13-1 2209 31

We worry that the robots are taking our jobs, but just as common a problem is that the robots are taking our judgment. In the large warehouses so common behind the scenes of today’s economy, human ‘pickers’ hurry around grabbing products off shelves and moving them to where they can be packed and dispatched. In their ears are headpieces: the voice of ‘Jennifer’, a piece of software, tells them where to go and what to do, controlling the smallest details of their movements. Jennifer breaks down instructions into tiny chunks, to minimise error and maximise productivity — for example, rather than picking eighteen copies of a book off a shelf, the human worker would be politely instructed to pick five. Then another five. Then yet another five. Then another three. Working in such conditions reduces people to machines made of flesh. Rather than asking us to think or adapt, the Jennifer unit takes over the thought process and treats workers as an inexpensive source of some visual processing and a pair of opposable thumbs.

13-2 2206 31

One of the big questions faced this past year was how to keep innovation rolling when people were working entirely virtually. But experts say that digital work didn’t have a negative effect on innovation and creativity. Working within limits pushes us to solve problems. Overall, virtual meeting platforms put more constraints on communication and collaboration than face-to-face settings. For instance, with the press of a button, virtual meeting hosts can control the size of breakout groups and enforce time constraints; only one person can speak at a time; nonverbal signals, particularly those below the shoulders, are diminished; “seating arrangements” are assigned by the platform, not by individuals; and visual access to others may be limited by the size of each participant’s screen. Such restrictions are likely to stretch participants beyond their usual ways of thinking, boosting creativity.

13-3 2203 32

Face-to-face interaction is a uniquely powerful — and sometimes the only — way to share many kinds of knowledge, from the simplest to the most complex. It is one of the best ways to stimulate new thinking and ideas, too. Most of us would have had difficulty learning how to tie a shoelace only from pictures, or how to do arithmetic from a book. Psychologist Mihàly Csikszentmihàlyi found, while studying high achievers, that a large number of Nobel Prize winners were the students of previous winners: they had access to the same literature as everyone else, but personal contact made a crucial difference to their creativity. Within organisations this makes conversation both a crucial factor for high-level professional skills and the most important way of sharing everyday information.

13-4 2111 33

Over time, babies construct expectations about what sounds they will hear when. They hold in memory the sound patterns that occur on a regular basis. They make hypotheses like, “If I hear this sound first, it probably will be followed by that sound.” Scientists conclude that much of babies’ skill in learning language is due to their ability to calculate statistics. For babies, this means that they appear to pay close attention to the patterns that repeat in language. They remember, in a systematic way, how often sounds occur, in what order, with what intervals, and with what changes of pitch. This memory store allows them to track, within the neural circuits of their brains, the frequency of sound patterns and to use this knowledge to make predictions about the meaning in patterns of sounds.

13-5 2109 33

One big difference between science and stage magic is that while magicians hide their mistakes from the audience, in science you make your mistakes in public. You show them off so that everybody can learn from them. This way, you get the advantage of everybody else’s experience, and not just your own idiosyncratic path through the space of mistakes. This, by the way, is another reason why we humans are so much smarter than every other species. It is not that our brains are bigger or more powerful, or even that we have the ability to reflect on our own past errors, but that we share the benefits that our individual brains have earned from their individual histories of trial and error.

13-6 2106 31

In a culture where there is a belief that you can have anything you truly want, there is no problem in choosing. Many cultures, however, do not maintain this belief. In fact, many people do not believe that life is about getting what you want. Life is about doing what you are supposed to do. The reason they have trouble making choices is they believe that what they may want is not related to what they are supposed to do. The weight of outside considerations is greater than their desires. When this is an issue in a group, we discuss what makes for good decisions. If a person can be unburdened from their cares and duties and, just for a moment, consider what appeals to them, they get the chance to sort out what is important to them. Then they can consider and negotiate with their external pressures.

13-7 2103 31

One of the most important aspects of providing good care is making sure that an animal’s needs are being met consistently and predictably. Like humans, animals need a sense of control. So an animal who may get enough food but doesn’t know when the food will appear and can see no consistent schedule may experience distress. We can provide a sense of control by ensuring that our animal’s environment is predictable: there is always water available and always in the same place. There is always food when we get up in the morning and after our evening walk. There will always be a time and place to eliminate, without having to hold things in to the point of discomfort. Human companions can display consistent emotional support, rather than providing love one moment and withholding love the next. When animals know what to expect, they can feel more confident and calm.

13-8 2103 32

When a child is upset, the easiest and quickest way to calm them down is to give them food. This acts as a distraction from the feelings they are having, gives them something to do with their hands and mouth and shifts their attention from whatever was upsetting them. If the food chosen is also seen as a treat such as sweets or a biscuit, then the child will feel ‘treated’ and happier. In the shorter term using food like this is effective. But in the longer term it can be harmful as we quickly learn that food is a good way to manage emotions. Then as we go through life, whenever we feel annoyed, anxious or even just bored, we turn to food to make ourselves feel better.

