

Tacit Knowledge and its role in expertise

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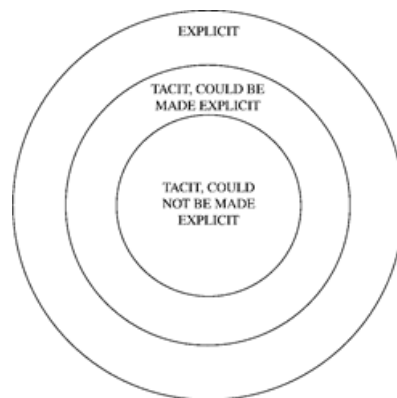
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Tacit knowledge is the representation of complex information in one's mind learnt through experiences perhaps independent of conscious actions. This knowledge is gained implicitly and the processes which it involves are very basic than those learnt explicitly through conscious efforts. Speaking native language, doing daily life tasks (like recognizing faces of acquaintances, typing very fast on keyboard etc.) are some of the instances of the tasks which we do quickly/regularly without thinking twice.

Before moving onto the relation and role played by tacit learning in gaining expertise, I would like to discuss philosophical aspects of implicit learning which in a way favours empiricism, which states the notion of gaining knowledge through experiences instead of having certain innate ideas (contradictory to nativism). As discussed by Reber in detail, knowledge gained through implicit experiences is more resistive to the neural disorders than explicit knowledge. For instance even an amnesiac person builds up his implicit memory through various stimuli in the environment without being aware of them.

The role of this implicit knowledge in gaining expertise is quite engrossing. Most often, the skills of expert make us to attribute its credit to their quick rational reflexes of mind instead of relating it to implicit knowledge which is found commonly among population. Taking examples of experts say Chess grandmasters, the speed/skill with which they take decisions surely rings a bell whether these decisions are taken rationally or it is just the outcome of their long experiences.

Elaborating more on this example, let's compare the game of a novice with that of grand master. A beginner while playing chess tries to analyse each step brute-forcing through all possible ways and then choosing the best possible option. It is analogous to simply search over the space of rules to discover the output. While on the other hand, an expert implicitly narrows down the dimension of search space extracting pattern out of the game thus selecting to analyse only useful options.



[Image Credit : Edwards 2008]

As in figure, we can say for novices they have only explicit knowledge about play while domain of experts lies in somewhat between inner and intermediate circle. We can relate it to the task of thinking fast and slow, extracting out pattern is rapid while some specific cases may require some attention leading to thinking slow.

Now, the question arises that is it the experience all that matters in gaining expertise. No! As described by Ericsson in detail, expertise is not just accumulation of knowledge through lengthy experiences but it's also the mental representation of knowledge gained through making deliberate efforts for particular kind of experiences (domain specific). It's this representation which helps them in rapid retrieval of relevant information, thus distinguishing experts from others.

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