3. Mental Models
3.1 How do mental models guide our speech and behaviour?

In everyday life, you will find that there are many common behaviours, attitudes and orientations among the public. For example, we are friendly to other people because we believe that others will treat us similarly in return. We brush our teeth because we believe that the fluoride in the toothpaste will help prevent tooth decay.

Most of our behaviours are based on our own assumptions. These assumptions are sometimes correct but sometimes wrong. At times they may even become automatic without our awareness of their existence. Since our behaviours are unconsciously influenced by these assumptions, we should try our best to understand how they work and whether they are accurate or not.
Before we proceed further to understand the relationship between assumptions and mental models, please try the following:

A. I will define mental models as follows:

B. Our mental models are:
   - right most of the time
   - sometimes right and sometimes wrong
   - right when they are accepted by the majority of people
   - wrong most of the time

Please evaluate the following sentences about mental models:

C. In face of events that are incongruent with people’s assumptions, the majority still tend to hold on to their established beliefs
   - Yes
   - No

D. Most of the time, we change our beliefs/ideas when we are presented with strong and powerful disconfirming evidence.
   - Yes
   - No
E. When we rely on our usual assumptions to arrive at our expected result, the experience will be used to confirm our beliefs / ideas.

☐ Yes
☐ No
In this exercise we will look at how beliefs influence our decision in purchasing liquid soap.

A. Do you often use liquid soap in the following circumstances?

- Bathing
- Washing hands
- Washing dishes
- Washing clothes

B. Which of the following characteristics should good liquid soap possess?

- Liquid soap should be smooth.
- Liquid soap should be rough.
- Liquid soap should contain an anti-bacteria component.
- Liquid soap should contain a bleaching component.
- Liquid soap should contain a component to remove grease.
- Liquid soap should be fragrant.
- Liquid soap should not be black.
C. Do you think there is a relationship between the utility of liquid soap and the characteristics that you think good liquid soap should possess? If yes, please explain:

D. Do you think advertisers usually make use of the utility of liquid soap or the characteristics people in general think what good liquid soap should possess in designing liquid soap commercials? Why? Please explain:
Everyone possibly has his/her own set of implicit beliefs about influenza (i.e. flu). Implicit beliefs are beliefs that we may not always be aware of in daily life. These beliefs influence our decision on whether to seek medical advice or take medicines when we have flu.

A. What do you think causes flu?

B. Do you or those around you have the following beliefs about how to fight flu?

- Flu can be cured after a sweat.
  - [ ] Yes  [ ] No
- Taking over-the-counter flu medicine can cure flu.
  - [ ] Yes  [ ] No
- Taking hot baths can cure flu.
  - [ ] Yes  [ ] No
- Drinking flu herbal tea can cure flu.
  - [ ] Yes  [ ] No
- One recovers from flu on his/her own so there is no need to see a doctor.
  - [ ] Yes  [ ] No
- Doctor’s prescription for flu is more or less the same as over-the-counter flu medicines.
  - [ ] Yes  [ ] No
C. Do you think each of the above anti-flu beliefs is right? How do you think these established beliefs are related to the approach we take in fighting flu?

I think the right beliefs about fighting flu include:

D. What do you think are ways to cure or prevent flu?
E. Can you identify the relationship between your beliefs about flu and the approaches you propose to cure/prevent it?
3.5 Understanding and avoiding confirmation bias

Sometimes mental models lead us to incorrect or less-than-objective judgements about an event or a person. Without realising it, we often seek information that confirms our expectations, i.e. information that affirms our established ideas.

Confirmation bias refers to our tendency to seek, choose and employ information/evidence that affirms our established ideas. In addition, information/evidence that threatens to refute our ideas will tend to be ignored or forgotten.

We often overlook our possible tendency towards confirmation bias because we neither consciously monitor the way we receive information from the outside world, nor pay attention to how we interpret it (for example, how do we distinguish between valid and invalid information? Do we accept or reject it?).
Do you or your friends think or did you used to think that young people living in public housing estates are more prone to committing offences? If the answer is “yes”, you or your friends may have the mental model that “young people living in public housing estates are more prone to committing offences.”

A. Please state the reasons why you believe that young people living in public housing estates are more prone to committing offences.

B. Please list some evidence in support of your belief that young people living in public housing estates are more prone to committing offences.
C. Now list some counterarguments (i.e. evidence that contradicts your beliefs).

D. Can you list other examples of confirmation bias in daily life? Try to list three examples and explain:
Let’s assume that you have graduated from the Police Academy and are now serving in the police force. As a police officer, your first assigned duty is to look for underage drinkers in all pubs. You know that any person who drinks in pubs must be aged 18 or above. Please consider the following scenarios carefully. Of the following persons in the pub, whose ID card would you check, or of whom would you enquire about the kind of drink s/he is having?

Table A
A gentleman around 50 years of age, wearing a dark blue suit, sitting comfortably with a glass of seemingly alcoholic drink in his hand.

☐ Examine
☐ Pass

Table B
A young girl, obviously under the age of 18, dressed modestly, sitting alone in a corner and holding a glass of juice-like orange-coloured drink.

☐ Examine
☐ Pass

Table C
A powerfully-built man in suit, holding a glass of carbonated drink, with an opened can of soda pop on the side.

☐ Examine
☐ Pass

Table D
A glamorously-dressed lady holding a bottle of beer, in the company of her friends.

☐ Examine
☐ Pass
3.8 Summary

How do you avoid confirmation bias or how could you prevent your behaviour from being led by incorrect beliefs? The best way is to actively search for evidence that contradicts your beliefs. Recall some recent decisions you have made or conclusions you have drawn from other information. Try to list a few reasons in support of your conclusion and those that contradict your conclusion. Weigh the importance of each reason. Through actively searching for counterarguments, you can make better and more reasoned judgements. This is a good way to reduce our use of subjective feelings or established beliefs to affirm our judgement before we judge.

If you notice that you may be influenced by your own bias, then it is important to nurture the way of considering more than one possible conclusion. Once it becomes your habit to consider more than one possible conclusion, you will be surprised by the countless possibilities that are available.