died when a natural gas pipeline **ruptured**.

The research team, who published their findings in the February issue of GSA Today, also **estimate** that the volcano, called Lusi, will leave more than 11,000 people permanently **displaced**.

#### 42 Top Business Schools

In an attempt to **lure new students**, leading business schools - including Harvard, Stanford, the University of Chicago and Wharton - have moved away from the unofficial admissions **prerequisite** of four years work experience and **instead** have set their **sights** on recent college graduates and so-called “early career” **professionals** with only a couple years of work **under** their belt.

under one's belt = as part of one's experience e.g. he had a linguistics degree under his belt.

#### 43 Stress Management

Stress is what you feel when you have to **handle** more than you are used to. When you are stressed, your body **responds** as though you are in danger. It makes **hormones** that speed up your heart, make you breathe faster, and give you a **burst** of energy. This is called the fight-or-flight stress **response**. Some stress is normal and even useful. Stress can help if you need to work hard or react quickly. For example, it can help you win a race or finish an **important** job on time. But if stress happens too often or **lasts** too long, it can have bad effects. It can be **linked** to headaches, an upset stomach, back pain, and trouble sleeping. It can **weaken** your immune system, making it harder **fight** off disease.

#### 44 My Father's Bookshelf

None of the books in my father's dusty old bookcase were forbidden. Yet while I was growing up, I never saw anyone take one down. Most were massive tomes—a comprehensive history of civilization, matching volumes of the great works of western literature, numerous others I can no longer recall—that seemed almost fused to shelves that bowed slightly from decades of steadfast support.

But way up on the highest shelf was a thin little text that, every now and then, would catch my eye because it seemed so out of place, like Gulliver among the Brobdingnagians. In hindsight, I'm not quite sure why I waited so long before taking a look.

#### 45 Folklore and Flying

Folklore is a modern term for the body of traditional customs, superstitions, stories, dances, and songs that have been adopted and maintained within a given community by processes of repetition not reliant on the written word. Along with folk songs and folktales, this broad category of cultural forms embraces all kinds of legends, riddles, jokes, proverbs, games, charms, omens, spells, and rituals, especially those of pre-literate societies or social classes. Those forms of verbal expression that are handed on from one generation or locality to the next by word of mouth are said to constitute an oral tradition

#### 46 William Shakespeare

William Shakespeare was born in Stratford-upon-Avon, allegedly on April 23, 1564. Church records from Holy Trinity Church indicate that he was baptized there on April 26, 1564. Young William was born of John Shakespeare, a glover and leather merchant, and Marry Arden, a landed local heiress. William, according to the church register, was the third of eight children in the Shakespeare household—three of whom died in childhood. John Shakespeare had a remarkable run of success as a merchant, alderman, and high bailiff of Stratford, during William's early childhood. His fortunes declined, however, in the late 1570s.

For all his fame and celebration, William Shakespeare remains a mysterious figure with regards to personal history. There are just two primary sources for information on the Bard: his works, and various legal and church documents that have survived from Elizabethan times. Naturally, there are many gaps in this body of information, which tells us little about Shakespeare the man.

#### 47 Beijing Language Institution

There were twenty-six freshmen **majoring** in English at Beijing Language Institute in the class of 1983, I was assigned to Group Two with another eleven boys and girls who had come from big cities in China. I was told that language study required **smallness** so that we would get more attention from the **skillful** teachers. The better the school, the smaller, the smaller the class.

I realized that my classmates were already all talking in English, simple sentences **tossed** out to each other in their red-faced introductions and carefree chatting. Their **intonations** were **curving** and dramatic and their pronunciation **refined** and accurate. But as I stretched to catch the drips and **drops** of their humming dialogue, I couldn't understand it all, only that it was English. Those words now flying before me **sounded** a little familiar. I had read them and tried to speak them, but I had never heard them spoken back to me in such a speedy, fluent manner. My big plan of **beating** the city **folks** was thawing **before** my eyes.

#### 48 Evaluating a Career Decision

It has been a year since I started writing my Graduate Journal column for Nature jobs, the past 12 months have been **marked** with fundamental changes and fundamental **constants**, both of which I'm glad to have experienced.

When I **enrolled** in my master's course at Oxford last year, I had come **straight** from medical school with the decision to leave clinical science for **good**. Thinking back, I realize that I didn't **put** very much **weight** on this decision at the time. But today, I more clearly understand the **consequences** of leaving my original profession. When I meet old friends who are now physicians and surgeons, I sense how our views on medical problems have **diverged**. They scrutinize the effects of disease and try to eliminate or alleviate them; I try to understand how they come about in the **first place**. I feel happier working on this side of the problem, although I do occasionally miss clinical work and seeing **patients**.

**However**, when I think about the rate at which my medical skills and knowledge have **dissipated**, the years spent reading weighty medical textbooks, the hours spent at the bedside, I sometimes wonder if these years were partly a **waste** of time now that I am **pursuing** a research career.

**Nonetheless**, I know the **value** of my medical education. It is easy to forget the importance of the biosciences when working with model organisms in basic research that seem to have nothing to do with a sick child or a suffering elderly person. Yet, I still have **vivid** memories of the cruel kaleidoscope of severe

diseases and of how they can **strike** a human being. I hope to **retain** these memories as a **guide** in my current occupation.

#### **49 Flying the Crowded Skies: Challenges for Aviation**

By 2025, government experts say, America's skies will **swarm** with three **times** as **many** planes, and not just the kind of **traffic** flying today. There will be **thousands** of tiny **jets**, seating six or fewer, at airliner **altitudes**, competing for space with remotely operated **drones** that need help **avoiding** midair **collisions**, and with commercially operated rockets **carrying** **satellites** and tourists **into** space.

#### **50 When Job Hunting — Dress for Success**

When it comes to job-hunting, first **impressions** are critical. Remember, you are marketing a product - yourself - to a potential employer. The first thing the employer sees when **greeting** you is your **attire**; thus, you must make every effort to have the **proper** dress for the type of job you are **seeking**. Will dressing properly get you the job? Of course not, but it will give you a competitive edge and a **positive** first impression.

How should you dress? Dressing **conservatively** is always the safest **route**, but you should also try and do a little **investigating** of your **prospective** employer so that what you wear to the interview makes you look as though you **fit** in with the organization. If you overdress (which is rare but can happen) or under dress (the more likely scenario), the potential employer may feel that you don't care enough about the job.

#### **51 Nature**

Nature is no longer an alien **enigma**, but instead something **immediately** beautiful, an **exuberant** opus with space for us to join in. Bird melodies have always been **called** songs for a reason. As long as we have been listening, people have **presumed** there is music coming out of those **scissoring** beaks.

#### **52 Joy through Pain**

All approaches **aim** to increase blood flow to areas of **tension** and to release painful knots **of** muscle known as "trigger points".

"Trigger points are tense areas of muscle that are almost constantly **contracting**," says Kippen. "The contraction causes pain, which in turn causes contraction, so you have a vicious circle. This is what deep tissue massage aims to **break**."



The way to do this, as I found out under Ogedengbe's elbow, is to apply pressure **to** the point, stopping the blood flow, and then to release, which causes the brain to **flood** the affected area **with** blood, encouraging the muscle **to** relax. At the same time, says Kippen, you can fool the tensed muscle **into** relaxing by applying pressure to a complementary one nearby. "If you cause any muscle to contract, its opposite will expand. So you try to trick the body into relaxing the muscle that is in spasm."

### 53 Paying for University Education

**Financing** of Australian higher education has **undergone** dramatic change since the early 1970s. Although the Australian Government provided regular funding for universities from the late 1950s, in 1974 it **assumed** full **responsibility** for funding higher education - abolishing tuition fees with the intention of making university **accessible** to all Australians who had the **ability** and who wished to participate in higher education.

Since the late 1980s there has been a move towards greater private contributions, **particularly** student fees. In 1989, the Australian Government introduced the Higher Education Contribution Scheme (HECS) which included a loans scheme to help students finance their **contributions**. This enabled universities to **remain** accessible to students by delaying their payments until they could afford to **pay** off their loans. In 2002, the Australian Government **introduced** a scheme similar to HECS for postgraduate students - the Postgraduate Education Loan Scheme (PELS).

Funding for higher education comes from various sources. This article **examines** the three main sources - Australian Government funding, student fees and charges, and HECS. While the proportion of total **revenue** raised through HECS is relatively small, HECS payments are a significant **component** of students' university costs, with many students carrying a HECS debt for several years after leaving university. This article also **focuses** on characteristics of university students based on their HECS liability status, and the level of **accumulated** HECS debt.

### 54 Ikebana Flower Arrangement

Ikebana is the Japanese art of flower **arrangement**. It is more than simply putting flowers in a **container**. It is a disciplined art form in which the **arrangement** is a living thing where nature and humanity are brought together. It is **steeped** in the philosophy of developing a closeness with nature. As is true of all other arts, ikebana is creative expression within certain rules of construction. Its materials are living branches, leaves, grasses, and **blossoms**. Its heart is the beauty resulting from color combinations, natural shapes, graceful

lines, and the meaning latent in the total form of the arrangement. Ikebana is, therefore, much more than mere **floral decoration**.

\* be steeped in sth: to have a lot of a particular quality or thing. E.g. the region is steeped in history.

### 55 The Teen Brain

Your teenage daughter gets top marks in school, **captures** the **debate team**, and volunteers at a **shelter for** homeless people. But while driving the family car, she textmessages her best friend and rear-ends another vehicle.

How can teens be so clever, accomplished, and responsible—and reckless **at the same time**? Easily, according to two physicians at Children's Hospital Boston and Harvard Medical School (HMS) who have been **exploring** the unique structure and chemistry of the **adolescent** brain. "The teenage brain is not just an adult brain with fewer miles on it," says Frances E. Jensen, a professor of neurology. "It's a **paradoxical** time of **development**. These are people with very sharp brains, but they're not quite sure what to do with them."

### 56 A Beard Full of Bunkum

In his **fascinating** book Carbon Detox, George Marshall argues that people are not persuaded by information. Our views are **formed** by the views of the people with whom we mix. Of the **narratives** that might penetrate these circles, we are more likely to listen to those which offer us some reward. A story which tells us that the world is cooking and that we'll have to **make** sacrifices for the sake of future generations is less likely to be accepted than the more **rewarding** idea that climate change is a conspiracy hatched by scheming governments and **venal** scientists, and that strong, independent-minded people should unite to defend their freedoms.

He **proposes** that instead of arguing for sacrifice, environmentalists should show where the rewards might lie: that understanding what the science is saying and planning accordingly is the smart thing to do, which will protect your interests more effectively than flinging **abuse** at scientists. We should emphasize the old-fashioned **virtues** of uniting in the face of a crisis, of **resourcefulness** and community action. Projects like the transition towns network and proposals for a green new deal tell a story which people are more willing to hear.

### 57 Basic Instincts

In a sequence of bestsellers, including The Language Instinct and How the Mind Works, Pinker has argued that **swathes** of our mental, social and

emotional lives may have **originated** as evolutionary **adaptations**, well suited to the lives our ancestors **eked** out on the Pleistocene savannah. Sometimes it seems as if nothing is **immune** from being explained this way. Road rage, adultery, marriage, altruism, our tendency to reward senior executives with corner offices on the top floor, and the small number of women who become mechanical engineers – all may have their **roots** in natural selection, Pinker claims. The controversial **implications** are obvious: that men and women might **differ** in their **inborn** abilities at performing certain tasks, for example, or that parenting may have **little** influence on personality.

### **58 Video-Conference Technology**

Never has the carbon **footprint** of multi-national corporations been under such intense scrutiny. Inter-city train journeys and long-haul flights to **conduct** face-to-face business meetings contribute significantly to greenhouse gases and the resulting **strain** on the environment.

The Anglo-US company Teliris has introduced a new video-conferencing technology and partnered with the Carbon Neutral Company, enabling corporate **outfits** to become more environmentally responsible. The innovation allows simulated face-to-face meetings to be **held** across continents without the time **pressure** or environmental **burden** of international travel.

Previous designs have enabled video-conferencing on a point-to-point, dual-location basis. The firm's Virtu aLive technology, however, can bring people together from up to five separate locations anywhere in the world-with **unrivaled** transmission quality.

### **59 Letting Your Readers Know What You Mean**

Learning to write well means **discovering** how to write **plainly** and clearly. Now that doesn't mean that **plainness** is the only beneficial style, or that you should become a **slave** to bare, undecorated writing. **Formality** and elaborateness have their place, and in **competent** hands complexity can take us on a dizzying, breathtaking **journey**. But most people, most of the time, should endeavor / **strive** to be reasonably simple, to **acquire** a baseline style of short words, active verbs, and comparatively simple sentences **carrying** / **conveying** clear actions or identities. It's quicker, it makes arguments easier to follow, it step-ups the chances a busy reader will bother to pay attention, and it lets you **center** / **focus** / **pay** more **attention** on your moments of **rhetorical** flourish, which I don't advise **deserting** altogether.

## 60 Has University Really Changed?

University science is now in real crisis - particularly the non-telegenic, non-ology bits of it such as chemistry. Since 1996, 28 universities have stopped offering chemistry degrees, according to the Royal Society of Chemistry.

The society predicts that as few as six departments could remain open by 2014. Most recently, Exeter University closed down its chemistry department, blaming it on "market forces", and Bristol took in some of the refugees.

The closures have been blamed on a fall in student applications, but money is a factor: chemistry degrees are expensive to provide - compared with English, for example - and some scientists say that the way the government concentrates research funding on a small number of top departments, such as Bristol, exacerbates the problem.

## 61 Essays

Essays are used as an assessment tool to evaluate your ability to research a topic and construct an argument, as well as your understanding of subject content. This does not mean that essays are a "regurgitation" of everything your lecture has said throughout the course. Essays are your opportunity to explore in greater depth aspects of the course theories, issues, texts etc., and in some cases relate these aspects to a particular context. It is your opportunity to articulate your ideas, but in a certain way: using formal academic style.

## 62 Advertising

Drive down any highway, and you'll see a proliferation of chain restaurants — most likely, if you travel long and far enough, you'll see McDonald's golden arches as well as signs for Burger King. Hardee's and Wendy's the "big four" of burgers. Despite its name, though, Burger King has fallen short of claiming the burger crown unable to surpass market leader McDonald's number 1 sales status. Always the bridesmaid and never the bride, Burger King remains number 2.

Worse yet, Burger King has experienced a six-year 22 percent decline in customer traffic, with its overall quality rating dropping, while ratings for the other contenders have increased. The decline has been attributed to inconsistent product quality and poor customer service. Although the chain tends to throw advertising dollars at the problem, an understanding of Integrated Marketing Communication theory would suggest that internal management problems (nineteen CEOs in fifty years) need to be rectified before a unified, long-term strategy can be put in place.

The **importance** of **consistency** in brand image and messages, at all levels of communication, has become a basic **tenet** of IMC theory and practice. The person who takes the customer's order must communicate the same message as Burger King's famous tagline, "Have it your way." or the customer will just buzz up the highway to a chain restaurant that seems more consistent and, therefore, more **reliable**.

### **63 Just in Time**

"Just-in-time" is a management philosophy and not a technique. It originally referred to the production of goods to **meet** customer **demand** exactly, in time, quality and quantity, **whether** the "customer" is the final purchaser of the product or another process **further** along the production line. It has now come to mean producing with **minimum waste**. "Waste" is taken in its most general sense and includes time and resources as well as materials.

### **64 Chinese Communist Party**

The book advances five fundamental and, in my view, fundamentally correct propositions. First, for all its **manifest** achievements. The Chinese attempt to **marry** a communist party-state with the market is **unsustainable**. Hutton does not deny the economic **achievements** of the past three decades. But he stresses that the result has been "not free-market capitalism but Leninist corporatism". This is not a **viable** new **model**, but an ultimately dysfunctional **hybrid**.

The **inevitable** consequences include **rampant** corruption, an absence of globally competitive Chinese companies, **chronic** waste of resources, rampant environmental **degradation** and soaring inequality. Above all, the monopoly over power of an ideologically bankrupt communist party is **inconsistent** with the pluralism of opinion, security of property and vibrant **competition** on which a dynamic economy depends. As a result, Chinese development remains **parasitic** on know-how and institutions developed elsewhere.

### **65 The Genetic Test for PD**

While Florey researchers have also created a genetic test for PD (10% of PD cases are caused by genetic factors), this new test has a broader **application** by **screening** for many different types of PD and monitoring **treatment**, as well as measuring the **effectiveness** of drugs being developed to treat the disease.

Dr. Qiao-Xin Li and colleagues from The University of Melbourne and The Mental Health Research Institute of Victoria, along with Professor Malcolm Home from

the Howard Florey Institute, **found** people with PD had low levels of the brain-secreted protein "alpha-synuclein" in their blood, **while** people without PD had high levels of the protein.

Professor Home said the test they developed measured alpha-synuclein levels in blood. "Currently there is no specific PD **diagnostic** test so doctors **rely** on their **observations** to make a diagnosis, which means some patients may not be **prescribed** the most suitable medication and around 15% of those **diagnosed** may actually be suffering from something else," Professor Home said.

"Further studies are required to establish whether this test can **distinguish** between people who are **responsive** to treatment and those who are not," he said.

The researchers are now conducting a large-scale study to **determine** the effectiveness of the test, to discover whether it is applicable for all types of PD, and to find out if it can measure the rate of **progression** and **severity** of the disease.

## 66 Classic Music

Away from the **rumble** of Shanghai's highways and the **cacophony** of the shopping districts, **stroll** down side streets filled with rows of tall **brick houses**. In the early evening or on a weekend morning, you'll hear the **sound** of classical music **drifting** from a piano, played by a 10-year old or a grandmother in her seventies. **Wander** down another alley toward **drab high-rises** and you'll hear Beethoven or Mozart flowing from a violin, or perhaps a cello, accordion or flute.

In China, classical music is **booming** as mightily as the 1812 overture, its fortissimo in Shanghai, is home to China's oldest **orchestra**, forte in Beijing and other lively cities, and on a crescendo in farther-flung areas. Commanding ¥100-200 per hour, private music **teachers** in Shanghai can readily earn more than five times the average per **capita** monthly income.

## 67 Banking

The first banks were probably the religious temples of the **ancient** world, and were probably **established** sometime during the third millennium B.C. Banks probably **predated** the invention of money. Deposits initially consisted of grain and later other goods including cattle, agricultural implements, and eventually precious **metals** such as gold, in the form of easy-to-carry compressed plates. Temples and palaces were the safest places to store gold as they were

constantly attended and well **built**. As sacred places, temples presented an extra **deterrent** to **would-be** thieves.

## 68 Advertisement

Almost all public spaces nowadays have advertisements in **sight**, and all **forms** of media, from newspapers to the cinema to the Internet are **filled** with adverts. This all-pervasive presence **reflects** the value of advertising to us. Without it, businesses of all types and sizes would **struggle** to inform **potential** customers about the products or services they provide, and consumers would be unable to make **informed** assessments when looking for products to buy and services to use. Without advertising, the **promotion** of products and practices that **contribute** to our physical and psychological **well-being** — medicines to treat minor ailments, insurance **schemes** to protect us, clothes and **cosmetics** to make us look and feel better — would be infinitely more **problematic** than it is. And without advertisements and the aspirations **represented** in them, the world would be a far duller place.

## 69 Seatbelt

I, for example, am a cyclist and a motorist. I **fasten** my seatbelt when I drive and **wear** a helmet on my bike to reduce the risk of **injury**. I am **convinced** that these are prudent safety measures. I have **persuaded** many friends to wear helmets on the grounds that transplant surgeons call those without helmets “donors on wheels”. But a book on ‘Risk’ by my colleague John Adams has made me re-examine my (V1: **convictions** or V2: **prejudices**).

Adams has completely **undermined** my confidence in these apparently sensible **precautions**. What he has persuasively argued, particularly in relation to seatbelts, is that the evidence that they do what they are supposed to do is very suspect. This is **in spite of** numerous claims that seat belts save many thousands of lives every year. Between 1970 and 1978 countries in which the wearing of seat belts is **compulsory** had on average about five percent more road accident deaths than before the introduction of the law. In the United Kingdom road deaths decreased **steadily** from about seven thousand a year in 1972 to just over four thousand in 1989. There is no evidence in the trend for any effect of the seat belt law that was introduced in 1983; there's actually evidence that the number of cyclists and **pedestrians** killed increased by about ten percent. That twice as many children were killed in road accidents in 1922 as now must not be taken as evidence that there is less risk when children play in the street today. It almost certainly reflects the care taken by parents in **keeping** children off the streets.

How are these figures, which are both **puzzling** and shocking to be explained? The answer seems to lie in our **perception** of risk and how we modify our behavior. An important concept that has been developed to account for people's handling of risk is the "Thermostat Model". An individual's **propensity** to take risks is influenced by their own experience and that of others and this model assumes that the degree to which we take risks varies from one individual to another. The key feature in risk taking is the **balancing** of perceptions of the risk and the possible **rewards**, and this balance may be a reflection of an individual's particular type of personality. In general, the more risks an individual takes the greater will be both the positive and negative rewards.

## 70 Smallpox

According to the literature, the history of **vaccination** can be **traced** back to as early as the 7th century when the monks in India tried to **immunize** themselves by drinking snake **venom**. The first vaccination was **inoculation** with human smallpox, a practice widely carried out in ancient India, Arabia, and China. This method of vaccination consisted of **collecting** pus from a patient suffering from **mild** form of smallpox virus infection and inoculating the sample to a healthy human, which later led to a minor infection.

This method was first **introduced** in England by a Greek named E. Timoni. **However**, this method had a risk of spreading smallpox in the community and even **worsening** the health condition of the person who received the inoculation.

While the use of human smallpox vaccine was **controversial**, E. Fenner came up with bovine smallpox vaccine in 1796: this new method also faced controversy, but continued to be **universalized**. Smallpox became a preventable disease by injecting pus extracted from a human infected with cowpox virus. Jenner named the substance "vaccine" after the Latin word "vacca" which means "cow," and thus the process of giving vaccine became "vaccination".

## 71 Sound Depressing

Sound depressing, even apocalyptic? Well, it could be the future. If government **forecasts** are right, about 20 years from now, two out of five households will be single **occupancy**. And there is evidence the situation is already **deteriorating**. **According to** a report, Social Isolation in America, published in the American Sociological Review in 2006, the average American today has only two close friends. Twenty-five per cent of those **surveyed** said they do not have anyone to talk with about important things.



And **yet**, while some are **declaring** a **crisis** in our ability to make friends, others are saying exactly the **opposite**. For example, MSN's Anatomy of Friendship Report, published last November, suggests that the average Briton has 54 friends - a **spectacular** rise of 64 per cent since 2003.

## 72 Assessment in Design and Technology

Professor Richard Kimbell directed the DES funded Assessment of Performance Unit research project in Design and Technology. In 1990 he **founded** the Technology Education Research Unit (TERU) at Goldsmiths College, University of London, which is now **running** a wide range of funded research projects in design and technology and IT. He has published widely in the field, including reports **commissioned** by the Congress of the United States, UNESCO and NATO; he has written and presented television programs and regularly lectures internationally. His latest book *Assessing Technology: International Trends in Curriculum and Assessment* won the international technology education book of the year award from the Council for Technology Teacher Education at ITEA in 1999 in Minneapolis, USA.

Kay Stables is Reader in Design and Technology Education and former Head of the Design Department at Goldsmiths College, University of London. She **started** her career as a textiles teacher, moving to Goldsmiths as a **part** of the APU D&T research **team**. From 1990–1992 she was Project Director for the Key Stage 1 Technology SAT developments and **followed** this as Research Associate on the Understanding Technological Approaches project which built case studies of D&T work from children aged 5–16. Most recently she has conducted, with Richard Kimbell, an **evaluation** of the **impact** of a technology education **initiative** in South Africa and is currently researching into the use of handling collections in developing D&T **capability** and **literacy**.

## 73 Works of Hans Christian Andersen

Fans of biographical criticism have a **luxurious** source in the works of Hans Christian Andersen. **Like** Lewis Carroll (and, to a lesser extent, Kenneth Grahame), Andersen was near-pathologically uncomfortable in the **company** of adults. **Of course** all three had to work and **interact** with adults, but all three really **related** well to children and their simpler worlds. Andersen, for a time, ran a puppet theatre and was **incredibly** popular with children, and, of course, he wrote an impressive body of fairy tales which have been produced in thousands of editions since the 19th century.

Most everyone has read or at least knows the titles of many of Andersen's works: "The Ugly Duckling," "The Emperor's New Clothes," "The Nightingale," "The Little Mermaid," "The Match Girl," and many others. **Though**, as with most

folk and fairy tales, they **strike** adult re-readers much differently than they do young first-time readers.

Charming tales of ducks who feel **awkward** because they don't **fit** in, only to exult in the **discovery** that they are majestic swans, gives child readers clearly-identifiable messages: don't **tease** people because they're different; don't fret about your being different because some day you'll discover what special **gifts** you have.

A closer, deeper look at many of Andersen's tales (including "The Ugly Duckling," which is not on our reading list), **reveals** a darker, harder, more **painful thread**. People are often cruel and unfeeling, love is torturous – in general, the things of the material world **cause** suffering. There is often a happy ending, but it's not conventionally happy.

Characters are rewarded, but only after they **manage** (often through death) to transcend the rigors of the mortal world.

#### **74 A Financial Director**

There isn't a financial director around who wouldn't like to **accelerate** cash flow by reducing debtor days – in other words, get customers to pay up faster. In Europe's top 1,000 **quoted** companies, nearly one quarter of all invoices are **unpaid at any point in time**, according to recent research carried out by the ASF organization. This means they are sitting on a total of 274bn overdue debt. Most of this is caused by poor collection practices. According to Jan Porter, ASF's Managing Director, "You can set up all the systems you want, you can insist on water **tight** contracts and payment terms, the government can even introduce late payment legislation, but there are always some debtors who **fail to pay on time**. Once a payment is overdue, your first step is to **talk** to your debtor. You should let them know the **payment** is late and try to find out if there is a dispute about the work, or if your debtor has financial problems."

It seems obvious / **This is OK**, but Tim Vainio, a chartered accountant, believes that too many companies are afraid of losing a **relationship**, and that, **before undertaking any action**; the focus should be on **recovering** as much money as possible, rather than on **preserving** a relationship.

#### **75 How to Win Votes?**

It is **tempting** to try to prove that good looks win votes, and many academics have tried. The difficulty is that beauty is in the eye of the beholder, and you cannot behold a politician's **face** without a veil of extraneous **prejudice** getting in the way. Does George Bush possess a disarming grin, or a facetious

smirk? It's hard to find anyone who can look at the president without assessing him **politically** as well as **physically**.

## 76 Modern Lifestyle

One thing is certain. Most people do not get enough **exercise** in their **ordinary routines**. All of the advances of modern technology – from electric can openers to power steering – have made life easier, more comfortable and much less physically **demanding**. Yet our bodies need activity, especially if they are carrying **around** too much fat. **Satisfying** this need requires a definite plan, and a **commitment**.

## 77 Influential Music

Those were his **halcyon** days, when his music was heard constantly in Venice and his **influence blanketed** Europe. He spent much of his time on the road, **performing** and **overseeing** productions of his music. In Germany, Bach studied Vivaldi's scores, copied them for performance and **arranged** some for other instruments.

## 78 Popularizing Pennsylvania

The dramatic **shift** of cultural presentation between the Progressive era and the 1990s matches the chronology historian Michael Kammen has **projected** for the role of tradition in American culture. Since 1870, he has **pointed** out, the most significant **role** involved the deliberate Americanization of folk heritage through collected and presented narrative, speech, and song. **Broadly** speaking, what followed was an imperfect democratization in regions and occupations, and later pluralization in groupings of ethnicity, race, gender, age, sexuality, appearance, and class, to name some in the ever-growing list. Kammen also noted the influence of tourism on later uses of tradition, and Pennsylvania, with its whopping fifty-one separate tourist agencies, certainly attests to that **trend** in the state. Even more than attracting tourism, heritage-writing—indeed, a whole heritage industry—is being called on for purposes of “economic development,” to promote community pride and image. Judging from the meteoric **increase** in museums, magazines, and films on heritage during the 1980s and 1990s, and the leveling-off of American studies programs in universities, the production of American heritage knowledge comes increasingly from media and public agencies. If the 1980s reports on higher education are to be believed, the role for public agencies may be heightened by the diminishing cultural authority of the academy. At the same time, American cultural education by many public agencies in the 1990s is a

frequent target of conservative criticism in an effort to scale back or re-devise governmental programs.

One might now **forecast** a period in which American folk tradition is geared toward emotional community-building in order to deal with the role of individuals in a global mass culture, where electronic communication and constant mobility create a need for organizing belonging. That opens up the kinds of traditions - the kinds of communities and organizations, identities and rituals - representing the American memory of the past, the American perception of the present, to a tremendously **wide** array of possibilities for a mobile and electronically communicating society. Muse-ums, books, films, and schools are scrambling to keep up. It used to be that Americans were preoccupied with the ways in which such institutions and the media reflected society's traditions. Now, and Shoemaker's building of the Pennsylvania mystique is a notable example, Americans have a view in which they see themselves as shaping traditions, or at least as defining what's important. Therefore, history is more than **recorded**; it is constructed. And folklore is more than collected; it is projected. In Pennsylvania, much of the mystique-building through folklore and history of the highland paradise seems to have worn off (and probably so has American romantic regionalism generally). Nevertheless, Shoemaker would be heartened to know that Pennsylvanians have retained their woods.

## 79 Corporate Culture

The article subjects the assumptions and prescriptions of the 'Corporate Culture' literature to critical scrutiny. The **body** of the article is devoted to teasing out the distinctive basis of its appeal **compared** with earlier management theory. It is seen to build upon earlier efforts (e.g. 'theory Y') to constitute a self-disciplining form of employee subjectivity by asserting that 'practical autonomy' is conditional upon the development of a strong corporate culture. The paper illuminates the dark side of this project by drawing **attention** to the subjugating and totalitarian implications of its excellence/quality prescriptions. To this **end**, parallels are drawn with the philosophy of control favored by the Party in Orwell's Nineteen Eighty-Four. Specifically, the paper critiques the 'doublethink' contention that autonomy can be realized in monoculture conditions that systematically **constrain** opportunities to **wrestle** with competing values standpoints and their associated life projects.

## 80 Alaska's Aleutian Islands

Alaska's Aleutian Islands have long been accustomed to shipwrecks. They have been part of local consciousness since a Japanese whaling ship ran

**aground** near the western end of the 1,100-mile (1,800-km) volcanic **archipelago** in 1780, inadvertently naming what is now Rat Island when the ship's infestation **scurried** ashore and made itself at home. Since then, there have been at least 190 shipwrecks in the islands.

## 81 Copyright

No one in Parliament would know better than Peter Garrett what largesse copyright can confer so it may seem right that he should announce a royalty for artists, amounting to 5 per cent of all sales after the original one, which can go on giving to their families for as much as 150 years. But that ignores the truth that copyright law is a scandal, recently **exacerbated** by the Free Trade Agreement with the US which required extension of copyright to 70 years after death.

Is it scandalous that really valuable copyrights end up in the ownership of corporations (although Agatha Christie's no-doubt worthy great-grandchildren are still **reaping** the benefits of West End success for her who dun nits and members of the Garrick Club enjoy the continuing fruits of A.A. Milne's Christopher Robin books)? No. The **scandal** is that bien pensants politicians have attempted to appear cultured by creating private assets which depend on an act of Parliament for their existence and by giving away much more in value than any public benefit could **justify**. In doing so they have betrayed our trust.

## 82 Impact and Management of Purple Loosestrife

The invasion of non-indigenous plants is considered a primary threat to integrity and function of ecosystems. However, there is little quantitative or **experimental** evidence for ecosystem impacts of invasive species. Justifications for control are often based on potential, but not presently realized, recognized or quantified, negative impacts. Should lack of scientific certainty about impacts of non-indigenous species result in postponing measures to prevent degradation? Recently, management of purple loosestrife (*Lythrum salicaria*), has been criticized for lack of evidence demonstrating negative impacts of *L. salicaria*, and management using biocontrol for lack of evidence documenting the failure of conventional control methods. Although little quantitative evidence on negative impacts on native wetland biota and wetland function was available at the onset of the control program in 1985, recent work has demonstrated that the invasion of purple loosestrife into North American freshwater wetlands alters **decomposition** rates and nutrient cycling, leads to reductions in wetland plant diversity, reduces pollination and seed output of the native *Lythrum*

datum, and reduces habitat **suitability** for specialized wetland bird species such as black terns, least bitterns, pied-billed grebes, and marsh wrens. Conventional methods (physical, mechanical or chemical), have continuously failed to **curb** the spread of purple loosestrife or to provide satisfactory control. Although a number of generalist insect and bird species utilize purple loosestrife, wetland habitat specialists are excluded by **encroachment** of *L. salicaria*. We conclude that negative ecosystem impacts of purple loosestrife in North America justify control of the species and that **detrimental** effects of purple loosestrife on wetland systems and biota and the potential benefits of control outweigh potential risks associated with the introduction of biocontrol agents. Long-term experiments and monitoring programs that are in place will evaluate the impact of these insects on purple loosestrife, on wetland plant succession and other wetland biota.

### 83 Space Work

The space work for an astronaut can be inside or outside, inside they can monitor machines and the work is **carried** out alongside the craft. They also need to make sure the **Space. Travel outside** the craft, they can see how the seeds react in the space. Some seeds company send seeds to them to **investigate** how seeds change their biological character. When **outside** the craft, they can set up experiments or clean **up** the space rubbish.

### 84 Roman Arena

The Romans glorified the **bravery** shown in the arena, but **trivialized** the events and degraded the participants. Mosaic pictures of executions and combats, **graphically** violent to our eyes, were displayed in the public rooms and even dining rooms in the homes of wealthy Romans. How can the viewer today possibly understand such images? Until fairly recently, modern authors writing about the arena minimized its significance and **represented** the institutionalized violence as a sideline to Roman history. The **tendency** was also to view the events through our own eyes and to see them as pitiful or horrifying, although to most Romans **empathy** with victims of the arena was inconceivable. In the past few decades, however, scholars have started to analyze the complex motivations for deadly public entertainments and for contradictory views of gladiators as despised, yet beloved hero-slaves.

### 85 Scientist's Job

Scientists make observations, have assumptions and do **experiment**. After these have been done, he got his **results**. Then there are a lot of **data** from scientists. The scientists around the world have a clearer **picture** of world.

## 86 Dog

A dog may be man's best friend. But man is not always a dog's. Over the centuries, **selective** breeding has pulled at the canine body shape to produce what is often a grotesque distortion of the underlying wolf. Indeed, some of these distortions are, when found in people, regarded as **pathologies**.

Dog breeding does, though, offer a chance to those who would like to understand how body shape is controlled. The **ancestry** of pedigree pooches is well recorded, their generation time is short and their **litter** size reasonably large, so there is plenty of material to work with. **Moreover**, breeds are, by definition, inbred, and this simplifies genetic analysis. Those such as Elaine Ostrander, of America's National Human Genome Research Institute, who wish to identify the genetic basis of the features of particular pedigrees thus have an **ideal experimental** animal.

## 87 The Contemporary Ministerial Staffing System

The contemporary ministerial staffing system is large, active and partisan – far larger and further evolved than any Westminster equivalent. Ministers' demands for help to cope with the pressures of an increasingly competitive and professionalized political environment have been key drivers of the staffing system's development. But there has not been commensurate growth in **arrangements** to support and control it. The **operating framework** for ministerial staff is **fragmented** and ad hoc.

## 88 TV Advertising

From a child's point of view, what is the purpose of TV advertising? Is advertising on TV done to give actors the opportunity to take a rest or **practice** their **lines**? Or is it done to make people buy things? Furthermore, is the main **difference** between programs and commercials that commercials are for real, whereas programs are not, or that programs are for kids and commercials for adults? As has been shown several times in the literature (e.g. Butter et al. 1981; Donohue, Henke, and Donohue 1980; Macklin 1983 and 1987; Robertson and Rossiter 1974; Stephens and Stutts 1982), some children are able to **distinguish** between programs and commercials and are **aware** of the intent of TV advertising, whereas others are not.

