# Chapter 13 Enneagram through Chaos Theory

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## ABSTRACT

Chaos Theory, which is the study of nonlinear dynamic systems, correlates to organizational systems. Organizations are not physical systems, and when they reach the bifurcation point, also known as the edge of chaos, they start to gain and produce unexpected results. In the past, how this actually happens remains mysterious, primarily because organizations are made up of individuals, and how the edge of chaos concept relates to the individual psyche is unclear. The available evidence suggests that individuals and groups find new energy to create and innovate when their organization is in this state. The available evidence, is known as the Enneagram of Personality, is making it presence known in the social science of organizational behavior within the organizational side of business. The main focus of this chapter is on the innovative strategy of utilizing the Enneagram of Personality as it applies to social sciences through chaos theory.

## INTRODUCTION

Within organizations there are many different internal or external change catalysts. Externally, there may be the involvement of new investors or new competition. Internally, change may be facilitated due to new leadership, the use of a new software program, or implementation of a new strategy. How the people within organizations deal with change varies a great deal, depending upon organizational culture and the approaches taken by organizational leaders. Thus, the modern idea of an organization has its roots in the industrial revolution of the 18<sup>th</sup> and 19<sup>th</sup> centuries. Prior to that period, most people were self-employed, lived on self-sustaining farms, or were employed by small proprietorships (Ciulla, 2000). Technological advances resulted in the building of large organizations to create efficiencies in production. During this period, the advancement of human understanding through science and industrialization were revered.

Since concepts from the natural science enhanced mechanical productivity, those principles were extended to the management of humans (Wheatley, 1999). Innovations such as Fredrick Taylor's scien-

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tific management began to dominate the way in which organizations operated. Scientific management approaches continue to dominate our discourse and influence our approaches to organizational change. Even today, we often refer to organizations working like *well-oiled machines* or refer to the need to *fix a broken link*. Through using such metaphors, we subconsciously imply that we view organizations as machines. Such thinking reflects the way in which we approach organizational problems and affects our actual approaches to organizational problems (Morgan, 2006). Repeated organizational failures, failed efforts to force change from the top, and meltdowns of organizations during crises have caused some to search for new approaches to organizational development and change. Ironically, the natural sciences provide another, less mechanistic view of the world that can be applied to human organizations: Chaos Theory.

## **Chaos Theory**

Chaos Theory, which is the study of nonlinear dynamic systems, promises to be a useful conceptual framework that reconciles the essential unpredictability of industries with the emergence of distinctive patterns (Cartwright, 1991). Although chaos theory was originally developed in the context of the physical sciences, Radzicki (1990) and Butler (1990) amongst others have noted that social, ecological, and economic systems also tend to be characterized by nonlinear relationships and complex interactions that evolve dynamically over time. This recognition has led to a surge of interest in applying chaos theory to a number of fields, including ecology (Kauffman, 1991), medicine (Goldberger, Rigney, & West, 1990), international relations (Mayer-Kress & Grossman, 1989), and economics (Baumol & Benhabib, 1989; Kelsey, 1988). Despite the apparent applicability of chaos theory to the field of business strategy, there has been surprisingly little work in this area.

# A Brief History of Chaos Theory

Chaos theory, and the related theory of complexity, arises out of the new science, from discoveries in biology, chemistry, and physics. According to Stewart (1997, p. X), "chaos theory tells is that simple systems can exhibit complex behavior; complexity theory tells us that complex systems can exhibit simple 'emergent' behavior." These theories have changed, or more correctly are changing, our world-view. The dominant scientific paradigm from the 1700s to the twentieth century was that of a Newtonian world-view. At its core, this paradigm suggests that the world is a well-behaved machine and that the universe predictably obeys certain laws. In the Newtonian view the world is separated into parts—if one manages all the parts, and their interaction, then the whole thing will run smoothly and predictably. This is the old paradigm.

Chaos theory arises out of recent investigations of quantum physics. The science of quantum physics focuses not on *things* as did the Newtonian science but on relationships. Relationships are seen as the key to understanding the world that we inhabit. In quantum physics the world is seen as a living organism, a living system which continuously renews itself, and provides checks and balances to maintain its own well-being. If it falls apart on one level, it reconfigures itself at a different level (Wheatley, 1999). The *chaos* aspect of chaos theory is not understood as synonymous with confusion, disarray, and pandemonium. Rather "chaos describes a complex, unpredictable, and orderly disorder in which patterns of behavior unfold in *irregular but similar* forms" (Tetenbaum, 1998, p. 24). Within the disorder in the system order and structure emerge with some regularity.

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