

UNDERSTANDING THE BRAIN

Here is a simplified analogy of how the brain works:

I find it helps to understand how the brain works if you think of the brain as a company. The company runs at peak efficiency when all the parts are working. Up at the front of the company (frontal temporal lobes) are the vice presidents, and there are several vice presidents. They make the plans for the company, they decide who's going to do what and when. As things get underway, they get feedback or information as to how well things are going and they judge it - that looks good or not so good; and they make further decisions - change that, keep this; and show appreciation or annoyance. So, up at the front you have planning, organization, decision making, judgement and appreciation.

In the middle (parietal association cortex) are the managers and each manager runs his own department. On the left side of the brain is a speech department (move the tongue and lips and throat muscles), a language department (find the words that you want, know what the words mean) and a motor department - move the right arm and right leg. On the right side is another motor department - move the left arm and left leg; and a spatial reasoning department - (find your way around a building, know where you are when driving a car, down to the basic getting your arm through a sleeve). Also over there is a music department and a few incidentals. The right side is the picture side and the left side is the talking side.

Now, the managers, they know what the plan is from the vice presidents, and they make sure it gets carried out. And in order to do this, they communicate frequently with each other, they send messages back and forth.

At the bottom, (limbic region, amygdala, basal ganglia) are the workers. They don't know what the plan is from the vice presidents, but they know their job and they do the same job day in and day out. Things like appetite control, need for water, staying alert and awake or going to sleep, and basic emotions - turn on the tears, make the face red, increase the pulse rate.

Basically in a brain injury, someone gets fired. It can be a vice president, a manager or a worker, depending on the injury. You can also have someone go on a leave of absence; that occurs when there is a temporary swelling or loss of blood supply that is returned in a short time. The result of the injury is to reduce the efficiency of the company. Messages get sent but aren't picked up. The vice presidents get annoyed; the managers get fatigued; and the emotional workers get overwrought. Confusion reigns. A primary purpose of rehabilitation is to find out who got fired and who is still on the job, so messages can be re-routed and the company can become more and more efficient again.

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Planning

Organization

Decision Making

Judgement

Right Movement

Perception

Left Movement

Language Library

Speech

Emotions

Appetite Control

Consciousness

Appreciation