## 89 Western Words

An eccentric mix of English, German and French has entered Japanese usage with grand abandon. A "kariya" woman is a career woman, and a "manshon" is an apartment. This increasing use of katakana, or unique Japanese versions

of Western words, and the younger generation's more casual use of the Japanese language have prompted Prime Minister Junichiro Koizumi to worry that these new words may not be understood by a wider audience. **As a result**, a government panel is proposing to publish a manual on how to speak proper Japanese. Foreign words became katakana Japanese **because** no existing Japanese words could quite capture a specific meaning or feeling. When the word "cool" traveled east, all of its English connotations did not make the journey. A kuru person in Japan is someone who is calm and never gets upset. **On the other hand**, someone who is kakkoii is hip, or in translation, "cool." **Similarly**, a hotto person is one who is easily excitable, perhaps passionate, but not necessarily a popular person or personality of the moment.

## 90 Complementary Therapies

Complementary therapies – such as those **practiced** by naturopaths, chiropractors and acupuncturists – have become increasingly popular in Australia over the last few **decades**. Interest initially coincided with **enthusiasm** for alternative lifestyles, while immigration and increased contact and trade with China have also had an **influence**. The status of complementary therapies is being re-visited in a number of areas: legal regulation; the stances of doctors' associations; their inclusion in medical education; and scientific research into their **efficacy**.

## 91 Egg-eating Snakes

Egg-eating snakes are a small group of snakes whose **diet** consists only of eggs. Some eat only bird's eggs, which they have to **swallow whole**, as the snake has no teeth. Instead, these snakes have **spines** that stick out from the backbone. The spines **crack** the egg **open** as it passes through the throat.

## 92 First-Year Students

For many first-year students, the University may be their first **experience** living away from home for an **extended** period of time. It is a **definite** break from home. The individual's usual **sources** of support are no longer present to facilitate adjustment to the unfamiliar environment. Here are tips for students which may provide realistic expectations concerning living arrangements and social life on campus. In addition, students may benefit from information concerning resources available to them at the Counseling Center.

In my point of view this is the best thing that you can do. I know you have to  **fend** for yourself, cook and clean after yourself, basically look after yourself without your parents but the truth is – some time in your life you are going to



have to part with lovely Mummy and Daddy. But they are only just a phone call away and it is really good to have some **quality time** without them. The first few weeks can be a **lonely** period. There may be concerns about forming friendship. When new students look around, it may seem that everyone else is self-confident and **socially** successful! The reality is that everyone is having the same **concerns**.

Increased personal freedom can feel both wonderful and **frightening**. Students can come and go as they choose with no one to “hassle” them. The strange environment with new kinds of procedures and new people can create the sense of being on an emotional roller coaster. This is normal and to be expected. You meet so many more people in the halls than if you stayed at home. The main points about living away from home are:

NO PARENTS! You don't have to tell them where you're going, who you're going with, what time you'll be coming, why you're going etc. etc.

You learn various **social** skills; you have to get along with your roommates. Living with them can present special, sometimes intense, problems. Negotiating respect of personal property, personal space, sleep, and relaxation needs, can be a complex task. The complexity increases when roommates are of different **backgrounds** with very different values. It is **unrealistic** to expect that roommates will be best friends. **Meaningful**, new relationships should not be expected to develop overnight. It took a great deal of time to develop intimacy in high school friendships; the same will be true of intimacy in university friendships.

You have a phone! So if you ever get homesick or miss you Mummy then she's always at the **end** of a phone-line for you – and so are your friends.

### **93 Mike's Research**

In 2001 he received the SIUC Outstanding Scholar Award. In 2003 he received the Carski Award for Distinguished Undergraduate Teaching from the American Society for Microbiology. Mike's research is **focused** on bacteria that inhabit **extreme** environments, and for the past 12 years he has studied the microbiology of permanently ice-covered lakes in the McMurdo Dry Valleys, Antarctica. In addition to his research papers, he has edited a major **treatise** on phototrophic bacteria and served for over a decade as chief editor of the **journal** Archives of Microbiology. He currently serves on the editorial board of Environmental Microbiology. Mike's nonscientific **interests** include forestry, reading, and caring for his dogs and horses. He lives **beside** a peaceful and quiet lake with his wife, Nancy, five shelter dogs (Gaino, Snuffy, Pepto, Peanut, and Merry), and four horses (Springer, Feivel, Gwen, and Festus).

## 94 The Allure of the Book

The allure of the book has always been negative and **positive**, for the texts and pictures between the covers have helped many young readers to **discover** and grasp the world around them in a pleasurable and meaningful way. But the allure has also enabled authors and publishers to **prey** upon young readers' dispositions and desires and to **sell** them a menu that turns out to be junk food.

## 95 Siblings

No two siblings are the same, not even **identical** twins. Parents often **puzzle** about why their children are so different from one another. They'll say, 'I brought them I up all the same.' They forget that what **determines** our behavior isn't what happens to us but how we interpret what happens to us, and no two people ever see anything in exactly the same way.

## 96 Roommate

If you're choosing to use the random **pairing** or are **letting** the college choose your roommate for you, you'll probably have to fill out some kind of profile or questionnaire. These usually include things like: what time do you usually go to bed, where do you prefer to study, do you keep your space clean or are you more messy, etc. When you're answering these questions, be as honest as possible. If there's something you're **dead** set against (e.g., a roommate who smokes) you can mark that and you will not be paired with someone who fits that criteria.

Choosing a roommate can be kind of **stressful**. In some cases, it can feel like as big of a decision as actually choosing which school to attend. But don't worry, if you get to campus and live with your roommate for a few weeks and find out that your lifestyles are just too different, you can always move. I **swapped** roommates my first semester of college, and after I moved my college experience was much more positive. In fact, I lived with different people every year of college and it all worked out.

So have fun with it! Be open to meeting new people and trying new things. Sometimes the best roommates are the ones that are the ones that are completely different than you because they cannot only **introduce** you to new cultural **experiences**, but they can also expand your ways of thinking and isn't that what college is all about?

## 97 The Dag Hammarskjold Library

The Dag Hammarskjold Library at United Nations Headquarters in New York is a library designated to facilitate the work of the United Nations and **focuses** mainly on the needs of the UN Secretariat and diplomatic missions. Anyone with a valid United Nations Headquarters grounds **pass**, including specialized agencies, accredited media and NGO staff, is able to visit the library. Due to **security** constraints in place at the United Nations Headquarters complex, the library is not open to the general **public**.

## 98 Expert Teachers

The **casual** observer does not necessarily recognize the **skill** in how a teacher, for instance, responds to a thoughtful question from a normally quiet student and how that may be very different from the 'standard response' to a commonly inquisitive or **talkative** student. Expert teachers are aware of what they are doing; they monitor and adjust their teaching behaviors to bring out the **best** in their students.

## 99 The UW Course Descriptions

The UW course descriptions are **updated** regularly during the academic year. All announcements in the General Catalog and Course Catalog are **subject** to change without **notice** and do not constitute an **agreement** between the University of Washington and the student. Students should assume the responsibility of **consulting** the appropriate academic unit or adviser for more current or specific information.

## 100 Investment

One city will start to attract the **majority** of public and/ or private investment. This could be due to **natural** advantage or political decisions. This in turn will **stimulate** further investment due to the multiplier effect and **significant** rural to urban migration. The investment in this city will be at the **expense** of other cities.

## 101 Brave New World

A good way to make sure that people police themselves is to get them to **believe** essentially the same stories about what the world is and why the way it is good, true and beautiful. The world needs to be **described**, needs to be justified by arguments about nature, philosophical principle, history or the gods. People will find their **place** in such a world. They will learn **what** hopes they might reasonably **hold** for themselves.

## 102 The Psychology of Voting

It would be reassuring to think that the electorate choose who to vote for based on the candidates' track records and future policy promises. In truth, many of us are swayed simply by the way that politicians look. Consider a 2009 study that asked Swiss students to look at multiple pairs of unfamiliar French political candidates and in each case to select the one who looked most competent. Most of the time, the candidate selected by students as looking the most competent was also the one who'd had real life electoral success, the implication being that voters too had been swayed by the candidates' appearance (there's little evidence that appearance and competence actually correlate). Unsurprisingly, being attractive also helps win votes, especially in war time (in peace time, looking trustworthy is more of an advantage). Other research has shown that we're more likely to vote for male and female candidates with deeper voices.

## 103 Individualism

It is commonly said by anthropologists that the primitive man is less individual than civilized man. This is an element of truth. Simpler societies call for, and provide opportunities for, a far smaller diversity of individual skills and occupations than the more complex and advanced societies, and as a result those who live in those societies are less individual. In this sense, individualism is a necessary product of modern advanced society, and runs through all its activities.

## 104 Life Expectancy

Life expectancy at birth is one of the most widely used and internationally recognized indicators of population health. It focuses on the length of life rather than its quality, and provides a useful summary of the general health of the population. While an indicator describing how long Australians live that simultaneously takes into account quality of life would be a desirable summary measure of progress in the area, currently no such measure exists and this is why life expectancy at birth is used as the Main Progress Indicator here. During the decade 1999 to 2009, life expectancy at birth improved for both sexes.

A girl born in 2009 could expect to reach 83.9 years of age, while a boy could expect to live to 79.3 years. Over the decade, boys' life expectancy increased slightly more than girls' (3.1 compared with 2.1 years). This saw the gap between the sexes' life expectancy decrease by one year to 4.6 years.

In the longer term, increases in life expectancy also occurred over most of the 20th century. Unfortunately, life expectancy isn't shared across the whole

population though, being lower in Tasmania and the Northern Territory, and for Aboriginal and Torres Strait Islander peoples.

### 105 The Tokyo's Skytree Mural

TeamLab's digital mural at the entrance to Tokyo's Skytree, one of the world's monster skyscrapers, is 40 meters long and immensely detailed. But **however** massive this form of digital art becomes — and it's a form subject to rampant inflation — Inoko's theories about seeing are based on more modest and often pre-digital sources. An early devotee of comic books and cartoons (no surprises there), then computer games, he recognized when he started to look at traditional Japanese art that all those forms had something **in common**: something about the way they captured space. In his discipline of physics, Inoko had been taught that photographic lenses, **along with** the conventions of western art, were the logical way of transforming three dimensions into two, conveying the real world on to a flat surface. **But** Japanese traditions employed “a different spatial logic”, as he said in an interview last year with j-collabo.org, that is “uniquely Japanese”.

### 106 The Foreign Policy

The foreign policy of a state, it is often argued, begins and ends with the border. No doubt an exaggeration, this aphorism nevertheless has an **element** of truth. A state's relation with its neighbors, at least in the **formative / original** years, are greatly **influenced** by its frontier policy, especially when there are no **settled** borders. Empire builders in the past sought to extend imperial frontiers for a variety of reasons; subjugation of kings and princes to gain their **allegiance** (as well as handsome tributes for the coffers of the state), and, security of the 'core' of the empire from external attacks by establishing a string of buffer states in areas **adjoining** the frontiers. The history of British empire in India was no different. It is important to note in this connection that the concept of international boundaries (between two sovereign states), demarcated and **delineated**, was yet to emerge in India under Mughal rule.

### 107 Texas Cosmology Center

A new interdisciplinary center for the study of the frontiers of the universe, from the tiniest subatomic particle to the largest chain of galaxies, has been formed at The University of Texas at Austin. The Texas Cosmology Center will be a way for the university's departments of Astronomy and Physics to **collaborate** on research that concerns them both. “This center will bring the two departments together in an area where they **overlap** --in the physics of the very early universe,” said Dr. Neal Evans, Astronomy Department chair. Astronomical

observations have **revealed** the presence of dark matter and dark energy, **discoveries** that challenge our knowledge of fundamental physics. And today's leading theories in physics involve energies so high that no Earth-bound particle accelerator can test them. They need the universe as their **laboratory**. Dr. Steven Weinberg, Nobel laureate and professor of physics at the university, called the Centre's **advent** "a very exciting development" for that department.

### **108 Violence**

Exposure to gun violence makes adolescents twice as **likely** to perpetrate **serious** violence in the next two years, according to a University of Michigan **study**. Researchers found there is a **substantial** cause and **effect relationship** between exposure and perpetration of violence. Jeffrey B. Bingenheimer, a doctoral student in health behavior and health education, analyzed five years of data from adolescents living in 78 neighborhoods in Chicago. Bingenheimer is lead author on a paper in this week's journal Science.

### **109 The Method of Difference**

The logic of the scientific method was set out by John Stuart Mill in 1843, and was **named** the method of difference. A simple example of what he meant by this is to take two glasses of water which are **identical** in every respect. Introduce a few drops of ink into one of these glasses. The water changes color! According to Mill's method of difference it is safe to assume that the change in the color of the water is due to the **introduction** of a new **factor** - the independent variable - in this case, the ink.

### **110 Consumer Preferences**

Differential rates of price change can also shape consumption patterns. To **satisfy** their needs and wants, consumers sometimes choose to **substitute** spending on a particular product or service with spending on an alternative product or service in response to a **relative** price movement of the items. All other **factors** being equal, consumption expenditure volumes would be expected to rise more strongly on spending options subject to lower rates of price inflation.

### **111 The Resultant Force**

The overall result of two or **more** forces acting on an object is called the resultant force. The resultant of two forces is a single force, which has the same effect as the two forces combined. If two forces pull an object in **opposite**

directions, the size of the resultant can be found by subtracting one force from the other. If the forces are equal, they balance each other.

### 112 The Opportunity Cost

Opportunity cost incorporates the notion of scarcity: No matter what we do, there is always a trade-off. We must trade off one thing for another because resources are limited and can be used in different ways. By acquiring something, we use up resources that could have been used to acquire something else. The notion of opportunity cost allows us to measure this trade-off. The opportunity cost of something is what you sacrifice to get it. Most decisions involve several alternatives. For example, if you spend an hour studying for an economics exam, you have one less hour to pursue other activities. To determine the opportunity cost of an activity, we look at what you consider the best of these "other" activities. For example, suppose the alternatives to studying economics are studying for a history exam or working in a job that pays \$10 per hour. If you consider studying for history a better use of your time than working, then the opportunity cost of studying economics is the 4 extra points you could have received on a history exam if you studied history instead of economics. Alternatively, if working is the best alternative, the opportunity cost of studying economics is the \$10 you could have earned instead.

### 113 Neuron Systems

We now know through the work of neuroscientists that the human brain is wired to mimic other people, and this mimicry involves actual involuntary, physiological experience in the observer. Human beings tend to imitate actions that they see. Physiologically, our brains include mirror neurons, which react to actions that are seen as if we are doing the action ourselves. It is largely an unconscious and automatic experience. When we hear people speak, observe their vocal nuances, watch their posture, gestures, and facial expressions, etc., neural networks in our brains are stimulated by the "shared representations," generating feelings within us that reflect the experience of those we are observing.

### 114 Climate

Climate is the word we use for weather over a long period of time. The desert has a dry climate, because there is very little rain. The UK has a 'temperate climate' which means winters are, overall, mild and summers, generally, don't get too hot.

### 115 Psychology

Psychology as a subject of study has largely developed in the West, since the late nineteenth century. During this period there has been an emphasis on scientific thinking. Because of this emphasis, there have been many scientific studies in psychology which explore different

aspects of human nature. These include studies into how biology (physical factors) influence human experience, how people use their **senses** (touch, taste, smell, sight and hearing) to get to know the world, how people develop, why people behave in certain ways, how memory works, how people develop language, how people **understand** and think about the world, what motivates people, why people have emotions and how personality develops. These scientific **investigations** all contribute to an understanding of human nature.

### 116 Criminal Acts

The narrative of law and order is located fundamentally at the level of individual **guilt** and responsibility. Criminal acts are seen as individual issues of personal responsibility and **culpability**, to which the state responds by way of policing, **prosecution**, adjudication and punishment. This is but one **level** at which crime and criminal justice can be analyzed. The problem is that so often analysis ends there, at the level of individual action, **characterized** in terms of responsibility, guilt, evil. In few other areas of social life does individualism have this hold. To take but one **instance**, it would be absurd to restrict analysis of obesity, to individual greed. It should similarly be widely seen as absurd to restrict analysis of criminal justice issues to the culpability of individuals.

### 117 Larger Dwellings, Smaller Households

The stock of Australia's dwellings is **evolving**, with current homes having more bedrooms on average than homes ten years ago. At the same time, households are getting smaller on average with **decreasing proportions** of couple families with children and **increasing** couple only and lone person households. This **article examines** the changes in household size and number of bedrooms from 1994-95 to 2003-04.

### 118 Interior Design

Interior design is a professionally conducted, practice-based process of planning and realization of interior spaces and the elements **within**. Interior design is **concerned** with the function and operation of the space, its safety and efficiency, its aesthetics and its sustainability. The work of an interior designer draws upon many other **disciplines**, such as environmental psychology, architecture, product design, and aesthetics, in relation to a wide range of building spaces **including** hotels, corporate and public spaces, schools, hospitals, private residences, shopping malls, restaurants, theaters and airport terminals.

### 119 What Is Alchemy?

To learn the speech of alchemy, an early form of chemistry in which people attempted to turn metals into gold, it helps to think back to a time when there was no science: no atomic number or weight, no periodic chart, no list of elements. To the **alchemists** the universe was not made of leptons, bosons, gluons, and quarks. Instead it was made of substances, and one substance-say, walnut oil-could be just as **pure** as another-say, silver-even though modern **chemistry** would say one is heterogeneous and the other homogeneous.



Without knowledge of atomic structures-how would it be possible to tell elements from compounds?

### 120 The Petrified Forest National Park

The Petrified Forest is home to some of the most impressive fossils ever found and more are being discovered each year as continuing erosion is exposing new evidence. Fossils found here show the Forest was once a tropical region, filled with towering trees and extraordinary creatures. More than 150 different species of fossilized plants have been discovered by paleontologists and evidence indicating ancient native people who inhabited this region about 10,000 years ago have been confirmed by archeologists.

### 121 Calendar Reform

Since the last papal reform, several proposals have been offered to make the Western calendar more useful or regular. Very few reforms, such as the rather different decimal French Republican and Soviet calendars, had gained official acceptance, but each was put out of use shortly after its introduction. The rather different decimal French Republican Calendar was one such official reform, but was abolished twelve years later by Napoleon. After World War II the newly-formed United Nations continued efforts of its predecessor, the League of Nations, to establish the proposed World Calendar but postponed the issue after a veto from the US government, which was mainly based upon concerns of religious groups about the proposed days that would be outside the seven day week cycle ("blank days") and thus disrupt having a Sabbath every seven days. Independently the World Council of Churches still tries to find a common rule for the date of Easter which might be eased by a new common calendar.

### 122 Learning How to Code

Developing computational thinking helps students to better understand the world around them. Many of us happily drive a car without understanding what goes on under the bonnet. So is it necessary for children to learn how to program computers? After all, some experts say coding is one of the human skills that will become obsolete as artificial intelligence grows. Nevertheless, governments believe coding is an essential skill. Since 2014, the principles of computer programming have featured on England's curriculum for children from the age of five or six, when they start primary school. While not all children will become programmers, Mark Martin, a computing teacher at Sydenham High School, London, argues that they should learn to understand what makes computers work and try to solve problems as a computer might.

### 123 Distance Learning

Distance learning can be highly beneficial to a large variety of people from young students wanting to expand their horizons to adults looking for more job security. With programs that allow learners of all ages to take courses for fun, personal advancement and degrees, distance learning can meet the **needs** of a diverse population. Perhaps one of the most notable and often talked about **advantages** of distance learning is the flexibility. The majority of programs allow students to learn when and where it's convenient for them. For **those** who are struggling to balance their distance learning goals with working a full-time job and taking care of a family, this kind of flexibility can allow many people to pursue education who would not otherwise be able to do so. **Since** there are no **on-campus** courses to attend, students can learn from their own homes, at work on their lunch breaks and from virtually anywhere with internet access. For some, it can even be a big source of savings on the fuel costs and time required to commute to classes.

### 124 The Way of Revising

Timing is important for revision. Have you noticed that during the school day you get times when you just don't care any longer? I don't mean the lessons you don't like, but the ones you find usually find OK, but on some occasions you just can't be bothered with it. You **may** have other things on your mind, be tired, restless, or looking forward to what comes next. Whatever the reason, that particular lesson doesn't get 100 percent **effort** from you. The same is true of revision. Your mental and physical **attitude** are important. If you try to revise when you are tired or totally **occupied** with something else, your revision will be inefficient and just about worthless. If you approach it feeling fresh, alert and happy, it will be so much easier and you will learn more, faster. However, if you make no plans and just slip in a little bit of revision when you feel like it, you probably won't do much revision! You need a revision timetable so you don't keep **putting it off**.

### 125 Engaging Learners

Seminars are not designed to be mini-lectures. Their educational **role** is to provide an opportunity for you to discuss interesting and/or difficult aspects of the course. This is founded on the **assumption** that it is only by actively trying to use the knowledge that you have acquired from lectures and texts that you can achieve an adequate understanding of the subject. If you do not understand a point it is highly **unlikely** that you will be the only person in the group in that position; you will invariably be **undertaking** a **service** for the entire

group if you come to the seminar equipped with questions on matters which you feel you did not fully understand.

### 126 Gene Regulation

Recently, research into embryonic development has given us an even better insight into how major structural changes might **occur** in a given population of organisms. We now understand that there are two major types of genes: developmental and “housekeeping” genes. Developmental genes are those that are **expressed** during embryonic development, and their proteins **control** the symmetry, skeletal development, organ placement, and overall form of the developing animal. **In contrast**, “housekeeping” genes are expressed during the animal’s daily life to generate proteins which keep the cells, tissues, and organs in the body functioning properly. **As** you might suspect, mutations in developmental genes can have radical consequences for body form and function, whereas mutations in “housekeeping” genes tend to **affect** the health and reproductive success of the post-embryonic animal.

### 127 The History of Clothing

About 10,000 years ago, people learned how to make cloth. Wool, cotton, flax, or hemp was first spun into a thin thread, using a spindle. The thread was then woven into a fabric. The earliest weaving machines **probably** consisted of little more than a pair of sticks that held a set of parallel threads, called the warp, while the cross-thread, called the weft, was inserted. Later machines called looms had roads that separated the threads to allow the weft to be inserted more **easily**. A piece of wood, called the shuttle, holding a spool of thread, was passed between the separated threads. The basic **principles** of spinning and weaving have stayed the same until the present day, though during the industrial revolution of the 18th century many ways were found of **automating** the processes. With new machines such as the spinning mule, many threads could be spun at the same time, and, with the help of devices like the flying shuttle, broad pieces of cloth could be woven **at** great speed.

### 128 Wind Energy

Wind is air moving around. Some winds can move **as** fast as a racing car, over 100 miles an **hour**. Winds can travel around the world. Wind **can** make you feel cold because you lose heat from your body **faster** when it is windy. Weather forecasters need to **know** the speed and direction of the wind. The strength of wind is **measured** using the Beaufort scale from wind force when there is no wind, to wind force 12 which can damage houses and buildings and is called hurricane force.

### 129 Bees Making Honey

Bees need two different kinds of food. One is honey made from nectar, which actually is a fluid that is collected in the heart of the flowers to **encourage** pollination by insects and other animals. Secondly, come from pollen, it is fine powdery substance in yellow, consisting of microscopic grains **stored** from the male part of a flower or from a male cone. It contains a male gamete that can fertilize the female ovule, which is **transferred** by wind, insects or other animals.

Let us go with the honeybee from her flower to the hive and see what happens. Most bees gather only pollen or nectar. As she sucks the nectar from the flower, it is **stored** in her special honey stomach ready to be transferred to the honey-making bees in the hive.

### 130 Dictatorship

Dictatorship is not a modern concept. Two thousand years ago, during the period of the Roman Republic, exceptional powers were sometimes given by the Senate to **individual** dictators such as Sulla and Julius Caesar. The **intention** was that the dictatorship would be temporary and that it would make it **possible** to take swift and effective **action** to deal with an emergency. There is some **disagreement** as to how the term should be applied today. Should it be used in its original form to describe the temporary exercise of emergency powers? Or can it now be **applied** in a much broader sense - as common usage suggests?

### 131 Reading Comprehension

Reading is an active process, not a **passive** one. We always read within a **specific context**, and this affects what we notice and what seems to matter. We always have a purpose in reading a text, and this will shape how we **approach** it. Our purpose and background knowledge will also **determine** the strategies we use to read the text.

### 132 Story and Music

Most important of all is the fact that for each new ballet-pantomime created at the Paris Opera during the July Monarchy, a new score was produced. The reason for this is simple: these ballet-pantomimes told stories -elaborate ones- and music was considered an indispensable tool in getting them across to the audience. **Therefore**, music had to be newly created to fit each story. Music tailor-made for each new ballet-pantomime, **however**, was only one weapon in the Opera's explanatory arsenal. **Another** was the ballet-pantomime libretto, a printed **booklet** of fifteen to forty pages in length, which was sold in

the Opera's lobby (like the opera libretto), and which laid out the plot in painstaking detail, scene by scene. Critics also took it upon themselves to recount the plots (of both ballet-pantomimes and operas) in their **reviews** of premieres. So did the publishers of souvenir albums, which also featured pictures of famous **performers** and of scenes from favorite ballet-pantomimes and operas.

### 133 Women Empowerment

With the increase in women's **participation** in the labor force, many mothers have less time available to undertake domestic activities. At the same time, there has been increasing recognition that the father's role and **relationship** with a child is important. A father can have many **roles** in the family, ranging from income provider to teacher, carer, playmate and role model. Therefore, balancing paid work and family responsibilities can be an important issue for both fathers and mothers in families.

### 134 USW GradLife

UWS graduates Racha Abboud and Anna Ford, whose story first appeared in GradLife in December 2009, have **successfully** risen through the ranks to be **appointed** Associates at leading western Sydney law firm, Coleman Greig Lawyers. The promotion marks the **culmination** of many years of hard work for these legal **eagles** who are the first to rise to this **level** from the firm's Cadet Lawyer program with UWS.

### 135 DNA

The recipe for **making** any creature is written in its DNA. So last November, when geneticists published the near-complete DNA sequence of the long-extinct woolly mammoth, there was much **speculation** about whether we could bring this behemoth back to life. Creating a living, breathing creature from a genome sequence that exists only in a computer's memory is not possible right now. But someone someday is sure to try it, **predicts** Stephan Schuster, a **molecular** biologist at Pennsylvania State University, University Park, and a **driving** force behind the mammoth genome project.

### 136 Special Effects

If you see a movie, or a TV advertisement, that involves a fluid behaving in an unusual way, it was probably made using technology based on the work of a Monash researcher. Professor Joseph Monaghan who **pioneered** an influential **method** for interpreting the behavior of liquids that underlies most special

effects involving water has been **honored** with election to the Australian Academy of Sciences. Professor Monaghan, one of only 17 members elected in 2011, was recognized for developing the **method** of Smoothed Particle Hydrodynamics (SPH) which has applications in the fields of astrophysics, engineering and physiology, as well as movie special effects. His research started in 1977 when he tried to use computer **simulation** to describe the formation of stars and stellar systems. The algorithms available at the time were **incapable** of describing the complicated systems that evolve out of chaotic clouds of gas in the galaxy. Professor Monaghan, and his colleague Bob Gingold, took the novel and effective approach of replacing the fluid or gas in the simulation with large numbers of particles with properties that **mimicked** those of the fluid. SPH has become a central tool in astrophysics, where it is currently used to simulate the evolution of the universe after the Big Bang, the formation of stars, and the processes of planet building.

### **137 Latin America Declares Independence**

In the southern cone especially, from Venezuela to Argentina, the region is rising to overthrow the legacy of external domination of the past centuries and the cruel and destructive social forms that they have helped to establish. The **mechanisms** of imperial control — violence and economic warfare, hardly a distant memory in Latin America — are losing their effectiveness, a sign of the shift toward independence. Washington is now compelled to tolerate governments that in the past would have drawn intervention or reprisal. Throughout the region a vibrant **array** of popular movements provide the basis for a meaningful democracy. The indigenous populations, as if in a rediscovery of their pre-Columbian legacy, are much more active and influential, particularly in Bolivia and Ecuador. These developments are in part the result of a phenomenon that has been observed for some years in Latin America: As the elected governments become more formally democratic, citizens **express** an increasing disillusionment with democratic institutions. They have sought to construct democratic systems based on popular participation rather than elite and foreign **domination**.

### **138 Great Engineers**

Great engineers have a passion to improve life; a burning conviction that they can make life better for everyone. Engineers need to have a talent for invention and innovation, but what **drives** them is the conviction that they can find a better way to do things; a cheaper and more efficient solution to the problems of human existence on this planet of **limited** resources that we call Earth.

Many of us spend a lot of time complaining about the difficulties and problems of life. It is easy to find fault with things that make daily life arduous. For an engineer, these difficulties can be opportunities. How can this be made to work better? How can that process be made more efficient? How can components be made more cheaply, more accurately and more fit-for-purpose? Great engineers are convinced that everything can be improved. Instead of complaining, they think of ways to make things better.

### 139 The Next Textile Wave

The environmental impact of the global textile industry is hard to overstate. One-third of the water used worldwide is spent fashioning fabrics. For every ton of cloth produced, 200 tons of water is polluted with chemicals and heavy metals. An estimated 1 trillion kilowatt-hours of electricity powers the factories that card and comb, spin and weave, and cut and stitch materials into everything from T-shirts to towels, leaving behind mountains of solid waste and a massive carbon footprint.

"Where the industry is today, is not really sustainable for the long term," says Shreyaskar Chaudhary, chief executive of Pratibha Syntex, a textile manufacturer based outside Indore, India.

With something of an "if you build it, they will come" attitude, Mr. Chaudhary has steered Pratibha toward the leading edge of eco-friendly textile production. Under his direction, Pratibha began making clothes with organic cotton in 1999. Initially, the company couldn't find enough organic farms growing cotton in central India to supply its factories. To meet production demands, Chaudhary's team had to convince conventional cotton farmers to change their growing methods. Pratibha provided seeds, cultivation instruction, and a guarantee of fair-trade prices for their crops. Today, Pratibha has a network of 28,000 organic cotton growers across the central states of Madhya Pradesh, Maharashtra, and Orissa.

### 140 Evolutionary Changes

In *The Origin of Species*, Darwin provided abundant evidence that life on Earth has evolved over time, and he proposed natural selection as the primary mechanism for that change. He observed that individuals differ in their inherited traits and that selection acts on such differences, leading to evolutionary change. Although Darwin realized that variation in heritable traits is a prerequisite for evolution, he did not know precisely how organisms pass heritable traits to their offspring. Just a few years after Darwin published *The Origin of Species*, Gregor Mendel wrote a groundbreaking paper on inheritance in pea plants. In that paper, Mendel proposed a model of

inheritance in which organisms transmit discrete heritable units (now called genes) to their offspring. Although Darwin did not know about genes, Mendel's paper **set** the stage **for** understanding the genetic differences on which evolution is based.

### 141 Trust Your Gut

What is the significance of instinct in business? Does a reliable gut feeling separate winners from losers? And is it the most valuable emotional tool any entrepreneur can possess? My observations of successful company owners lead me to believe that a highly analytical attitude can be a drawback. At critical junctures in commercial life, risk-taking is more an **act** of faith than a carefully balanced choice. Frequently, such moments require **decisiveness** and absolute conviction above all else. There is simply no time to wait for all the facts, or room for doubt. A computer program cannot tell you how to invent and launch a new **product**. That **journey** involves too many unknowns, too much luck — and too much sheer intuition, rather than the infallible **logic** that machines deliver so well. As Chekhov said: “An artist's flair is sometimes worth a scientist's brains”- entrepreneurs need right-brain thinking. When I have been considering whether to buy a company and what price to offer, I have been **blinded** too often by reams of due diligence from the accountants and lawyers- Usually it pays to stand back from such mountains of grey data and weigh up the really important issues - and decide how you feel about the opportunity.

### 142 Paris

Paris is very old—there has been a settlement there for at least 6000 years and its shape has been determined in part by the River Seine, and in part by the edicts of France's rulers. But the great boulevards we admire today are relatively new, and were constructed to prevent any more barricades **being created** by the rebellious population; that work was carried out in the middle 19th century. The earlier Paris had been **in part** a maze of narrow streets and alleyways. But you can imagine that the work was not only highly expensive, but caused great distress among the half a million or so residents whose houses were **simply** razed, and whose neighborhoods disappeared. What is done cannot usually be undone, especially when buildings are torn **down**.

### 143 Bats

Of the more than 1,000 bat species worldwide, 22 are **native** to North America. And while there are no pollinator bats in our area, gardeners should **champion** those that do live here, because they're insectivorous. These bats **consume**



moths, beetles and mosquitoes, and can eat up to 500 mosquito-sized insects per hour. They also protect gardens and crops from such **pests** as cucumber beetles, cutworms and leafhoppers.

#### **144 Conservancy Committee**

To qualify as a conservancy, a committee must **define** the conservancy's boundary elect a **representative** conservancy committee, negotiate a legal constitution, prove the committee's ability to **manage** funds, and produce an acceptable plan for **equitable** distribution of wildlife-related benefits. **Once** approved, registered conservancies acquire the **rights** to a sustainable wildlife **quota** set by the ministry. The animals can either be sold to trophy hunting companies or hunted and consumed by the **community**. As legal **entities**, conservancies can also enter into contracts with private-sector tourism operators.

#### **145 Reliable Information**

Having tracked down research that is **relevant** to your area of interest the next task is to actually make sense of that research. This section is intended to show you how to be critical of the research you **are reviewing** and how to check that the **evidence** is credible and represented appropriately. Unfortunately, this means discussing the ways in which research findings may be misrepresented.

#### **146 Pidgins**

Pidgins are languages that are born after contact between at least two languages. As many pidgins developed during the period of empire and international trade, one of the language 'parents' was frequently a European language such as French or English, and the other language parent was the language of the people with whom the Europeans were **trading** or whom they were colonizing. Usually one of the languages provided the majority of **vocabulary items** and the other provided the **grammatical** structure. When pidgins become learned as a mother tongue, they become known as creoles. I am not going to discuss pidgins and creoles and contact languages as such in this book in **any depth**.

#### **147 The Sustainable Transportation System**

A sustainable transportation system is one in which people's needs and desires for access to jobs, commerce, recreation, culture and home are

accommodated using a minimum of resources. Applying **principles of sustainability** to transportation will reduce pollution generated by gasoline-powered engines, noise, traffic congestion, land devaluation, urban sprawl, economic segregation, and injury to drivers, pedestrians and cyclists. In addition, the costs of commuting, shipping, housing and goods will be **reduced**.

Ultimately in a sustainable San Francisco, almost all trips to and **within** the City will be on public transit, foot or bicycle - as will a good part of trips to the larger Bay Region. Walking **through** streets designed for pedestrians and bicycles will be more pleasant than walking through those designed for the automobile. Street-front retail and commercial establishments will prosper from the large **volume** of foot traffic drawn to an environment enhanced by trees, appropriately designed "street furniture," (street lights, bicycle racks, benches, and the like) and other people. Rents and property costs will be lowered as land for off-street parking is no **longer** required or needed.

#### **148 The Tapir's Morning Bath**

Charles Darwin knew intuitively that tropical forests were places of **tremendous** intricacy and energy. He and his cohort of scientific naturalists were **awed** by the beauty of the Neotropics, where they collected tens of thousands of **species** new to science. But they couldn't have guessed at the complete contents of the rain forest, and they had no idea of its **value** to humankind.

#### **149 Why Study Business?**

Deciding to go to business school is perhaps the simplest part of what can be a complicated process. With nearly 600 accredited MBA programs on **offer** around the world, the choice of where to study can be overwhelming. Here we explain how to **choose** the right school and course for you and unravel the application and funding process. "Probably the **majority** of people applying to business school are at a point in their careers where they know they **want** to shake things up, but they don't know exactly what they want to do with their professional live." says Stacy Blackman, an MBA admissions consultant based in Los Angeles. "If that's the case with you, look at other **criteria**: culture, teaching method, location, and then pick a place that's a good fit for you with a strong general management program. Super-defined career goals don't have to be a part of this process."

