

**BOOK SUMMARY – SIX DEGREES**

**SIX DEGREES BY DUNCAN J. WATTS**

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### **Introduction: Strengths and weaknesses of the book**

The book is actually two stories, the development of the new science of networks and the phenomenon of networks in the world (Watts, 2003, p. 16).

The story of the science of networks is an exhaustive account of the history and evolution of network science. It offers examples of how researchers from many different disciplines (i.e., biology, physics, sociology, economics, mathematics) contributed to and collaborated in the development of the new science of networks.

The story of the phenomenon of networks speaks to the application of the science of networks to world events, epidemics, the spread of animal and digital viruses, the internet, business systems, etc.

The passion and dedication of the author and of the other researchers described in the book are clearly evident. One strength of the book is the painstaking evidentiary proof offered by Watts to defend his assumptions and understanding of network theory. His descriptions and logical explanations of various theoretical models support his hypotheses, which he builds upon, one layer at a time, to underscore the empirical strength of his arguments and findings.

But Watts' thoroughness is also one of the weaknesses of the book. His reliance on facts and theory may be useful in making intellectual points. His passion seemed to be akin to the thrill of solving a puzzle, an intellectual pursuit of mind over matter. What was lacking was a heart connection, a compelling reason that gives meaning other than to satisfy a curiosity.

### **What “spoke” to you?**

- The scientific backing of the presenting concepts, and how some universal concepts between different networks surfaced.
- Networks can be of systems, people, information, electronics, viruses/diseases, information, etc. The behavior of the various elements are similar, the phenomenon of networks overrides.

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- The understanding that computer viruses are not that different than flu viruses!
- The connection to pop culture items such as the Kevin Bacon phenomenon and identifying where 6 degrees of separation actually stemmed. The more explained the more interesting it became and hooked the reader.

### **What frustrated you?**

- In all honesty, the book is written from an in-depth perspective far outside normal logic and became fairly boring.
- The author tended to ramble and lacked summarization. The book could have been drastically reduced in length.
- Starting from the first page, a reader may begin very excited to learn about network science, however, by the time they reach the end of the book all interest has been lost in the topic. The author, who was caught up with details and encounters that were meaningful to him failed to translate effectively too many readers causing annoyance. (*Noteworthy comment: “I can’t imagine a situation where I would want to sit down and have a beer with him as he regales me with endless tedium about who he met on a plane or some new Greek letter coefficient or the properties of a statistical distribution.”*)
- The logic and path were hard to follow - the author wasn’t clear about what tied to what.
- It was easy to lose interest when the author dove into advanced mathematics; frustrating those of us with little understanding of that level of math. From a science-based perspective, the math may be important but for Organization Development, it did not seem to be helpful.

### **What excited you?**

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- The deeper understanding of how networks work and interact. It helped to understand how different concentrations of nodes (or people) in networks can influence the whole, even if it's not the typical influencers.
- Mathematical backing speaks to “engineer” style logic and thinking; putting math to the virus, as well as to social situations.
- The potential application to organizational situations, such as exploring their communication structure for areas of threat and promise.
- The relationship aspect in groups reveals the importance of connection. Different levels of relationship between individuals shift what is carried forward into their varying networks. Therefore, the investment of time and energy into people directly impacts what surfaces for you in the network.
- The brief mention of 9/11 and the impact specifically on Cantor Fitzgerald was relatable to personal memories from that time period and what was going on in the country and the world. Watts states that the science of networks is still “new” and there is much to be explored, learning about it in real time through current events is most helpful.

### **Primary message**

The science of networks can tell us about the world itself (Watts, 2003, p. 15), through a description of its development and how it fits into the larger scheme of scientific progress. By studying networks, we get exposure to the world of connection and how it operates within and on the different facets of our lives and organizations such that everything is connected and affects everything else (spider web).

### **Secondary message**

Think of organization networks in terms of information flow, which can flow freely in some parts of the network and be clogged in others. This perspective exposes the power of

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gatekeepers (executive administrators, program managers, etc.) who control schedules and access to decision makers.

“The true ambiguity of modern business processes... is not just that the environment necessitates continual redesign of the production process but that design itself, along with innovation and troubleshooting, is a task to be performed, not only at the same time as the task of production but also in the same decentralized fashion” (Watts, 2003, p. 268) “True ambiguity necessitates problem-solving, and thus communication, on all scales of the organization at once” (Watts, 2003, p. 282).

Multiscale connectivity distributes the information congestion associated with problem-solving across many scales of the organization, thereby minimizing the likelihood of failures. Simultaneously, it reduces the effect of failures if and when they occur. Innovation, error correction, and catastrophe recovery are all versions of the same response to ambiguity (Watts, 2003, p. 287). In multiscale connectivity, the distinction between a knowledge manager and a production worker blurs, leading to a breakdown in role distinction, due to the ambiguous environment, which necessitates continuous problem-solving and the tasks of production. Everyone must do some of both.

### **Potential manifestations in China**

The underlying structure of the consulting assignment is built upon a network with the steering team as the main source of initial contact, resembling the network node. Teams will then go out into the community and encounter another network node during the work; a visualization that comes into focus is as if we, as consultants, are plugging ourselves directly into the client network.

Armed with new knowledge and perspective, questions as to potential encounters have surfaced:

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1. What is the proper perspective to place into the scene? Are the clients to be more like the people who live in the cave, or like the Solarians? What role does Phi Prime play?
2. How can Phi Prime, working as consultants, ensure effective and efficient information flow between the different “organizations” or teams as we collaborate? Upon reflection, the current state has been operating in an autonomous nature.
3. How will the aspect of language and translation affect communication transferring from the consultant to the client? It is as if the flow of communication will need to pass through a gate or weir, and if said translation is incorrect, proper flow will be affected (*Weir: a notch in a dam that controls the flow of water. A weir isn't on or off. It's a continuum. It's always on to some extent*).
4. Consideration of those who are present in the room, such as the stakeholders, will need to be further examined. Is the right person who disseminates information throughout the organization going to be there? Considering in many organizations the administrative role often sends out such communications, if said information is being presented to that individual second hand it could resemble a bad game of telephone where the information becomes washed from meaning and skewed.
5. How will the reading relate to the potential work in the area of Trans Organizations?

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### **References**

Watts, D. J. (2003). *Six Degrees - The Science of a Connected Age*. New York: W. W. Norton Company, Inc.