Changing Hearts and Minds - A Perspective from Memory Research

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ABSTRACT

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Individuals can change. They can be radicalized to the point of perpetrating extreme violence. They can also grow to fight for human rights out of compassion for other human beings. At the core of any such change is learning. Two types of learning are relevant. Explicit Learning is when we gain factual knowledge and the details of the events we experience each day, or what memory researchers call Declarative Memories.

This knowledge can be consciously brought to mind. Information stored in this manner can be broadcast widely in the cerebral cortex, and we knowingly use it to guide our decisions. The second type of learning is Implicit Learning, and in this case we may not know what we have learned or even that we have learned. Importantly, the two types of learning can occur concurrently, and these memories can change over time (e.g., fragments of explicit factual knowledge may later be retrieved implicitly). Thus, we distinguish between consciously retrieved or explicit memories, and those that otherwise influence our behavior, implicit memories. The latter category includes basic skills, habits, certain priming phenomena, and conditioning, each operating based on different principles. Both implicit and explicit memories can impact decision making even though we generally recognize only the impact of the latter. Another fundamental principal is that learning is not merely a function of changes in the brain at the moment of information acquisition — to produce enduring memories, a protracted extension of the learning process must continue after the initial experience.

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Reactivation of memories during sleep is now thought to be a key part of effective learning. Through reactivation and association, a progressive process of consolidation entails various adjustments in memory storage. Armed with this knowledge of memory storage in the brain, how can we conceptualize learning in ways that are incompatible with violence? Although this question must be addressed through a wide range of perspectives, memory research can offer some useful insights. The principals of memory storage apply to learning about social groups and regulate the extent to which our actions reflect tribalism and selfish forces. Social categorization and implicit social biases are prevalent but can be countered through learning by cultivating a natural and pervasive sense of compassion.

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