### 150 The Private Library

Omniscience may be a foible of men, but it is not so of books. Knowledge, as Johnson said, is of two kinds, you may know a thing yourself, and you may know where to find it. Now the amount which you may actually know yourself must, at its best, be limited, but what you may know of the sources of information may, with proper training, become almost boundless. And here come the value and use of reference books - the working of one book in connection with another - and applying your own intelligence to both. By this means we get as near to that omniscient volume which tells everything as ever we shall get, and although the single volume or work which tells everything does not exist, there is a vast number of reference books in existence, a knowledge and proper use of which is essential to every intelligent person. Necessary as I believe reference books to be, they can easily be made to be contributory to idleness, and too mechanical a use should not be made of them. Very admirable reference books come to us from America, where great industry is shown, and funds for publishing them never seem to be short. The French, too, are excellent at reference books, but the inferior way in which they are printed makes them tiresome to refer to.

### 151 The Origins of Music

Music is an important part of our lives. We connect and interact with it daily and use it as a way of projecting our self-identities to the people around us. The music we enjoy - whether it's country or classical, rock n' roll or rap - reflects who we are. But where did music, at its core, first come from? It's a puzzling question that may not have a definitive answer. One leading researcher, however, has proposed that the key to understanding the origin of music is nestled snugly in the loving bond between mother and child. In a lecture at the University of Melbourne, Richard Parncutt, an Australian-born professor of systematic musicology, endorsed the idea that music originally spawned from 'motherese' - the playful voices mothers adopt when speaking to infants and toddlers. According to Parncutt, who is based at the University of Graz in Austria, 'motherese' arose as a way to strengthen this maternal bond and to help ensure an infant's survival.

### 152 The Story of English

At the beginning of the twenty-first century, the relationship between standard and nonstandard language is, evidently, still an uncertain one. We are at a transitional point between two eras. We seem to be leaving an era when the rules of Standard English, as selected and defined by prescriptive grammarians, totally conditioned our sense of acceptable usage, so that all

other usages and varieties were considered to be inferior or corrupt, and excluded from serious consideration. And we seem to be approaching an era when nonstandard usages and varieties, previously denigrated or ignored, are achieving a new presence and respectability within society, reminiscent of that found in Middle English, when dialed variation in literature was widespread and uncontentious. But we are not there yet. The rise of Standard English has resulted in a confrontation between the standard and nonstandard dimensions of the language which has lasted for **over** 200 years, and this has had traumatic **consequences** which will take some years to eliminate. Once people have been given an inferiority complex about the way they speak or write, they find it difficult to shake off.

### 153 Customer Services

Good customer service relates to the service you and your employees provide before, during and after a purchase. For example, it's how you **interact** with your customer. Improving your customer service skills can lead to greater customer **satisfaction** and a more enjoyable experience for them.

No matter the size of your business good customer service needs be at the heart of your business model if you wish to be successful. It is important to provide good customer service; to all types of customers, including **potential**, new and existing customers. Although it can take extra resources, time and money, good customer service leads to customer satisfaction which can generate positive **word-of-mouth** for your business, keep your customers happy and encourage them to purchase from your business again. Good customer service can help your business grow and prosper.

### 154 Unemployment

One cause of unemployment may be downswings in the trade cycle, ie. periods of recession. Another explanation of wide-scale unemployment refers to structural employment. **Structural** unemployment arises from longer-term changes in the economy, affecting **specific** industries, regions and occupations. Structural unemployment often explains regional unemployment. Some regions of the UK such as Central Scotland, and the North-West have higher rates of unemployment because the **traditional** heavy industries which **located** there have gone into decline as they are **replaced** by cheaper imports from abroad. The new high-tech industries based on new technologies tend to be based in the South-East and along particular growth corridors.

### 155 How Mathematics Happened

Rudman looks at how a poor understanding of Maths has led historians to false conclusions about the Mathematical **sophistication** of early societies. Rudman's final observation - that ancient Greece enjoys **unrivalled** progress in the subject **while** failing to teach it at school - leads to a **radical** punchline; Mathematics could be better learnt after we **leave** school.

### 156 The Civil Society

For too long we have held preconceived notions of 'the' market and 'the' state that were seemingly independent of local societies and cultures. The debate about civil society ultimately is about how culture, market and state **relate to** each other. Concern about civil society, however, is not only relevant to central and eastern Europe and the developing world. It is very much **of interest** to the European Union as well. The Civil Dialogue initiated by the Commission in the 1990s was a first attempt by the EU to give the institutions of society-and not only governments and businesses-a voice at the policy-making tables in Brussels. The EU, like other international institutions, has a long way to go in trying to **accommodate** the frequently divergent interests of non-governmental organizations and citizen groups. There is increasing **recognition** that international and national governments have to open up to civil society institutions.

### 157 The Physical Universe

Stars and the material between them are almost always found in gigantic **stellar** systems called galaxies. Our own galaxy, the Milky Way System; happens to be one of the two **largest systems** in the Local Group of two dozen or so galaxies. The other is the Andromeda galaxy; it **stretches** more than one hundred thousand light-years from one end to the other, and it is **located** about two million light-years **distant** from us.

### 158 Free to Choose

Friedman showed that, while people do save more when they earn more, it is **only** to spend later. Those in work save **against** a **time** of sickness, unemployment or old age - but because the sick, unemployed and elderly **spend** their savings, overall **consumption** does not fall as people get richer.

### 159 Benefits of Coffee

Coffee is enjoyed by millions of people every day and the 'coffee experience' has become a staple of our modern life and **culture**. While the current body of

research related to the effects of coffee **consumption** on human health has been contradictory, a study in the June issue of Comprehensive Reviews in Food Science and Food Safety, which is published by the Institute of Food Technologists (IFT), found that the potential **benefits** of moderate coffee drinking outweigh the risks in adult consumers for the majority of major health **outcomes** considered.

### 160 Bored in Class

A majority of U.S. high school students say they get bored in class every day, and more than one out of five has considered dropping out, according to a survey **released** on Wednesday. The survey of 81,000 students in 26 states found two-thirds of high school students **complain** of boredom, usually because the subject matter was **irrelevant** or their teachers didn't **seem** to care about them.

### 161 Mice and Fear

Researchers in Europe and the US wanted to find out exactly what happens to our brain when we find ourselves stunned with fright in the hope of better understanding how fear **interplays** with human anxiety disorders.

For the first time, they **traced** and linked three parts of the brain **responsible** for freezing behaviors: the amygdala, ventrolateral periaqueductal grey region and magnocellular nucleus.

Mice are excellent lab animals where it comes to anxiety and fear experiments. When a mouse is scared, its defensive behaviors range from freezing, attacking, risk **assessment** or fleeing the scene. How a mouse acts depends on **variables** such as access to escape **routes** or the level of threat faced.

So Andreas Lüthi at the Friedrich Miescher Institute for Biomedical Research in Switzerland and colleagues from Europe and the US **observed** brain activity in mice placed in frightening situations to trace the brain circuits responsible for freezing behaviors.

In particular, the researchers wanted to **learn** more about a part of the brain called the ventrolateral periaqueductal grey region, which was believed to **play** some part in a mouse's instinct to freeze or flee.

### 162 A Curious Herbal

A herbal is a book of plants, describing their appearance, their properties and how they may be used for preparing ointments and medicines. The medical use of plants is **recorded** on fragments of papyrus and clay tablets from ancient Egypt, Samaria and China that date back 5,000 years but document

traditions far older still. Over 700 herbal **remedies** were detailed in the Papyrus Ebers, an Egyptian text written in 1500 BC.

Around 65 BC, a Greek physician called Dioscorides wrote a herbal that was **translated** into Latin and Arabic. Known as 'De materia medica', it became the most influential work on medicinal plants in both Christian and Islamic worlds until the late 17th century. An illustrated manuscript copy of the text made in Constantinople (modern-day Istanbul) **survives** from the sixth century. The first **printed** herbals date from the dawn of European printing in the 1480s. They provided valuable information for apothecaries, whose job it was to make the pills and potions **prescribed** by physicians. In the next century, landmark herbals were **produced** in England by William Turner, considered to be the father of British botany, and John Gerard, whose illustrations would inspire the floral fabric, wallpaper and tile designs of William Morris four centuries later.

### 163 Mayan Civilization

The Classic **era** of Mayan **civilization** came to an end around 900 AD. Why this happened is unclear; the cities were probably over-farming the land, so that a **period** of drought led to famine. Recent geological **research** supports this, as there appears to have been a 200-year drought around this time.

### 164 The Corn People

Descendants of the Maya living in Mexico still sometimes refer to themselves as 'the corn people'. The phrase is not intended as metaphor. Rather, it's meant to **acknowledge** their abiding **dependence** on this miraculous grass, the **staple** of their diet for almost 9000 years.

The supermarket itself-the wallboard and joint compound, the linoleum and fiberglass and adhesives out of which the building itself has been built-is in no small measure a **manifestation** of corn.

### 165 The Conservation Department

The Gallery's Conservation Department performs one of the Gallery's **core** functions, the long-term preservation of all Collection items, to make them **accessible** now and in future.

The Collection **dates** from the 8th century to the present day, and **consists** of portraits in a variety of media, so the Gallery employs Conservators with **expertise** in a range of disciplines, including Framing, Painting, Paper, Sculpture and Photography.

### 166 Customer Power

Organizations need to integrate their sales activities more both internally and with customers' needs according to a new book co-authored by an academic at the University of East Anglia. The book **addresses** how sales can help organizations to become more customer oriented and considers how they are responding to challenges such as increasing competition, more **demanding** customers and a more complex selling environment.

Many organizations are facing escalating costs and a growth in customer power, **which** makes it necessary to allocate resources more strategically. The sales function can provide critical customer and market knowledge to help inform both innovation and marketing. However, the authors say that within the industry **there** is still uncertainty about the shape a future sales team should take, how it should be managed, and how it **fits** into their organization's business model.

### 167 Classic

One of the most important things to remember is that "classic" does not necessarily translate to "favorite" or "bestselling". Literature is **instead** considered classic when it has stood the test of time and it stands the test of time when the artistic quality it expresses be it an expression of life, truth, beauty, or anything about the **universal** human condition continues to be relevant, and continues to **inspire** emotional responses, no matter the period in which the work was written. Indeed, classic literature is considered as such **regardless** of book sales or public popularity. That said, classic literature usually merits lasting **recognition** from critics and other people in a position to **influence** such decisions and has a universal appeal. And, while effective use of language as well as technical excellence is a must, not everything that is well-written or is characterized by technical achievement or critical acclaim will automatically be considered a classic. **Conversely**, works that have not been **acknowledged** or received positively by the writer's contemporaries or critics can still be considered as classics.

### 168 Studying Law

It is important to **emphasize** the need for hard work as essential part of studying law, because far too many students are tempted to think that they can succeed by relying on what they imagine to be their natural ability, without bothering to add the expenditure of effort. To take an analogy, some people prefer the more or less instant **gratification** which comes from watching a television adaptation of a classic novel to the rather more **laborious** process of reading the novel itself. Those who **prefer** watching television to reading the



book are less likely to study law successfully, unless they rapidly acquire a **taste** for text-based materials.

### 169 Matchstick Man

Laurence Stephen Lowry (1 November 1887 — 23 February 1976) was an English artist. Many of his drawings and paintings depict Pendlebury, Lancashire, where he lived and worked for more than 40 years, and also Salford and its surrounding areas. Lowry is famous for painting scenes of life in the **Industrial** districts of North West England in the mid-20th century. He developed a distinctive style of painting and is best **known** for his urban landscapes peopled with human figures often **referred** to as “**matchstick** men”. He painted mysterious unpopulated landscapes, brooding **portraits** and the unpublished “marionette” works, which were only found after his death.

### 170 The Nature Conservation Amendment Act

The Nature Conservation Amendment Act of 1996 enables the Minister of Environment and Tourism to register a conservancy if it has a **representative** committee, a legal constitution, which provides for the sustainable **management** and utilization of game in the conservancy, the ability to manage the funds, an approved method for the equitable distribution of benefits to members of the community and defined **boundaries**.

### 171 Ancient Egyptians Music

Music was as important to the ancient Egyptians as it is in our modern society. Although it is thought that music played a **role** throughout the history of Egypt, those that **study** the Egyptian writings have discovered that music **seemed** to become more important in what is called the ‘pharaonic’ **period** of their history. This was the **time** when the Egyptian dynasties of the pharaohs were **established** (around 3100 BCE) and music was **found** in many parts of every day Egyptian life.

The ancient Egyptians were very organized and this included how they **organized** and arranged music and musicians. They brought music to their religious ceremonies, but it was also played and **performed** in s, palaces, the farms, on the battlefield and even in their tombs. The Egyptian gods Hathor and Bes were their gods of music and they had many ceremonies devoted to them that **involved** song and dance to accompany the playing of musical instruments.

### 172 Queensland University

David Lynch is professor and head of education at Charles Darwin University. Prior to this he was sub dean in the Faculty of Education and Creative Arts at Central Queensland University and foundation head of the University's Noosa campus. David's career in education began as a primary school teacher in Queensland in the early 1980's and progressed to four principal positions before entering high education. David's research interests predominate in teacher education with particular interest in building teacher capability to meet a changed world.

### 173 Volcano's Eruption

Volcanoes blast more than 100 million tons of carbon dioxide into the atmosphere every year but the gas is usually harmless. When a volcano erupts, carbon dioxide spreads out into the atmosphere and isn't concentrated in one spot. But sometimes the gas gets trapped underground under enormous pressure. If it escapes to the surface in a dense cloud, it can push out oxygen-rich air and become deadly.

Huge clouds of carbon dioxide were released from California's volcanic Mammoth Mountain in 1984, killing thousands of trees. The U.S. Forest Service declared the area off-limits to campers and keeps a close eye on gas levels there to this day.

### 174 The United Nations (The UN- Different Version)

The United Nations is an international organization founded in 1945. Due to its unique international character, and the powers vested in its founding Charter, the organization can take action on a wide range of issues and provide a forum for its 193 Member States to express their views, through the General Assembly, the Security Council, the Economic and Social Council and other bodies and committees. The work of the United Nations reaches every corner of the globe. Although best known for peacekeeping, peacebuilding, conflict prevention, and humanitarian assistance, there are many other ways the United Nations and its system (specialized agencies, funds, and programs) affect our lives and make the world a better place.

### 175 Canadian Arctic

This summer, 41 UBC alumni and friends participated in expeditions to the Canadian Arctic and the legendary Northwest Passage. Presentations, conversations and learning accompanied their exploration of the great outdoors aboard the Russian-flagged Akademik Ioffe, designed and built in

Finland as a scientific research vessel in 1989. Her bridge was open to passengers virtually 24 hours a day. Experts on **board** presented on topics including climate change, wildlife, Inuit culture and history, and early European explorers. UBC professor Michael Byers presented on the issue of Arctic sovereignty, a **growing** cause of debate as ice melts, new shipping routes open, and natural resources **become** accessible. Recommended pre-trip reading was late UBC alumnus Pierre Bertons book, The Arctic Grail.

### **176 Anesthetic**

Before effective anesthetics, surgery was very crude and very painful. Before 1800, alcohol and opium had **little** success in easing pain during operations. Laughing gas was used in 1844 in dentistry in the USA, but failed to ease all pain and patients **remained** conscious. Ether (used from 1846) made patients totally unconscious and lasted a long time. However, it could make patients cough during operations and sick afterwards. It was highly flammable and was **transported** in heavy glass bottles. Chloroform (used from 1847) was very effective with few side effects. However, it was difficult to get the dose right and could kill some people **because of** the effect on their heart. An inhaler helped to regulate the dosage.

### **177 Legal Deposit**

Legal deposit has existed in English law since 1662. It helps to ensure that the nation's published output (and thereby its **intellectual** record and future published heritage) is collected systematically, to **preserve** the material for the use of future generations and to make it available for **readers** within the designated legal deposit libraries.

The Legal Deposit Libraries are the British Library, the National Library of Scotland, the National Library of Wales, the Bodleian Libraries, Oxford and the University Library, Cambridge.

The legal deposit **system** also has **benefits** for authors and publishers: Deposited publications are made available to users of the deposit libraries on their premises, are **preserved** for the benefit of future generations, and became part of the nation's heritage. Publications are **recorded** in the online catalogs and **become** an essential **research resource** for generations to come. Most of the books and new serial titles are listed in the British National Bibliography (BNB), which is used by **librarians** and the book trade for stock selection. The BNB is available in a variety of formats.

### 178 Australia and New Zealand

Australia and New Zealand have many common links. Both countries were recently settled by Europeans, are predominantly English speaking and in that sense, share a common culture **heritage**. Although in close proximity to one another, both countries are geographically isolated and have small populations by world **standards**. They have similar histories and enjoy close relations on many fronts.

In terms of **population characteristics**, Australia and New Zealand have much in common. Both countries have minority indigenous populations, and during the latter half of the 20th century have seen a steady stream of migrants from a variety of regions throughout the world. Both countries have **experienced** similar declines in fertility since the high levels recorded during the baby boom, and alongside this have enjoyed the benefits of continually improving life expectancy. One consequence of these trend is that both countries are faced with an aging population, and the **associated challenge** of providing appropriate care and support for this growing group within the community.

### 179 Walt Disney World

Walt Disney World has become a pilgrimage site partly because of the luminosity of its cross-cultural and **marketing** and partly because it's **utopian** aspects appeal powerfully to real needs in the capitalist **society**. Disney's marketing is unique because it captured the symbolic essence of **childhood** but the company has gained access to all public shows, comic books, dolls, apparels, and **educational** film **strips** all point to the parks and each other.

### 180 Growth of The Internet

The exponential growth of the internet was **heralded**, in the 1990s, as revolutionizing the production and **dissemination** of information. Some people saw the internet as a means of **democratizing** access to knowledge. For people concerned with African development, it seemed to offer the possibility of **leapfrogging** over the technology gap that separates Africa from advanced industrialized countries

However, the initial optimism about the internet's potential to provide an enormous and ever-expanding body of publicly available knowledge has had to come to terms with material and social **obstacles**.

### 181 Medalists

In an often -cited study about counterfactuals, Medvec, Madey, and Gilovich (1995) found that bronze medalists appeared happier than silver medalists in

television coverage of the 1992 Summer Olympics. Medvec et al. **argued** that bronze medalists compared themselves to 4th place finishers, **whereas** silver medalists compared themselves to gold medalists. These counterfactuals were the most **salient** because they were either qualitatively different (gold vs. silver) or categorically different (medal vs. no medal) from what **actually** occurred. Drawing on archival data and experimental studies, we show that Olympic athletes (among others) are more likely to make counterfactual comparisons based on their **prior** expectations, consistent with decision affect theory. Silver medalists are more likely to be disappointed because their personal expectations are higher than **those** of bronze medalists. We provide a test between expectancy-base versus category-based processing and discuss circumstances that trigger each type of processing.

### 182 Sewing Machine

A sewing machine is a machine used to stitch fabric and other materials together with thread. Sewing machines were invented during the first Industrial Revolution to decrease the amount of manual sewing work performed in clothing companies. Since the **invention** of the first working sewing machine, **generally** considered to **have been** work of Englishman Thomas Saint in 1790, the sewing machine has **generally improved** the efficiency and productivity of the clothing industry.

Home sewing machines are designed for one person to sew individual items while using a single stitch type. In a modern sewing machine, the fabric easily **glides** in and out of the machine without the inconvenience of needles and thimbles and other such tools used in hand sewing, automating the process of stitching and saving time.

Industrial sewing machines, by contrast to **domestic machines**, are larger, faster, and more varied in their size, cost, appearance, and task.

### 183 Define Robots

Joseph Engelberger, a pioneer in industrial robotics, once marked, "I can't **define** a robot, but I know one when I see one." If you consider all the different machines people **call** robots, you can see that it's nearly impossible to come up with a **comprehensive** definition. Everybody has a different **idea** of what constitutes a robot.

### 184 Genius

Genius, in the popular conception, is inextricably tied up with precocity doing something truly creative; we're inclined to think, requires the freshness and

energy of youth. Orson Welles made his masterpiece Citizen Kane, at twenty-five. Herman Melville wrote a book a year **through** his **late** twenties, culminating at age thirty-two, with Moby-Dick. Mozart wrote his breakthrough Piano Concerto No.9 in E-Flat-Major at the **age** of twenty-one. In some creative forms, like lyric poetry, the **importance** of precocity had hardened into an iron law. How old was T.S. Eliot when he wrote The Love Song of Alfred Prufrock (I grow old... I grow old)? Twenty-three. Poet's peak young, the creativity researcher James Kaufman maintains, the author of flow agrees: "The most creative lyric verse is believed to be that written by the young." According to the Harvard psychologist Howard Gardner, a leading **authority** on creativity Lyric poetry is a **domain** where **talent** is discovered early, burns brightly, and then peters out at an early **age**.

### 185 High-Protein Diet

In our studies, those people on a higher-protein **diet** lost the same amount of weight as those on a higher-carbohydrate diet. This is because the two diets **offered** an equal amount of fat. However, body composition (that is, the ratio of fat to muscle) **showed** / **observed** greater improvement among those people on the higher-protein diet. When the **participants** in other studies were allowed to eat until they were no longer hungry, those on the higher-protein diet lost more weight than those on the higher carbohydrate diet, even after more than a year. The reduction in hunger and the beneficial effect on muscle provided by the higher-protein diet is mostly related to its protein content, while the enhanced fat-loss seems to be related to its lower amounts of carbohydrate. The diet is healthy because its protein comes from lean red meat fish, chicken and low-fat dairy products, all of which **provide** good nutrition. A high-protein diet in which the protein comes from protein powders and **supplements** is unlikely to be healthy, unless the supplements are **fortified** with vitamins and minerals.

### 186 Weightless Environment

Living in a weightless **environment** for long periods of time can also result in bone mineral loss and **muscle** atrophy as well as dangerous exposure to the sun's radiation, and it is because of these health hazards that stays on the International Space Station are **restricted** to six months.

### 187 Coastal hypothesis

The coastal hypothesis **suggests** an economy based on marine mammal hunting, saltwater fishing, shellfish gathering, and the use of watercraft. **Because of** the barrier of ice to the east, the Pacific Ocean to the west, and

populated areas to the north, may have been a greater **impetus** for people to move in a southerly direction.

### **188 Absence from Work**

Absence from work is a costly and **disruptive** problem for any organization. The cost of absenteeism in Australia has been put at 1.8 million hours per day or \$1400 million annually. In 2015, a study was **conducted** in the Prince William Hospital in Brisbane, Australia, where, prior to this time, few active steps **had** been taken to measure, understand or manage the **occurrence** of absenteeism.

### **189 Leadership**

Leadership is all about being granted **permission** by others to lead their thinking. It is a bestowed moral authority that gives the right to organize and direct the efforts of others. But moral authority does not come from simply managing people effectively or communicating better or being able to motivate. It comes from many **sources**, including being authentic and genuine, having integrity, and showing a real and deep understanding of the business in question. All these **factors** build confidence.

Leaders lose moral authority for three reasons: they behave **unethically**; they become plagued by self-doubt and lose their conviction; or they are blinded by power, lose self-awareness and thus lose **connection** with those they lead as the context around them changes. Having said all this, it has to be assumed that if someone becomes a leader, at some point they understood the difference between right and wrong. It is up to them to **abide** by a moral code and up to us to ensure that the moment we suspect they do not, we fire them or vote them out.

### **190 Reasoning Lies**

One of the most eminent of psychologists, Clark Hull, **claimed** that the essence of reasoning lies in the putting together of two 'behavior segments' in some **novel** way, never actually performed before, so as to reach a goal. Two followers of Clark Hull, Howard and Tracey Kendler, **devised** a test for children that was explicitly based on Clark Hull's principles. The children were given the task of learning to **operate** a machine so as to get a toy. In order to succeed, they had to go through a two stage sequence.

### 191 New Systematic Nomenclature

The new systematic nomenclature was so **cumbersome** that many chemists preferred **revert** to the older trivial names that were at least shorter. At least, that is the sensible reason. Actually, tradition seems to carry more weight than **system** with some scientists.

### 192 Buying a House

Buying a **house** can seem like a daunting process —First you need to work out how much you can borrow. This is where our services will really help you. Make sure you have an accurate and detailed budget that takes into account all associated with purchasing a property, including stamp duty, council rates, and other fees. We can help you identify these extra costs. Ask us for our budget planner if you don't already have one. Interest rates move constantly, so you will need to allow room in your budget for interest rate increases and for other **unforeseen events**. All purchase funds are paid at settlement. In the **ordinary course of events**, settlement takes place, the purchase price is paid in full and the deposit bond simply lapses group certificates for the **past** two years.

### 193 Tree Ring

A bonus of dendrochronology is that the width and substructure of each ring **reflect** the amount of rain and the **season** at which the rain fell during that particular year. Thus, tree ring studies also allow one to reconstruct **past** climate; e.g., a series of wide rings means a wet period, and a **series** of narrow rings means a **drought**.

### 194 Environmentalists

Although environmentalists have been **warning** about this situation for decades, many other people are finally beginning to realize that if we don't act soon it will be too late. The good news is that more and more businesses and governments are beginning to **understand** that without a healthy environment the global economy and everything that depends on it will be seriously endangered. And they are beginning to take **positive** action.

### 195 The UK Private Schools

Private schools in the UK are redoubling their marketing efforts to foreigners. Almost a third of the 68,000 boarding pupils at such schools **already** come from overseas. But now, with many UK residents **unwilling** or unable to afford the fees - top boarding schools are **edging towards** £30,000 (\$49,759) a year - and a



cultural **shift** away from boarding, many schools are looking abroad to survive. Sue Fieldman, press officer at The Good Schools Guide, says: "It's a whole new world out there. Ten years ago, English private schools were full of English pupils. Now you see foreigners in most schools. With the recession, there are gaps in desks and beds. If they can't fill them with English, they fill them with foreigners, especially Russians and Chinese." Overseas students now **account** for about £500m of fee income a year for boarding schools in the UK.

### 196 Radioactivity

So why is it a concern? It is **because** radioactivity is invisible and un-sensed, and for that reason is perceived as scary. **Nevertheless**, we understand quite well the radiation levels to which people can be **exposed** without harm, and those levels, are orders of **magnitude** above at the typical background levels.

### 197 Country (Defining a Country?- New Sentences)

What is a country, and how is a country **defined**? When people ask how many countries there are in the world, they **expect** a simple answer. **After all**, we've **explored** the **whole** planet, we have international travel, satellite navigation and plenty of global organizations like the United Nations, so we should really know how many countries there are! **However**, the answer to the question **varies** according to whom you ask. **Most** people say there are 192 countries, but **others** point out that there could be more like 260 of them. So why isn't there a **straightforward** answer? The problem **arises** because there isn't a universally agreed definition of 'country' and because, for political **reasons** some countries **find it convenient** to recognize or not recognize **other** countries. For example, Taiwan claims to be a country, but China states that Taiwan is just another part of China. The consequence is that the USA, that doesn't want to upset China, doesn't recognize Taiwan as a country. **Conversely** from the end of the Second World War, the Soviet Union annexed the countries of Estonia, Latvia and Lithuania but the USA continued to regard them as independent countries that were 'occupied' because it didn't really get on with the USSR. So, how do governments define what makes a country?

### 198 Labor Market

Higher education qualifications provide a substantial **advantage** in the labor market. Higher education graduates are less likely to be **unemployed** and tend to have **higher** incomes than those without such qualifications. Having a highly educated workforce can also lead to increased productivity and innovation and make Australia more **competitive** in the global market.

## 199 Major Stressors

Research has suggested that major stressors in our lives are life **changes**, for example, moving house, marriage or relationship breakdown. Work-related factors, **including** unemployment and boredom, are also common **causes** of stress. Differences in personality may also **play** a part.

## 200 Bhutan

Bhutan is the last standing Buddhist Kingdom in the World and, until recently, has **preserved** much of their culture since the 17th century by avoiding globalization and staying isolated from the world. Internet, television, and western dress were banned from the country up until ten years ago. But over the past ten years globalization has begun to change in Bhutan, but things remain **perfectly** balanced. Bhutan is the only country in the world that has a 'GNH.' You may think GNH is just another **statistically** based term with no real-life application, but it refers to "Gross National Happiness". The process of measuring GNH began when Bhutan opened up to globalization. It measures people's quality of life, and makes sure that "material and spiritual development happen together." Bhutan has done an amazing job of finding this balance. Bhutan has continually been (ranked) as the happiest country in all of Asia, and the eighth Happiest Country in the world according to Business Week. In 2007, Bhutan had the second fastest growing GDP in the world, at the same time as **maintaining** their environment and cultural identity. Bhutan is the only Buddhist Kingdom in the world; Mahayana Buddhism is the official religion of Bhutan. Over two thirds of the people are Buddhist, and Buddhism is supported by the government both politically and economically. The government gives **subsidies** to Buddhist monasteries, shrines, monks and other Buddhist programs.

## 201 Problem of Communication

The writer- or, for that matter, the speaker conceives his thought 'whole', as a unity, but must express it in a line of words; the reader- or listener- must take this line of symbols and from it **reconstruct** the original wholeness of thought. There is **little** difficulty in conversation, because the listener receives innumerable cues from the physical expressions of the speaker; there is a dialogue, and the listener can **cut** in at any time. The advantage of group discussion is that people can overcome linear sequence of words by **conversing** on ideas from different directions; which makes for wholeness of thought. But the reader is confronted by line upon line of printed symbols, without benefits of physical **tone** and emphasis or the possibility of dialogue or discussion.

## 202 Final Price

Once an organization has its product to sell, it must then **determine** the appropriate price to sell it at. The price is set by balancing many factors including supply-and-demand, cost, desired profit, competition, perceived value, and market behavior. Ultimately, the final price is determined by what the market is willing to **exchange** for the product. Pricing theory can be quite complex because so many **factors** influence what the purchaser **decides** is a fair value.

## 203 Neurons

In animals, movement is **coordinated** by a cluster of neurons in the spinal cord called the central **pattern** generator (CPG). This produces signals that drive muscles to **contract** rhythmically in a way that produces running or walking, depending on the pattern of **pulses**. A simple signal from the brain instructs the CPG to switch between different **modes**, such as going from a standstill to walking.

## 204 Wagonways

Roads of rails called Wagonways were being used in Germany as **early** as 1550. These **primitive** roads consisted of wooden rails over which house-drawn wagons or carts moved with greater ease than over dirt roads. Wagonways were the beginnings of modern railroads. **By** 1776, iron had replaced the wood in the rails and wheels on the carts. Wagonways evolved into Tramways and spread throughout Europe.

Horses, however, still provided all the pulling power. In 1789, Englishmen William Jessup designed the first wagons with **flanged** wheels. The **flange** was groove that allowed the wheels to better **grip** the rail, this was an important design that carried over to later locomotive.

## 205 Management of Water Resources

Equitable and sustainable management of water resources is a major global challenge. About one third of the world's population lives in countries with **moderate** to high water stress with **disproportionately** to high impacts on the poor. With **current** projected human population growth, industrial development and the expansion of irrigated agriculture in the next two decades, water demand will rise to levels that will make the task of providing water for human **sustenance** more difficult.

Since its establishment, the United Nations Environment Program (UNEP) has worked to promote sustainable water resources management practices

through collaborative approaches at the national, regional and global levels. After more than 30 years, water resources management continues to be a strong pillar of UNEP's work. UNEP is actively participating in addressing water issues together with partner UN agencies, other organizations and donors. They facilitate and catalyze water resource assessments in various developing countries; implement projects that assist countries in developing integrated water resource management plans; create awareness of innovative alternative technologies; and assist the development, implementation and enforcement of water resource management policies, laws and regulations.

## 206 Fiction and Life

The precise relationship between fiction and life has been debated extensively. Most modern critics agree that, whatever its apparent factual content or verisimilitude, fiction is finally to be regarded as a structured imitation of life and should not be confused with a literal transcription of life itself. While fiction is a work of the imagination rather than reality, it can also be based closely on real events, sometimes experienced by the author. In a work of fiction, the author is not the same as the narrator, the voice that tells the story. Authors maintain a distance from their characters. Sometimes that distance is obvious for instance, if a male writer tells a story from the point of view of a female character. Other times it is not so obvious, especially if we know something of the author's life and there are clear connections between the story and the author's life. The writer of fiction is free to choose his or her subject matter and is free to invent, select, and arrange fictional elements to achieve his or her purpose. The elements of fiction are the different components that make up a work of fiction. All literature explores a theme or significant truth expressed in various elements such as character, plot, setting, point of view, style, and tone that are essential and specific to each work of fiction. All of these elements bind a literary work into a consistent whole and give it unity. Understanding these elements can help the reader gain insight about life, human motives, and experience. Such insight is one of the principal aims of an effective work of fiction; when readers are able to perceive it, they develop a sense of literary judgment that is capable of enriching their lives. The following sections describe elements that should be considered in the analysis of fiction.

## 207 What Will Make You Happy?

Want to know what will make you happy? Then ask a total stranger — or so says a new study from Harvard University, which shows that another person's experience is often more informative than your own best guess.

The study, which appears in the current issue of Science, was led by Daniel Gilbert, professor of psychology at Harvard and author of the 2007 bestseller *Stumbling on Happiness*, along with Matthew Killingsworth and Rebecca Eyre, also of Harvard, and Timothy Wilson of the University of Virginia.

"If you want to know how much you will enjoy an experience, you are better off knowing how much someone else enjoyed it than knowing anything about the experience itself," says Gilbert. "Rather than closing our eyes and **imagining** the future, we should examine the experience of those who have been there.

Previous research in psychology, neuroscience, and behavioral economics has shown that people have difficulty predicting what they will like and how much they will like it, which **leads** them to make a wide variety of poor decisions. **Interventions** aimed at **improving** the accuracy with which people **imagine** future events have been generally unsuccessful.

## 208 Dark Energy

The rest of the universe appears to be made of a mysterious, invisible **substance** called dark matter (25 percent) and a force that repels gravity known as dark energy (70 percent). Scientists have not yet **observed** dark matter directly. It doesn't interact with baryonic matter and it's completely invisible to light and other forms of electromagnetic radiation, making dark matter **impossible** to detect with current instruments. But scientists are confident it **exists** because of the gravitational effects it appears to have on galaxies and galaxy clusters.

## 209 Impressionism (2<sup>nd</sup> Version)

Impressionism was an art movement of the 19th century, which began as a private association of Paris-based artists who exhibited publicly in 1874. It is characterized by a concern with **depicting** the visual impression of the moment, especially in terms of the shifting effect of light and color. The term impressionism **originated** from art critic Louis Leroy, who commented on Monet's painting 'Impression: Soleil Levant'. Leroy said that it indeed was just an impression and that the work could not be considered finished. The impressionists adopted this term and decided to use it for their own **benefit**. Early Impressionist painters were **radicals** in their time, breaking many of the rules of picture making that had been set by earlier **generations**. Up until the Impressionists, history had been the accepted **source** of subject matter for paintings.

## 210 Sharks

Sharks killed four people and injured 58 others around the world in 2006, a comparatively dull year for dangerous encounters between the two species. Shark bite numbers **grew** steadily over the last century as humans reproduced exponentially and **spent** more time at the seashore. But the numbers have been **flat** / **stabilised** over the past five years as overfishing **thinned** the shark population near shore and swimmers **have learned** / **got smarter** about the risks of wading into certain areas, Burgess said.

## 211 Dairy Farms

A few summers ago I visited two dairy farms, Huls Farm and Gardar Farm, which despite being located thousands of miles apart were still remarkably similar in their strengths and vulnerabilities. Both were by far the largest, most prosperous, most technologically advanced farms in their **respective districts**. In particular, each was centered around a magnificent state-of-the-art barn for **sheltering** and milking cows. Those structures, both neatly **divided** into opposite-facing rows of cow stalls, dwarfed all other barns in the district. Both farms let their cows **graze** outdoors in lush pastures during the summer, produced their own hay to harvest in the late summer for feeding the cows through the winter, and **increased** their production of summer fodder and winter hay by irrigating their fields. The two farms were similar in area (a few square miles) and in barn size, Huls barn holding somewhat more cows than Gardar barn (200 vs. 165 cows, respectively). The owners of both farms were viewed as leaders of their **respective** societies. Both owners were deeply religious. Both farms were located in **gorgeous** natural **settings** that attract tourists from afar, with backdrops of high snow-capped mountains drained by streams teeming with fish, and sloping down to a famous river (below Huls Farm) or 3ord (below Gardar Farm).

