The Journal of Prediction Markets (2009) **3**, 1 *13-16*

THE CHALLENGE OF INCENTIVE ALIGNMENT IN THE APPLICATION OF INFORMATION MARKETS WITHIN AN ORGANIZATION

Art Hall[*]

Prediction markets have captured the imagination of business thinkers—much like chaos theory captured it a decade ago. The urge is to apply prediction markets to a host of business challenges just like the urge was to apply insights of chaos theory to business challenges. However, the intelligent application of prediction markets within organizations may be no easier than the intelligent application of chaos theory to business strategy.

I have chosen the comparison to chaos theory for two reasons. First, the excitement about prediction markets seems to me to have the same type of buzz that chaos theory carried in the late 1990s. Second, and more to the point, Jim Lavoie's reference to the business potential of Web 2.0 tools arguably offers a platform for capturing some of the more realistic goals of those who once urged businesses to operate "on the edge of chaos"—as captured by the title of this popular-audience book: *Surfing the Edge of Chaos: The Laws of Nature and the New Laws of Business.*[1]

It is easy to become excited about the success Lavoie and his colleagues at Rite-Solutions have had with prediction markets while also under-appreciating how remarkable an accomplishment it represents from a management perspective. I say that as someone with limited—but relevant—experience in trying to facilitate and coordinate creative thinking and action across business units of a large conglomerate and the agencies of a state government.

The force of bureaucratic inertia combined with the interpersonal dynamics of large organizations creates a formidable gauntlet for innovation. Lavoie understands these phenomena well from his considerable career experience. That is why he and his partner, Joe Marino, tried from day-one to

[*] Center for Applied Economics, School of Business, University of Kansas

[1] Richard T. Pascale, Linda Gioja, Mark Milleman, *Surfing the Edge of Chaos: The Laws of Nature and the New Laws of Business* (New York: Crown Business, 2000).

prevent them from forming in their new company. This effort is documented in a Stanford University case study on Rite-Solutions.[2]

DISTINGUISHING AMONG TYPES OF INCENTIVES

The prediction market developed by Rite-Solutions, called Mutual Fun, is, as Lavoie suggests, more akin to a Web 2.0 social networking tool than a conventional prediction market. It succeeds at merging an “idea market” with a “prediction market,” though both are stylized to fit with the organizational dynamics of Rite-Solutions.

A paper co-authored by GE’s Christina LaComb, one of the conference participants, provides a useful discussion about the difference between idea markets and prediction markets (two different types of information markets). It also provides a useful discussion about the importance of incentives: “As with any business incentive system, a considerable challenge exists in choosing incentives that motivate the right behavior. . . With information markets, incentives must serve a dual role: to motivate participation and to motivate participants to provide truth-revealing opinions. Incentives that satisfy both criteria can be difficult to define.”[3]

The notion of “motivation to provide truth-revealing opinions” has different aspects within an organizational context. The easier aspect, which economists can handle reasonably well, relates to prediction market design and the structure of payoffs. The more difficult aspect relates to an organization’s (often unspoken) rules and norms for sharing information and making decisions, commonly, but awkwardly, referred to as an organization’s “culture.” In my experience, the influence of such cultural elements on incentives will overwhelm the incentives of even the best-designed information market, especially in a more free-flowing idea market context.

In this regard, the work environment at Rite-Solutions has everything to do with the firm’s successful implementation of information markets. The same environment is also a precondition for capturing the innovation potential described by those business thinkers encouraging firms to operate “on the edge of chaos” or embracing “complexity,” a more general term denoting the dynamics of a complex adaptive system.

[2] Hayagreeva Rao and David Hoyt, “Rite-Solutions: Mavericks Unleashing the Quiet Genius of Employees,” Case HR-27, Stanford University Graduate School of Business, September 11, 2006.
[3] Christina Ann LaComb, Janet Arlie Barnett, and Qimei Pan, “The Imagination Market,” *Information System Frontiers*, Vol. 9, Nos. 2-3, July 2007, p. 254.

The importance of this point related to operating culture seems lost on some segments of the scholarly community but second nature to other segments. Fundamentally, the question relates to how well a particular organization can capitalize on exogenous or endogenous nonlinear phenomena (disruptive change, in the popular-audience business literature).

