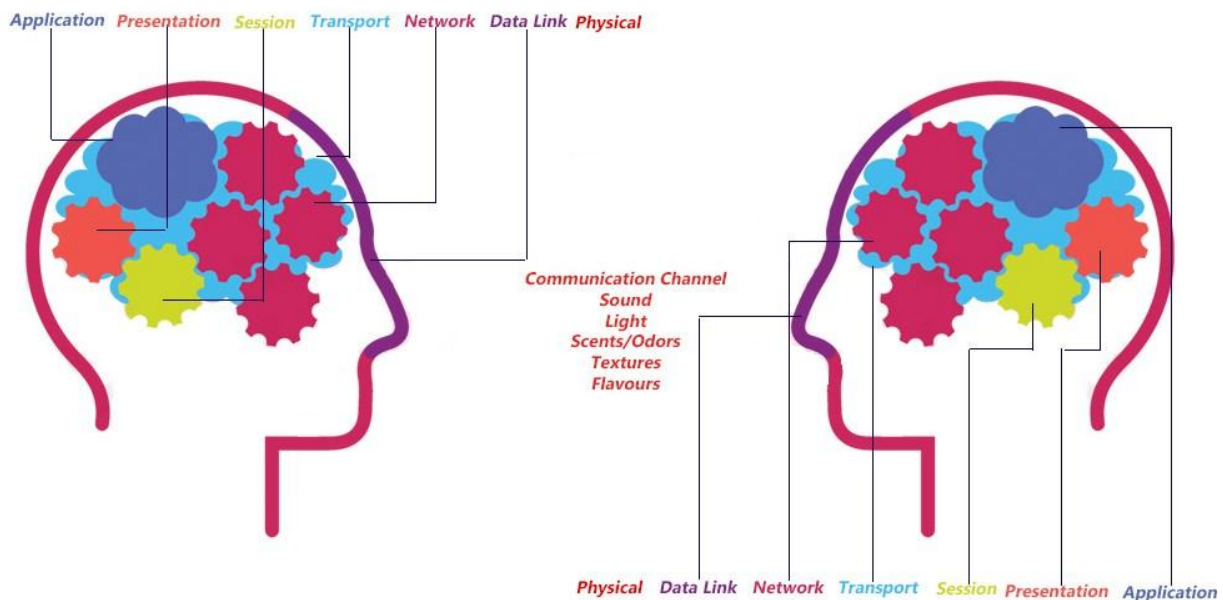


The OSI Model Interpreted by Maham Zia

Preface

I chose to represent the OSI model using sensation, perception and the human mind because as we built up each level of the OSI model throughout this course, I envisioned the model to be less linear and more flexible, almost branchlike. The comparison with a human being was actually my fourth idea (rejected ideas include the water cycle, the food chain, and a town). In the rejected ideas, I found aspects of interconnectedness that the levels and sublevels of the OSI model have but none quite as layered as a functioning human. Going into the future, I think it would be highly instructive to look towards biology and nature since there are so many processes with interdependent and interconnected pieces. I focused primarily on communications between two humans but another way to look at it could be to look at a single human body as a network of interconnected processes.

*OSI Model Diagram **



* built upon clip art image: <http://www.cliparthut.com/clip-arts/569/perception-clip-art-569053.jpg>

1. **Physical** can be compared to information in the surrounding world such as light, temperature, sound and textures in this particular case. I think it's really interesting how similar the on and off process might be in how we as humans receive sensory information. There might be a 0s and 1s in the presence or absence of light even though eyes are much more complex data links contrasted against copper wires.

2. **Data Link** in this case would be represented by eyes, ears, mouth, nose and skin. My favorite part of this comparison is thinking about the bridge and hub, and what roles they might play in controlling the information coming into the larger network. I reinterpret it for my diagram by saying that the bridge is always open to all types of sensory information that we may be aware of at some automatic level but only the information we are focused on makes it to the highest, thinking or application level in this arrangement. For example, if I skate on the Frog Pond in Boston on a really cold day, I would be receiving sensory information about the coldness or about people skating my way but the bridge might allow my higher level thinking to focus on what a good time I am having.
3. **Network**, or the pink cogs are similar to the neural network and paths that allow us to think. In fact, I think we as humans might even have a “cache” function where we can take quicker paths within our neural network if we have visited something before. For example, the first time we ever came across $1+1$, we had to take a path to our computation center to come up with an answer. However, now, the answer 2 is stored in our cache and we don't have to go through the whole path and do actual math. The router equivalent in the human brain would function slightly differently: instead of acting as check points or guidance systems, there might be more used paths in light of certain stimuli and there may be more associations stored as we get to know more. In this example, I would explain physical and logical addressing in the way that there is a logical, higher level control of complex actions and a lower level coordination function of the of muscle groups that need to be used. In this particular diagram, I can think of IP addresses as a major association header that keeps a server behind it. For example, the IP address could be “dance” and when we consciously arrive at this association, we can find specifics or certain moves (placed in the higher level brain functions or application level). There may even be a limitation on the amount of addresses that can exist in our internet or brain networks. While, the web can limit IP addresses by utilizing domain controllers to umbrella many devices in huge organizations, the brain might remedy overfilling by placing things in long term memory or losing the memory in total if unused.
4. **Transport** is shown by the blue cloud surrounding the other layers. I interpreted transport in two different ways. One way to think about transport is the actual electrical signals that travel end to end from each neuron (TCP). Alternatively, an entirely different comparison could be a direct conversation where each “user” registers and assures the other “user” that the information has been received by responding (TCP). I think UDP could be compared to reading, watching and listening where the information is set free into your mind and it may or may not be stored as part of a preexisting association.
5. **Session** is represented by the green cog in the diagram. I thought about session in this particular model as memories or past information about a similar experience, used to identify incoming information. In this way the memories serve as information you locally store to make sense of what is coming in from the environment. I thought about HTTP and how it is stateless. In this case I treated information that is coming in as stateless until matched to sessions inside our own networks so that we can make sense of it. When I first read the technical material on session in this course, I thought it was opposite and more like our identity on the internet that is divided and spread and called as needed. I love the idea that there are bits and pieces of us that different applications send around to each other to function in an expected way. Although I took some

creative liberties while translating sessions to my diagram, I think that the concept of self interacting with new or stateless information is an interesting way to create unique instances.

6. **Presentation** is represented by the orange cog. XML would compare to the structure of information storage at each main heading like dance in my diagram. This could make the difference in a flexible thinker who has loose associations listed under one of their IP address headings or tighter and more organized information storage (example associating summer and sun is a closer association meanwhile associating summer with a certain type of music is a looser association). Both types of data structures have a time and place: one allows creativity while the other applies well to other types of thinking. Ironically, when applied to the actual web the case might be the opposite where standardized data structures would oppositely allow for more flexibility and creativity while less organized data structures would be less usable by different applications. Regardless, the structure of the data plays a huge role in the flow of web services or flow of thoughts.
7. **Application** is represented by the blue cloud in this diagram. This would be where the conscious thinking, and decision making take place. I thought the comparison worked quite well because in both an application and higher thinking, we are aware of what is happening at that level as opposed to all the lower levels where we may not be in direct contact with the processes. Both these levels have recognizable, interactive features. They also complete the loop. Once I come in contact with a certain stimulus, I can think of a response at this level and send it downwards until the response emerges from one of the motor systems. Once the response is out, it is in the other “user’s” communication channel as sensory information and they would repeat the process.