## 212 Serve on a Jury

Serving on a jury is normally compulsory for individuals who are **qualified** for jury service. A jury is **intended** to be an impartial panel capable of reaching a verdict. There are often **procedures** and **requirements** may include a fluent understanding of the language and the opportunity to test jurors' neutrality or otherwise exclude jurors who are perceived as likely to be less than **neutral** or partial to one side.

### 213 Australia

Australia is a dynamic multi-cultural society, viewed by many as the world's most desirable place to live. Here Frank Welsh traces Australia's intriguing and varied history to **examine** how this society **emerged**, from its ancient Aborigine tribes and earliest British convict **settlements** to today's modern nation- one that **retains** strong links with its colonial past but is **increasingly independent** and diverse.

### 214 Professor Phoenix

For Professor David Phoenix, the dean of the faculty of science and technology, the return of single-honours chemistry is a matter of **credibility** and pride. "If you say you're a science faculty, you have to have all the core sciences, and this course will mean we attract a new supply of potential Masters and PhD students in chemistry." Phoenix is adamant that the new course will teach "solid **chemistry**", but he thinks that an attraction for students will be a teaching approach that **differs** significantly from his days as an undergraduate. This takes real-life issues as the starting point of lectures and modules, such as how drugs are made or the science behind green issues. Out of this study, he says, students will be exposed to exactly the same core chemistry, unchanged over decades, but they will be doing it in a way that is more **engaging** and more likely to lead to more fundamental learning.

### 215 High Culture

Many people today think of culture in the way that it was thought of in Europe during the 18th and early 19th centuries. This **concept** of culture reflected inequalities within European societies and their colonies around the world. This understanding of culture equates culture with civilization and contrasts both with nature or non-civilization. According to this understanding of culture, some countries are more civilized than others, and some people are more cultured than others. Theorists like Matthew Arnold (1822-1888) believed that culture is simply that which is created by "the best that has been thought and said in the world". Anything that doesn't **fit** into this category is labeled as chaos or anarchy. From this perspective, culture is closely tied to cultivation, which is the progressive refinement of human **behavior**.

In practice, culture referred to elite goods and activities such as haute cuisine, high fashion or haute couture, museum-caliber art and classical music. The word cultured referred to people who knew about and took part in these activities. For example, someone who used culture in this sense might **argue** that classical music is more refined than music by working-class people, such as jazz or the indigenous music traditions of aboriginal peoples.

## 216 Attending Preschool

Disadvantage in early childhood poses multiple risks to children's development. Factors such as low socioeconomic status, long-term unemployment of parents, and social isolation may have lasting **impacts** on a child's chance of reaching their full potential. Whilst not eliminating disadvantage, preschool education can help to **lessen** the effects of these risk factors and can provide children with a better start to school. However, some of these factors may also be **barriers** to preschool attendance for groups that would benefit most from preschool education.

In Australia, the early years of children's education is the responsibility of many government and non-government agencies and it occurs in a range of settings. Preschool is aimed at children around four years of age to **prepare** them for compulsory schooling from the age of six years. In most states and territories, children can start full-time schooling at five years of age, when they enroll in a kindergarten or preparatory year. In 2001, just over half of five year olds (57%) were at school with about a third (34%) attending preschool. While in some states and territories children can **commence** preschool before they turn four, participation rates for three year olds are much lower than four year olds (24% compared with 56% for four year olds in 2001). The preschool participation rate of four year olds in 2001 (56%) was similar to the rate in 1991 (58%).

## 217 Question

You have about 30 minutes to answer each question. You must take account of how many marks are **available** for each part when you answer it. Even if you think you can write more, don't spend 15 minutes **answering** a part worth only 5 marks. Leave space at the end of your answer and come back to it if you have **time** to **spare** later. And if you can't think of an answer to some part, leave a space and move on to the next part. Don't write about something else if you don't know the correct answer -- this is just a waste of your **valuable** time (and the examiner's).

## 218 Darkness in the Northern

The increasing darkness in the Northern Hemisphere this time of year "indicates to the plant that **fall** is coming on. So it starts recouping materials from the **leaves** before they drop off." Evergreens protect their needle-like foliage from freezing with **waxy** coatings and natural "antifreezes." But broadleaf plants,



like sugar maples, birches, and sumacs, have no such protections. As a result, they shed their leaves. But before they do, the plants first try to salvage important nutrients such as nitrogen and phosphorus.

### 219 Chronic Disease

If you have a chronic disease — such as heart disease, diabetes, asthma, or back or joint pain, exercise can have important health benefits. However, it's important to talk to your doctor before starting an exercise routine. He or she might have advice on what exercises are safe and any precautions you might need to take while exercising.

### 220 Fiber Segments

The trigger point causes the rest of the fiber segments to be stretched to capacity. It becomes a tight band. Normally the regular contracting and releasing of these little segments circulates blood in the capillaries that supply them (the segments) with their nutrients. When they hold this contraction, blood flow is stopped to that area, there is not an oxygen supply, and waste products are not pushed out. The trigger point then sends out pain signals until the trigger point is put in a position of rest again.

### 221 Pupils Skip School for Holidays

Children who skip school are increasingly on family holidays, government figures revealed today. Fewer children played truant this spring term compared with the spring term last year. Children missed 3m unauthorized days of school last term, compared with 3.7m days of school in the same period last year. But a hardcore group of truants - 6% of the school population - who account for more than three-quarters of all those on unauthorized absence, are more likely to be on a family holiday than they were in the same period last year. Some 1.2% of all absence was for family holidays not agreed by their school last term, compared with 0.9% for the same term last year. More than 60% of all absences were for illness, the same figure as last year.

### 222 Poverty

Measuring poverty on a global scale requires establishing a uniform poverty level across extremely divergent economies, which can result in only rough comparisons. The World Bank has defined the international poverty line as U.S. \$1 and \$2 per day in 1993 Purchasing Power Parity (PPP), which adjusts for differences in the prices of goods and services between countries. The \$1 per day level is generally used for the least developed countries, primarily African;

the \$2-per-day level is used for middle **income** economies such as those of East Asia and Latin America.

### 223 Steven Pinker

Steven Pinker, a cognitive psychologist best known for his book "The Language Instinct", has called music "auditory cheesecake, an exquisite confection crafted to tickle the sensitive spots of at least six of our mental faculties." If it **vanished** from our species, he said, "the rest of our lifestyle would be **virtually** unchanged." Others have argued that, on the **contrary**, music, along with art and literature, is part of what makes people human; its absence would have a brutalizing effect. Philip Ball, a British science writer and an avid music enthusiast, comes down somewhere in the middle. He says that music is ingrained in our auditory, cognitive and motor functions. We have a music instinct as much as a language **instinct**, and could not rid ourselves of it if we tried.

### 224 New Coastal Residents

People move to a new region for many different reasons. The **motivation** for moving can come from a combination of what researchers sometimes call 'push and pull **factors**' - those that encourage people to leave a region, and those that attract people to a region. Some of the factors that motivate people to move **include** seeking a better climate, finding more affordable housing, looking for work or retiring from work, leaving the **congestion** of city living, wanting a more pleasant environment, and wanting to be near to family and friends. In reality many complex factors and personal reasons may **interact** to motivate a person or family to move.

### 225 Sea and Land Breezes

During the day, the sun heats up both the ocean surface and the land. **Water** is a good absorber of the energy from the sun. The land absorbs much of the sun's energy as well. However, water heats up much more slowly than land and so the air above the land will be **warmer** compared to the air over the ocean. The warm air over the land will rise throughout the day, causing low pressure at the surface. Over the water, high surface pressure will form because of the colder air. To **compensate**, the air will sink over the ocean. The wind will blow from the higher pressure over the water to lower pressure over the land causing the sea breeze. The sea breeze strength will vary depending on the temperature **difference** between the land and the ocean.

## 226 Sustainable Job Growth

'Sustainable Job Growth' is a motto for many governments, especially in the aftermath of a recession. The problem of 'job quality' is less often addressed and may be seen as **hindering** job growth. The sentiment 'any job is better than no job' may resonate with governments as well as people, especially in the context of high unemployment. However, if the balance between improving the quality of **existing** jobs and creating new jobs becomes greatly imbalanced **towards** the latter, this could increase work stress among **current** and future workers, which in turn has health, economic and social costs. A recent British Academy Policy Centre Report on Stress at Work highlights these **concerns**, and describes the context, determinants and consequences of work-related stress in Britain.

## 227 Understanding Winds (Sea and Land Breezes- Different Version)

The world's atmosphere is forever on the move. Wind is air in motion. Sometimes air moves slowly, giving a **gentle** breeze. At other times it moves rapidly creating gales and hurricanes. **Gentle** or fierce, wind always starts in the same way. As the sun moves through the sky, it heats up some parts of the sea and land more than others. The air above these **hot** spots is warmed, becomes lighter than the surrounding air, and begins to rise. Elsewhere, cool air **sinks**, because it's **heavier**. Winds blow because- air squeezed out by sinking, cold air is sucked in under rising, warm air. Winds will blow wherever there is a **difference** in air temperature and pressure, always flowing from high to low pressure. Some winds blow in one place, and have a local name - North America's chinook and France's mistral. Others are part of a huge circulation pattern that sends winds over the **entire** globe.

## 228 Global Warming

You may well ask why science did not warn us of global warming sooner; I think that there are several reasons. We were from the 1970s until the end of the century **distracted by** the important global problem of stratospheric **ozone** depletion, which we knew was manageable. We threw all our efforts into it and succeeded but had little time to spend on climate change. Climate science was also neglected because twentieth-century science **failed to recognize** the true nature of Earth as a **responsive** self-regulating entity. Biologists were so carried away by Darwin's great vision that they failed to see that living things were tightly coupled to their material environment and that evolution concerns the whole Earth system with living organisms an **integral** part of it. Earth is not the Goldilocks planet of the solar system sitting at the right place for life. It was in this favorable state some two billion years ago but now

our planet has to work hard, against ever increasing heat from the Sun, to keep itself **habitable**. We have chosen the worst of times to add to its difficulties.

### **229 Universe (Dark Energy- Different Version)**

It seems we live in a bizarre Universe. One of the greatest mysteries in the whole of science is the prospect that 75% of the Universe is made up from a mysterious **substance** known as 'Dark Energy', which causes an acceleration of the cosmic expansion. Since a further 21% of the Universe is made up from invisible 'Cold Dark Mater' that can only be **detected** through its gravitational effects, the ordinary atomic matter making up the rest is apparently only 4% of the total cosmic budget. These **discoveries** require a shift in our perception as great as that made after Copernicus's **revelation** that the Earth moves around the Sun. This lecture will start by reviewing the checkered history of Dark Energy, not only since Einstein's proposal for a similar entity in 1917, but by tracing the concept back to Newton's ideas. This lecture will **summarize** the current evidence for Dark Energy and future surveys in which UCL is heavily involved: the "Dark Energy Survey", the Hubble Space Telescope and the proposed Euclid space mission.

### **230 School-to-Work Transition**

School-to-work transition is a historically **persistent** topic of educational policymaking and reform that impacts national systems of vocational education and training (Bailey, 1995). The **transition** process refers to a period between **completion** of general education and the beginning of vocational education or the beginning of gainful employment as well as to training systems, institutions, and programs that prepare young people for careers (Rauner, 1999). The status passage of youth from school-to-work has changed structurally under late modernism, and young people are **forced** to adapt to changing **demands** of their environment especially when planning for entry into the labor market. Since the transition to a job is seen as a major success in life, youth who manage this step successfully are more **optimistic** about their future; still others are disillusioned and pushed to the margins of society. While some young people have developed **successful** strategies to cope with these requirements, those undereducated and otherwise disadvantaged in society often face serious problems when trying to prepare for careers. Longer transitions lead to a greater **vulnerability** and to **risky behaviors**.

### **231 Poison Frogs**

Colorful poison frogs in the Amazon owe their great **diversity** to ancestors that leapt into the region from the Andes Mountains several times during the last 10

million years, a new study from The University of Texas at Austin suggests. This is the first study to show that the Andes have been a **major source** of diversity for the Amazon basin, one of the largest **reservoirs** of biological diversity on Earth. The finding runs **counter** to the idea that Amazonian diversity is the result of evolution only within the **tropical** forest itself. "Basically, the Amazon basin is a 'melting pot' for South American frogs," says graduate student Juan Santos, lead author of the study. "Poison frogs there have come from multiple places of **origin**, notably the Andes Mountains, over many millions of years. We have shown that you cannot understand Amazonian biodiversity by looking only **in** the **basin**. Adjacent regions have played a major role".

### **232 Agrarian Parties**

Agrarian parties are political parties chiefly representing the interests of peasants or, more broadly, the rural sector of society. The extent to which they are important, or **whether** they even exist, depends mainly on two factors.

One, obviously, is the size of an identifiable peasantry, or the size of the rural relative **to** the urban population. The other is a matter of social integration: **for** agrarian parties to be important, the representation of countryside or peasantry must not be integrated **with** the other major sections of society. **Thus** a country might possess a sizeable rural population, but have an economic system in which the interests of the voters were predominantly related to their incomes, not to their occupations or location; and in such a country the political system would be unlikely to include an important agrarian party.

### **233 Retirement**

For a start, we need to change our **concept** of 'retirement', and we need to change mindsets arising from earlier government policy which, in the face of high unemployment levels, encouraged mature workers to take early retirement. Today, government encourages them to **delay** their retirement. We now need to think of retirement as a phased process, where mature age workers **gradually** reduce their hours, and where they have considerable flexibility in how they combine their work and non-work time.

We also need to recognize the broader change that is occurring in how people work, learn, and live. Increasingly we are moving away from a linear relationship between education, training, work, and retirement, as people move in and out of jobs, careers, caregiving, study, and leisure. Employers of choice remove the **barriers** between the different segments of people's lives, by creating flexible conditions of work and a range of leave entitlements. They take an individualized approach to workforce planning and development so that the needs of employers and employees can be met **simultaneously**. This

approach supports the different transitions that occur across the life course - for example, school to work, becoming a parent, becoming responsible for the care of older relatives, and moving from work to retirement.

### 234 Arbitration

Arbitration is a method of conflict resolution which, with more or less **formalized mechanisms**, occurs in many political and legal spheres. There are two main **characteristics** to arbitration. The first is that it is a voluntary process under which two parties in conflict agree between themselves to be **bound** by the judgment of a third party which has no other **authority** over them; the judgment, however, is not legally binding. The second is that there is usually no clear **body** of **law** or set of rules that must apply; the arbitrator is free, **subject** to any prior agreement with the conflicting parties, to decide on whatever basis of justice is **deemed suitable**. Arbitration has been used successfully, for example, to decide on disputed borders between Israel and Egypt, where local history was a major part of the arbitrator's decision.

### 235 The Welfare (Personal Politics- New Sentences)

The morality of the welfare state **depends** on contribution and responsibility. Since some people don't **contribute** and many are irresponsible, the choice of those who do contribute and are responsible is either to **tolerate** the free riders, refuse to pay for the effects of their irresponsibility or trust the state to **educate** them.

Hence the government campaigns **against** smoking, alcoholism, obesity and gas guzzling- the first two solidly in place, the other two ramping up. But the British state now goes further: it acts in favor of sexual and racial minorities. In the case of gay men and women this means progressively removing the legal disadvantages under which they have lived, and ensuring that society as a whole **observes** the new order.

### 236 Snakes (Egg-Eating Snakes- New Sentences)

Egg-eating snakes are a small group of snakes whose **diet** consists only of eggs. Some eat only bird's eggs, which they have to **swallow** whole, as the snake has no teeth. Instead, these snakes have spines that stick out from the backbone. The spines **crack** the egg **open** as it passes through the throat.

It's **easy** to envision the evolution of this ability. Some snakes, like the rat snake, already eat smaller eggs as **part** of their **diet**. If you lose your teeth, and evolve some protrusions on your spine, you suddenly gain access to a rich source of nutrition unavailable to other snakes.

### 237 Sharks Have Personalities

Down the road, the study authors write, a better understanding of sharks' personalities may help scientists learn more about what drives their choice of things like prey and habitat. Some sharks are shy, and some are outgoing some are adventurous, and some prefer to stick close to what they know, information that could prove useful in making sense of larger species-wide behavior patterns.

### 238 Exercise (Modern Lifestyle- Different Version)

One thing is certain. Most people do not get enough exercise in their (V1: daily, V2: regular) routines. All of the advances of modern technology - from electric can openers to power steering - have made life easier, more comfortable and much less physically demanding. Yet our bodies need activity, especially if they are carrying around too much fat. Satisfying this need requires a definite plan, and a commitment. There are two main ways to increase the number of calories you expend:

Start a regular exercise program if you do not have one already.

Increase the amount of physical activity in your daily routine.

### 239 Books and Articles

Books and articles highlighting intractable debt, poverty and development abound in both the academic and popular literature. This addition to the debate is both timely and interesting as it subsumes the economic debate to the broader social, political, environmental and institutional context of debt in developing countries. Debt-for-Development Exchanges: History and New Applications is intended for a wide audience including: academics from a range of disciplines (including accounting and finance); non-Government organizations (NGOs); civil society groups; and, both debtor and creditor governments and public sector organization. Professor Ross Buckley, author and editor, has developed an international profile in the area of debt relief and this book is the outcome of an Australian Research Council (ARC) Discovery grant to explore debt-for development mechanisms that relieve debt, improve development outcomes from aid, are practically and politically attractive to creditors and contribute to regional security.

### 240 Japanese Usage (Western Words- Different Version)

In recent years, an eccentric mix of English, German and French has entered Japanese usage. For instance, a "Kariya" woman is a career woman, and a "manshon" is an apartment. This increasing use of katakana, or unique

Japanese version of Western words, and the younger generation's more casual use of the Japanese language are causing worry in government circles. **As a result**, an official panel is proposing to publish a manual on how to speak proper Japanese. Foreign words become katakana Japanese **because** no existing Japanese words could quite capture a specific meaning or feeling. **However**, they don't always retain the same meaning they had in their original language. When the word "cool" traveled east, all of its English connotations did not make the journey. A kuru person in Japan is someone who is calm and never gets upset. **Similarly**, a hotto person is one who is easily excitable, but not necessarily a popular person or personality of the moment. Researching and monitoring changes in the Japanese language, including the influx of foreign words, has been the responsibility of the National Institute of Japanese Language, established in 1948. According to its president, Seiju Sugito, since the late 1950s the use of Katakana words has tripled. Older people are especially alarmed by this trend. For one thing, they find many of these new words are difficult to understand. **In addition**, their casual and ready acceptance by the younger generation has come in tandem with its increasing tendency not to use the more respectful Japanese grammatical forms.

## 241 NASA

Scientists preparing for NASA's proposed Jupiter Icy Moons Orbiter believe that Jupiter's moons Europa may be a corrosive mixture of acid and peroxide. Thus, it may not be the **ideal** place for life to exist as was thought possibly to be the case. **Virtually** all the information we have about Europa comes from the spacecraft Galileo, which completed its mission to study Jupiter and its moons close up before NASA dramatically crashed it into Jupiter in 2003. **Although** the general perception of Europa is of a frozen crust of water ice harboring a salty subterranean ocean kilometers below, researchers studying the most **recent** measurements say light reflected from the moon's icy surface bears the spectral fingerprints of hydrogen peroxide and strong acids. **However**, they accept that it could just be a thin surface dusting and might not come from the ocean below.

## 242 Intelligence of Animals

Comparing the intelligence of animals of different species is difficult, how do you compare a dolphin and a horse? Psychologists have a technique for looking at intelligence that **does** not require the cooperation of the animal involved. The relative size of an individual's brain is a reasonable indication of intelligence. Comparing **across** species is not as simple an elephant will have



a larger brain than a human simple because it is a large beast. **Instead** we use the Cephalization index, which compare the size of an animal's brain to the size of its body.

Based on the Cephalization index, the brightest animals on the planet are humans, **followed** by great apes, porpoises and elephants. As a general **rule** animals that hunt for a living (like canines) are smarter than strict vegetarians (you don't need much intelligence to outsmart a leaf of lettuce). Animals that live in social groups are always smarter and have large EQ's than solitary animals.

### **243 E-Learning**

Remember when universities were bursting at the seams with students sitting in the aisles, balancing books on their knees? No more, it seems. E-learning is as likely to stand for empty lecture theatres as for the internet **revolution**, which has greatly increased the volume and range of course, materials available online in the past five years. "The **temptation** now is to simply think, 'Everything will be online so I don't need to go to class'," said Dr Kerri-Lee Krause, of the Centre for the Study of Higher Education at the University of Melbourne. The nation's universities are in the process of opening the doors for the new academic year and, while classes are generally well **attended** for the early weeks, it often does not last. "There is concern at the university level about student attendance dropping and why students are not coming to lectures," Dr. Krause said. But lecturers' pride - and **fierce** competition among universities for students - mean few are willing to acknowledge publicly how poorly attended many classes are.

### **244 Amount of Sleep**

The amount of sleep you need depends on many **factors**, especially your age. Newborns sleep between 16 and 18 hours a day and preschool children should sleep between 10 and 12 hours. Older children and teens need at least nine hours to be well rested. For most adults, seven to eight hours a night appears to be the best amount of sleep. However, for some people, "enough sleep" may be as few as five hours or as many as 10 hours of sleep.

As you get older, your sleeping **patterns** change. Older adults tend to sleep more lightly and awaken more frequently in the night than younger adults. This can have many causes including medical conditions and medications used to treat them. But there's no evidence that older adults need less sleep than younger adults. Getting enough sleep is important to your health because it boosts your **immune** system, which makes your body better able to fight disease. Sleep is necessary for your nervous system to work properly. Too little

sleep makes you drowsy and unable to concentrate. It also impairs memory and physical performance.

So how many hours of sleep are enough for you? Experts say that if you feel drowsy during the day — even during boring activities — you are not getting enough sleep. Also, quality of sleep is just as **important** as quantity. People whose sleep is frequently interrupted or cut short are not getting quality sleep. If you experience frequent daytime sleepiness, even after increasing the amount of quality sleep you get, talk to your doctor. He or she may be able to **identify** the cause of sleep problems and offer advice on how to get a better night's sleep.

## 245 Film

Film is where art meets commerce. **As** Orson Welles said: "A painter just needs a brush and the writer just needs a pen, but the producer needs an army." And an army needs money. A producer is just like an entrepreneur, we **raise** money to make films. First we need to find an original idea or a book or a play and **purchase** the rights, then we need money to develop that idea often a reasonably small sum **besides**, to commission a writer for the screenplay isn't something you would want to gamble your own money on, so you find a partner. We are lucky here in the UK, as we have Film4, BBC Films and the UK Film Council, all of **these/which** are good places to develop an idea. Producing in Britain is very different to producing in America or **even** Europe because the economic dynamic is different.

## 246 Rise in Temperature

Three degrees does not sound like much but it **represents** a rise in temperature compatible with the global heating that occurred between the last ice age, some 15,000 years ago, and the warmth of the eighteenth century. When Earth was cold, giant glaciers sometimes extended from the polar-regions as far south as St Louis in the US and the Alps in Europe. Later this century when it is three degree hotter glaciers everywhere will be melting in a climate of often **unbearable** heat and drought, punctuated with storms and floods. The **consequences** for humanity could be truly horrific; if we fail to act swiftly, the full impact of global heating could cull us along with vast populations of the plant and animals with whom we share Earth. In a worst case scenario, there might - in the 22nd century - be only a remnant of humanity eking out a **diminished** existence in the polar-regions and the few remaining oases left on a hot and arid Earth.

### 247 Children (Jean Piaget- New Sentences)

Jean Piaget, the pioneering Swiss philosopher and psychologist, spent much of his professional life listening to children, watching children and poring over reports of researchers around the world who **were** doing the same. He found, to put it most succinctly, that children don't think like grownups. After thousands of **interactions** with young people often barely old enough to talk, Piaget began to suspect that behind their cute and seemingly illogical utterances were thought processes that had their own kind of order and their own special logic. Einstein called it a discovery "so simple that only a genius could have thought of it". Piaget's insight opened a new window into the inner workings of the mind. By the end of a wide ranging and remarkably prolific research career that spanned nearly 75 years, from his first scientific publication at age 10 to work still in progress when he died at 84, Piaget **had developed** several new fields of science: developmental psychology, cognitive theory and that came to be called genetic epistemology. Although not an educational reformer, he **championed** / **opened** a way of thinking about children that provided the foundation for today's education-reform movements. It was a shift comparable to the displacement of stories of "noble savages" and "cannibals" by modern anthropology. One might say that Piaget was the first to take children's thinking seriously.

### 248 Variolation (Smallpox- Different Version)

The fall of smallpox began with the realization that **survivors** of the disease were immune for the rest of their lives. This led to the practice of variolation - a process of exposing a healthy person to infected material from a person with smallpox in the hopes of producing a mild disease that **provided** immunity from further infection. The first written account of variolation describes a Buddhist nun practicing around 1022 to 1063 AD. By the 1700's, this method of variolation was **common** practice in China, India, and Turkey. In the late 1700's European physicians used this and other methods of variolation, but reported "devastating" results in some cases. Overall, 2% to 3% of people who were variolated died of smallpox, but this practice decreased the total number of smallpox **fatalities** by 10-fold.

### 249 Intellectual Property Rights

The presentation will cover copyright's position as one of the intellectual property rights and now it **differs** from other intellectual rights it will give **an overview** of what copyright protects as well as what may be done with copyright protected works without permission under permitted acts (sometimes or so-called exception). It is by manipulating the restricted acts

through licensing arrangements that rights owners **establish** and exploit commercial markets in contrast to commercial markets, the growth of open source and open content licensing models has **challenged** established business models. The presentation gives a brief commentary on two of the more **prominent** open licensing frameworks the GNU Creative Common licenses.

## 250 Cultural Ideas

People modify cultural ideas in their minds, and sometimes they pass on the modified versions. Inevitably, there are unintentional modifications as well, partly because of straightforward error, and partly because inexplicit ideas are hard to **convey** accurately: there is no way to download them directly from one brain to another like computer programs. Even native speakers of a language will not give identical definitions of every word. So it can be only rarely, if **ever**, that two people hold precisely the same cultural idea in their minds. That is why, when the founder of a political or philosophical movement or a religion dies, or **even before**, schisms typically happen. The movement's most devoted followers are often shocked to **discover** that they disagree about what its doctrines —reallyll are.

## 251 Students Part-Time Job

Students are increasingly finding it necessary to obtain employment in order to subsidize their income during their time in higher education. The **extra** income helps to pay for necessities, to maintain a social life and to buy clothes, and holding a part-time job helps students to **gain** skills for life after university or college. Using a part-time job to cut down on borrowing is a sound investment, as it reduces the **debt** that will be waiting to be paid off after graduation. How many hours students are currently working each week during term-time is not really certain? Some institutions advise that students should not work more than ten hours a week, and there are others that set a higher recommend **limit** [set a limit] of fifteen hours a week. There is no doubt that some students **exceed** even fifteen hours a week.

## 252 Sentiments

Over the last ten thousand years there seem to have been two separate and conflicting building sentiments throughout the history of towns and cities. **One** is the desire to start again, for a variety of reasons: an earthquake or a tidal wave may have demolished the settlement, or fire destroyed it, or the new city **marks** a new political beginning. The other can be likened to the effect of a magnet: established settlements attract people, who **tend** to come whether

or not there is any planning for their arrival. The clash between these two sentiments is evident in every established city **unless** its development has been almost completely accidental or is lost in history. Incidentally, many settlements have been planned from the beginning but, for a variety of reasons, no settlement followed the plan. A good example is Currowan, on the Clyde River in New South Wales, which **was surveyed** (= to measure and record the features of an area of land) in the second half of the 19th century, in expectation that people would come to establish agriculture and a small port. But no **one** came. Most country towns in New South Wales started with an original survey, whose grid lines are still there today in the pattern of the original streets.

### 253 Sales Jobs

Sales jobs allow for a great deal of discretionary time and effort on the part of the sales representatives - especially when compared with managerial, manufacturing, and service jobs. Most sales representatives work independently and outside the immediate presence of their sales managers. Therefore, some form of goals needs to be in place **as motive and guide** their performance. Sales personnel are not the only professionals with performance goals or quotas. Health care professionals operating in clinics have daily, weekly, and monthly goals in terms of patient visits. Service personnel are assigned a number of service calls they **must perform** during a set time period. Production workers in manufacturing have output goals. So, why are achieving sales goals or quotas such a big deal? The answer to this question can be found by examining how a firm's other departments are affected by how well the company's salespeople achieve their performance goals. The success of the business **hinges on** the successful sales of its products and services. Consider all the planning, the financial, production and marketing efforts that go into **producing what** the sales force sells. Everyone depends on the sales force to sell the company's products and services and they eagerly anticipate knowing things are going.

hinges on = depends on

### 254 Most Respected Companies

Look at the recent —Most Respected Companies survey by the Financial Times. Who are the most respected companies and business leaders at the **current** time? Rather predictably, they are Jack Welch and General Electric, and Bill Gates, and Microsoft. **Neither** has achieved their world class status through playing nice. Welch is still remembered for the brutal downsizing he led his business **through** and for the environmental pollution incidents and

prosecutions. Microsoft has had one of the **highest** profile cases of bullying market dominance of recent times - and Gates has been able to **achieve** the financial status where he can choose to give lots of money away by being ruthless in business.

### **255 Fresh Water**

Everybody needs fresh water. **Without** water people, animals & plants cannot live. Although a few plants and animals **can** make do with saltwater, all humans need a constant supply of fresh water to stay **fit** & healthy. Of the total supply of water on the Earth, only about 3% of it is fresh, & most of that is stored as ice & snow at the poles, or is so **deep** under the surface of the Earth that we cannot get to it. Despite so much of the water being out of reach, we still have a million cubic miles of it that we **can** use. That's about 4,300,000 cubic kilometers of fresh water to share out between most of the plants, animals & people on the planet!

### **256 Gray Wolf**

After an absence of more than 50 years, the gray wolf (*Canis lupus*) once again runs beneath the night skies of Yellowstone National Park. At 3:45 pm on March 21st 1995, the first of three groups of gray wolves (also known as the timber wolf) were released from **fenced** acclimation pens at Crystal Creek within Yellowstone National Park. The wolf release plan, **involved** in an environmental impact statement (EIS) in 1992-1994, is to restore wolves to Yellowstone and central Idaho by establishing experimental populations of gray wolves in both areas. The goal for Yellowstone is to establish 10 packs wolves reproducing in the area for three **consecutive** years by the year 2002. Restoring wolves to Yellowstone is in keeping with national park goals to perpetuate all native species and their natural interactions with their environment. As with other park wildlife programs, management emphasizes **minimizing** human impact on natural animal population dynamics. Yellowstone National Park is a wilderness and wildlife refuge in the United States.

### **257 Prepare for Exams**

It's that time again: exams looming, essays or reports outstanding and you wonder where the year's gone already. You start **wondering** how you going to cope with it all. Fear and anxiety are insidious things and they can take hold if you don't do something about them. This amounts to a bad type of stress which is just what you don't need, especially at this time of year. This is not to say that all anxiety is bad, however. A limited amount of anxiety can help you

to be more motivated and more **purposeful**. It can help you to plan your work and to think more clearly and **logically** about it. In other word, it can help you to stay on top of things. So how can you limit your stress and stay in control? There are a number of practical things you can do, even at this late stage before the exams. Don't give up hope, even if you start to feel —snowballed when you think of the all the work you have to do. First of all, it's essential to get yourself organized. Sit down at your desk and make a start on writing down all the things you have to do to **prepare** for the exams. If you feel there's too much to do, then work out priorities for your work. Outstanding assignments should take priority but make sure to leave time for revision of your lecture notes.

### 258 Demographic Characteristics

People who visit health professionals tend to be older than the **general** population, because illness increases with age. However, the **proportion** of the population who visited complementary health therapists was highest between the ages 25 and 64 years. The lower rates for people aged 65 years and over **contrasted** with the rate of visits to other health professionals which increased steadily with increasing age. The reasons for this difference might include lower levels of **acceptance** of complementary therapies by older people. Alternatively, older people may have different treatment priorities than do younger people because their health on average is worse while their incomes are generally lower.

### 259 A Brief History of Pop Art

In the U.S., artists in the mid-1950s began to create a **bridge** to Pop. Strongly influenced by Dada and its **emphasis** on appropriation and everyday objects, artists increasingly worked with **collage**, consumer products, and a healthy dose of irony. Jasper Johns **reimagined** iconic imagery like the American flag; Robert Rauschenberg employed silk-screen printings and found objects; and Larry Rivers used images of mass-produced goods. All three are considered American **forerunners** of Pop.

### 260 Sportswomen

Sportswomen's records are important and need to be **preserved**. And if the paper records don't exist, we need to get out and start interviewing people, not to put too **fine** a point on it, while we still have a **chance**. After all, if the records aren't kept in some form or another, then the stories are **lost** too.

\*not to put too fine a point on it, means to speak plainly and bluntly.

### 261 Eating Insects (Edible Insects- Different Version)

Insects have been an important part of the human diet for thousands of years. So why has insect eating died out in the developed world? Stuart Hine, an entomologist at the Natural History Museum in London, says it's a cultural **thing**: insects are seen as 'dirty' and as carriers of disease. Despite this, a decade ago, insect eating seemed to be making a **comeback**, with the publication of a number of insect recipe books. Edible, a London-based company, supplies products such as chocolate-covered ants and toasted leafcutter ants. Perhaps as we become **aware** of the sentience of higher animals, insects will become the protein of choice in centuries to come. On 6 April, Hine will give a talk on edible insects at London's Natural History Museum and offer some unusual snacks.

### 262 Impressionism (3<sup>rd</sup> Version)

Impressionism was a nineteenth century art movement that began as a loose association of Paris-based artists who started publicly exhibiting their art in the 1860s. . Characteristics of Impressionist painting include visible brush strokes, light colors, open composition, **emphasis** on light in its changing qualities (often accentuating the effects of the passage of time), ordinary subject matter, and unusual visual angles. The name of the movement is **derived** from Claude Monet's Impression, Sunrise (Impression, soleil levant). Critic Louis Leroy **inadvertently** coined the term in a satiric review published in Le Charivari

Radicals in their time, early Impressionists broke the rules of **academic** painting. They began by giving colors, freely brushed, primacy over line, drawing **inspiration** from the work of painters such as Eugene Delacroix. They also took the **act** of painting out of the studio and into the world. Previously, not only still-lives and portraits, but also landscapes had been painted indoors, but the Impressionists found that they could **capture** the momentary and transient effects of sunlight by painting outdoors. Research has suggested that major stresses in our lives are life **changes**, for example, moving house, marriage or relationship breakdown. Work-related factors, **including** unemployment and boredom, are also common **causes** of stress. Differences in personality may also **play** a part.

### 263 Allergies

Allergies are abnormal immune system reactions to things that are typically harmless to most people. When you're allergic to something, your immune system **mistakenly** believes that this substance is harmful to your body. Substances that cause allergic reactions such as certain foods, dust, plant pollen, or medicines are known as allergens. In an attempt to **protect** the body,



the immune system produces the antibodies to that allergen. Those antibodies then cause certain cells in the body to **release** chemicals into the bloodstream, one of which is histamine. The histamine then **acts** on the eyes, nose, throat, lungs, skin, or gastrointestinal tract and causes the symptoms of the allergic reaction. Future exposure to that same allergen will trigger this antibody response again. This means that every time you come into contact with that allergen, you'll have some form of allergy symptoms.

### **264 Tackling Truancy**

In reality the causes of truancy and **non-attendance** are diverse and multi-faceted. There are as many **causes** of non-attendance as there are non-attenders. Each child has his or her own **unique** story, and whilst there may often be certain identifiable factors in common, each non-attending child demands and **deserves** an individual response, tailored to meet his or her individual needs. This applies **equally** to the 14-year-old who fails to attend school because a parent is terminally ill, the overweight 11-year-old who fails to attend because he is **embarrassed** about changing for PE in front of peers, the 15-year-old who is 'bored' by lessons, and to the seven-year-old who is teased in the playground because she does not wear the latest designer-label clothes.

