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| Nota di contenuto | Contents; Prologue; Acknowledgments; 1. Chance and Variation; 1.1. The myth of equality; 1.2. Slaughter's Cafe; 1.3. What are the odds?; 1.4. Odds against smallpox; 1.5. Information and chance; 2. The Expectation of Health; 2.1. Control and cybernetics; 2.2. Temperature regulation; 2.3. Respiration regulation; 2.4. Cardiac regulation; 2.5. Averages are not sufficient; 3. Even Uncertainty has Laws; 3.1. Randomness and measurement; 3.2. Chaos and determinism; 3.3. Wisdom is not static; 3.4. A new tradition; 4. The Uncertainty of Health; 4.1. The different kinds of scientists 4.2. The Emperor in exile 4.3. What is wrong with the law of errors; 4.4. The inverse power-law distribution; 4.5. How the physical and life sciences are different; 4.6. Only the few matter; 5. Fractal Physiology; 5.1. Scaling in physiological data; 5.2. Allometric relationships; 5.3. Fractal heartbeats; 5.4. Intermittent chaos and colored noise; 5.5. Fractal breathing; 5.6. Fractal gait; 5.7. Fractal temperature; 5.8. Fractal gut; 5.9. Fractal neurons; 5.10. Internetwork interactions; 6. Complexity; 6.1. Random networks; 6.2. Scale-free networks; 6.3. |

Controlling complexity

6.4. Allometric control 6.5. Disease as loss of control; 7. Disease as Loss of Complexity; 7.1. Pathological periodicities; 7.2. Heart failure and fractal loss; 7.3. Breakdown of gait; 7.4. Summing up; Epilogue; References; Index

Sommario/riassunto

Where Medicine Went Wrong explores how the idea of an average value has been misapplied to medical phenomena, distorted understanding and lead to flawed medical decisions. Through new insights into the science of complexity, traditional physiology is replaced with fractal physiology, in which variability is more indicative of health than is an average. The capricious nature of physiological systems is made conceptually manageable by smoothing over fluctuations and thinking in terms of averages. But these variations in such aspects as heart rate, breathing and walking are much more susceptible
