**Globalization**

Culture

Language

It seems that many people from different countries all can speak English

Geographical

Plane, travelling,

Economy

The company Underwood Samson: what they do

In the beginning of the book, the man’ clothes can be bought from different places.

Politics

All the countries are tied together politically: Pakistan, the US, India, etc.

Scientific knowledge:

The liquid pressure is calculated using the formula P=density\*g\*h.

In the bottle 1, let the top of the longer straw be point A, the length be l1, and the top of the shorter one be point B, and the length is l2. In Bottle 2, let the top of the longer straw be Point C with length l3 and the shorter one be point D with length l4. By measuring, l1>>10cm>l2=l3>l4. According to the pressure of liquid P=density\*g\*h, and since the areas of the four straws are approximately the same, and the value of g, the acceleration of free fall is also the same because they are at the same place, we can just look at the height of the water. And the height of water is proportional to the pressure, and thus proportional to the force because P=F/S.

If the force of the water inside is equal to the force from the air pressure outside, the system is balanced and the water will stop flowing out, because the bottle is sealed. The air pressure is about 100000Pa, and by a rough calculation, the height of the water should be about less than 10cm.

The water will first stop flowing in the shorter straw in both of the bottle, since the two shorter straw is less than 10 cm, and keep flowing in the longer straw. If the the length of the longer straw is longer than 10 cm, the water will keep flowing.

The hypothesis is partly valid because I did hypothesize that bottle 1 will empty first because the pressure of water in the longest straw is largest and thus the force is largest, meaning the acceleration is largest and water will flow faster. However, the water is the bottles will not stop flowing as soon as shorter straw stop flowing. I ignored that as soon as the shorter straw stops flowing and when the water longer one in the keeps flowing, the pressure outside will be larger than the pressure inside if we look at the shorter straw, meaning there will be air getting inside the bottle from the shorter straw. Thus, the pressure inside the bottle will get bigger until the pressure inside and outside get balanced, when the water will not have other force but gravity and the water will all flow out of the bottle. Another thing I underestimated is the initial air pressure inside the bottle. It is larger than I expected and the difference between pressure inside and outside cannot be larger than the liquid pressure of water, so the water in both bottles will keep flowing until they are empty, but Bottle 1 will empty first.