### **265 Japan and China**

At times, a broad stream of knowledge flowed from China to Japan. At other times, this transfer was **halted** from one side or the other, and Japan **developed** on its own. But whether in isolation or not, Japan was always itself. Everything that **arrived** from China was **adapted** to suit Japanese tastes and needs.

### **266 The Workforce Plan**

The purpose of the workforce plan is to enable a business to achieve its overall objective by successfully putting its corporate strategies into action. So it is these whole business objective and strategies that are the **starting point** for assessing the number and type of staff of workers that will be needed in the future. Where growth is the objective, the business **may be planning** to increase sales by targeting new markets for launching new products. The workforce plan will need to set out **how** the people required to make this happen will be recruited, retained, developed or relocated if cost minimization is the goal, and if workforce efficiency is one of the strategies, plans will need to be in place to **boost** productivity, cut wages bills or delays the organizational structure.

## 267 Marmosets and Tamarins

Their punk hairstyle and bright colors, marmosets and tamarins are among the most attractive primates on earth. These animals live in the rainforest of South America. Their small size **makes** it easy for them to dart about the tress, catching insects and small animals, such as lizards, frogs and snails. Marmosets have another unusual food **source**. They use their chisel-like incisor teeth to dig into tree bark and lap up the gummy sap that seeps out, leaving tell-tale, oval-shaped **holes** in the **branches** when they have finished. But as vast tracts of rainforest are cleared for plantation and cattle ranches, marmosets and tamarin are in serious **danger** of extinction.

## 268 Progressive Enhancement

Progressive enhancement is a design practice based on the idea that instead of **designing for** the least capable browser, or mangling our code to make a site look the same in every browser, we should provide a core set of functionality and information to all users, and then **progressively enhance** the appearance and behavior of the site for users of more capable browsers. It's very productive development practice. **Instead of spending** hours working out how to add drop shadows to the borders of an element in every browser, we simply use the standards-based approach for browsers that support it and don't even attempt to implement it in browsers that don't. After all, the users of older and less capable browsers won't know what they are missing. The **biggest challenge** to progressive enhancement is the belief among developers and clients that websites should look the same in every browser. As a developer, you can simplify your life and dedicate your time to more interesting challenges if you let go of this outdated notion and embrace progressive enhancement.

## 269 Promoting Good Customer Service

Promoting good customer service must start at the top. If management doesn't realize how important this **aspect** of their business is, they will be at an instant **disadvantage** in their industry. Good customer response **equates** to loyal customers, which are the cornerstone of any successful business. No matter how much money you invest in your **marketing**, if you don't have the fundamental elements of your business right, it's **wasted** money.

## 270 Symbiosis

Symbiosis is a general term for **interspecific** interactions in which two species live together in a long-term, **intimate** association. In everyday life, we

sometimes use the term symbiosis to mean a relationship that **benefits** both parties. However, in ecologist-speak, symbiosis is a broader concept and can include close, lasting relationships with a variety of positive or negative effects on the **participants**.

Symbiosis is a biological **relationship** in which two species live in **close** proximity to each other and interact regularly in such a way as to benefit one or both of the **organisms**. When both partners benefit, this **variety** of symbiosis is known as mutualism.

## 271 English Rules the World of Languages

With about one and a half billion non-native speakers, English has become the world's own language. Such **dominance** has its downside, of course. There are now about 6,800 languages left in the world, compared with perhaps **twice** that number back at the dawn of agriculture. Thanks in **part** to the rise of über-languages, most importantly English, the remaining languages are now dying at the **rate** of about one a fortnight.

## 272 An Incredible Moment

The last tourists may have been leaving the Valley of the Kings on the West Bank in Luxor but the area in front of the tomb of Tutankhamun remained far from deserted. Instead of the **tranquility** that usually descends on the area in the evening it was a hive of activity. TV crews trailed masses of equipment, journalists milled and photographers held their cameras at the ready. The reason? For the first time since Howard Carter **discovered** the tomb in 1922 the mummy of Tutankhamun was being prepared for public display.

Inside the subterranean burial chamber Egypt's archaeology supremo Zahi Hawass, **accompanied** by four Egyptologists, two restorers and three workmen, were slowly lifting the mummy from the golden sarcophagus where it has been rested -- mostly undisturbed -- for more than 3,000 years. The body was then placed on a wooden stretcher and **transported** to its new home, a high-tech, climate-controlled plexi-glass showcase located in the outer chamber of the tomb where, covered in linen, with only the face and feet exposed, it now greets visitors.

## 273 Successful Leaders

In search of lessons to **apply** in our own careers, we often try to emulate what effective leaders do. Roger Martin says this focus is misplaced, because **moves** that work in one context may make little sense in another. A more productive, though more difficult, **approach** is to look at how such leaders **think**. After

extensive interviews with more than 50 of them, the author discovered that most are **integrative** thinkers – that is, they can hold in their heads two opposing ideas at once and then come up with a new idea that contains elements of **each** but is superior to both.

### **274 Globalization and Financial Institutions**

Economic **dimension** of globalization involves the international financial institutions i.e. the IMF & WB. Stabilization and adjustment are sponsored by the two respectively and are rooted in the ideology of free market. At the other end of the spectrum, protesters see globalization in a very different light than the treasury secretary of the United States, or the finance or trade ministers of most of the advanced industrial countries. The difference in **views** is so great that one wonders, are the protestors and the policy makers talking about the same **phenomenon**? Are they looking at the same data? Are the visions of those in **power** are so clouded by special and particular **interests**?

### **275 Antibiotic and Microorganisms**

Although for centuries preparations derived from living **matter** were applied to wounds to destroy **infection**, the fact that a microorganism is **capable** of destroying one of another species was not **established** until the latter half of the 19th cent. When Pasteur noted the antagonistic effect of other bacteria on the anthrax organism and pointed out that this action might be put to **therapeutic** use.

### **276 Wrinkle Cure**

BARRIE FINNIN, a professor at Monash University's college of pharmacy in Melbourne, and PhD student Anita Schneider, **recently** tested a new wrinkle cure. Twice daily, 20 male and female volunteers applied a liquid containing Myoxinol, a patented **extract** of okra (*Hibiscus esculentus*) seed, to one side of their **faces**. On the other side they applied a similar **liquid** without Myoxinol. Every week for a month their wrinkles were tested by self-assessment, photography and the size of depressions made in silicon moulds. The results were impressive. After a month the **depth** and number of wrinkles on the Myoxinol-treated side were reduced by approximately 27 per cent.

But Finnin's research, commissioned by a cosmetics company, is unlikely to be published in a scientific **journal**. It's hard to even find studies that show the active ingredients in cosmetics penetrate the skin, let alone more comprehensive research on their effects. Even when **rigorous** studies are

commissioned, companies usually control whether the work is published in the traditional scientific literature.

### 277 Open Air Architectural Museum

The Edo-Tokyo Tatemono En is an open-air architectural museum, but could be better thought of as a park. Thirty buildings from the 19th and early 20th centuries from **all around** Tokyo were restored and relocated to the space, where they can be explored by future generations to come.

The buildings are a collection of houses and businesses, shops, and bathhouses, all of which would have been present on a typical middle-class street from Edoera to Showa-era Tokyo.

The west section is residential, with **traditional** thatched roof bungalows of the 19th century. Meiji-era houses are also on view, constructed in a more Western style after Japan opened its borders in 1868. The Musashino Sabo Café occupies the ground floor of one such house, where visitors can enjoy a cup of tea. Grand residences like that of Korekiyo Takahashi, an early 20th century politician assassinated over his controversial policies, demonstrate how the upper class lived during that time period.

The east section is primarily businesses from the 1920s and '30s, preserved with their wares on display. Visitors are free to **wander** through a kitchenware shop, a florist's, an umbrella store, a bar, a soy sauce shop, a tailor's, a **cosmetics** shop, and an inn complete with an **operational** noodle shop.

### 278 Threatened Northern Spotted Owls

Our analysis of the genetic structure of northern spotted owls across most of the range of the subspecies allowed us to test for genetic discontinuities and identify landscape features that influence the subspecies' genetic structure. Although no **distinct** genetic breaks were found in northern spotted owls, **several** landscape features were important in structuring genetic variation. Dry, low elevation valleys and the high elevation Cascade and Olympic Mountains restricted gene flow, while the lower Oregon Coast Range **facilitated** gene flow, acting as a "genetic corridor." The Columbia River did not act as a barrier, **suggesting** owls readily fly over this large river. Thus, even in taxa such as northern spotted owls with potential for long-distance dispersal, landscape features can have an important impact on gene flow and genetic structure.

### 279 Are Dogs More Intelligent than Cats?

Comparing the intelligence of animals of different species is difficult although there are certain tests and problem sets that have **proved** to be useful. Making

the tests equivalent, however, for say a dolphin that lives in the water and a horse that lives on the land is obviously complicated and may prove to be virtually impossible. In the case of dogs versus cats we also have a problem, since each are specialized to do different things. Dogs are **designed** to be more efficient runners while cats have better ability at manipulating things with their paws. Thus a test that involved pulling **strings** or operating levers would tend to favor a cat, while a test involving moving from place to place, where speed is a measure of performance, would favor a dog. Charles Darwin **claimed**, "Intelligence is based on how efficient a species became at doing the things they need to survive," and one might **argue** that by this definition all species that stay healthy, remain numerous and avoid **extinction** are equally intelligent.

## 280 Space Taxi

SpaceX's Falcon 9 rocket lifted off from Cape Canaveral, Florida, on Friday at 1845 GMT (1445 EDT), reaching **orbit** 9 minutes later.

The rocket lofted an uncrewed **mockup** of SpaceX's Dragon capsule, which is designed to one day carry both crew and cargo to **orbit**. "This has been a good day for SpaceX and a **promising** development for the US human space flight programme," said Robyn Ringuette of SpaceX in a webcast of the launch.

In a teleconference with the media on Thursday, SpaceX's CEO, Paypal co-founder Elon Musk, said he would consider the flight 100 per cent successful if it reached **orbit**. "Even if we prove out just that the first stage functions correctly, I'd still say that's a good day for a test," he said. "It's a great day if both stages work correctly."

SpaceX hopes to win a NASA **contract** to launch astronauts to the International Space Station using the Falcon 9. US government space shuttles, which currently make these trips, are **scheduled** to **retire** for safety reasons at the end of 2010.

## 281 History as Commemoration

History is selective. What history books tell us about the past is not everything that happened, but what historians have **selected**. They cannot put in everything: choices have to be made. Choices must similarly be made about which aspects of the past should be formally taught to the next generation in the shape of school history lessons. So, for example, when a national school curriculum for England and Wales was first discussed at the end of the 1980s, the history curriculum was the subject of considerable public and media

**interest**. Politicians argued about it; people wrote letters to the press about it; the Prime Minister of the time, Margaret Thatcher, **intervened** in the debate.

Let us think first about the question of content. There were two main camps on this issue – those who thought the history of Britain should take **pride** of place, and those who favored what was **referred** to as ‘world history’.

## 282 The Study of Objects

The study of objects constitutes a relatively new field of academic enquiry, commonly referred to as material culture studies. Students of material culture seek to understand societies, both past and present, through careful study and **observation** of the physical or material objects generated by those societies. The source material for study is **exceptionally** wide, including not just human-made artefacts but also natural objects and even preserved body parts (as you saw in the film ‘Encountering a body’).

Some specialists in the field of material culture have made bold claims for its pre-eminence. In certain disciplines, it **reigns** supreme. It plays a critical role in archaeology, for example, especially in circumstances where written evidence is either patchy or non-existent. In such cases, objects are all **scholars** have to rely on in forming an understanding of ancient peoples. Even where written documents survive, the physical remains of literate cultures often help to provide new and interesting insights into how people once lived and thought, as in the case of medieval and post-medieval archaeology. In analysing the physical remains of societies, both past and present, historians, archaeologists, anthropologists and others have been careful to remind us that objects mean different things to **different** people.

## 283 Art of Nature

From the earliest civilisations, plants and animals have been portrayed as a means of understanding and recording their potential uses, such as their economic and healing properties. From the first illustrated **catalogue** of medicinal plants, De Materia Medica by Dioscorides, in the first century, through to the late fourteenth century, the illustration of plants and animals changed very little.

Woodcuts in instructional manuals and herbals were often repeatedly copied over the centuries, resulting in a loss of definition and accuracy so that they became little more than stylized decoration. With the growing **popularity** of copperplate engravings, the traditional use of woodcuts declined and the representation of plants and animals became more **accurate**.

Then, with the emergence of artists such as Albrecht Dürer and Leonardo Da Vinci, naturalists such as Otto Brunfels, Leonhard Fuchs in botany and Conrad Gesner and Ulisse Aldrovandi in zoology, nature began to be **depicted** in a more realistic style. Individual living plants or animals were observed directly and their likeness **rendered** onto paper or vellum.

### **284 Calendar Reform (New Sentences)**

Since the papal reform in 1582, several proposals have been **offered** to make the Gregorian calendar more useful or **regular**. Very few reforms have gained official **acceptance**. The rather different decimal French Republican Calendar was one such official reform, but was abolished twelve years later by Napoleon. After World War II, the newly formed United Nations continued efforts of its predecessor, the League of Nations, to establish the proposed World Calendar but **postponed** the issue after a veto from the government of the United States, which was mainly based upon concerns of religious groups about the proposed days that would be outside the seven-day week cycle ("blank days") and thus disrupt having a sabbath every seven days. Independently the World Council of Churches still tries to find a common rule for the date of Easter, which might be eased by a new common calendar.

### **285 Experience-Based Learning**

Learning is a process by which behavior or knowledge changes as a result of experience. Learning from experience plays a major role **in** enabling us to do many things that we clearly were not born to do, from the simplest tasks, such as flipping a light switch, to the more complex, such as playing a musical instrument. To many people, the term "learning" signifies the **activities** that students do reading, listening, and taking tests in order to acquire new information. This process, which is known as cognitive learning, is just **one** type of learning, however. Another way that we learn is by associative learning, which is the focus of this module. You probably **associate certain** holidays with specific sights, sounds, and smells, or foods with specific flavors and textures. We are not the only **species** with this skill even the simplest animals such as the earthworm can learn by association.

### **286 Crime prevention**

Crime prevention has a long history in Australia, and in other parts of the world. In all societies, people have tried to **protect** themselves and those close to them from assaults and other abuses. Every time someone locks the door to their house or their car, they practise **a form of** prevention. Most parents want their children to learn to be law abiding and not spend extended periods of



their lives in prison. In this country, at least, most succeed. Only a small minority of young people become recidivist offenders. In a functioning society, crime prevention is part of everyday life. While prevention can be all-pervasive at the grassroots, it is oddly neglected in mass media and political discourses. When politicians, talkback radio hosts and newspaper editorialists pontificate about crime and possible remedies, it is comparatively rare for them to mention prevention. Overwhelmingly, emphasis is on policing, sentencing and other 'law and order' responses.

### **287 Bank Failures**

As the economic depression deepened in the early 30s, and as farmers had less and less money to spend in their town, banks began to fail at alarming rates. During the 20s, there was an average of 70 banks failing each year nationally. After the crash during the first 10 months of 1930, 744 banks failed – 10 times as many. In all, 9,000 banks failed during the decade of the 30s. It's estimated that 4,000 banks failed during the one year of 1933. By 1933, depositors saw \$140 billion disappear through bank failures.

### **288 Space X (Space Taxi- Different Version)**

The agreement commits Nasa to offer SpaceX help with deep space navigation and communications, design of the spacecraft's trajectory and help with developing the landing system. The SpaceX mission will use a version of the Dragon spacecraft that currently flies to the International Space Station under SpaceX's resupply contracts with Nasa. As part of work to develop a version of the capsule that can carry astronauts, SpaceX has developed and tested motors that allow the craft to make a safe landing on earth in the event of an emergency during take-off. SpaceX would adapt that system to allow the craft to touch down on Mars. The craft would be launched on its journey by SpaceX's new Falcon Heavy rocket, a heavy-lift version of its existing Falcon 9, which it expects to fly for the first time later this year. Because interplanetary missions require spacecraft to be launched from earth's surface faster than orbital flights such as missions to the space station, they depend on heavy rockets, usually three standard rockets strapped together.

### **289 Snails' Efficient Thinking**

Snails are not traditionally known for quick thinking, but new research shows they can make complex decisions using just two brain cells in findings that could help engineers design more efficient robots. Scientists at the University of Sussex attached electrodes to the heads of freshwater snails as they searched for lettuce. They found that just one cell was used by the mollusc to tell if it was

**hungry** or not, while another let it know when food was present. Food-searching is an example of goal-directed behaviour, during which an animal must integrate information about both its external environment and internal state while using as little energy as possible. Lead researcher Professor George Kemenes, said: "This will eventually help us design the "brains" of robots based on the principle of using the fewest possible components necessary to **perform** complex tasks. "What goes on in our brains when we make complex behavioural decisions and carry them out is poorly understood. "Our study reveals for the first time how just two neurons can create a mechanism in an animal's brain which drives and **optimises** complex decision-making tasks.

## 290 Words and Rules

Language comes so naturally to us that it is easy to forget what a strange and miraculous gift it is. All over the world members of our **species** fashion their breath into hisses and hums and squeaks and pops and listen to others do the same. We do this, of course, not only because we like the sounds but because details of the sounds contain information about the **intentions** of the person making them. We humans are fitted with a means of **sharing** our ideas, in all their unfathomable vastness. When we listen to speech, we can be led to think thoughts that have never been thought before and that never would have **occurred** to us on our own. Behold, the bush burned with fire, and the bush was not consumed. Man is **born** free, and everywhere he is in chains. Emma Woodhouse, handsome, clever, and rich, with a comfortable home and happy disposition, seemed to unite some of the best blessings of **existence**. Energy equals mass times the speed of light squared. I have found it impossible to **carry** the heavy burden of responsibility and to discharge my duties as King without the help and support of the woman I love.

## 291 Body Chemistry

Chemistry is an extremely important topic in physiology. Most physiological processes occur as the **result** of chemical changes that occur within the body. These changes include the influx/efflux of ions across a neuron's membrane, causing a **signal** to pass from one end to the other. Other examples include the **storage** of oxygen in the blood by a protein as it **passes** through the lungs for usage throughout the body.

## 292 Plagiarism

How is plagiarism detected? It is usually easy for lecturers to identify plagiarism within students work. The University also actively investigates plagiarism in students assessed work through electronic detection software called Turnitin.

This software **compares** students work **against** text on the Internet, in journal articles and within previously **submitted** work (from LSBU and other institutions) and highlights any matches it **finds**.

### **293 The English is Changing**

English has been changing throughout its lifetime and it's still changing today. For most of us, these changes are fine as long as they're well and truly in the past. Paradoxically, we can be **curious** about word origins and the stories behind the structures we find in our language, but we **experience** a queasy distaste for any change that might be happening right under our noses. There are even language critics who are **convinced** that English is dying, or if not dying at least being progressively **crippled / lost / damaged** through long years of mistreatment.

### **294 Indigenous Health Through Education**

Education is generally considered to be a key factor in improving outcomes for Indigenous Australians, with many studies showing that improved **health** and socioeconomic status are directly **linked** to educational participation and achievement. There is a range of issues **affecting** participation in education for Indigenous Australians, including **access** to educational institutions, financial constraints, and community expectations.

### **295 Where to study**

You can study anywhere. Obviously, some places are **better** than others. Libraries, study slounges or private rooms are best. Above all, the place you choose to study should not be **distracting**. Distractions can **build up**, and the first thing you know, you're out of time and out of luck. Make choosing a good physical environment a **part** of your study **habits**.

### **296 The Great Barrier Reef**

One of Australia's most remarkable natural gifts, the Great Barrier Reef is blessed with the breathtaking beauty of the world's largest coral reef. The reef contains an **abundance** of marine life and comprises of over 3000 individual reef systems and coral cays and literally hundreds of **picturesque** tropical islands with some of the world's most beautiful sun-soaked, golden beaches. Because of its natural beauty, the Great Barrier Reef has become one of the world's most **sought** after tourist destinations.

A visitor to the Great Barrier Reef can enjoy many **experiences** including snorkelling, scuba diving, aircraft or helicopter tours, bare boats (self-sail), glass-

bottomed boat viewing, semi-submersibles and educational trips, cruise ship tours, whale watching and swimming with dolphins.

### 297 Improving Your Memory

"In the process of studying these techniques, I learned something remarkable: that there's far more potential in our minds than we often give them credit for. I'm not just talking about the fact that it's possible to memorize lots of information using memory techniques. I'm talking about a lesson that is more general, and in a way much bigger: that it's possible, with training and hard work, to teach oneself to do something that might seem really difficult" said Joshua Foer.

### 298 The American Government

The American cabinet, unlike the British, has no connection with the legislature, and this lack of coordination between executive and legislature is one of the distinctive features of American federal government. It came as a reaction against George III's very intimate relations with the House of Commons. The Constitution guarded against executive control through "place-men" by disqualifying federal officials.

### 299 Renoir's Landscapes

An exhibit that brings together for the first time landscapes painted by French impressionist Pierre-Auguste Renoir comes to the national Gallery of Canada this June. The gallery in Ottawa worked with the National Gallery of London and the Philadelphia Museum of Art to pull together the collection of 60 Renoir paintings from 45 public and private collections.

### 300 The Pre-Raphaelite Movement

Pre-Raphaelitism was Britain's most significant and influential 19th-century art movement. Founded in 1848, it centred on a group of three young artists: William Holman Hunt, Dante Gabriel Rossetti and John Everett Millais. These artists sought to revive English art by radically turning away from the old studio tradition and bringing painting into direct contact with nature. With an eye for absolute accuracy, every detail was now to have intense realist as well as symbolic meaning.

### 301 Supply and Demand

The supply of a thing, in the phrase "supply and demand," is the amount that will be offered for sale at each of a series of prices; the demand is the amount

that will be bought at each of a series of prices. The principle that value depends on supply and demand means that in the case of nearly every commodity, more will be bought if the price is lowered, less will be bought if the price is raised. Therefore sellers, if they wish to induce buyers to take more of a commodity than they are already doing, must reduce its price; if they raise its price, they will sell less. If there is a general falling off in demand — due, say, to trade depression — sellers will either have to reduce prices or put less on the market; they will not be able to sell the same amount at the same price. Similarly, with supply. At a certain price a certain amount will be offered for sale, at a higher price more will be offered, at a lower price less. If consumers want more, they must offer a higher price; if they want less, they will probably be able to force prices down. That is the first result of a change in demand or supply.

### 302 Academic Writing

So what is academic writing? In their introduction to *How to write for university: Academic writing for success*, Kathleen McMillan and Jonathan Weyers state that academic writing is “an expression of logic that is the product of thinking. This means that the writing that you produce is a reflection of your intellectual abilities. It puts into words your knowledge and your conceptual understanding and shows evidence of your ability to think critically”. Home students (NS students) are not automatically successful in these skills merely because English is their native language. Students, regardless of native language, can have problems at text level, sentence level, and word level.

### 303 The University of Maryland

The University of Maryland boasts 78 academic programs ranked in the top 25 nationally and 29 academic programs in the top 10 according to U.S. News and World report. By drawing top-notch faculty, attracting the brightest students and investing in the quality of our academic programs, we are a force to reckon with on a national basis.

### 304 Mad Enchantment

The closing decades of an artist's life do not generally make the biographer's heart beat faster, but Claude Monet is one of a handful of painters who bucks the pattern of an irrelevant old age. While it's true that by the time he was 73 he had accumulated all the usual dragging baggage.

### 305 The Alpine Newt

The Alpine Newt is native to much of central, continental Europe and occurs up the coasts of northeast France through to Holland but it does not appear to have been native to the British Isles. As its name suggests it can be found in montane habitats up to 2,500 metres in altitude but it can also be abundant in lowlands, and it will use a variety of water-bodies including both shallow and deep ponds and slow flowing streams.

### 306 Evaluating Information

One of the characteristics of 'good' information identified earlier was that it should be 'balanced'. In an ideal world, 'objective' or 'balanced' information would present all the evidence for and against, and leave you to weigh this up and draw conclusions. In the real world, however, we recognise that all information presents a position of interest, although this may not necessarily be intentional. Objectivity may therefore be an unachievable ideal. This means that the onus is on you as the reader and user of the information to develop a critical awareness of the positions represented in what you read, and to take account of this when you interpret the information. In some cases, authors may explicitly express a particular viewpoint – this is perfectly valid as long as they are open about the perspective they represent. Hidden bias, whether or not it is deliberate, can be misleading.

### 307 Canterbury Tales by Chaucer

Chaucer's Tales quickly spread throughout England in the early fifteenth century. Scholars feel The Canterbury Tales reached their instant and continued success because of their accurate and oftentimes vivid portrayal of human nature, unchanged through 600 years since Chaucer's time.

### 308 Listening to Icebergs' Songs

Twenty years ago, not so long before B-15 broke off from Antarctica, "we didn't even know that icebergs made noise," says Haru Matsumoto, an ocean engineer at NOAA who has studied these sounds. But in the past few years, scientists have started to learn to distinguish the eerie, haunting sounds of iceberg life—ice cracking, icebergs grinding against each other, an iceberg grounding on the seafloor—and measure the extent to which those sounds contribute to the noise of the ocean. While they're just now learning to listen, the sounds of ice could help them understand the behavior and breakup of icebergs and ice shelves as the poles warm up.

### 309 Men Are Risk takers

Dr Matthews said demographic characteristics had a substantial impact on the choices people made about KiwiSaver funds and retirement savings more generally. When it came to fund selection, she found there were significant differences based on gender. Men are more likely to **invest** in aggressive and growth funds, while women are more likely to choose **conservative** funds. "Males are risk takers, **whether** it's in their choice of car or their investment fund," she says. "**But when it comes** to long-term savings, risk taking can **actually** be an advantage."

### 310 Politics and International Relations

This course provides students with an in-depth understanding of the exciting disciplines of politics and international relations and commerce. Students will learn about the **workings** of political institutions in countries around the world and explore the complex field of relations between nations. Topics in governance, public policy, public administration, national security, border control and commerce ensure that students receive a **broad** and current education in the range of issues which are covered under the label of politics and international relations and commerce. Bachelor of Commerce students **specialise** in one of the following areas Accounting, Banking & Financial Services, Business Administration, Economics, Financial Planning, Human Resource Management, Information Systems, International Business, Marketing Management, Public Sector Management, or Tourism Management.

Students will undertake four compulsory units and two majors, one in politics and international relations and the other in governance and policy. They will also choose an elective major from a wide choice of options **including** political communication, international studies, international business and national security studies.

In addition to acquiring **specialist knowledge** and competencies in Politics and International Relations and Commerce, students will graduate with a range of generic skills such as critical thinking, enhanced communication abilities, problem solving and **strong** capacities to work with others. They will also develop ethically based and socially **responsible** attitudes and behaviours.

### 311 Science and Technology

Throughout the 18th century, mathematicians, scientists and philosophers researched, discussed, and published their investigations into how the world worked, while engineers and inventors developed new and successful machines and processes. The latest theories inspired greater invention, and

more technology encouraged theoretical scientists to make further discoveries in medicine, biology, mechanics, physics, and chemistry. By 1800, the new machines **had** brought revolutionary changes to the workplace, transportation and communications, and eventually to the home. Some of these inventions simply made it easier to produce things on a large scale such as textile machines and foundries, **which** produced large quantities of cloth and metal objects quickly and cheaply. But some inventions **brought** completely new possibilities such as the first batteries, steamboats, and locomotives. It would take decades for some of these inventions to make a big impact on the world. **Yet** their creation, and the sheer amount of imagination and risk-taking involved, marked the beginning of a modern, global, technologically based economy of the kind that we live in today.

### **312 Dance and Musicals**

Dance has played an important role in many musicals. In some **cases** dance numbers are included as an excuse to add to the colour and spectacle of the show, but dance is more **effective** when it forms an **integral** part of the plot. An early example is Richard Rodgers' *On Your Toes* (1936), in which the story about classical ballet meeting the world of jazz enabled dance to be introduced in a way that **enhances**, rather than interrupts the drama.

### **313 Total Wellbeing Diet**

In our studies, those people on a higher-protein diet lost the same amount of weight as those on a higher-carbohydrate diet. This is because the two diets **offered** an equal amount of fat. However, body composition (that is, the ratio of fat to muscle) showed greater improvement among those people on the higher-protein diet. When the **participants** in other studies were allowed to eat until they were no longer hungry, those on the higher-protein diet lost more weight than those on the higher-carbohydrate diet, even after more than a year. The reduction in hunger and the beneficial effect on muscle provided by the higher-protein diet is mostly related to its protein content, while the enhanced fat-loss seems to be related to its lower amounts of carbohydrate. The diet is healthy because its protein comes from lean red meat, fish, chicken and low-fat dairy products, all of which **provide** good nutrition. A high-protein diet in which the protein comes from protein powders and supplements is unlikely to be healthy, unless the supplements are **fortified** with vitamins and minerals.



### 314 Plate Tectonics

In geologic terms, a plate is a large, rigid slab of solid rock. The word tectonics comes from the Greek **root** "to build." Putting these two words together, we get the term plate tectonics, which **refers** to how the Earth's surface is built of plates. The theory of plate tectonics **states** that the Earth's outermost layer is **fragmented** into a dozen or more large and small plates that are moving **relative** to one another as they ride atop hotter, more mobile material.

### 315 The Discovery of the Universe

From the time of the very earliest civilisations man has wondered about the world he lives in, about how it was created and about how it will end. In these distant times the sun was seen to make its daily **journey** across the sky. At night the moon appeared. Every new night the moon waxed or waned a little and on a few nights it did not appear at all. At night the great dome of the heavens was dotted with tiny specks of light. They **became** known as the stars. It was thought that every star in the heavens had its own purpose and that the **secrets** of the universe could be discovered by making a study of them. In was well know that there were wandering stars, they appeared in different nightly positions against their neighbours and they became known as planets. It took centuries, in fact it took millennia, for man to **determine** the true nature of these wandering stars and to evolve a model of the world to accommodate them and to **predict** their positions in the sky.

### 316 Double Trees

A popular tree grows twice as well in the New York metropolitan sprawl as in rural New York State, according to a new test.

Clones of an Eastern cottonwood (*Populus deltoides*) in the Bronx and other city spots grew to double the biomass of clones **planted** outside small towns upstate or on LongIsland, says Jillian Gregg, now of the Environmental Protection Agency's western-ecology division in Corvallis, Ore.

The growth gap comes from ozone damage, she and her New York colleagues report. Ozone chemists have known that **concentrations** may spike skyscraper high in city air, but during a full 24 hours, rural trees actually get a higher cumulative ozone exposure from urban pollution that **blows** in and lingers. A series of new experiments now shows that this hang-around ozone is the **overwhelming** factor in tree growth, the researchers say in the July 10 Nature.

"This study has profound importance in showing us most vividly that rural areas **pay** the price for [urban] pollution," says Stephen P. Long of the University of Illinois at Urbana-Champaign. "This work should be a wake-up call," he adds.

Earlier studies had fingered car fumes, heavy metals in soils, and other cityscape menaces to plant life. Yet some urban quirks, such as extra warmth and increased concentrations of carbon dioxide, may **boost** plant growth.

### **317 Early Years Education and Childcare**

Affordable early years education and childcare potentially enables parents, particularly mothers, to be in paid employment. International studies **have found** that countries with greater enrolment rates in publicly funded or provided childcare also have higher maternal employment rates, although untangling causal relationships is complex. From the point of view of the household, additional income, especially for the less well-off, is itself associated with better outcomes for children, as child poverty HAS BEEN SHOWN to be a key independent determinant of children's outcomes. From the point of view of the public purse, as mothers **enter** employment they are likely to claim fewer benefits and to generate extra revenues **through** income tax and national insurance contributions.

### **318 The Art of the Infinite**

This book unlocks the secrets of maths - revealing it to be our lost, native language, as much a part of us as the words we use every day. Number and form are the **essence** of our world: from the **patterns** of the stars to the pulses of the **market**, from the **beats** of our hearts to catching a ball or **tying** our shoelaces. Drawing on science, literature, history and philosophy, and introducing **geniuses** from Alcibiades, the enfant terrible of Athens, to Gauss, the Mozart of numbers, this **inspiring** book makes the rich **patterns** of maths brilliantly clear.

### **319 Playing Active Video Games**

The purpose of this study was to: (1) determine energy expenditure (EE) during a range of active video games (AVGs) and (2) determine whether EE during AVGs is influenced by gaming **experience** or fitness. Twenty-six boys (11.4±0.8 years) participated and performed a range of sedentary **activities** (resting, watching television and sedentary gaming), playing AVGs (Nintendo® Wii Bowling, Boxing, Tennis, and Wii Fit Skiing and Step), walking and running including a **maximal** fitness test. During all activities, oxygen uptake, heart rate and EE were determined. The AVGs resulted in a significantly higher EE compared to rest (63-190%,  $p \leq 0.001$ ) and sedentary screen-time activities (56-184%,  $p \leq 0.001$ ). No significant differences in EE were found between the most **active** video games and walking. There was no evidence to suggest that gaming experience or aerobic fitness influenced EE when

playing AVGs. In conclusion, boys expended more energy during active gaming compared to sedentary activities. Whilst EE during AVG is games-specific, AVGs are not intense enough to contribute towards the 60min of daily moderate-to-vigorous physical activity that is currently recommended for children.

### 320 Law Express: Criminal Law

Most students commencing legal studies will have some experience of crime, whether directly, as a victim of crime or indirectly through exposure to media coverage. This means that most offences **covered** on the syllabus, such as murder, theft and rape will be familiar terms. This tends to give students the impression that they know more about criminal law than they do about other subjects on the syllabus. This can be a real disadvantage **in terms of** the academic study of criminal law because it tends to lead students to rely on preconceived **notions** of the nature and scope of the offences and to reach instinctive, but often legally inaccurate, conclusions. It is absolutely **essential** to success in criminal law that you put aside any prior knowledge of the offences and focus on the principles of law derived from statutes and cases. **By doing this**, you will soon appreciate just how much difference there is between everyday conceptions of crime and its actuality.

### 321 Unnoticed Connections

What can computer science tell us about what biological systems do and how they do it? Can these chemical information-processing functions be **replicated** in digital computing systems? What are the **implications** of developments in computer science in understanding the nature of causality? Aaron Sloman, author of *Computer Revolution in Philosophy* **delves** into the world of connections between ideas developed in computer science, biology and philosophy, providing new **insights** into some fundamental questions about the nature of consciousness and free will.

### 322 Biological systems

Since biological systems with signs of **complex** engineering are unlikely to have arisen from accidents or coincidences, their **organization** must come from natural selection, and hence should have **functions** useful for survival and reproduction in the environments in which humans evolved.

### 323 The End of Globalization

Protestors see globalization in a different light than the Treasury Secretary of the United States. The differences in **views** are so great that one wonders, are the protestors and the policy makers talking about the same **phenomena**? Are the visions of those in **power** clouded by special and particular **interests**?

### 324 Class Attendance

Because of the instructional methods, expected class participation and the nature of the courses vary, no fixed number of absences is applicable to all **situations**. Each **instructor** is responsible for making clear to the class at the beginning of the **semester** his or her policies and procedures in regard to class **attendance** and the reasons for them.

### 325 People Who Survived the Impossible

For a long time, people have been **fascinated** with heroes who've somehow survived great danger and brutal hardship. Back in 800 B.C.E., the Greek poet Homer composed "The Odyssey," one of the great adventure tales of all time, in which his protagonist Odysseus survives **shipwrecks**, encounters with myriad monsters and a wily sorcerer before finally returning to his family. While some of Odysseus' adventures were **fanciful**, it now turns out that he may well have been a real person. In 2010, **archaeologists** announced they had uncovered a palace in ancient Ithaca that fit Homer's description of the place where his hero lived.

### 326 Critical Thinking

Critical thinking involves looking at something you may have seen many times and examining it from many different **angles** and perspectives. It involves going beyond the **obvious** or beyond "easy" to seek new understanding and rare **solutions**. It involves looking at common issues with uncommon eyes, known problems with new skepticism, everyday conflicts with probing **curiosity**, and daily challenges with greater attention to detail.

