The introduction of the book and its purpose

Chapter 21
Pain and Bodies

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The problem of non-monotonic reasoning is a critical issue in artificial intelligence and computer science. A non-monotonic reasoning system is one that can reason about incomplete or uncertain information. In a monotonic system, once a conclusion is drawn, it cannot be revoked even when new information is introduced. However, in a non-monotonic system, conclusions can be withdrawn or revised as more information becomes available.

This is important in many real-world applications, such as expert systems and legal reasoning, where the availability of information can change over time. Non-monotonic reasoning allows for more flexible and realistic models of reasoning, which can better handle situations where information is uncertain or incomplete. The ability to retract or modify conclusions as new information is learned is a key feature of non-monotonic reasoning, making it a valuable tool in many domains.
The hypothesis is a key component of the scientific method. It is the statement that a researcher believes to be true, which is then tested through experiments and observations. In the context of chronic pain research, hypotheses are crucial for guiding the direction of studies and for evaluating the effectiveness of treatments. The scientific method involves formulating a hypothesis, designing an experiment to test the hypothesis, collecting data, analyzing the results, and drawing conclusions. If the data supports the hypothesis, it may be considered a discovery; if not, the hypothesis may need to be revised or discarded. The process is iterative, with new hypotheses arising from the results of previous studies, leading to further exploration and understanding of chronic pain mechanisms and potential treatments.