

# Networks -- in science and in life

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Links are a prerequisite for success. Top performers, for example, are often distinguished by their well-developed social networks. Still more important, links help to maintain our physical and mental health.

However, the network concept is much broader than this. Networks can be composed of atoms, cells, companies, Web pages, or countries, to name just a few.

In his new book, *Weak Links*, Peter Csermely shows that all kinds of networks, from molecules to the whole Universe, are governed by the same principles and that it is surprisingly the weak links that stabilize the systems at all these levels.

Weak links, which are invisible in many networks, are crucial for our own stability and the stability of the world. A weak link can be a casual acquaintance as opposed to a close friend; local decisions made by the "worker" bee independently of the queen in the hive; the stabilizing effect of women in crises as they seek out social support instead of displaying "masculine" hostility; or trustful and cooperative working relationships in a company, which may achieve more than strong management.

The book, a best-seller in Hungary, shows convincingly that, despite its overwhelming complexity, the modern world can be understood by using the simple logic of networks. Carefully balancing scientific analysis with popular science, the author introduces several viewpoints, often playfully, and invites the reader to take part in the formulation of scientific ideas. Smilies and other symbols identify hypotheses,

additional information, and questions, enabling readers to select their preferred level of sophistication. Spite, a fictitious high-school student, accompanies the author on his journey to Net-land, the world of networks, criticizing and posing awkward questions as the journey progresses. But by the end of the book, Spite too has come to understand the important message.

Peter Csermely (47) is a professor at the Semmelweis University in Budapest. A former Fogarty Fellow at Harvard University, his main fields of study are molecular chaperones and networks. In 1996 Dr. Csermely launched a highly successful initiative providing research opportunities for more than 7,000 gifted high school students. The author of nine books and more than 170 research papers, Dr. Csermely has been the recipient of numerous international fellowships and awards, for example the 2003 Science Communication Award of the European Molecular Biology Organization and the 2004 Descartes Award of the European Union for Science Communication.

Source: Springer

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