### 327 Philanthropy Economy

Americans approached a record level of generosity last year. Of the \$260.28bn given to charity in 2005, 76.5 percent of it came from **individual** donors. These people gave across the range of non-profit bodies, from museums to hospitals to religious **organizations**, with a heavy **emphasis** on disaster relief after the Asian tsunami and US hurricanes. In total, Americans gave away 2.2 per cent

of their household income in 2005, slightly above the 40-year **average** of 2.1 per cent.

### 328 Chemicals and Water Pollution

Chemicals used to control weeds in crops such as corn and soybeans may sometimes run off farm land and enter surface water bodies such as lakes and streams. If a surface water body that is used as a **drinking** water supply receives excess amounts of these herbicides, then the municipal water treatment plant must **filter** them out in order for the water to be safe to drink. This added filtration process can be expensive. Farmers can help control excess herbicides in runoff by choosing chemicals that bind with **soil** more readily, are less toxic, or degrade more quickly. Additionally, selecting the best tillage practice can help minimize herbicide **pollution**.

### 329 Coffee Naps

To **understand** how a coffee nap might work, we need to look at how the body **processes** caffeine. When you drink a coffee, the caffeine stays in the stomach for a while before moving to the small intestine. It is from here that caffeine is **absorbed** and distributed throughout the body. This process, from drinking to absorption, takes 45 minutes. Although caffeine is broken down in the liver, half of it remains in the blood for 4-5 hours after drinking a moderate amount (equivalent to two large cups of brewed coffee). It **takes** more time to eliminate greater amounts of caffeine from the body.

### 330 So Good to Talk

Talking is not just an activity of the vocal chords, it is a way of connecting with ourselves and **others** that creates a culture of health and **wellbeing**. Specifically, speaking with healthcare **practitioners** about health worries, and more generally opening up to create more and stronger social **ties**, can have many positive benefits.

### 331 What Is Music?

What is music? In one sense, this is an easy **question**. Even the least musical among us can recognize pieces of music when we hear them and name a few canonical **examples**. We know there are different kinds of music and, even if our **knowledge** of music is restricted, we know which kinds we like and which kinds we do not.

### 332 The Financial Crisis

Since the beginning of the financial crisis, there have been two principal explanations for why so many banks made such disastrous decisions. The first is structural. Regulators did not regulate. Institutions failed to function as they should. Rules and guidelines were either inadequate or ignored. The second explanation is that Wall Street was incompetent, that the traders and investors didn't know enough, that they made extravagant bets without understanding the consequences.

### 333 Unlocking Humanities Secrets

In the literary world, it was an accepted assumption that the 1970s was a time of unprecedented growth in homegrown Australian fiction. And everybody was reading and talking about books by young Australian women. But it was not until recently that a researcher was able to measure just how many novels were published in that decade, and she found that there had been a decline in novels by Australian writers overall, but confirmed an increase in women's novels. It is this sort of research - testing ideas about literary history - that is becoming possible with the spread of 'Digital Humanities.' The intersection of Humanities and digital technologies is opening up opportunities in the fields of literature, linguistics, history and language that were not possible without computational methods and digitised resources to bring information together in an accessible way. Transcription software is being developed for turning scans of books and documents into text, as the field of digital humanities really takes off.

### 334 The Economic Character

**The Economic Character-1<sup>st</sup> version:** One distinguishing feature of business is its economic character. In the world of business, we interact with each other not as family members, friends, or neighbors, but as buyers and sellers, employers and employees, and the like. Trading, for example, is often accompanied by hard bargaining, in which both sides conceal their full hand and perhaps engage in some bluffing. And a skilled salesperson is well versed in the art of arousing a customer's attention (sometimes by a bit of puffery) to clinch the sale. Still, there is an "ethics of trading" that prohibits the use of false or deceptive claims and tricks such as "bait-and-switch" advertising.

**The Economic Character-2<sup>nd</sup> version:** One distinguishing feature of business is its economic character which can be summarized as the conduct of buyers and seller and employers and employees. A second distinguishing feature of

business is that it typically takes place in organizations which is a hierarchical system of functionally defined positions designed to **achieve** some goal or set of goals. Because business involves economic relations and transactions that take place in markets and also in **organizations**, it raises ethical issues for which the ethics of everyday life has not prepared us. Decisions making occurs on several distinct levels: the level of the individual, the organization, and the business system. The level of the individual represents **situations** that confront them in the workplace and require them to make a decision about their own well-being.

### 335 Crime

A crime is generally a **deliberate** act that results in harm, physical or otherwise, toward one or more people, in a manner **prohibited** by law. The determination of which acts are to be considered criminal has varied **historically**, and continues to do so among cultures and nations. When a crime is committed, a process of **discovery**, trial by judge or jury, conviction, and punishment occurs. Just as what is considered criminal varies between jurisdictions, so does the punishment, but elements of **restitution** and **deterrence** are common.

### 336 Getting Out More

Spending too much time in the concrete jungle is bad for city **dwellers'** health and could have potentially catastrophic **consequences** for the environment, conservation biologist Richard Fuller will argue during a seminar at the University of Canberra **today**. Dr Fuller, lecturer in biodiversity and conservation at the University of Queensland and CSIRO, will explore the fact that although there's evidence that the well-being of humans increases with **exposure** to our surrounding biodiversity, the **opportunities** for people to experience nature are declining rapidly in the modern world.

### 337 Social Animals

Dolphins, whales and porpoises are all social animals, but some species are more sociable than others. This **depends on** the environment because a species adopts the lifestyle most suitable for this. Among dolphins, forming groups makes it easier for them to **find** food, reproduce and **gain** knowledge. They are safer, too, because dolphins can communicate danger when there are threats around.

### 338 Active Learning Classrooms

UMN's ALCs feature large **circular** tables that seat nine students and can accommodate laptop computers for **collaborative** work. Typically, students bring their own computers to class and use the building's ubiquitous wireless capability. The classrooms are designed to **facilitate** hands-on activities and problems that require students to interact with each other to reach a solution. Students can display their work on large LCD screens mounted around the room to promote small- and large-group discussion. Each table is allotted three gooseneck microphones so that students can make themselves heard without shouting during group discussions. Additionally, students can press a button on their table console to light a **signal** lamp to indicate when they need help or wish to **speak**. To facilitate brainstorming and group reporting, the room is also lined with erasable marker-boards.

### 339 Tiny Organisms

Some of the most basic organisms are smarter than we thought. Rather than moving about randomly, amoebas and plankton employ sophisticated **strategies** to look for food and might travel in a way that optimises their foraging. Biophysicists have long tried to explain how creatures of all sizes **search** for food. However, single-celled organisms such as bacteria seem to move in no particular direction in their search. **To investigate**, Liang Li and Edward Cox at Princeton University studied the movements of amoebas (*Dictyostelium*) in a Petri dish, recording the paths travelled by 12 amoebas, including every turn and movement straight ahead, for 8 to 10 hours per amoeba. Immediately after an amoeba turned right, it was twice as likely to turn left as right again, and vice versa, they told a meeting of the American Physical Society meeting in Denver, Colorado, last week. This suggests that the cells have a rudimentary **memory**, being able to remember the last direction they had just turned in, says Robert Austin, a biophysicist at Princeton who was not involved in the study.

### 340 Performance Management

Managing performance is about getting people into action so that they achieve planned and agreed results. It focuses on what has to be done, how it should be done and what IS to be achieved. But it is equally concerned with **developing** people - helping them to learn - and providing them with the support they need to do well, now and in the future. The framework for performance management is provided by the performance agreement, **which** is the outcome of performance planning. The agreement provides the basis for managing performance throughout the year and for **guiding**



improvement and development activities. It is used as a reference point when reviewing performance and the **achievement** of improvement and development plans.

### **341 The Breton Language**

It is difficult to tell precisely when the Breton language was born. As early as the sixth century the new country was **established** and known as "Lesser Britain", but for many centuries its language **remained** close to the one of Great Britain - very close even to the dialect spoken in the South West. The eighth century is the milestone where Breton, Cornish and Welsh are **considered** as different languages.

### **342 The Effects of Undernutrition**

Under-nutrition and related diseases kill between 15 and 18 million people a year, the **majority** are children. At least 500 million are chronically hungry. The tragic paradox of massive suffering **amid** global plenty traces **in part** to widespread poverty, which denies access to food **even** where it piles high in village market.

### **343 Virtual Calssrooms**

E-learning is the new way forward. We believe **passionately** in e - learning. Our innovative approach opens up new **opportunities** for busy professionals that simply did not previously exist the **chance** to combine a prestigious Masters programme with a demanding professional and personal LIFE. Our small virtual classrooms facilitate intensive **interaction** and collaboration among professionals from all over the world.

### **344 Musical Theater**

One of the most popular forms of theatre is the musical. Combining drama, dance and music, the musical has been around for over a century, and in that time has kept pace with changing **tastes** and socials conditions, as well as **advances** in theatre technology. Many modern musicals are known for their spectacular **sets**, lighting and other effects.

### **345 Integrated Ticketing**

Well in 2004 we integrated ticketing in South East Queensland, so we **introduced** a paper ticket that allowed you to travel across all the three **modes** in South East Queensland, so bus, train and **ferry** and the second stage of integrated ticketing is the introduction of a Smart Card, the Smart Card

will enable people to **store** value so to put value on the card, and then to use the card for **travelling** around the **system**.

### **346 Studying Finance**

While accounting focuses on the day-to-day management of financial **reports** and records across the business world, finance uses this same information to project future growth and to **analyze** expenditure in order to strategize company finances. By studying this major you get to have a better insight on the market, with the right **knowledge** and skills acquired you should be able then when you graduate to advise others in making strong investments. This major will help you gain responsibility of predicting and **analyzing** the potential for profit and growth, assessing monetary resources, utilizing accounting statistics and reports, and also looking externally for future funding options.

### **347 Retirement Savings (Men Are Risk Takers-Different Version)**

Men and women are making different choices about their retirement savings, which could lead to very different investment outcomes, according to Dr Claire Matthews, Director of Financial Planning at Massey University's Centre for Banking Studies. Speaking at the 2012 New Zealand Finance Colloquium, held at Massey University's Albany campus last week, Dr Matthews said demographic characteristics had a substantial impact on the choices people made about KiwiSaver funds and retirement savings more generally. When it came to fund selection, she found there were significant differences based on gender. Men are more likely to invest in aggressive and **growth** funds, while women are more likely to choose **conservative** funds. "Males are risk takers, **whether** it's in their choice of car or their investment fund," she says. "But when it comes to long-term savings, risk taking can actually be an advantage." Dr Matthews also found that men are more likely than women to have prior savings when joining KiwiSaver. Just over half of male respondents said they had savings already, while only 38% of women did. "These figures reflect and confirm, quite disappointingly, the difference between males and females and the level of interest they take in financial planning," Dr Matthews says. "It's important for all New Zealanders to be better educated about their personal finances, but this is particularly so for women." Other demographic factors, including age, ethnicity, education, and income, can also influence the choices **being** made about retirement savings. Dr Matthews found that those with bachelor and higher degrees, and those in households with a pre-tax income of \$100,000 or more, were more likely to choose aggressive and growth funds.

On the other hand, both the youngest and oldest age groups were more likely to be invested in conservative funds. While this might be appropriate for the life-cycle stage of older investors, it might not be so appropriate for younger, longer-term investors.

### 348 Kiwi: A Natural History

A Massey ecologist has teamed up with a leading wildlife photographer to produce the definitive book on New Zealand's national bird, the kiwi. *Kiwi: A Natural History* was written by Dr Isabel Castro and features photographs by Rod Morris. Dr Castro has been working with kiwi since 1999, with a focus on their behaviour. "I've specifically been looking at the sense of smell that kiwi uses when foraging, but also in their interactions with their environment and other kiwi," she says. The book covers all aspects of kiwi, from their evolution, prehistory and closest relatives to their feeding and breeding behaviour and current conservation issues, making this the perfect introduction for anyone with an interest in these fascinating birds. The book is the second title in a new series on New Zealand's wildlife, targeted at a family readership.

### 349 Total Wellbeing Diet

Since nutrition scientists are constantly making new discoveries, we need to revise our recommendations for healthy eating from time to time. However, nutrition is an art as well as a science. It's an art because it requires creativity to develop a healthy eating plan for people who differ in their food preferences, beliefs and culture, let alone in their nutritional needs according to their genes and life stage. As we discover more about how our genes and our environment interact, it's becoming increasingly difficult to provide a single set of dietary recommendations that will be suitable for everyone.

### 350 Careless Human Exploitation

At the height of summer the Antarctic, tourist ships move gently around the coast. Even 30 years ago such sights would have been unthinkable, but today people are willing to pay large sums of money to see the last real wilderness in the world. In the Arctic, careless human exploitation in the past has damaged the fragile ecosystem. Today concerned governments are trying to find ways to develop the region while caring for the very special natural environment. because the Antarctic is less accessible than the Arctic, it is still largely undamaged by humans, although holes in the ozone layer above the Antarctic have already been discovered. Many people believe that one way to preserve the area is to make the whole region into a world park, with every form of exploitation internationally banned.

### 351 Photography and Advertising

Daniel Harris, a scholar of consumption and style, has observed that until photography finally **supplanted** illustration as the "primary means of advertising clothing" in the 1950s, glamour **inherited** less in the face of the drawing, which was by necessity schematic and generalized, than in the sketch's altitude, posture, and gestures, especially in the strangely dainty positions of the hands. Glamour once resided so emphatically in the stance of the model that the faces in the illustrations cannot really be said to have **expressions** at all, but angles or tilts. Facial expression was not the focus; tilting the head at just the right glamorous angle was. In the 1960s, as attention shifted away from the body, the size of the face in fashion images grew. The chin raised upwards in a haughty look; the eyes lowered in an attitude of introspection; the head cocked at an inquisitive or coquettish angle: or the profile presented in sharp outline, emanating power the severity like an emperor's bust **embossed** on a Roman coin.

### 352 Film as Social Practice

The universality of story Feature films are narratives—they tell stories. Even films based on true events will fictionalize them in order to **produce** drama, to telescope time, to avoid being filled up with too many minor characters, or simply to be more entertaining. Even in the current welter of special-effect movies, feature films are usually **summarized** by their plots—in their first 'treatment' (or outline of the script idea), in the advance publicity, in the TV guide, in reviews, and in conversations. Films may **differ** from other kinds of narrative—literary fiction or television drama, for instance—in the medium used and the representational conventions. They do, **however**, share with literary fiction and television drama the basic structure and functions of narrative.

### 353 Shanghai International University

Upholding the motto of "Integrity, Vision and Academic Excellence", Shanghai International Studies University (SISU) is an internationally recognized, **prestigious** academic institution distinctive for its multidisciplinary and multicultural nature, committed to preparing innovative professionals and future global leaders for a wide range of international expertise to address the critical challenges of our times.

Drawing on our strengths in multi-language programs and multi-disciplinary resources, while responding to national and regional strategies, we operate more than 70 research institutes and centers serving as academic think tanks to provide advisory services on language policies, diplomatic strategies and global public **opinion** of China. These academic entities have contributed

landmark research and are also dedicated to promoting the development of social sciences in China.

We have now **established** partnerships with more than 370 universities and institutions from 56 countries and regions, and have **maintained** close connection with international organizations, including the United Nations and the European Union.

### **354 Sandra Lousada**

London's National Portrait Gallery is currently celebrating the fifty year **career** of photographer Sandra Lousada. The twenty one portraits on display depict key **figures** in literature, film and fashion from the early 1960s. Subsequent to the acquisition of forty portraits by Lousada, the display at The National Portrait Gallery highlights shots taken between 1960 and 1964, many of which feature in Lousada's book *Public Faces Private Places* (2008).

### **355 The End of Globalization (New Sentences)**

The differences in **views** are so great that one wonders are the protesters and the policymakers talking about the same **phenomenon**? Are they looking at the same data? Are the visions of those **in** power so clouded by special and particular **interests**? what is this phenomenon of globalization that has been subject, at the same time, to such vilification and such praise? Fundamentally, it is the closer integration of the countries and the peoples of the world which has been **brought** about by the enormous reduction in the costs of transportation and communication, and the breaking down of the Artificial barriers to the flow of goods, services, capital, knowledge, and, (to a lesser extent), people across borders.

### **356 Culture, Media, and Language**

Traditionally, mass-communications research has conceptualized the process of communication in terms of a circulation circuit or loop. This **model** has been criticized for its linearity - sender/message/receiver - for its concentration on the level of message exchange and for the absence of a structured conception of the different moments as a complex structure of relations. But it is also possible (and **useful**) to think of this process in terms of a structure produced and sustained through the articulation of linked **but** distinctive moments - production, circulation, distribution/consumption, reproduction. This would be to think of the **process** as a 'complex structure in dominance', sustained through the articulation of connected practices, each of which,

however, retains its distinctiveness and has its own **specific** modality, its own forms and conditions of existence.

### 357 French Revolution

The Roman people had at first been inclined to regard the French Revolution with either indifference or **derision**. But as the months went by and the émigrés who remained in the city were less and less **hopeful** of an early return home, the mood of the Romans became increasingly **antagonistic** towards the 'assassins of Paris'. The nationalization of Church property in France, the confiscation of papal territories, the **dwindling** of contributions and the **paucity** of tourists and pilgrims all contributed to an exacerbation of this antagonism. When the French Convention, determined to gain international recognition for the Republic, **dispatched** envoys to Rome, the people turned upon them in fury.

### 358 End to Cattle Curbs

Good sense appears to have **prevailed** at last. With a fresh set of draft rules to replace last year's poorly conceived ones, the Centre has sought to withdraw the ban on sale of cattle for slaughter in animal markets. The draft rules are now open for comments and suggestions. When the Union Ministry for Environment, Forests and Climate Change notified the rules under the prevention of Cruelty to Animals Act on May 23, 2017, there was **concern** that in the name of preventing cruelty to animals and regulating livestock markets the government was surreptitiously throttling the cattle trade and furthering the BJP's cow protection agenda. The rules were criticized for restricting legitimate animal trade and interfering with **dietary** habits.

### 359 Lifelong Learning

Education and well-being have often been **associated**. The idea that education can promote individual well-being indirectly, by **improving** earnings and promoting **social** mobility, is an old one; so are notions of education helping to promote the good society by **contributing** to economic growth and equality of opportunity.

### 360 Freud in Cambridge

That Sigmund Freud became a major intellectual presence in twentieth-century culture is not in doubt. **Nor** is that at all times there was both fervent enthusiasm over and bitter hostility to his ideas and influence. But the exact means **by which** Freud became, despite his hostility, a master of intellectual

life, on a par, already in the 1920s, with Karl Marx, Albert Einstein, Marie Curie and Bertrand Russell, has not been sufficiently explored. Strikingly, Freud emerged as a twentieth-century icon without the endorsement and support of an institution or a profession (in contrast to Einstein, Curie and Russell). Where are we to look for the details of this story of an emergent – and new – figure of immense cultural authority? One of the principals aims of this book is to show how this happened in one local, parochial yet privileged, site – Cambridge, then as now a university town stranded in the English Fens with a relatively (V1: small, V2: fluctuating) population.

### 361 Drug-Injecting Room

When that happens, staff will help the person – strung out and now a little stressed – fish their drugs out of the rubbish. On their way out, they might have a blood test, their first dental check-up in years, or just a hot cup of Milo. “We enable people to inject in the centre because that’s what they do,” the medical director, Nico Clark, tells Guardian Australia during a recent visit to the North Richmond Community Health Centre. “The majority are dependent on their substances. The purpose is not to be a place that facilitates injection per se, the purpose is to keep people alive.” Victorian government rejects criticism of drug-injecting room saying it is saving lives. The centre is a response to a coroner’s report that noted the 34 heroin-related deaths in the area in 2016.

### 362 Orchestrating Impartiality

Discrimination against women has been alleged in hiring practices for many occupations, but it is extremely difficult to demonstrate sex-biased hiring. A change in the way symphony orchestras recruit musicians provides an unusual way to test for sex-biased hiring. To overcome possible biases in hiring, most orchestras revised their audition policies in the 1970s and 1980s. A major change involved the use of blind’ auditions with a screen’ to conceal the identity of the candidate from the jury. Female musicians in the top five symphony orchestras in the United States were less than 5% of all players in 1970 but are 25% today. We ask whether women were more likely to be advanced and/or hired with the use of blind’ auditions. Using data from actual auditions in an individual fixed-effects framework, we find that the screen increases by 50% the probability a woman will be advanced out of certain preliminary rounds. The screen also enhances, by severalfold, the likelihood a female contestant will be the winner in the final round. Using data on orchestra personnel, the switch to blind’ auditions can explain between 30% and 55% of the increase in the proportion female among new hires and between 25% and 46% of the increase in the percentage female in the orchestras since 1970.

### 363 Artificial Light and Turtle Hatchlings

The widespread use of artificial light in modern societies means that light pollution is an increasingly common feature of the environment humans inhabit. This type of pollution is **exceptionally** high in coastal regions of tropic and temperate zones, as these are areas of high rates of human population growth and settlement. Light pollution is a threat for many species that inhabit these locations, particularly those whose ecology or behaviour depends, **in some way**, on natural cycles of light and dark.

Artificial light is known to have detrimental effects on the ecology of sea turtles, particularly at the hatchling stage when they emerge from nests on natal beaches and head towards the sea. Under natural conditions, turtles hatch predominantly at night (although some early morning and late afternoon emergences occur) and show an innate and well-directed orientation to the water, **relying** mostly on light cues that attract them toward the brighter horizon above the sea surface. Artificial lighting on beaches is strongly attractive to hatchlings and can cause them to **move** away from the sea and **interfere** with their ability to orient in a constant direction. Ultimately, this disorientation due to light pollution can lead to death of hatchlings from exhaustion, dehydration and predation.

### 364 Nanny state

Kathryn Mewes does not meet bohemian, hippy parents in her line of work. Typically one, or both, of the parents she sees work in the City of London. "Professionals seek professionals," she says. Originally a nanny, Mewes is now a parenting consultant, advising couples privately on changing their child's behaviour, **as well as** doing corporate seminars for working parents. Her clients find they are unprepared for the chaos and unpredictability that having a child can entail. "Parents are getting older, they have been in control their **whole** lives and been successful. Suddenly a baby turns up and life turns on its head." Nicknamed the "Three-Day Nanny" **because of** her pledge to fix behavioural problems in children under the age of 12 within three days, she is filming a new Channel 4 television series demonstrating her techniques. The **role** of the parenting consultant – distinct from that of a nanny – has developed, she says, as people are used to buying in expertise, such as personal trainers or, in her case, **parenting** advice.

### 365 Health Benefits of The Beach

When our skin is directly **exposed** to the sun, our bodies make vitamin D, a vital tool that helps with calcium **absorption** and building strong bones. Some of it comes from diet, but a good portion also comes from the sun. And according



to the Mayo Clinic, as little as 10 minutes of sun **exposure** can provide us with our daily dose. According to the vitamin D council, "your body can produce 10,000 to 25,000 IU of vitamin D in just a little under the time it takes for your skin to **turn** pink."

### 366 America's Children Nutrition Program

The increased funding will go to nutrition programs including school breakfast and lunch and more. First lady Michelle Obama issued a **supportive** statement upon receiving the news of the passage of the bill that could impact the Let's Move campaign that aims to end childhood obesity within a generation. I congratulate Chairman Miller and the House Education and Labor Committee on the successful bipartisan passage of a child nutrition reauthorization bill out of the Committee today. This important legislation will combat hunger and provide millions of schoolchildren with access to healthier meals, a critical **step** in the battle against childhood **obesity**. In the statement, she urged the House and Senate for a further legislative action. The President looks forward to signing a final bill this year, so that we can make significant **progress** in improving the nutrition and health of children across our nation.

### 367 Individualism (New Sentences)

It is commonly said by anthropologists that primitive man is less individual and more completely moulded by his **society** than civilized man. This contains an element of truth. Simpler societies are more **uniform**, in the sense that they call for, and provide opportunities for, a far **smaller** diversity of **individual** skills and occupations than the more complex and advanced societies. Increasing individualization in this sense is a necessary product of modern **advanced** society, and as a result those who live in those societies are **less** individuals. But it would be a serious error to **set up** an antithesis between this process of individualization and the growing strength and cohesion of society. The development of society and the development of the individual go hand in hand and condition each other.

### 368 Ancient Farming

When humans began farming some 12,000 years ago, they altered the future of our **species** forever. Our ancestors were ecological **pioneers**, discovering and cultivating the most **valuable** crops, scaling them up to feed entire communities and transforming wild crops so fundamentally that they became dependent on humans for their survival. Farming, in the words of National Geographic's Genographic Project, "sowed the seeds for the modern **age**."

### 369 The Benefits of Breastfeeding

While many mothers-to-be are **advised** about the benefits of breastfeeding, what they may not be told is the effects go well beyond physical health. A new study finds babies breastfed for long periods have better performance on intelligence tests, greater school achievement, and higher monthly incomes as 30-year-olds.

While past research has found higher intelligence scores among breastfed babies, what is so significant about this study is the researchers were able to collect more complete information on breastfeeding duration and also followed for a longer period. And, by using a population-based birth cohort, the breast feeding practices had no **association** with income level. Most of the evidence of higher intelligence test scores among breastfed babies comes from high-income countries, where middle-class and higher-class mothers are more likely to breastfeed their babies than lower income mothers — certainly in the United States, breastfeeding rates reflect this trend.

With evidence coming from first-world countries "where breastfeeding is positively associated with higher **socioeconomic status**," Horta explained, "there's always a question of whether the effect that has been **observed** in other studies is a consequence of breastfeeding by itself or has the result been confounded by socioeconomic status." Specifically, higher income babies are most likely eating better quality food and this could be impacting IQ test **scores**.

### 370 Criminal Acts (New Sentences)

The narrative of law and order is located fundamentally at the level of individual **guilt** and responsibility. Criminal acts are seen as individual issues of personal responsibility and **culpability**, to which the state responds by way of policing, **prosecution**, adjudication and punishment. This is but one **level** at which crime and criminal justice can be analyzed. The problem is that so often analysis ends there, at the level of individual action, **characterized** in terms of responsibility, guilt, evil. In few other areas of social life does individualism have this hold.

To take but one **instance**, it would be absurd to restrict analysis of obesity, to individual greed. It should similarly be widely seen as absurd to restrict analysis of criminal justice **issues** to the culpability of individuals.

To **point** to social determinants in explaining crime, is not, as Nicola Lacey notes, "inconsistent with judging it adversely or with **holding** offenders accountable."

### 371 Professor Phoenix (New Sentences)

For Professor David Phoenix, the dean of the faculty of science and technology, the return of single-honors chemistry is a matter of **credibility** and pride. "If you say you're a science faculty, you have to have all the core sciences, and this course will mean we attract a new supply of potential Masters and PhD students in chemistry." Phoenix is adamant that the new course will teach "solid **chemistry**", but he thinks that an attraction for students will be a teaching approach that **differs** significantly from his days as an undergraduate. This takes real-life issues as the starting point of lectures and modules, such as how drugs are made or the science behind green issues. Out of this study, he says, students will be exposed to exactly the same core chemistry, unchanged over decades, but they will be doing it in a way that is more **engaging** and more likely to lead to more fundamental learning. It is an approach that **symbolises chemistry's** recent success story: moving with the times, while holding fast to the subject's essential **role** as a building block of science and technological advance.

### 372 Neutrinos

In June 1998, an international team of Japanese and US physicists unveiled strong evidence that elusive subatomic particles known as neutrinos have mass. These findings run **counter** to the standard model of particle physics—the basic theory about the structure of matter—which holds that these electrically neutral, weakly interacting particles have no mass. The discovery means that existing theoretical models of matter must now be **revised** to include neutrinos with mass. Neutrinos occur in three states: electron, muon, and tau, with the names signifying what is produced when a neutrino collides with another particle. **Observers** do not see the neutrinos themselves, but can detect the creation of electrons and muons from faint flashes of light following a particle collision.

The physicists used the giant Super-Kamiokande—the world's biggest neutrino detector buried deep underground in Mozumi, Japan. In the experiment, **conducted** in a 50,000-ton tank of purified water, neutrinos created when cosmic rays bombard Earth's upper atmosphere were counted relative to the number expected to penetrate the cavern. The experimenters found that the number of electron-neutrinos detected was relatively constant with theorized totals, while the number of muon-neutrinos was significantly lower. This indicated that they were disappearing into another state, or "flavor," such as an undetected tau-neutrino, or possibly another type.

### 373 Australian Legal System

This text delivers a thorough and balanced introduction to the Australian Legal System. It provides a clear grounding in the western and indigenous legal traditions, as well as the history of Australian law and legal institutions. There is a special emphasis on legal method which forms the basis of legal understanding. In particular, the text analyses and explains legal method—the following and distinguishing of precedent, statutory interpretation and the identification of ratio, which prepares students for their legal study. Numerous quality exercises prepare the way for legal thinking in students, for example, "Part 3: Legal Method" contains many examples and exercises to encourage understanding.

### 374 Helping Others

There are many different ways to help other people. Perhaps the most common of these involves giving others practical help. In our society, there are many individuals who spontaneously help others in this way. Additionally, there are others who belong to organisations which have been set up to provide help to specific groups, such as the elderly, the disabled, and those with serious physical or mental health problems. Most importantly, there are many occupations, such as nursing, occupational therapy and social work, which involve professionals who are trained to provide or organise practical help for others. While helping other people in a practical way, many volunteer and professional helpers also make use of some counselling skills. These skills can be very useful in enabling people to feel better as described in this book and our book, Counselling Skills in Everyday Life. However, it needs to be recognized that just being able to make use of some counselling skills does not qualify a person as a counsellor.

### 375 Bamboo

Bamboo is a favoured plant among architects and designers because of its incredible strength and durability. One Colombian architect refers to it as nature's steel, but in many respects it is even better than steel: it is lighter and more flexible, and these qualities make it the ideal building material in areas that suffer earthquakes and severe weather patterns. Construction workers in places such as Hong Kong rely on bamboo scaffolding whatever the height of the tower block they may be working on: over a billion people around the world live in a home that is made of bamboo; and China has cultivated the plant for thousands of years. The only drawback to this remarkable product is the cost of transporting it. So for those who live in cooler regions of the world, the enormous advantages of this natural building material are less accessible.

### 376 The Dow Jones Industrial Average

The Dow Jones Industrial Average (DJIA) reports the average stock price of large, publicly traded US companies. It tends to **reflect** the state of the stock market as a whole. Though its name would **lead** you to believe the DJIA is made up of only **industrial** companies, the DJIA in fact contains stocks across many "industries," not all of which are industrial. The businesses **represented** include finance, food, technology, retail, heavy equipment, oil, chemical, pharmaceutical, consumer goods, and entertainment.

### 377 Wetland Plant

Experts have waited a considerable amount of time for this much-needed book. Now we have a new and very thorough survey of wetland plant species. The content is extensive and totally up-to-date and as reference **material**, it represents extremely good value. In addition to the editors, there are 35 well-chosen contributors who have put in a tremendous amount of work to **assist** the reader with maps and indexes. And colorful photographs. The plant descriptions are straightforward, yet scholarly, and flicking through the pages, **you can sense** the writers' passion for the subject. Each of the eight sections has an overview, **highlighting** current concerns and future conservation plans. Despite a few gaps and the occasional unsatisfactory illustration, this handbook will remind botanists and specialists of the importance of protecting the country's plant life. **Every** person interested in the topic, whether student or hardened expert will find it indispensable.

### 378 Neanderthals

A few years ago scientists **discovered** a **three-foot** skeleton of an early human species on an Indonesian island. They **nicknamed** the **creature** a "hobbit." But the find left scientists with two major questions: Do these short, 18,000-year-old bones represent an entirely new human species? Or is it just someone with a growth disorder? Now the wrist bones may provide an answer. Researchers from the Smithsonian Institution **published** an article in the latest issue of Science. They showed that the hobbit's wrists are **significantly** different from both early humans and from **Neanderthals**. In fact, the wrists are closer to those of African apes. Wrist bones take shape in early pregnancy and don't change much. They're also particularly distinctive between species. Scientists believe this shows that an early species in the human line migrated from Africa to Asia. They evolved into a new species on the Indonesian island. If modern humans and Neanderthals have a common ancestor, then modern humans and hobbits have a common, well, grand-ancestor. Making us and hobbits kind of second cousins.

### 379 Contaminated Microbiomes

In this age of cheap DNA technology, **scientists** are sequencing every sample they can get their hands on. They've ID'd the microbes in mosquito guts, coral mucus and frog skin; in polar ice; even floating in the Earth's atmosphere. But it turns out some of the bugs reported to belong to those unusual microbiomes could unfortunately be contaminants, from non-sterile lab reagents and DNA extraction kits. So says a study in the journal BMC Biology. Researchers **sequenced** a pure sample of just one type of bacteria. But depending which kit they used, which reagents, which lab, their results **contained** DNA from up to 270 different bacterial strains. Many of those contaminating strains are **commonly** found on human skin... (a lab technician's, maybe?). Or in soil or water. Which could explain why one recent study turned up soil bacteria in samples of breast cancer tissue, the researchers say. Another study found that infants' throat bacteria change as they get older. But these researchers say the **changing** bacterial communities in that study were due not to age—but to changing the brand of DNA kit over time. Study author Alan Walker, of the University of Aberdeen, says **contamination** is only a problem if you're working with samples that aren't already rich in bacteria. "If you're doing fecal work, for example, this probably doesn't concern you, because there's enough DNA coming from the actual sample that it'll drown out any of the background contamination." His **recommendation** for scientists? Alongside the actual samples, try sequencing nothing...to see what sort of shadow microbiome is already lurking in your lab.

### 380 Athens Games

While the preparations for the Athens games were **marred** by construction delays and an epic race to complete **venues** before the opening ceremonies, the game's return to their historic home ended as a surprising success. Participation **records** were once again broken, with 201 nations and 10,625 athletes taking part in 301 different events. Nearly as **compelling** as the competitions were the historic sites used for the games.

### 381 Famous People

Have you ever known anyone famous? If so, you may have found that they are remarkably similar to the rest of us. You may have even heard them **object** to people saying there is anything different about them. "I'm really just a normal guy," **presents** an actor who has recently rocketed into the spotlight. There is, of course, usually a brief period when they actually start to believe they are as great as their **worshipping** fans suggest. They start to wear **fancy** clothes and talk as if everyone should hear what they have to say. This period,

however, does not often last long. They fall back to reality as fast as they had originally risen above it all.

### 382 A Day in the Life of Your Body

Taking us through a typical day, from the arousal of the senses in the morning to the reverie of sleep and dreams, Ackerman reveals the human form as we've never seen it: busy, cunning, and miraculous. Advances in genetics and medical imaging have allowed us to peer more deeply inside ourselves than ever before, and one of the most amazing recent discoveries is that we are intensely rhythmic creatures. The human body is like a clock – actually an entire shop of clocks — measuring out the seconds, minutes, days, and seasons of life.

### 383 Neo-Latin

Those of you who've never heard the term neo-Latin, may be forgiven for thinking it's a new South American dance craze. If you're puzzled when I tell you it has something to do with the language of Romans, take heart, over the years many classes who have confessed they are not really sure what it is either. Some have assumed that they are so-called 'Late-Latin', written at the end of the Roman Empire. Others have supposed it must have something to do with the middle ages. Or perhaps it's that pseudo-Latin which my five and seven-year-old boys seem to have gleaned from the Harry Potter books, useful for spells and curses that they zip one another with makeshift paper ash ones. No, in fact, neo-Latin is more or less the same as the Latin that was written in the ancient world, classical Latin. So, what's so new about it?

### 384 Event Management

Event management is particularly challenging from an operational viewpoint. In many cases, events are staged on sites where everything has been set up over a 24-hour period, with all elements carefully synchronized. In contrast, many events are years in the planning: large convention bids are often won five years before the event is held. For the very competitive bidding process, budgets need to be developed and prices quoted, requiring a good understanding of market, economic and political trends, as well as consumer choices. This long-term view is the basis of strategic management, which is covered in Part 1, and focuses on the event concept, feasibility of the event, legal compliance and financial management. Marketing is a critical success factor and other important topic of this first section, many events (sporting, cultural and arts) involving long - term sponsorship arrangements with key industry players. Relationship building is particularly challenging since

there are so many stakeholders involved in events, including government agencies at many levels. Part 1 will look at all these aspects, including strategic risk, before moving on to the second part where operational planning and implementation will be covered in detail.

