

# A Deceptively Simple Formula

By Geoffrey West, President



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**The Santa Fe Institute is more than 20 years old** and, thanks to the visionary leadership of past presidents, board members, and an outstanding array of scientists, it is now well established on the international scientific landscape.

Complexity Science, with its tentacles stretching across an astonishing spectrum of fundamental problems, is now viewed as a legitimate, exciting frontier, with SFI playing a central and seminal role. We have extraordinary name recognition and, per dollar, we must be one of the best-known institutes in the world!

This recognition goes well beyond the narrow confines of the traditional scientific community reaching into the corporate and business world. Recently, senior journalists from both *Wired* and *Time* magazines spent time with us prodding and poking around trying to uncover the secrets of our success. Their efforts will result in what we hope to be favorable feature articles (as well as a book) about the Institute. In addition, *Harvard Business Review* will feature an interview with me exploring why SFI is so attractive to businesses. Despite all of this, we remain, by our very nature and design, a little on the outside and “on the edge,” namely, a continually evolving experiment not only in the science that we support but in the way we do it.

Maintaining the vision of the Institute as a haven for brilliant mavericks, risk-takers, big-thinkers, and synthesizers who are willing to go beyond the more traditional boundaries is an enormous challenge. Identifying such people and convincing them to become part of the SFI community is perhaps the single most important task of being president. I am much influenced by the deceptively simple formula expressed by Max Perutz, who was the director of the notable Medical Research Council

Laboratory of Molecular Biology in Cambridge that produced 12 Nobel Laureates (including Watson and Crick): “No politics, no reports, no referees, just gifted, highly motivated people, picked by a few men of good judgment.” This is the ultimate challenge for us—if only it were so simple! Of course we have the advantage of being able to depend on a few women of good judgment as well.

Bringing brilliant minds together to attack some of the big problems that might otherwise fall between the cracks is our major challenge. For example, SFI is particularly well positioned to facilitate serious interactions between those from the harder sciences of physics, chemistry, and mathematics with those from the softer, more qualitative biomedical and social sciences. To what extent (if at all) can these be put on a more quantitative, mathematical, predictive basis derived from “universal” underlying principles and laws? Among the sorts of problems being attacked are questions such as, Are there general principles and conceptual commonalities underlying robustness, resilience, innovation, and evolution—concepts that are ubiquitous and central across the entire spectrum of science and technology? To what extent are social organizations an extension of biology? How are energy, resource, and information networks integrated in living systems, in engineered systems, in societies? Such questions are of fundamental importance, sometimes requiring a new way of thinking and a synthesis that can be difficult to accomplish in the often-constrained environment of a particular department in a typical university. But here, it is possible.

There are tremendous opportunities for us as a community to continue the tradition set by the founding fathers and early associates of the Institute: to remain on the frontier of discovery. I look forward to working with all of you to accomplish the dream. ◀