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8. **Multiagent Systems - A Modern Approach to Distributed Artificial Intelligence, G. Weiss (Ed.),** The MIT Press, 2001, Ch.2.3, 8.5-8.7


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25. **K. Scherer,** *What are emotions and how can they be measured?*, Social Science Information Vol. 44, No. 4: 695-729, 2005.