### **385 Small Wonders**

On the journey, we learn about the teamwork required to rot human teeth; the microbe superheroes who feed on radioactive **waste**; suicide genes; the origins of diseases and antibiotic **resistance**; and the numerous respects in which microbes **benefit** human life - from manufacturing food and medicine, to mining gold, finding oil, cleaning up the mess we make, and generally **rendering** the earth habitable. Small Wonders is popular science at its best. Ben-Barak's love of bugs is infectious and makes for a scintillating, fast-moving adventure that will **appeal** to even the least scientifically savvy of readers.

### **386 The History of Skyscrapers**

The desire to build big is nothing new. Big buildings have been used to show off power and wealth; to honor leaders or religious beliefs; to stretch the limits of what's possible; and even as simple **competition** among owners, families, architects, and builders. Some of the most **dramatic** buildings of the past include the pyramids in Egypt, the skinny towers stretching towards the sky in Italian hill towns, and the gothic cathedrals of France. While these types of buildings may look very different from each other, they all have one thing in **common**. They were built with masonry or stone walls supporting most of the weight (so-called load-bearing walls), including that of the floors, the people, and everything the rooms contained. Because of this, the height of these buildings was limited by how massive and heavy they had to be at the base.

Two **developments** in the 19th century paved the way for a whole new type of building: the skyscraper. The first was the development of a safe elevator. Primitive elevators of various designs had been used for centuries, and starting in the mid-19th century, steam-operated elevators were used to move materials in factories, mines, and warehouses. But these elevators were not **considered** safe for people; if the cable broke, they would plummet to the bottom of the elevator shaft. Then in 1853, an American inventor named Elisha Graves Otis developed a safety device that kept elevators from falling if a cable should break. This new development had an enormous impact on public confidence. And later in the century, the switch to an electric motor made the elevator a practical solution to the problem of getting up and down tall buildings.



### 387 World Income Inequality

To understand how many inhabitants of a country are poor, it is not enough to know a country's per capita **income**. The number of poor people in a country and the **average** quality of life depend on how equally or unequally income is **distributed** across the population. In Brazil and Hungary, for example, per capita income levels are quite comparable, but the **incidence** of poverty in Brazil is much higher. In Hungary the richest 20% of the population receives about four times more income than the poorest 20%, whereas in Brazil the richest 20% **receives** 30 times more than the poorest 20%.

### 388 Open Door

Open Door, maintenance in a certain territory of equal commercial and industrial rights for the nationals of all countries. As a **specific** policy, it was first advanced by the United States, but it was **rooted** in the typical most-favored-nation clause of the treaties concluded with China after the Opium War (1839–42). Although the Open Door is generally **associated** with China, it also received recognition at the Berlin Conference of 1885, which declared that no power could **levy** preferential duties in the Congo basin.

### 389 Beware the Ides of March

The soothsayer's warning to Julius Caesar, "Beware the Ides of March," has forever imbued that date with a sense of **foreboding**. But in Roman times the **expression** "Ides of March" did not necessarily evoke a dark mood—it was simply the standard way of saying "March 15." Surely such a fanciful expression must signify something more than merely another day of the year? Not so. Even in Shakespeare's time, sixteen centuries later, **audiences** attending his play Julius Caesar wouldn't have blinked twice upon hearing the date called the Ides.

### 390 Haute Couture Strict Regulations

To be called a haute couture house, a business must belong to the Syndical Chamber for Haute Couture in Paris, which is **regulated** by the French Department of Industry. Members must employ 15 or more people and present their collections twice a year. Each **presentation** must include at least 35 separate outfits for day and eveningwear.

### 391 Bad Habits

What are your bad habits? I think everyone has bad habits. Not **everyone** agrees on what bad habits are. Some **smokers** don't think smoking is a bad habit. Young people don't think listening to loud music on the train is a bad

habit. In Japan, slurping your noodles is a sign that you enjoy your **food**, but making a noise while eating in England is not good. Have you ever tried to break your bad habits? I have **quit** smoking and have stopped leaving things laying **around** the house. I wish other people would stop their bad habits. I get annoyed when people are late **for** meetings or talk loudly on their phones in public. I also think many motorists need to think about their driving habits. **Perhaps** I should point out their bad habits.

### 392 New Year, Old Customs

A symbol of renewal, January 1 is the most important holiday in Japan. In December, various Bonenkai or "forget-the-year **parties**" are held to bid farewell to the problems and **concerns** of the past year and **prepare** for a new beginning. Misunderstandings and grudges are forgiven and houses are scrubbed. At midnight on Dec. 31, Buddhist temples strike their gongs 108 times, in an effort to **expel** 108 types of human weakness. New Year's day itself is a day of joy and no work is to be done. Children receive otoshidamas, small gifts with money inside. Sending New Year's cards to arrive on January 1 is a popular **tradition**.

### 393 Guided Tours

A spokesman for the project said: "A car mechanic for **instance** could find at a glance where a part on a certain car model is so that it can be identified and repaired. For the motorist the system could **highlight** accident black spots or dangers on the road." In other cases the glasses could be worn by people going on a guided tour, **indicating** points of interest or by people looking at panoramas where all the sites could be identified.

### 394 Climate Change

There's no question that the Earth is getting hotter. The real questions are: How much of the warming is our fault, and are we **willing** to slow the devastation by controlling our insatiable **appetite** for fossil fuels? Global warming can seem too **remote** to worry about, or too uncertain-something projected by the same computer **techniques** that often can't get next week's weather right. On a raw winter day you might think that a few degrees of warming wouldn't be such a bad thing anyway. And no doubt about it: Warnings about **climate** change can sound like an environmentalist scare tactic, meant to force us out of our cars and restrict our lifestyles.

### 395 Baby Face and Cuteness

Cuteness in offspring is a potent protective mechanism that ensures survival for otherwise completely **dependent** infants. Previous research has linked cuteness to early ethological ideas of a “kindchenschema” (infant schema) where infant facial features serve as “innate releasing mechanisms” for **instinctual** caregiving behaviours. We propose extending the concept of cuteness beyond visual features to include positive infant sounds and smells. Evidence from behavioural and neuroimaging studies links this extended concept of cuteness to simple “instinctual” behaviours and to caregiving, protection and complex emotions. We review how cuteness supports key parental capacities by **igniting** fast privileged neural activity followed by slower processing in large brain networks also involved in play, empathy, and perhaps even higher-order moral emotions.

### 396 Aliens

There are aliens out there, somewhere. I strongly believe this. Not sure what they look like, though. I really **doubt** they are green; like they are in science **fiction** movies. I also don't think they look like us. But I'm sure they exist. I just don't think we'll ever see any or find any. They live too far away. If you think about it **logically**, there has to be aliens out there. All a **planet** needs is to be warm and have water and life will exist. There are billions and billions of planets in the **universe**, so there are **probably** millions and millions that have life. Alien life. It's also likely that some of the aliens are much more intelligent than we are. I wonder what we'd do if really intelligent aliens visited Earth. What would we ask them?

### 397 Flower Attract Insects

A flower's color, however, isn't a fool-proof guide to a good lunch. That's because the color can change depending on the angle at which sunlight hits its petals. A yellow flower, for example, may look somewhat blue from one angle and red from another. Scientists call this kind of color change iridescence. “It's the same phenomenon that makes a rainbow appear in a soap bubble or on a CD,” says Beverley Glover. She studies plants at the University of Cambridge in England.

In 2009, Glover and her colleagues showed that even when petals look shimmery, bees can still tell which flowers likely hold food. But she and others noticed something odd about **iridescence**. It's not quite as flashy in plants as in other life forms, Glover says. The backs of jewel beetles or the wings of certain butterflies, for instance, shine and shimmer a lot more.

The researchers tested their hypothesis in the lab. They trained a group of bees to associate fake purple flowers with getting more nectar. Then the team **tested** the bees. They added non-shimmery fake flowers with purple-blue and purple-red hues to the bees' flight path. The bees passed the test, ignoring flowers that weren't **perfectly** purple.

second group of bees was **trained** to drink from fully flashy, "perfectly iridescent" purple flowers. But when the team added perfectly iridescent flowers in different hues, the insects checked them for nectar too.

A third group of bees, however, had no problem finding the right flowers when the petals had only a little bit of bling. These bees were trained to drink from "imperfectly iridescent" purple flowers. When the team added imperfectly iridescent flowers in different hues, the bees weren't confused at all. "They could still clearly identify the purple flowers as the good ones," Glover says. That means imperfect iridescence is best for bees.

### **398 The Rules of Investing**

To invest, you need to **draw up** a clear plan, do your own research, **build** in a margin of safety by always thinking about the valuation and, ultimately, be patient. By all means include some speculative picks if you wish, but ensure they are only a small part of your portfolio. Looking for an oil explorer whose shares double, treble and **double** again is exciting but such firms are very **rare**. There are a lot more which have a consistent record of paying out the dividends which really make the markets work for you, once they are reinvested.

### **399 Animal Consciousness**

So some of the time an intellectual challenge is to assimilate how similar we can be to others species. In other cases the challenge is to appreciate how, though human physiology **resembles** that of other species, we use the physiology in novel ways. We activate the classical physiology of vigilance while watching a scary movie. We activate a **stress response** when thinking about mortality. We secrete hormones related to nurturing and social bonding, but in response to an adorable baby panda. And this **certainly applies** to aggression - we use the same muscles as does a male chimp attacking a sexual competitor, but we use them to harm someone because of their ideology.

#### 400 Hippocrates

Hippocrates allowed observation, rationality and his own genuine respect for his patients to **guide** his practice (Garrison 94 ). Using the scientific method, he carefully **recorded** his patient's symptoms and **responses** to treatments, and used the data **gathered** to evaluate and prescribe the most successful regimens. His prestige as a great medical **practitioner**, educator, and author helped spread these ideals of **rational** medicine throughout the ancient world.

#### 401 Changes in Ocean Currents

At the end of the last ice age, the melting ice disrupted the ocean currents in the North Atlantic and **caused** a drop in temperature of almost 5 degrees. Even **though** the rest of the planet was warming **up**, the North Atlantic region remained in a cold period for 1300 years. The same thing happened **around** 8000 years ago, when the cooling lasted about a hundred years, and it **could** happen again today. Even a short period of cooling in the North Atlantic could have a dramatic effect on the wildlife, and the human populations, living there.

#### 402 Fish Farms

Coastal fish farms seem to do less harm to nearby plants and animals than **previously** believed, a new study reveals. And marine ecosystems can recover from this damage **surprisingly** fast. But the analysis of a single trout farm in a Faroe Islands fjord over nearly a year also shows that these facilities need to be **placed** carefully, and that there's a limit to how many can operate in a particular area before its biodiversity suffers lasting harm. In coastal farms, fish live in large cages hanging from pontoons on the surface. Fish feces and uneaten food sink to the seabed, affecting its ecosystem. **Badly**-managed farms can also have serious effects on the surrounding water column.

#### 403 Finding Rewarding Employment

Finding challenging or **rewarding** employment may mean retraining in mid-life and moving from a state or boring job in order to find your **passion** and pursue it. The idea is to think long range and expect to have an active lifestyle into later years. Being personally productive may now mean anticipating retiring in stages. This might necessitate going for an alternate **plan** should a current career end by choice or for economic reasons.

#### 404 The Australian Maritime College

The Australian Maritime College at the University of Tasmania, in partnership with CSIRO and University of Queensland, have been awarded \$2.48 Million funding support from Australian Renewable Energy Agency.

#### 405 Human Nature

What can science tell us about human nature?

Modern developments in areas such as neuroscience, artificial intelligence and evolutionary psychology have resulted in new ways of thinking about human nature. Can we explain the mind and consciousness in terms of brain function? Can we understand modern human behavior in terms of our evolutionary heritage? Is science even the right place to start if we want to understand human nature?

#### 406 The Following Trips

Researchers suggest the following trips as you begin to network, seek common ground, engage with your network regularly (rather than only when you have crisis), and consistently apply yourself to making your network work or it will wither. It is a skill that you need to practice, not a talent.

#### 407 The Good Schools Guide

A big rise in state schools rated among the best institutions in the country is revealed in the latest edition of the Good Schools Guide. Middle-class parents facing financial pressures in the downturn are increasingly looking beyond the private sector to educate their children. The 23-year-old Good School Guide – a popular reference book for fee-paying families set on the best private school – has increased the number of state schools in this year's edition to 251, pushing the figure to more than a quarter of its 1000 entries for the first time. Explaining why the guide has more than doubled the number of schools it features outside the private sector in only five years, Sue Fieldman, regional editor, told the Financial Times: "The parents we speak to want more information on the state sector and the best it has to offer."

#### 408 Financial Markets

When people worry about a glut of liquidity, they are thinking of the first of these concepts. If money is too abundant or too cheap, inflationary pressures may build up or bubbles may appear in financial markets – until central banks tighten policy or market opinion suddenly changes. A slackening of economic activity or a drop in asset prices can leave households, businesses and financial

institutions in trouble if their balance sheets are not liquid enough (the second concept) or if they cannot find a buyer for **assets**.

#### **409 Joy through Pain (Different Version)**

Deep tissue massage aims to release painful knots **of** muscle called trigger points. The way to do this is to stop the blood flow **by** applying pressure **to** the point and then to release **for** a few seconds, which tricks the brain **into** flooding the affected area **with** blood, encouraging the muscle to relax.

#### **410 Trees**

Trees, as ever, are or should be at the heart of all **discussion** on climate change. The changes in carbon dioxide, in temperatures, and in patterns of rainfall will each affect them in many ways – and each parameter **interacts** with all the others, so between them these three main **variables** present a bewildering range of possibilities.

#### **411 The Definition of Research**

Research is a process of investigation leading to new insights effectively shared and is central to the purpose of any university. Students have the right to be taught by acknowledged **experts** in their field, which requires that staff members operate at the most advanced level appropriate to their **discipline** and level. Research is, therefore, crucial to a **positive** student experience from further education to doctoral development.

#### **412 Marion Dorset**

Marion Dorset (1872-1935) was an influential American biochemist. He began working as a **researcher** for the U.S. Department of Agriculture in 1894, and worked his way up to become chief of the biochemical **division** in 1904. He made important discoveries in bacterial toxins and animal diseases, and he conducted pioneering work in the **inspection** of meat products. He co-discovered the virus that causes hog cholera and subsequently developed a **serum** to prevent it.

#### **413 Creative Writing**

This exciting new M.A. in Creative Writing is designed for graduates who wish to examine and expand their work. Through workshops, seminars, and **individual** tutorials, students will discover new writing strategies and refine their writing. The course **offers** students the practical expertise needed for researching and structuring texts, and **understanding** traditions and genres, as

well as the critical and creative proficiencies **necessary** to develop a career in creative writing or in a related **field**.

#### **414 Behaviorism**

Another way to looking at personality is the behaviorist approach according to the behaviorists; the inner **facts** of the consciousness are not important. Instead they believed that our behaviors, and therefore our **personalities** are learned primarily through our experiences. The theories of behaviorism arose through **experiments** largely on animals in which behaviors were learned through carefully controlled **stimuli**.

#### **415 Inflation Pressure**

When people worry about a glut of liquidity, they are concerned with overall monetary conditions. If money is too abundant or too cheap, inflationary **pressures** may build up or bubbles may appear in financial markets. Then a slackening of **economic** activity or a drop in asset prices can leave households, businesses and financial institutions in trouble if their balance sheets are not liquid enough or if they cannot find a buyer for **assets**.

#### **416 Lysimachia (A Vegetable)**

The genus Lysimachia includes about 150 species of herbaceous and evergreen perennials and shrubs, mainly growing in damp grassland and woodland or near water in **subtropical** regions. Leaf shapes may vary, but leaves are often hairy. The 5-petaled flowers can be shaped liked stars, saucers, or cups, and are most often white or yellow, and sometimes pink and purple. **Noteworthy** characteristics: Larger species can be used in a moist border, bog garden, or on the edge of a pond, or for naturalizing in a wild or woodland **setting**. Smaller, low-growing species make good **groundcovers**.

#### **417 Security Footage**

The introduction of security footage in courtrooms as evidence is increasingly common. With the number of closed-circuit television (CCTV) cameras rising, the likelihood of images deemed relevant for criminal proceedings being recorded also increases. However, while CCTV footage may arguably have assisted in achieving **convictions** in some high profile cases, can it assist in the overall reduction of violence against women? A well-known example in Australia of CCTV helping solve a crime is the footage pulled from a shop on Sydney Road the night Jill Meagher was raped and murdered by Adrian Bayley. This footage was mentioned in his sentencing in 2013. In the same year,



Simon Gittany was found **guilty** of the murder of his partner Lisa Harnum. CCTV footage – taken from his own security cameras – was again **interpreted** as key evidence. Beyond the courtroom, news media reports of crime are saturated with the use of CCTV footage. In both contexts, it is often seen to be **decisive** – an authoritative and objective witness that can tell us “what really happened”. While used in a range of offences, its inclusion in instances of extreme (and public) violence against women can mean certain images receive significant and sustained media **attention**, and may remain online indefinitely. The strength of CCTV in our public consciousness is such that questions of privacy are often dismissed as inconsequential. CCTV installed in the homes of family violence victims has even been considered.

#### **418 Transportation**

Before the 20th century the horse provided day to day transportation in the United States. Trains were used only for long-distance transportation.

Today the car is the most popular **means** of transportation in all of the United States. It has completely **replaced** the horse as a means of everyday transportation. Americans use their car for **nearly** 90 percent of all personal **trip**.

Most Americans are able to **buy** cars. The average price of a **recently** made car was, \$ 2500 in 1950, \$2740 in 1960 and up to \$4750 **in** 1975. During this period American car manufacturers set about **improving** their products and work efficiency.

#### **419 SARS**

Scientists around the world are racing to learn how to rapidly diagnose, treat and stop the spread of a new, deadly disease. SARS--Severe Acute Respiratory Syndrome--was **detected** for the first time in February 2003 in Hanoi, **and** since then has infected more than 1,600 people in 15 countries, killing 63. At this **point**, there are more questions than answers surrounding the disease.

Symptoms start **with** a fever over 100. 4 degrees F, chills, headache or body **aches**. Within a week, the patient has a dry cough, which might **progress** to shortness of breath. In 10% to 20%of cases, patients require **mechanical** ventilation to breathe. About 3.5%die from the disease. Symptoms **generally** begin in two to seven days, but some reports suggest it **might** take as long as 10 days. Scientists are close to **developing** a lab test to diagnose SARS. In the meantime, it is diagnosed by its symptoms. There is no evidence **that** antibiotics or anti-viral medicines help, **so** doctors can offer only supportive care. Patients with SARS are kept in isolation to reduce the risk of **transmission**.

Scientists aren't sure yet, but some researchers think it's a newly discovered coronavirus, the family of viruses that cause some common colds.

Most cases appear to have been passed through droplets expelled when infected patients cough or sneeze. Family members of infected people and medical workers who care for them have been most likely to contract the illness. But recent developments in Hong Kong suggest that the disease might spread through air, or that the virus might linger for two to three hours on doorknobs or other surfaces. Health experts say it is unlikely, though, that sharing an elevator briefly with an infected person would be enough to pass the virus.

#### 420 Who Won the World Cup 1994

Who won the World Cup 1994 football game? What happened at the United Nations? How did the critics like the new play? Just when an event takes place, newspapers are on the streets to give the details. Wherever anything happens in the world, reports are on the spot to gather the news.

Newspapers have one basic purpose, to get the news as quickly as possible from its source, from those who make it to those who want to know it. Radio, telegraph, television, and other inventions brought competition for newspapers. So did the development of magazines and other means of communication. However, this competition merely spurred the newspapers on. They quickly made use of the newer and faster means of communication to improve the speed and thus the efficiency of their own operations. Today more newspapers are printed and read than ever before. Competition also led newspapers to branch out to many other fields. Besides keeping readers informed of the latest news, today's newspapers educate and influence readers about politics and other important and serious matters. Newspapers influence readers' economic choices through advertising. Most newspapers depend on advertising for their very existence. Newspapers are sold at a price that fails to cover even a small fraction of the cost of production. The main source of income for most newspapers is commercial advertising. The success in selling advertising depends on a newspaper's value to advertisers. This is measured in terms of circulation. How many people read the newspaper? Circulation depends much on the work of the circulation department and on the services or entertainment offered in a newspaper's pages. But for the most part, circulation depends on a newspaper's value to readers as a source of information about the community, city, country, state, nation, and world—and even outer space.

#### 421 Reading

For many people today, reading is no longer relaxation. To keep up their work they must read letters, reports, trade publications, interoffice communications, not to mention newspapers and magazine: a never-ending flood of words. In

getting a job or advancing in one, the ability to read and comprehend quickly can mean the difference between success and failure. Yet the unfortunate fact is that most of us are poor readers. Most of us develop poor reading habits at an early age, and never get over them. The main deficiency lies in the actual stuff of language itself—words. Taken individually, words have little meaning until they are strung to gather into phrase, sentences and paragraphs. Unfortunately, however, the untrained reader does not read groups of words. He laboriously reads one word at a time, often regressing to reward words or passages. Regression, the tendency to look back over what you have just read, is a common bad habit in reading. Another habit which slows down the speed of reading is vocalization — sounding each word either orally or mentally as one reads.

To overcome these bad habits, some reading clinics use a device called an accelerator, which moves a bar (or curtain) down the page at a predetermined speed. The bar is set at a slightly faster rate than the reader finds comfortable, in order to stretch him. The accelerator forces the reader to read fast, making word-by-word reading, regression and subvocalization, practically impossible. At first comprehension is sacrificed for speed. But when you learn to read ideas and concepts, you will not only read faster, but your comprehension will improve. Many people have found their reading skill drastically improved after some training. Take Charlice Au, a business manager, for instance, his reading rate was a reasonably good 172 words a minute before the training, now it is an excellent 1,378 words a minute. He is delighted that how he can get through a lot more reading material in a short period of time.

## 422 What Coffee Does to Your Health

Coffee can be considered one of nature's greatest gifts. It gives mental and emotional clarity without harmful side effects, (like alcohol or tobacco), and it contains a wealth of nutrients. Yet, when most people drink coffee, they are not thinking that the beverage is improving their health. In fact, some may even feel a little guilty, since they believe coffee isn't good for you at all. Well, here's the truth of the matter. Coffee, like anything else, can cause problems if too much is consumed. In the short-term, too much coffee will cause insomnia, nausea and hypertension. In the long-term, too much coffee will cause stomach problems, teeth staining, and high cholesterol.

As for the benefits, moderate consumption of coffee, (which means 1 to 4 cups a day), supplies your body with a wealth of antioxidants. These substances are responsible for eliminating free radicals. They are the chemical byproducts produced any time your body does something. A small number of them can help serve as a buffer against negative elements, but if they aren't kept in check, they can cause health problems. Antioxidants ensure that this doesn't happen.

The psychological effects of caffeine cannot be ignored either. Not only does caffeine make you more alert, but it can actually affect your mood. If you were

feeling **depressed** or overwhelmed, a nice cup of coffee could change your perspective. The stack of work that seemed **impossible** before isn't even a problem now.

**In addition**, caffeine helps stimulate creativity as it speeds up the body's functioning. That's why coffee is often **associated** with writers and other intellectual professions. Other drugs **tend** to make people dumber. Consider what happens when people get high off of crack or when they get drunk off of alcohol. They won't be functional at all. But with coffee, an individual gets a creative boost while still helping their bodies.

In conclusion, don't feel bad when you're brewing your morning cup of coffee. **Unlike** a can of soda or a shot of alcohol, coffee will make you feel wonderful while keeping you healthy. Just remember, you do have to consume the beverage **in moderation**.

### 423 Mind

Let us then suppose the mind to be, as we say, white paper, **void** of all characters, without any ideas:- How comes it to be **furnished**? Whence comes it by that vast store which the busy and **boundless** fancy of man has painted on it with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, from **experience**.

### 424 Typewriter Monkeys

This illustration often used is the one that the monkey and the typewriters\_ OK, we have a monkey sitting at a **typewriter** and the claim here is basically if you leave chance in time long enough you will get life. Don't worry about it, yes, its strange, yes it's wonderful, but leaves enough matter 600 million years on earth and you will have life. So, the monkey sitting at the typewriter: the chances are eventually he produces the complete works of Shakespeare but he doesn't manage to do it in 600 million years\_ So what I decide to do is to run the numbers\_ I instead of saying typing the complete work of Shakespeare. I just run the numbers for how long would it take a monkey typing one key **striker** a second\_ To type "to be or not to be that is the question", right? On average how long is it gonna take my monkey friend one **keystroke** a second. Don't know how you think it would be\_ Maybe you could have a guess. Would it be less or more than 600 million years, which is the period life on earth isn't supposed to have **emerge** within and when I run the numbers "to be or not to be is the question" tikes 12.6 trillion trillion trillion year to type just that **phrase** and a DNA **string** that something of that complexity emerges by chance undirected within 600 million years? Again, it's mathematically possible but it's so incredible unlikely that it would have that it tilts me in favor of the Christian story in which God creating life, simply a question of saying let that be and there was.

#### 425 Psychological Theories

Attempts to apply psychological theories to education can falter on the translation of the theory into educational practice. Often, this translation is not clear. **Therefore**, when a program does not succeed, it is not clear whether the lack of success was due to the inadequacy of the theory or the inadequacy of the implementation of the theory. A **set** of basic principles for translating a **theory** into practice can help clarify just what an educational implementation should (and should not) look like. This article presents 12 principles for translating a tribrachic theory of successful intelligence into educational practice.

#### 426 Low-Priced Labor

With an abundance of low-priced **inexpensive** labor relative to the United States, it is no surprise that China, India and other developing countries specialize in the production of labor-intensive products. For similar reasons, the United States will specialize in the production of goods that are human- and physical-capital intensive because of the relative abundance of a highly-educated labor force and technically sophisticated **advanced** equipment in the United States.

This division of global production should yield higher global output of both types of goods than would be the case if each country attempted to produce both of these goods itself. For example, the United States would produce more expensive labor-intensive goods because of its more expensive labor and the developing countries would produce more expensive human and physical capital-intensive goods because of their relative scarcity of these inputs. This logic implies that the United States is unlikely to be a significant global competitor in the production green technologies that are not relatively intensive in human and physical capital.

Nevertheless, during the early stages of the development of a new technology, the United States has a comparative advantage in the production of the products enabled by this innovation. However, once these technologies become well-understood and production processes are designed that can make use of less-skilled labor, production will migrate to countries with less expensive labor.

#### 427 Ageing World

We live in an ageing world. While this has been recognized for some time in developed countries, it is only recently that this phenomenon has been fully acknowledged. Global communication is "shrinking" the world, and global ageing is "maturing" it. The increasing presence of older persons in the world is making people of all ages more aware that we live in a diverse and multigenerational society. It is no longer possible to ignore ageing, regardless of whether one views it positively or negatively.

Demographers note **observe** that if current trends in ageing continue as predicted **anticipated**, a demographic revolution, wherein the proportions of

the young and the old will undergo a historic crossover, will be felt in just three generations. This portrait of change in the world's population parallels the magnitude of the industrial revolution - traditionally considered the most significant social and economic breakthrough in the history of humankind since the Neolithic period. It marked the beginning of a sustained movement towards modern economic growth in much the same way that globalization is today marking an unprecedented and sustained movement toward a "global culture". The demographic revolution, it is envisaged, will be at least as powerful.

While the future effects are not known, a likely scenario is one where both the challenges as well as the opportunities will emerge from a vessel into which exploration and research, dialogue and debate are poured. Challenges arise as social and economic structures try to adjust to the simultaneous phenomenon of diminishing young cohorts with rising older ones, and opportunities present themselves in the sheer number of older individuals and the vast resources societies stand to gain from their contribution.

#### **428 Bar Code Scanners**

Many different types of bar code scanning machines exist, but they all work on the same fundamental principles. They all use the **intensity** of light reflected from a series of black and white stripes to tell a computer what code it is **seeing**. White stripes reflect light very well, while black stripes reflect hardly any light at all. The bar code scanner shines light **sequentially** across a bar code, simultaneously detecting and recording the pattern of reflected and non-reflected light. The scanner then **translates** this pattern into an electrical signal that the computer can understand. All scanners must include computer software to interpret the bar code once it's been entered. This simple principle has transformed the way we are able to **manipulate** data and the way in which many businesses handle recordkeeping.

#### **429 Leaders**

In search of lessons to **apply** in our own careers, we often try to emulate what effective leaders do. Roger Martin says this focus is misplaced, because **moves** that work in one context may make little sense in another. A more productive, though more difficult, **approach** is to look at how such leaders think. After extensive interviews with more than 50 of them, the author discovered that most are **integrative** thinkers – that is, they can hold in their heads two opposing ideas at once and then come up with a new idea that contains elements of **each** but is superior to both.

#### **430 Work-Ready International Students**

Work-ready international students are providing greater options for local employers who are having difficulties **finding** local staff due to **high** employment rates and ongoing labor shortages. International students in

accounting and information technology take part in a year-long program consisting of classroom work and practical experience, which provides them with valuable skills, industry contacts and a working knowledge of Australian workplaces.

### 431 Sociology

Sociology is, in very basic terms, the study of human societies. In this respect, it is usually classed as one of the social sciences (along with subjects like psychology) and was established as a subject in the late 18th century (through the work of people like the French writer Auguste Comte). However, the subject has only really gained acceptance as an academic subject in the 20th century through the work of writers such as Emile Durkheim, Max Weber and Talcott Parsons (names that will be visited throughout this course). One name that you may have heard of - Karl Marx (the founder of modern Communism) - has probably done more to stimulate people's interest in the subject than anyone else, even though he lived and wrote (1818-1884) in a period before sociology became fully established as an academic discipline. Sociology, therefore, has a reasonably long history of development, (150-200 years) although in Britain it has only been in the last 30-40 years that sociology as an examined subject in the education system has achieved a level of importance equivalent to, or above, most of the other subjects it is possible to study.

### 432 The First Motion Pictures

The first motion pictures were filmed in the 1890s, when film production companies started producing commercial movies. Before that, films used to have one-minute duration. Fortunately, filmmakers figured out how to produce prolonged films using several shots. Later, when other innovations such as rotating camera were introduced, the overall performance of cinematographers changed forever.

### 433 Australia and New Zealand (Different version)

Twelve hundred miles east of Australia lie the islands of New Zealand. Long before they were discovered by Europeans, a Polynesian race of warriors, the Maoris, had sailed across the Pacific from the northeast and established a civilization notable for the brilliance of its art and the strength of its military system. When Captain Cook visited these islands towards the end of the 18th century, he estimated that the population numbered about a hundred thousand.

### 434 Medical Examination

The most common reason for carrying out a detailed medical examination of a dead person-a-postmortem or autopsy – is when it is necessary to establish

the cause of death. In some circumstances, a doctor may be allowed to perform a post-mortem in pursuit of medical **knowledge**. The examination is usually performed by a pathologist, and **involves** dissection of the body, and tests done on blood, tissues and internal organs, but sometimes it is performed by a doctor.

### **435 Sleep Patterns**

Children have **sound** (explicit) sleep patterns. They can **successfully** sleep for 8-9 hours and get up at a fixed time. But teenagers don't. Their need of early start to schools or other schedules can **influence** their sleep patterns. Despite these factors, they actually need longer sleep time.

### **436 Playing Active Video Games (Different Version)**

There has been increased research interest in the use of active video games (in which players physically interact with images onscreen) as a means to **promote** physical activity in children. The aim of this review was to assess active video games as a means of interesting energy expenditure and physical behavior in children. Studies were obtained from computerized searches of multiple electronic bibliographic databases. The last search was conducted in December 2008. Eleven studies focused on the quantification of the energy cost associated with playing active video games, and eight studies focused on the utility of active video games as an **intervention** to increase physical activity in children. Compared with traditional non-active video game, active video games **elicited** greater energy expenditure, which was similar in intensity to mild to moderate intensity physical activity. The intervention studies indicate that active video games may have the potential to increase free-living physical activity and improve body **composition** in children; however, methodologically sound intervention trials to provide definitive answers as to whether this technology is effective in **promoting** long-term physical activity in children.

### **437 Ernest Shackleton**

Ernest Shackleton was a British explorer of the South Pole who is best remembered for leading his crew to safety after the failed expedition of the Endurance (1914-16). Shackleton had been a junior officer on Robert Falcon Scott's discovery **expedition** (1902-03), and his travels with the Nimrod (1907-09) had taken him closer to the South Pole than anyone before. After Roald Amundsen reached the Pole in 1911, Shackleton and a crew of 28 men set out in his ship Endurance in 1914, in the **hope** of being the first to cross the polar continent. The ship was frozen in ice, then crushed, and Shackleton and his men set out in lifeboats after nearly a year and a half on the ice. Shackleton, known as "The Boss," took five men and sailed 800 miles in an open boat from Elephant Island to the island of South Georgia, then went back and **saved** the rest of his crew, all of whom survived. Almost two years after starting out, they



reached safety in South America in September 1916. In spite of his heroics, Shackleton had a hard time back in England with finances and alcohol. He eventually managed to get financing for another voyage to Antarctica in 1921, but he had a fatal heart attack at South Georgia Island and never made it.

### 438 The Importance of Electricity

It would be very hard to imagine life without electricity. Most of the appliances and machines that are used in homes, offices and factories are powered by electricity and this equipment helps to improve people's overall quality of life. For that reason, the wider provision of electricity supplies is a critical factor in reducing global poverty levels. To meet the needs of users around the world, the global consumption of coal has risen more quickly since 2000 than any other fuel. For countries that do not have their own supply of natural energy resources, coal has become an essential means of producing power. On a global scale, coal is currently used to fire power stations and produces 40% of global electricity. This figure is very likely to increase, and predictions are that by 2030 coal will fuel 44% of the world's electricity.

### 439 Trade Agreement

Over the years, to increase trade, many countries have created free trade agreements with other countries. Under the framework of General Agreement on Tariffs and Trade and World Trade Organization, countries opened up their borders and agreed to

1: remove trade barriers, which saw the emergence of International Trade and expanded economic globalization. For example, in 1994, the United States, Mexico, and Canada signed the North American Free Trade Agreement (NAFTA), which ultimately 2: removed all tariffs on trade goods between the three nations. This 3 allowed globalization of goods and services, as well as people and ideas, between these three countries.

### 440 Corollary

An important corollary of this focus on language as the window to legal epistemology is the central role of discourse to law and other sociocultural processes. In particular, the ideas that people hold about how language works (linguistic ideologies) combine with linguistic structuring to create powerful, often unconscious effects. In recent years, linguistic anthropologists have made much progress in developing more precisely analytic tools for tracking those effects.

#### 441 Teen Writing

Teens write for a variety of reasons—as part of a school assignment, to **get** a good trade, to stay in touch with friends, to share their artistic creations with others or simply to put their thoughts to paper (whether virtual or otherwise). In our focus groups, teens said they are motivated to write when they can **select** topics that are relevant to their lives and interests, and **report** greater enjoyment of school writing when they have the opportunity to write creatively. Having teachers or other adults who challenge them, **present** them with interesting curricula and give them detailed feedback also serves as a motivator for teens. Teens also **report** writing for an audience motivates them to write and write well.

#### 442 Mass Migration

Mass migration has produced a huge worldwide economy of its own which has **accelerated** so fast during the past few years that the figures have **astonished** experts. Last year remittances sent home by migrants were expected to **exceed** \$232 billion according to the World Bank which **tracks** these figures vital through the flow of remittances is to alleviate the plight of the migrant's family it can't on its own lift entire nation out of poverty. Those who study the **impacts** of remittances argue that money allows poor countries to put off basic decisions of economic management like reforming their tax collection systems and building schools.

#### 443 Giant Exoplanets

Giant exoplanets, like the so-called 'hot Jupiters' that are similar in **CHARACTERISTICS** to the solar system's biggest planet and orbit very close to their host stars, are excellent targets for **ASTRONOMERS** in their search for extrasolar worlds. The size and proximity of these planets is easy to **DETECT** as they create a large decrease in brightness when passing in front of their parent stars.