A special issue of *Organization Science* noted: “Organizational scholars seldom come to grips with nonlinear phenomena. Instead, we tend to model phenomena as if they were linear in order to make them tractable, and we tend to model aggregate behavior as if it is produced by individual entities which all exhibit average behavior. . . It is difficult to know how to draw a conceptual model and how to report the results of empirical inquiries into complex organizational phenomena.”[4] However, outside the academy, at the Santa Fe Center for Emergent Strategies, Howard Sherman and Ron Schultz argued that: “Differentiating between the mechanistic-linear qualities of trend analysis and organic-nonlinear [business opportunities] has nothing to do with numbers and everything to do with learning to evaluate nonlinear feedback.”[5]

Sherman and Schultz employ the phrase “adjacent possibilities” to describe the array of unrealized opportunities a business organization faces. “The key,” according to the authors, “is to develop the capacity within an organization to step outside the industry, view from that vantage point the way business is conducted, and imagine other possibilities. We call this innovation.”[6]

The notion of adjacent possibilities—and the organizational ability to recognize and capture them—fits comfortably with the intellectual traditions of entrepreneurship articulated by Joseph Schumpeter and the resource-based theory of the firm articulated by Edith Penrose. Schumpeter emphasized that the essence of economic competition relates to “new combinations” for the use of existing resources.[7] Penrose argued that the growth of a business organization is dynamically constrained, in part, by the limited capabilities of

---

[4] Philip Anderson, et. al, “Introduction to the Special Issue: Applications of Complexity Theory to Organization Science,” *Organization Science*, Vol. 10 (3), March 1999: 233.

[5] Howard Sherman and Ron Schultz, *Open Boundaries: Creating Business Innovation through Complexity* (Reading, MA: Perseus Books, 1998), p. 132.

[6] Sherman and Schultz, pp. 22-23.

[7] Joseph Schumpeter, *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle* (Cambridge: Harvard University Press, 1959), p. 74.

the organization's human resources.[8] (Jim Lavoie might refer to such capabilities as the firm's "intellectual bandwidth.")

John Kay, the noted British scholar of business strategy and a proponent of the resource-based theory of the firm, argues that the business organizations that are adept at recognizing and capturing adjacent possibilities have somehow managed "to create consummate, rather than perfunctory, cooperation."[9] Kay argues that business organizations with this (rare) attribute have built a "network of relational contracts within or around a firm" that allow the firm to "create organizational knowledge and routines, to respond flexibly to changing circumstances, and to achieve an easy and open exchange of information."[10]

Returning to the topic at hand: Why is deep incentive alignment—at the cultural level of an organization—perhaps a necessary condition for reaping the power of information markets as a business tool? Kay notes that "There is no room for team spirit in a world of spot or classical contracts. . . One can benefit from a cooperative ethic, or the knowledge and expertise of others, only in the context of reiteration and reciprocation."[11] Truth-revealing opinions require—especially in the context of idea markets—this richer environment of relational contracts. A well-designed pay-off structure may be inadequate. And even in the context of a straightforward prediction market, authentic participation may rely on a trust that decision-makers within the organization will heed the information generated by the market.

All of the elements of the above discussion are intuitive for Lavoie (and Marino). He built a company around these ideas. As the Stanford case study notes: "Rite-Solutions . . . developed a tool, Mutual Fun, to help bring out and develop their employees' ideas. The tool, however, was more than just a way of developing innovations. It was a tangible embodiment of a company culture of trust and collaboration."[12] The firm's free-flowing set of relational contracts helps create the consummate cooperation needed for a Web 2.0 tool to channel the firm's "intellectual bandwidth" toward the discovery and implementation of adjacent possibilities.

---

[8] Edith Penrose, *The Theory of the Growth of the Firm*, 3rd Edition (New York: Oxford University Press, 1995), Chapters 3 and 4. Also see, John Cantwell, "Innovation, Profits and Growth: Penrose and Schumpeter," in Christos Pitelis, ed., *The Growth of the Firm: The Legacy of Edith Penrose* (Oxford: Oxford University Press, 2002), pp. 215-248.

[9] John Kay, *Why Firms Succeed: Choosing Markets and Challenging Competitors to Add Value* (New York: Oxford University Press, 1995), p. 68.

[10] *Ibid*., p. 63

[11] *Ibid*., p. 71.

[12] Rao and Hoyt, p. 14.