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Multitasking

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Definition

Multitasking is the ability to conduct two or more tasks at the same time both requiring attention and various advanced cognitive processes. All human action requires a series of associated brain functions in order to efficiently execute the task. Moving from one task to another also requires complementary stages of goal shifting and rule activation. When conducting more than one task simultaneously, the interrelated cognitive processes establish priorities among tasks and allocate the mind's resources to them.

Human multitasking is common for automatic tasks (e.g., walking and chewing gum), or for familiar tasks, or for those actions that have been repeatedly practiced to the point of becoming automatic (e.g., playing piano). Notably there are individual differences in people's ability to multitask, particularly when confronted with new and unfamiliar tasks or tasks requiring complex rules of performance (Burgess et al. 2000). There is always a time cost involved in shifting mental gears. In these cases, multitasking can be risky and even lead to serious injury. Research has

shown that the loss of a mere half second to task switching when driving a motor car and using a mobile device can mean the difference between life and death (Salvucci and Taatgen 2008). The brain is not constructed to pay equal attention to multiple tasks and to complete them equally competently without loss in some respects.

Cross-References

- [Central Executive](#)
- [Cognitive Processing](#)
- [Divided Attention](#)
- [Functional Neuroanatomy](#)
- [Occipital Lobe](#)
- [Prefrontal Cortex](#)

References and Readings

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