#### 444 Deforestation

Deforestation can disrupt the lives of local communities, sometimes with devastating **CONSEQUENCES**. Forests provide a vast array of **RESOURCES** to all of us, including food, wood, medicine, fresh water, and the air we breathe. Without the trees, species can disappear, the natural water balance can become disrupted and the ecosystem that supports the human population can **FALL APART**.

#### 445 Coral Reefs

Coral reefs support more marine life than any other ocean ecosystem and are, not **SURPRISINGLY**, a favorite pursuit for many divers. But as well as being physically and biologically spectacular, coral reefs also **SUPPORT** the livelihoods of over half a billion people. What is more, this number is expected to **DOUBLE** in coming decades while the area of high-quality reef is expected to halve.

#### 446 Flowers

Most people assume, correctly, that flowers look the way they do to attract insects that pollinate them. But that's not the whole story. Scientists have now discovered that plants have another 'trick up their sleeves' to make themselves **IRRESISTIBLE** to even the most choosy insect solar power. Cambridge University's Beverley Glover and her **COLLEAGUES** recently set up some fake flowers filled with a sugar solution, which they kept at different temperatures. Unleashing a team of bumblebees on their floral **OFFERINGS**, they watched as the insects visited the flowers to drink the surrogate nectar'. Very quickly, it became obvious that the bees were concentrating on the flowers with the warmest nectar. Just in case it was something to do with the colour of the fake flowers, the scientists also tried a different colour combination and got the same **RESULT**.

#### 447 The International Journal of Design

The International Journal of Design is a peer-reviewed, open-access journal devoted to publishing research papers in all fields of design, including industrial design, visual communication design, interface design, animation and game design, architectural design, urban design, and other design related fields. It aims to provide an international forum for the **EXCHANGE** of ideas and findings from researchers across different cultures and encourages research on the impact of cultural factors **ON** design theory and practice. It also seeks to promote the **TRANSFER** of knowledge between professionals in academia and industry by emphasizing research in **WHICH** results are of interest or applicable to design practices.

#### 448 Increase in Global Demand for Food

For two decades, leading up to the millennium, global demand for food **INCREASED** steadily, along with growth in the world's population, record harvests, **IMPROVEMENTS** in incomes, and the diversification of diets. As a result, food prices continued to **DECLINE** through 2000. But beginning in 2004, **PRICES** for most grains began to rise. Although there was an increase in production, the increase in demand was **GREATER**.

#### 449 Trip to India

From beach holidays to VOLUNTEER opportunities to holy pilgrimages, a trip to India can take many FORMS and have a wide RANGE of effects. Potentially, tourism can offer great benefit both to the destination country and the traveler. At time of publication, travel and tourism are expected to account for 5 percent of all jobs in India, according to the World Travel and Tourism Council. ASIDE from economic impact, a healthy tourism industry can have far-reaching consequences affecting a nation's infrastructure and environment.

#### 450 The Environmental Policy

The environmental policy does not contribute to the profitability in any real sense at all. In practice it is companies that are well organised and efficient, or that are already comfortably profitable, that have time to establish and police environmental policies. However, if profitable companies are the ones most likely to establish "environmental best practice" this is confusing cause with effect. It is not that environmental best practice causes profitability, but that being profitable allows for concern for the environment.

#### 451 Social Reforms

Social reforms are normally INITIATED as a result of statistical analyses of factors such as crime rates and poverty levels etc. Large-scale population can result from projections devised by statisticians. Manufacturers can provide better products at lower costs by USING statistical control tools, SUCH as control charts. Diseases are controlled through analyses designed to anticipate epidemics. Endangered species of fish and other wildlife are protected through regulations and laws that react to statistical estimates of changing population sizes. THROUGH statistical analysis of fatality rates, legislators can better justify laws, such as those governing air pollution, auto inspections, seat belt and airbag use, and drunk driving.

#### 452 Frost's Poetry

There's duplicity in Frost's poetry, and there's a certain doubleness in the figure that he PROJECTS as a poet. I like to think of his obsession with DOUBLE meanings, which he has, as a way of responding to a division in culture, between popular and elite readers, a division that he saw as EXPRESSIVE of a division in American culture between money and esteem, business and art.

#### 453 Turning Off Car Engines

In the UK, it is recommended that drivers should turn off their car engines when they expect to be stationary for more than 1 minute. To ENCOURAGE drivers to turn off their engines while waiting at rail crossings, the Kent city council placed a PERMANENT sign at the crossing asking drivers to "please switch off your engine when barriers are down to help improve air quality." On average,

drivers had to wait between 2 and 3 minutes to cross after the barrier had gone down. **HOWEVER**, the sign didn't seem to be convincing the majority of drivers to switch off their engines. "Although some research suggests that signs alone can change **BEHAVIOR**, the message on this sign was designed simply to be an informational request and was not guided by any particular behavioral theory," the researchers explain. So the research team, led by Rose Meleady of the University of East Anglia, designed an intervention study.

#### 454 The Nature Conservancy

A new report by environmental **NON-PROFIT** The Nature Conservancy lays out how trees could pave the way to cleaner air and cooler cities. Using **GEO-SPATIAL** information on forest cover paired with air pollution data and population **FORECASTS** for 245 cities, researchers found that trees have the biggest health **PAY-OFFS** in densely populated, polluted cities like Delhi, Karachi and Dhaka. The Conservancy and the C40 Cities Climate Leadership Group presented the findings of their global survey this week at the American Public Health Association meeting in Denver, Colorado.

#### 455 The Process of Delegation V1

The process of delegation comprises the decision to delegates, the briefing and the follow up. At each of these points, **ANTICIPATE** the potential problems. The decision: persuade yourself that it takes longer to teach somebody else to do a job than to do it yourself. Delegation has its own rewards - once someone has learned a particular task, they will be able to do it in the future without repeated briefings. However, be sure to delegate each job to a person with the appropriate skills and knowledge. The briefing: make sure that the person to **WHOM** you are delegating clearly understands the brief - what you want them to do and by when. Offer ongoing support and guidance. The follow-up: during the course of the project, check the standard of work produced. Provide **POSITIVE** feedback, but beware of overdoing it - there is a narrow line between helpful supervision and debilitating interference.

#### 456 The Process of Delegation V2

The process of delegation comprises the decision to delegate, the briefing, and the follow-up. At each of these points, **ANTICIPATE** the potential problems. When you delegate, you are not delegating the right to perform **AN ACTION**, you are delegating the right to make decisions. It is important to be **FLEXIBLE**, as the person to whom you delegate may have a better and faster way of completing a job than you. A brief can be misinterpreted, so it is a good idea to ask for it to be repeated back to you. **OVERALL** responsibility for a delegated task remains with you. It is helpful to others if you can provide **CONSTRUCTIVE** feedback on their performance. Too much criticism is far more harmful than too much praise.

### 457 Government Subsidies

However, proper **ACCOUNTING** shows that for each hectare government subsidies formed \$8,412 of this figure and there were costs, too: \$1,000 for pollution and \$12,392 for losses to ecosystem services. These comprised damage to the supply of foods and medicines that people had taken from the forest, the loss of habitats for fish, and less buffering against storms. And because a given shrimp farm only stays **PRODUCTIVE** for three **OR** four years, there was the additional cost of restoring them afterwards.

### 458 Transition from University

This is a challenging time for UK students, and we should be making their transition from university to the globalized world easier, not harder. The British Academy has voiced its **CONCERN** over the growing language deficit for some years and the gloomy statistics speak for themselves. We need **DECISIVE** action if we are remedying this worsening situation. The **ROOTS** of the problem lie within schools, but Vice-Chancellors have the power to drive change and **HELP** their students recognize the importance of learning language, and about the countries where they are spoken and the cultures they sustain. We **URGE** them to act and protect this country's long term economic, social and cultural standing.

### 459 Rising Demand for Food

As demand for food and competition for land rises, it is vital that crop losses are limited. Chemical protection has **PROVIDED** effective control of crop losses in recent years. Alongside chemical fertilisers and improved crop genetics, it has helped to increase crop yields dramatically over the last six decades. **HOWEVER**, there is now a need to develop complementary alternatives, and researchers from the Rural Economy and Land Use Programme have been exploring the potential of – and barriers to – alternative pest management approaches. “Alternatives to chemical pesticides are **NEEDED** because overuse of them leads to pesticide resistance and affects biodiversity and water quality,” says Dr Alastair Bailey. “Heightened EU regulations are also leading to the withdrawal of many pesticide products. **HENCE**, complementary approaches are required to reduce use and preserve the efficacy of those valuable pesticides that are still available to sustain food production systems.”

### 460 Houston

Houston is the fifth-largest metropolitan area in the United States and has an outsized **IMPACT** on the U.S. economy. More than 90 percent of U.S. offshore oil and gas **PRODUCTION** takes place in the Texas Gulf Coast area, and the Houston region contains the largest **CONCENTRATION** of energy, petrochemical, and refining industries in the United States. Houston is home to

25 percent of the country's petroleum refining capability, 40 percent of the nation's capacity for downstream chemical production, and the fastest-growing liquefied natural gas industry in the nation.

#### 461 Social Experiment

For the past thirty years, the United States has been conducting what one observer (Samuelson 2001) has called “a massive social experiment” regarding the political and social consequences of increasing economic inequality. The share of national income going to families in the bottom 40 percent of the income distribution **DECLINED** by about one-fifth, from 17.4% in 1973 to 13.9% in 2001, **WHILE** the share going to families in the top 5 percent increased by more than one-third, from 15.5% to 21.0% (Mishel, Bernstein, and Boushey 2003). Meanwhile, the share of income going to the top one-tenth of one percent quadrupled between 1970 and 1998, leaving the 13,000 richest families in America with almost as much income as the 20 million poorest families (Krugman 2002). The economic causes of these trends—technological change? demography? global competition? are a matter of some **SCHOLARLY** controversy. But the important political point is that, whereas most rich democracies have significantly mitigated increasing economic inequality through government action, the United States has mostly been content to **LET** economic trends take their course, doing “less than almost any other rich democracy to **LIMIT** economic inequality” through employment and wage policies, taxes, and transfers (Jencks 2002, 64).

#### 462 The Platypus

The platypus looks like no other creature on Earth. Physically, it appears to be a hybrid blend of a bird, beaver, reptile and otter, with additional characteristics not contained in any of these four. On cursory examination, the platypus has a bill that most **RESEMBLES** that of a waterfowl, not the mouth of any known mammal. Yet it is not an ordinary bill. It is actually a well-designed sensory organ. Not a nose, but a highly sensitive electrolocation sensor, detecting miniscule electrical impulses generated by its food source of small crustaceans and worms. No other mammal has a sensor so highly **DEVELOPED**—in fact, only one other mammal has this ability at all. Then **THERE** are the webbed feet, similar to those found on otters. Unlike an otter, however, the webbing is far more pronounced on the front feet of the platypus, which it uses like paddles for swimming. While in the water, the back feet are tucked into its body and **HARDLY** used at all.

#### 463 Video Games

The study, of 322 overweight 10- to 14-year-olds, found that those whose usual, sedentary video games were partly replaced with active games **GAINED** less weight over six months. For years, experts have worried that the **GROWING** amount of time children are spending in front of TVs and computers is helping

to **FEED** an epidemic of childhood obesity.

#### 464 Conflict

Most of us are **SCARED** of open conflict and avoid it if we can. And there is a **RISK** to expressing and working through conflict. If the working through involves harsh words and name-calling, people feel deeply hurt and relationships can be **DAMAGED**. Sometimes permanently. Some group members may be afraid that if they really **EXPRESS** their anger, they may go out of control and become violent, or they may do this. These fears can be very **REAL** and based on experience.

#### 465 The Radioactive Waste

It is important to keep the quantities here in perspective. The **VOLUME** of radioactive waste is very small - even smaller if the used **MATERIAL** is chemically re-processed - but it has to be **MANAGED** carefully. Most countries **ACCEPT** that they are responsible for their own and a number including France, Sweden, Finland, Korea and the USA are now constructing facilities, which will eventually be deep geological repositories.

#### 466 The Importance of Plants

Plants serve as the conduit of energy into the biosphere, provide food and materials used by humans, and they **SHAPE** our environment. According to Ehrhardt and Frommer, the three major challenges facing humanity in our time are food, energy, and environmental **DEGRADATION**. All three are plant related. All of our food is produced by plants, either directly or indirectly via animals that eat them. Plants are a **SOURCE** of energy production. And they are intimately involved in climate change and a major factor in a variety of environmental concerns, including agricultural expansion and its impact on habitat destruction and waterway pollution.

#### 467 The Role of New Ideas

First, new ideas are the **WHEELS** of progress. Without them, stagnation reigns. Whether you're a designer dreaming of another world, an **ENGINEER** working on a new kind of structure, an **EXECUTIVE** charged with developing a fresh business concept, an advertiser seeking a breakthrough way to sell your product, a fifth-grade teacher trying to plan a memorable school **ASSEMBLY** program, or a volunteer looking for a new way to sell the same old raffle tickets, your ability to **GENERATE** good ideas is critical to your success.

#### 468 Chimpanzees

Chimpanzee posture, gestures, and facial expressions communicate many messages and **EMOTIONS** between various individuals. When **GREETING** a



dominant individual following an absence or in response to an aggressive gesture, nervous **SUBORDINATES** may approach with submissive signals – crouching, presenting the hindquarters, holding a hand out – accompanied by pant-grunts or squeaks. In response, the dominant individual may make gestures of **REASSURANCE**, such as touching, kissing, or embracing.

#### **469 The Process of Evolving**

“It appears that in the process of **EVOLVING** specialised face-recognition abilities to quickly and accurately **EXTRACT** important information, there has been a trade-off where face-like images in **UNEXPECTED** orientations become especially difficult to process,” he says. The **REASON** for this trade-off is unclear, but it probably **RELATES** to the fact that you rarely see inverted faces, says Sheehan.

#### **470 Selfie Posts**

To better understand selfies and how people form their identities online, the researchers combed through 2.5 million selfie posts on Instagram to determine what kinds of identity statements people make by taking and sharing the photos. Nearly 52 percent of all selfies **FELL INTO** the appearance category: pictures of people showing off their make-up, clothes, lips, etc. Pics about looks were two times more popular than the other 14 categories combined. **AFTER** appearances, social selfies with friends, loved ones, and pets were the most common (14 percent). Then came ethnicity pics (13 percent), travel (7 percent), and health and fitness (5 percent). The researchers noted that the prevalence of ethnicity selfies (selfies about a person's ethnicity, nationality or country of origin) is an indication that people are proud of their backgrounds. They also found that most selfies are solo pictures, rather than taken with a group. The data was gathered in the summer of 2015. The research team believes the study is the first large-scale empirical research on selfies. Overall, an overwhelming 57 percent of selfies on Instagram were posted by the 18-35-year-old crowd, something the researchers say isn't too surprising **CONSIDERING** the demographics of the social media platform. The under-18 age group posted about 30 percent of selfies. The older crowd (35+) shared them far less frequently (13 percent). Appearance was most popular among all age groups. Lead author Julia Deeb-Swihart says selfies are an identity performance—meaning that users carefully craft the way they appear online and that selfies are an extension of that. This evokes William Shakespeare's famous line: “All the world's a stage, and all the men and women merely players.”

#### **471 Marine Life**

Understanding the number of species, we have in our marine environment is a **BASIC** need if we are to protect and conserve our biodiversity. This is **VITAL** in today's rapidly changing world, not just here in Hong Kong, but **ESPECIALLY** in

Southeast Asia which holds the world's most diverse marine habitats. SWIMS is playing a major role in trying to measure and conserve these important resources, both within Hong Kong but also, together with its regional collaborators, in Southeast Asia." said Professor Gray A. Williams, the leader of this study and the Director of HKU SWIMS. The enormous **ARRAY** of marine life in Hong Kong, however, has yet to receive its desirable level of conservation as currently only less than 2% of Hong Kong's marine area is protected as marine parks or reserve as compared with approximately 40 % of our terrestrial area. The Government has committed to designate more new marine parks in the coming years. The Brothers Marine Park in the northern Lantau waters will be launched soon, which will bring Hong Kong's total protected marine area to more than 2%. The research team welcomed the initiative of the new marine park **WHILE** also urging the Hong Kong government to move towards the global target of at least 10% marine protected area by the year 2020 under United Nation's Convention on Biological Diversity (CBD).

#### **472 Lake Turkana**

Lake Turkana is a large lake in Kenya, East Africa. This **PART** of Africa was home to some of the first humans. Here, archaeologists have found piles of **BONES** (both human and animal) and collections of stones that humans used as **TOOLS**. By carefully uncovering and **EXAMINING** these remains, scientists have started to put together the story of our earliest ancestors. In 2001, a 4 million year-old skeleton was uncovered in the area. Although a link between it and modern-day humans has not been established, the skeleton shows the species was walking upright.

#### **473 The Press**

Throughout its history, one of the strengths of the Press has been the diversity of the Press's list. The Press has also distinguished itself with its strong list in social work, publishing texts that have been **WIDELY** adopted in courses and are used by professionals in the field. Through its European Perspectives **SERIES** and the publication of the Wellek Library Lectures, the Press has published a range of innovative and **LEADING** scholars. Other notable lecture series published by Columbia University Press include The Leonard Hasting Schoff Memorial Lectures and The Bampton Lectures in America.

#### **474 Well-Being**

Life in the UK 2012 provides a unique overview of well-being in the UK today. The report is the first snapshot of **LIFE** in the UK to be delivered by the Measuring National Well-being programme and will be **UPDATED** and published annually. Well-being is discussed in **terms** of the economy, people and the environment. Information such as the unemployment rate or **NUMBER** of crimes against the person are presented alongside **DATA** on people's thoughts and feelings, for example, satisfaction with our jobs or **LEISURE** time and fear of crime. Together,

a richer picture on 'how society is doing' is provided.

#### 475 Monitoring Animals

Monitoring animals is hard work. Field biologists have to follow **TRACKS** made by the animals and **LOOK** out for fruit that they might like in order to find the animals, whether it be walking through rivers, up and down slippery hillsides with **DENSE** vegetation or through thick mud and swamps.

#### 476 The Forms of Reading or Studying

Some students say that they need complete quiet to read and study. Others study best in a crowded, noisy room because the noise actually **HELPS** them concentrate. Some students like quiet music playing; **OTHERS** do not. The point is, you should know the level of noise that is optimal for your own studying. However, one general rule for all students is that the television seems to be more of a distraction than music or other background noise, so **LEAVE** the TV off when you are reading or studying. **ALSO**, don't let yourself become distracted by computer games, email, or Internet surfing.

#### 477 Home Appliances

In the developed world, home appliances have greatly reduced the need for physical labour. **FEWER** people need to be involved in tasks that once left them little time to do much else. For example, the word processor and email have, to a great **EXTENT**, replaced the dedicated secretarial staff that briefly flourished with the rise of the typewriter. At **ONE** time all copies were made with manual scribes, carefully duplicating what they read. Then we had carbon paper. Then photocopiers. Then printers. Then the requirement for physical copy reduced. An entire stream of labour appeared and disappeared as technology advanced. We freed ourselves of one kind of work; we just replaced it **WITH** another.

#### 478 The Benefits of Physical Activity

Participating regularly in physical activity has been shown to benefit an individual's health and **WELL-BEING**. Regular physical activity is important in reducing the risk of **CHRONIC** diseases, such as heart disease and stroke, obesity, diabetes and some forms of cancer. The National Physical Activity Guidelines for Adults **RECOMMEND** at least 30 minutes of moderate-intensity physical activity, **PREFERABLY** every day of the week, to **OBTAIN** health benefits.

#### 479 Ancient Hominin Footprints

The discovery of a set of what look like ancient hominin footprints on the island of Crete could throw our understanding of human evolution into disarray. Received wisdom is that after **SPLITTING** from the chimp lineage, our hominin

ancestors were confined to Africa until around 1.5 million years ago. The prints found in Crete, however, **BELONGED** to a creature that appears to have lived 5.7 million years ago – suggesting a more complex story. More research is needed to confirm what kind of animal made them. However, the prints seem to have been **MADE** by a creature that walked upright, on the soles of clawless feet (rather than on its toes), with a big toe positioned like our own, rather than sticking out sideways like an ape's. It may yet turn out to have been a **PREVIOUSLY** unknown non-hominin that had evolved with a human-like foot; but the explanatory paper, in the Proceedings of the Geologists' Association, is not the first to suggest that hominins could have originated in Europe. A few months ago, a team put forward **EVIDENCE**, gleaned from fossils found in Greece and Bulgaria, that a 7.2 million-year old ape known as Graecopithecus was in fact a hominin.

#### **480 The Stock Market**

The Dow Jones Industrial Average (DJIA) reports the average stock price of 30 large, publicly traded US companies. It tends to **REFLECT** the state of the stock market as a whole. Though its name would LEAD you to believe the DJIA is made up of only **INDUSTRIAL** companies, the DJIA in fact contains stocks across many "industries," not all of which are industrial. The business **REPRESENTED** include finance, food, technology, retail, heavy equipment, oil, chemical, pharmaceutical, consumer goods, and entertainment.

#### **481 The Value of Technology**

Like the sea turtles, we are **DRAWN** to the bright lights of our phones, tablets, laptops, and TV's our minds and bodies becoming **DISORIENTED** as we lose focus and direction. Each day, we are **TORN** between the value of tech and the cost to our health.

#### **482 Western Firms**

It is often assumed that when Western firms, or any firm for that matter, reach out across **BORDERS** to establish a factory outlet here, an assembly plant there or a subsidiary in some far-off **LOCATION**, they do so through directly investing and thereby wholly owning such facilities. In the 1970s and 1980s, among the low-cost manufacturing overseas operations, this was indeed often the case, but increasingly Western firms started to conduct their business at-a-distance through a variety of indirect means, of which subcontracting became the principle **ARRANGEMENT**.

#### **483 The Giant of The Penguin World**

The emperor is the giant of the penguin world and the most iconic of the birds of Antarctica. Gold patches on their ears and on the top of their chest brighten **UP** their black heads. Emperors and their closest relative, the king penguin,

have unique breeding cycles, with very long chick-rearing periods. The emperor penguins breed the furthest south of any penguin species, forming large colonies on the sea-ice surrounding the Antarctic continent. They are true Antarctic birds, rarely **SEEN** in the subantarctic waters. So that the chicks can fledge in the late summer season, emperors breed during the cold, dark winter, with temperatures as low as  $-50^{\circ}\text{C}$  and winds up to 200 km per hour. They trek 50–120 km (30–75 mls) over the ice to breeding colonies which may include thousands of individuals. The female lays a single egg in May then passes it over to her mate to incubate **WHILST** she goes to sea to feed. For nine weeks the male fasts, losing 45% of his body weight. The male balances the egg on his feet, which are **COVERED** in a thick roll of skin and feathers. The egg can be  $70^{\circ}\text{C}$  warmer than the outside temperature.

#### 484 American People

Creating a Nation and a Society examines U.S. history as revealed through the **experiences** of all Americans, both ordinary and extraordinary. With a thought-provoking and rich presentation, the authors explore the complex lives of Americans of all national **origins** and cultural backgrounds, at all levels of society, and in all **regions** of the country.

#### 485 Low Fertility

Low fertility is a concern for many OECD countries as they face the prospect of population aging. This article makes **comparisons** between Australia and seven other OECD countries in fertility rates between 1970 and 2004. Changing age **patterns** of fertility are also compared and show that for most of the countries, women are **postponing** childbirth and having fewer babies. The **associations** of women's education levels and rates of employment with fertility are also explored.

#### 486 Iceland

On average, Iceland **experiences** a major volcanic event once every 5 years. Since the Middle Ages, a third of all the lava that has **covered** the earth's surface has erupted in Iceland. However, according to a recent geological hypothesis, this estimate does not include **submarine** eruptions, which are much more extensive than those on the land surface.

#### 487 Mini Helicopter

A mini helicopter modeled on flying tree seeds could soon be flying overhead. Evan Ulrich and colleagues at the University of Maryland in College Park turned to the biological world for inspiration to build a scaled-down helicopter that could mimic the properties of full-size aircraft. The complex **design** of full-size helicopters gets less efficient when shrunk, **meaning** that standard mini helicopters expend most of their power simply fighting to stay stable in the air.

The researchers realized that a simpler aircraft designed to stay stable passively would use much less power and reduce manufacturing costs to boot. It turns out that nature had **beaten** them to it. The seeds of trees such as the maple have a single-blade structure that **allows** them to fly far away and drift safely to the ground. These seeds, known as samaras, need no engine to **spin** through the air, thanks to a process called autorotation. By analyzing the behavior of the samara with high-speed cameras, Ulrich and his team were able to copy its design. The samara copter is not the first single-winged helicopter- one was flown in 1952, and others have been attempted since - but it is the first to take advantage of the samara's autorotation. This allows Ulrich's vehicle to perform some neat tricks, such as falling safely to the ground if its motor fails or using vertical columns of air to stay aloft indefinitely. "We can turn off the motor and auto rotate, which requires no power to sustain", says Ulrich.

#### **488 Transport Problem**

Despite transport problems being a topic of frequent dinner table conversation, comprehensive **assessment** of policy directions for transport has been the subject of remarkably little academic analysis. This chapter introduces the scope of the book, which is intended to help redress this **shortcoming**. The primary focus is on **urban** transport policy, with the emphasis being on policy analysis rather than analysis of the policy process. Importantly, the chapter sets out some key propositions that have been important in shaping the authors' approach to the particular matters that are considered in subsequent chapters.

#### **489 Cheating**

Although not written about extensively, a few individuals have considered the concept and act of cheating in **history** as well as contemporary culture. J. Barton Bowyer writes that cheating "is the advantageous distortion of perceived reality. The advantage falls to the cheater because the cheated person **misperceives** what is assumed to be the real world". The cheater is taking advantage of a person, a situation, or **both**. Cheating also involves the "distortion of perceived reality" or what others call "deception". Deception can involve hiding the "true" reality or "showing" reality in a way intended to deceive others.

#### **490 Leading Scientists**

The Life Science Institute at the University of Michigan achieves **excellence** in biomedical research by bringing together the world's leading scientists from a variety of life science disciplines to **accelerate** breakthroughs and discoveries that will improve human health. With close to 400 scientific staff members, the LSI is exploiting the power of a **collaborative** and interdisciplinary approach to biomedical research in an open-laboratory facility.

#### 491 Pewter

Pewter is an attractive metal which has been used for the **production** of household and other items in Britain since Roman times. It is an alloy **consisting** mostly of tin which has been **mixed** with small amounts of other metals such as copper, lead or antimony to harden it and make it more durable.

#### 492 McLuhan

McLuhan's preeminent theory was his idea that human history could be **divided** into four eras: the acoustic age, the literary age, the print age and the electronic age. He **outlined** the concept in a 1962 book called The Gutenberg Galaxy, which was **released** just as the television was starting to become popular. He **predicted** the world was entering the fourth, electronic age, which would be characterized by a community of people brought together by technology. He called it the "global village", and said it would be an age when everyone had **access** to the same information through technology. The "global village" could be understood to be the Internet.

#### 493 Pullman

Built in 1880 on 4,000 acres of **land** outside of the Chicago city limits, Pullman, Illinois, was the first industrial planned **community** in the United States. George Pullman, of the Pullman railroad Car Company, built the south residential portion of the company town first, which contained 531 **houses**, some of which stand today more or less as they did originally.

#### 494 Octopuses

If consciousness comes in degrees, then how far along on the spectrum is the octopus? Octopuses almost certainly feel pain. They nurse and protect **injured** body parts, and show a preference not to be touched near wounds. In addition to feeling pain, octopuses also have **sophisticated** sensory capacities: excellent eyesight, and acute sensitivity to taste and smell. This, together with their large nervous systems and **complex** behavior makes it all but certain. The question of what subjective experience might be like for an octopus is **complicated** by the odd relationship between its brain and body.

#### 495 Gauss

Gauss was a child prodigy. There are many **anecdotes** concerning his precocity as a child, and he made his first ground-breaking mathematical **discoveries** while still a teenager. At just three years old, he **corrected** an error in his father payroll calculations, and he was looking after his father's accounts on a regular basis by the age of 5. At the age of 7, he is **reported** to have amazed his teachers by summing the integers from 1 to 100 almost instantly (having quickly spotted that the sum was actually 50 pairs of numbers, with

each pair summing to 101, total 5,050). By the age of 12, he was already attending gymnasium and criticizing Euclid's geometry.

#### 496 The Psychoanalytic and Behaviorist Theories

Elements of both the psychoanalytic and behaviorist theories are arranged in modern approaches to personality. Advances in neuroscience have begun to bridge the gap between biochemistry and behavior, but there is still a great deal that needs to be explained. Without a consistent understanding of personality, how can we begin to categorize risk takers? If we cannot, we will be unable to compare their genes with those of others.

#### 497 Human Remains

In 1959, the partial skeletal remains of an ancient woman estimated to be 10,000 years old were unearthed in Arlington Springs on Santa Rosa Island, one of the eight Channel Islands off the southern California coast. They were discovered by Phil C. Orr, curator of anthropology and natural history at the Santa Barbara Museum of Natural History. The remains of the so-called Arlington Springs woman were recently reanalyzed by the latest radiocarbon dating techniques and were found to be approximately 13,000 years old. The new date makes her remains older than any other known human skeleton found so far in North America. The discovery challenges the popular belief that the first colonists to North America arrived at the end of the last ice age about 11,500 years ago by crossing a Bering land bridge that connected Siberia to Alaska and northwestern Canada. The earlier date and the location of the woman's remains on the island adds weight to an alternative theory that some early settlers may have constructed boats and migrated from Asia by sailing down the Pacific coast.

#### 498 Questionnaire

The How I Feel About My School questionnaire, designed by experts at the University of Exeter Medical School, is available to download for free. It uses emoticon-style faces with options of happy, ok or sad. It asks children to rate how they feel in seven situations including on the way to school, in the classroom and in the playground. It is designed to help teachers and others to communicate with very young children on complex emotions. The project was supported by the National Institute for Health Research Collaboration for Applied Health Research and Care South West Peninsula (NIHR PenCLAHRC). Professor Tamsin Ford, Professor of Child and Adolescent Psychiatry at the University of Exeter Medical School, led the design, involving children to give feedback on which style of questionnaire they could relate to best. She said: "When we're carrying out research in schools, it can be really hard to meaningfully assess how very young children are feeling. We couldn't find anything that could provide what we needed, so we decided to create something."



### 499 Romans

Over many centuries and across many territories the Romans were able to win an astonishing number of military victories and their success was due to several important factors. Italy was a peninsula not easily attacked, there was a huge pool of fighting men to draw upon, a disciplined and innovative army, a centralized command and line of supply, expert engineers, effective diplomacy through a network of allies, and an inclusive approach to conquered peoples which allowed for the strengthening and broadening of the Roman power and logistical bases. Further, her allies not only supplied, equipped and paid for additional men but they also supplied vital materials such as grain and ships. On top of all, this Rome was more or less in a continuous state of war or readiness for it and believed absolutely in the necessity of defending and imposing on others what she firmly believed was her cultural superiority.

### 500 Cardona Salt Mountain

Formed two million years ago when low-density salt was pushed up through the much harder materials surrounding it, the Cardona Salt Mountain is one of the largest domes of its kind in the world, and unique in Europe. While small amounts of other minerals pervade the savory hill, the salt pile would have a near translucent quality if not for the thin layer of reddish clay coating the exterior. The significance of the mountain was recognized as early as the middle ages when Romans began exploiting the mountain for its salt, which began to bolster the young Cardonian economy. With the invention of industrial mining techniques, a mine was built into the side of the mountain and a thriving facility formed at its base as excavators dragged enormous amounts of potash (water-soluble) salt from the innards of the hill. In addition to the mineral export, the locals of Cardona began making salt sculptures to sell and invented a number of hard, salty pastries unique to the area.

### 501 Education for Global Leadership

The Importance of International Studies and Foreign Language Education for U.S. Economic and National Security Committee for Economic Development. To confront the twenty-first century challenges to our economy and national security, our education system must be strengthened to increase the foreign language skills and cultural awareness of our students. America's continued global leadership will depend on our students' abilities to interact with the world community both inside and outside our borders.

### 502 Physical Capital V1

Capital has often been thought of narrowly as physical capital – the machines, tools, and equipment used in the production of other goods, but our wealth and well being also RELIES on natural capital. If we forget this, we risk degrading

the services that natural ecosystems provide, which **SUPPORT** our economies and sustain our lives. These services include purifying our water, **REGULATING** our climate, reducing flood risk, and pollinating our crops. One reason why our natural resources continue to be degraded is that decision makers do not have a **RELIABLE** way to assess the true value of the services that ecosystems provide.

### **503 Management of Water Resources (Different Version)**

Equally critical is the challenge of water security. The UN Environment Programme (UNEP) has pointed out that about one- third of the world's population lives in countries with moderate to high water stress, with a **disproportionate** impact on the poor. With current projected global population growth, the task of providing water for human **sustenance** will become increasingly difficult. And increasing competition over this scarce but vital resource may fuel instability and conflict within states as well as between states. The UN is doing a great deal in both areas to proactively foster **collaboration** among Member States. UNEP has long been actively addressing the water issue together with partner UN **agencies** and other organizations. Looking ahead, the UN can do more to build synergies of technology, policy and capacity in this field. In this regard, events like the annual World Water Week in Stockholm come to the forefront of the public mind when talking about championing water issues.

## INCOMPLETE SENTENCES

### 504 Sydney (exam memory)

RWFIB: Sydney is becoming effective in making the best of its limited available unconstrained land...

(comparable, patronage, affordability, consumption)

### 505 German Trip (exam memory)

It's a ( trip ) to Germany not for leisure but for Germany exchange. This is the worst flight I have ever had in my life, I have (been)...We were originally from Amsterdam, I arrived half hour due the time that plane take off, but our plane was late, we took another plane and flew somewhere, and the result was still wrong, landed. Another airport, this airport is a few hundred kilometers away from my destination. We can only wait for the next (connecting) flight to continue the journey, for which I have waited for (another) and half hour. No wonder we all hope to go home straight away.

Answers: trip, been, connecting, land, another

### 506 Flowers (exam memory)

RWFIB: According to a research conducted by Cambridge University, flowers can their own ways to attract insects to help them pollinate. Flowers will release an irresistible smell. A scientist and her colleagues did an experiment in which they use fake flowers to attract bees and insects.

### 507 Fingerprints (exam memory)

Fingerprints can prove that a suspect was actually at the scene of a crime. As long as a human entered a crime scene, there will be traces of DNA. DNA can help the police to identify an individual to crack a case. An institute in London can help reserve DNA and be used to match with the samples taken from the crime scenes.

### 508 Marion Dorset (exam memory)

Marion Dorset (1872-1935) was an influential American biochemist. He began working as a researcher for the U.S. Department of Agriculture in 1894, and worked his way up to become chief of the biochemical division in 1904. He made important discoveries in bacterial toxins and animal diseases, and he conducted pioneering work in the inspection of meat products. He co-discovered the virus that causes hog cholera and subsequently developed a serum to prevent it.

### 509 Physical Capital V2 (exam memory)

Capital is often narrowly known as physical capital...

[Lean Towards, Support, Regulating, Unreliable]

### 510 Climate Change in the US (exam memory)

This article explains that the changing climate will be very costly for US states...

[Losses, Rainfall, Catastrophic, Economic]

### 511 Digital media (exam memory)

Digital media and internet has made sharing things...

[Enforcement, Prompted, Challenges, Creative]

### 512 Recent Developments (exam memory)

Recent developments in socioeconomic climate and technology

[Important, Gap, Increase, Speed, Respond]

### 513 Greenhouse Gas Emissions (exam memory)

An American retail giant is set to ask its suppliers to measure and report their greenhouse gas emissions

There is a need to DISCLOSE business emission. The DATA of emission can be used to test which company causes climate change CONFLATE the government CAMPAIGNERS and environmental INVIGLATORS.

[Disclose, Data, Conflate, Campaigners]

### 514 Equality of Men And Women (exam memory)

With the gender equality campaign and cultural change, the traditional role that men must be the earner, and women should stay at home, is challenged today. (Other options recommended, authority, appreciated)

### 515 Armed Force (exam memory)

mainly about women gaining more job opportunities in the military field with the advanced of military, the demand of armed force is decreasing ... // So... [opened] more positions to women, [including].... in military, [ Provided] they work behind the front line of war. (alternative available, except)