13-9 2011 33

As much as we can learn by examining fossils, it is important to remember that they seldom tell the entire story. Things only fossilize under certain sets of conditions. Modern insect communities are highly diverse in tropical forests, but the recent fossil record captures little of that diversity. Many creatures are consumed entirely or decompose rapidly when they die, so there may be no fossil record at all for important groups. It’s a bit similar to a family photo album. Maybe when you were born your parents took lots of pictures, but over the years they took photographs occasionally, and sometimes they got busy and forgot to take pictures at all. Very few of us have a complete photo record of our life. Fossils are just like that. Sometimes you get very clear pictures of the past, while at other times there are big gaps, and you need to notice what they are.

13-A 2206 32

The law of demand is that the demand for goods and services increases as prices fall, and the demand falls as prices increase. Giffen goods are special types of products for which the traditional law of demand does not apply. Instead of switching to cheaper replacements, consumers demand more of giffen goods when the price increases and less of them when the price decreases. Taking an example, rice in China is a giffen good because people tend to purchase less of it when the price falls. The reason for this is, when the price of rice falls, people have more money to spend on other types of products such as meat and dairy and, therefore, change their spending pattern. On the other hand, as rice prices increase, people consume more rice.

13-10 2009 31

As the tenth anniversary of the terrorist attacks of September 11, 2001, approached, 9/11 related media stories peaked in the days immediately surrounding the anniversary date and then dropped off rapidly in the weeks thereafter. Surveys conducted during those times asked citizens to choose two “especially important” events from the past seventy years. Two weeks prior to the anniversary, before the media blitz began, about 30 percent of respondents named 9/11. But as the anniversary drew closer, and the media treatment intensified, survey respondents started identifying 9/11 in increasing numbers—to a high of 65 percent. Two weeks later, though, after reportage had decreased to earlier levels, once again only about 30 percent of the participants placed it among their two especially important events of the past seventy years. Clearly, the amount of news coverage can make a big difference in the perceived significance of an issue among observers as they are exposed to the coverage.

13-11 2009 32

Here’s the unpleasant truth: we are all biased. Every human being is affected by unconscious biases that lead us to make incorrect assumptions about other people. Everyone. To a certain extent, bias is a necessary survival skill. If you’re an early human, perhaps Homo Erectus, walking around the jungles, you may see an animal approaching. You have to make very fast assumptions about whether that animal is safe or not, based solely on its appearance. The same is true of other humans. You make split-second decisions about threats in order to have plenty of time to escape, if necessary. This could be one root of our tendency to categorize and label others based on their looks and their clothes.

13-12 2006 31

When reading another scientist’s findings, think critically about the experiment. Ask yourself: Were observations recorded during or after the experiment? Do the conclusions make sense? Can the results be repeated? Are the sources of information reliable? You should also ask if the scientist or group conducting the experiment was unbiased. Being unbiased means that you have no special interest in the outcome of the experiment. For example, if a drug company pays for an experiment to test how well one of its new products works, there is a special interest involved: The drug company profits if the experiment shows that its product is effective. Therefore, the experimenters aren’t objective. They might ensure the conclusion is positive and benefits the drug company. When assessing results, think about any biases that may be present!

13-13 2006 32

Humans are champion long-distance runners. As soon as a person and a chimp start running they both get hot. Chimps quickly overheat; humans do not, because they are much better at shedding body heat. According to one leading theory, ancestral humans lost their hair over successive generations because less hair meant cooler, more effective long-distance running. That ability let our ancestors outmaneuver and outrun prey. Try wearing a couple of extra jackets — or better yet, fur coats — on a hot humid day and run a mile. Now, take those jackets off and try it again. You’ll see what a difference a lack of fur makes.

13-14 2006 33

Recently I was with a client who had spent almost five hours with me. As we were parting for the evening, we reflected on what we had covered that day. Even though our conversation was very collegial, I noticed that my client was holding one leg at a right angle to his body, seemingly wanting to take off on its own. At that point I said, “You really do have to leave now, don’t you?” “Yes,” he admitted. “I am so sorry. I didn’t want to be rude but I have to call London and I only have five minutes!” Here was a case where my client’s language and most of his body revealed nothing but positive feelings. His feet, however, were the most honest communicators, and they clearly told me that as much as he wanted to stay, duty was calling.

13-15 2003 31

Remember that patience is always of the essence. If an apology is not accepted, thank the individual for hearing you out and leave the door open for if and when he wishes to reconcile. Be conscious of the fact that just because someone accepts your apology does not mean she has fully forgiven you. It can take time, maybe a long time, before the injured party can completely let go and fully trust you again. There is little you can do to speed this process up. If the person is truly important to you, it is worthwhile to give him or her the time and space needed to heal. Do not expect the person to go right back to acting normally immediately.

13-16 2003 32

Although many small businesses have excellent websites, they typically can’t afford aggressive online campaigns. One way to get the word out is through an advertising exchange, in which advertisers place banners on each other’s websites for free. For example, a company selling beauty products could place its banner on a site that sells women’s shoes, and in turn, the shoe company could put a banner on the beauty product site. Neither company charges the other; they simply exchange ad space. Advertising exchanges are gaining in popularity, especially among marketers who do not have much money and who don’t have a large sales team. By trading space, advertisers find new outlets that reach their target audiences that they would not otherwise be able to afford.