Summary Completion Skill-Building Exercise 3

An Era of Abundance

Our Knowledge of the complex pathways underlying digestive processes is rapidly expanding, although there is still a great deal we do not fully understand. On the one hand, digestion, like any other major human biological system, is astonishing in its intricacy and cleverness. Our bodies manage to extract the complex resources needed to survive, despite sharply varying conditions, while at the same time, filtering out a multiplicity of toxins.

On the other hand, our bodies evolved in a very different era. Our digestive processes, in particular, are optimized for a situation that is dramatically dissimilar to the one we find ourselves in. For most of our biological heritage, there was a high likelihood that the next foraging or hunting season (and for a brief, relatively recent period, the next planting season) might be catastrophically lean. So, it made sense for our bodies to hold on to every possible calorie. Today, this biological strategy is extremely counterproductive. Our outdated metabolic programming underlies our contemporary epidemic of obesity and fuels pathological processes of degenerative diseases such as coronary artery disease, and type ll diabetes.

Up until recently (on an evolutionary timescale), it was not in the interest of the species for old people like myself (I was born in 1948) to use up the limited resources of the clan. Evolution favored a short lifespan-life expectancy was 37 years only two centuries ago-so these restricted reserves could be devoted to the young, those caring for them, and laborers strong enough to perform intense physical work. We now live in an era of great material abundance. Most work requires mental effort rather than physical exertion. A century ago, 30 percent of the U.S. workforce worked on farms, with another 30 percent deployed in factories. Both of these figures are now under 3 percent. The significant majority of today's job categories, ranging from airline flight attendants to web designers, simply didn't exist a century ago.

Our species has already augmented the “natural” order of our life cycle through our technology: drugs, supplements, replacement parts for virtually all bodily systems, and many other interventions. We already have devices to replace our hips, knees, shoulders, elbows, wrists, jaws, teeth, skin, arteries, veins, heart valves, arms, legs, feet, fingers, and toes. Systems to replace more complex organs (for example, our hearts) are beginning to work. As we're learning the principles of operation of the human body and the brain, we will soon be in a position to design vastly superior systems that will be more enjoyable, last longer, and perform better, without susceptibility to breakdown, disease, and aging.

In a famous scene from the movie, The Graduate, Benjamin's mentor gives him career advice in a single word: "plastics." Today, that word might be "software," or "biotechnology". but in another couple of decades, the word is likely to be "nanobots." Nanobots-blood-cell-sized robots will provide the means to radically redesign our digestive systems, and incidentally, just about everything else.

Questions 1-8

Complete the summary below.

Choose **NO MORE THAN THREE WORDS** from the passage for each answer

In the past it was essential to hoard our calories for as long as possible because our food source was mainly restricted to **1** _____or **2** _____which brought in irregular supplies. However, these reserves were intended for the young or **3.** _____ Because they had the power and energy to work hard. Nowadays, the focus has moved away from jobs on **4.** _____and in **5.** _____to jobs that were not available **6.** _____. Through technology, it has now become possible to replace body **7.** _____and as techniques improve we will be able to develop better **8.** _____to improve the quality of life.