

2.3.4.1.4 Understanding Cognitive Layer

[Return to Cognitive Taxonomy of Data](#)

The Understanding Cognitive Layer is a level of the Cognitive Model. See: [Appendix I: Cognitive Model](#)

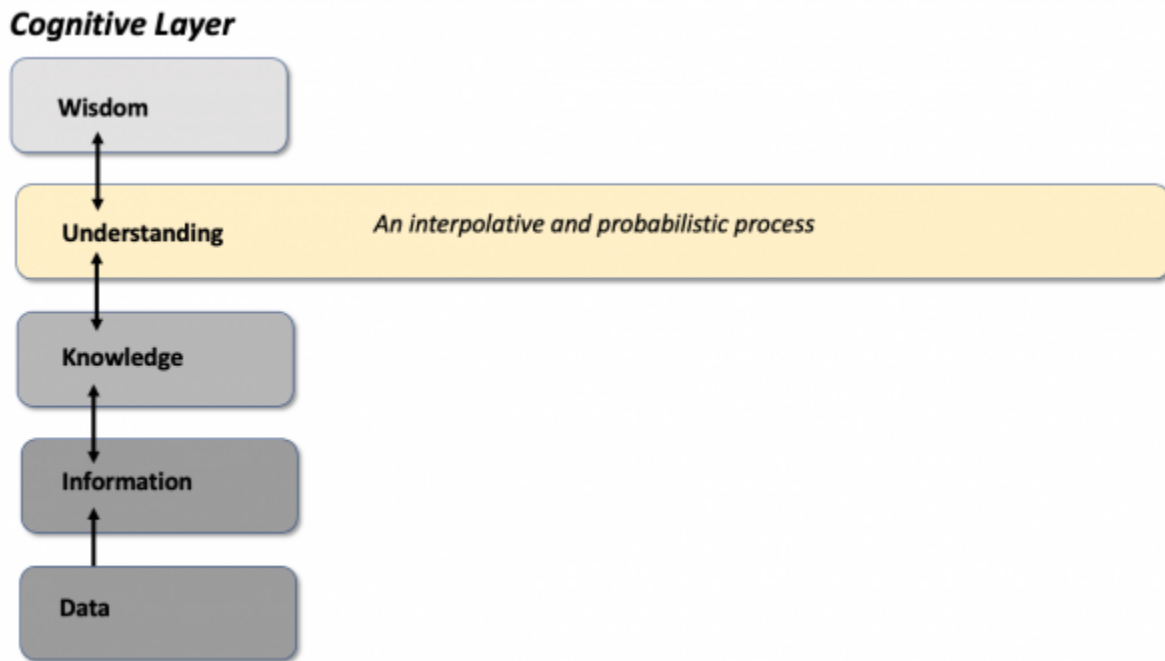


Figure 1: The Understanding Layer of the Cognitive Model

Yingxu Wang ¹⁾ does not directly define Understanding, but does describe **Intelligence**. Wang defines **Intelligence** as the fourth level of cognitive objects in the brain. Intelligence may be classified into the categories of reflexive, perceptive, cognitive, and instructive.

Although all animal species possess reflexive and perceptive intelligence, only humans and a few advanced species have developed the abilities of cognitive and instructive intelligence.

Yingxu Wang ²⁾ defines **Intelligence** as a human or a system's ability that transforms information into behaviors.

Paradigms of intelligence include natural intelligence, artificial intelligence, machinable intelligence, and computational intelligence. The development of cognitive robots, cognitive computers, intelligent systems, and software agents indicates that intelligence may also be created or implemented by machines and man-made systems.

Stavros and Albrant ³⁾ define **Understanding** as an interpolative and probabilistic concept that reflects **Wisdom** concepts.

¹⁾

Yingxu Wang, Formal Cognitive Models of Data, Information, Knowledge, and Intelligence, WSEAS Transactions on Computers Accessed: 29 September 2021, E-ISSN: 2224-287, Colume 14, 2015, Page

770-781 <http://www.wseas.us/journal/pdf/computers/2015/b5072610-109.pdf>

2)

Yingxu Wang, Formal Cognitive Models of Data, Information, Knowledge, and Intelligence, WSEAS Transactions on Computers Accessed: 29 September 2021, E-ISSN: 2224-287, Column 14, 2015, Page

770-781 <http://www.wseas.us/journal/pdf/computers/2015/b5072610-109.pdf>

3)

Stavros, Robert W. and Albrant, Jeremiah; Engineering Governance, SPAWAR, October 9, 2007,

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