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Theories of Embodied Cognition claim that cognitive processes are rooted in the interactions that the human body experiences with the physical environment, which are often specific to an individual. From an embodied perspective, cognition is outlined as the "*goal-oriented interaction of a **specific** individual with a particular body in a given physical environment and setting*." These experiences take place in the form of actions and interactions. An action or an imagination of an action that is performed which aligns with a novel problem's solution is likely to augment a cognitive reasoning process and possibly help in better retention and understanding of that solution. In a mathematical proof, picturing or carrying out a certain motion can provide a key insight that underlays it. For example, when proving that a function between two sets is invertible, (i.e., for each value in one set, there is a unique value mapped to it from the other set and vice versa) it helps to picture or draw two dots, which represent elements from each set and a line that joins them. This notion can provide a key insight into how to begin to formulate the proof.

This mental experience of action can be triggered by reading or listening to words that describe the actions, by planning or thinking about an intended action, or maybe by picturing another person performing the action. Hearing or reading ***action words*** activates the brain regions involved in producing those actions, therefore decentralizing memory and adding another dimension to it. There is also a distinction made between behaviourism and cognitive science; the former relates to study of observable stimuli and behaviour while the latter is concerned with ***unobservable*** processes through which encoded stimuli are transformed into encoded instructions, which in turn elicit intelligent behaviour by the individual. An example for *behaviourism* would be standing up when the teacher or the professor enters the class and one for *cognitive reasoning* is the set of instructions students follow when a morning school bell rings; They need to line up and assemble in the auditorium for the morning prayer. There are many instructions that get encoded within the student's minds and which elicit intelligent behaviour from them.

Furthermore, about embodied cognition, the aligning motion that I mentioned earlier was also found to be subject to fatigue (in the areas of the brain that coordinate it). Thus, thinking about performing the action was similar to performing the action itself and instead of the muscles that fatigue, it was corresponding areas in the brain. Both of these components (primary motor response and an effector) form integral parts of the sensory response arc. I remember when I was playing once, I was looking at my friend run away from my view behind a pillar and come out the other side. Even though I didn't know the speed at which he was running nor the width of the pillar, I was about to guess very accurately when he would come out the other side so I could shift my eyes from one end of the pillar to another. A purely computational setting would involve me calculating the complete trajectory of my friend and the geometry of the pillar. But as experiences become embodied, it becomes easier to judge complex tasks which when delocalised from the brain, become more straightforward. Gestures also play an important role in learning. While we speak (irrespective of whether that person is around you or not), we make gestures with our hands which may bear a mismatch with our conversational intent. Studies have shown that children make gestures while trying to connect past experiences with new knowledge. This mismatch can even be used to gauge a child's understanding of a topic and the readiness to learn: **Concordance** is when there is little mismatch and **Discordance** is when the mismatch is amplified and there is reasoning going on. Thus, discordance bears a greater readiness to learn.

Embodied cognition and constructivist learning share many aspects; Constructing unique cognitive structures may be assisted by delocalising the response to the stimulus in order to better facilitate knowledge retention and recall. They however differ in the fact that a constructivist theory does not quite familiarise the responses to learning stimuli as well as embodied cognition does; Embodied cognition also has an influence of the type of knowledge structures that are created; If a student learns about multiplication of numbers while keeping in mind the word "***magnify***" in the mind, it may result in a different structure from when a student learns about it as repeated addition. In the former case, the student can associate multiplication to a magnification (one node branching out into many trees) while in the latter, the student likely "***stacks***" over repeated values. Theories of situated learning which are a subset of the social theory view sociocultural and physical settings of an environment as a part of the cognitive system, while theories of embodied cognition take as central the physical body and the sensory arc system, i.e., more onus is laid upon the physical body of a single individual. So, theories of embodied cognition augment constructivist theories but bear a sharp contrast with social theories of learning.