Chapter 2
The Problem of Governance from an Autopoietic Perspective (And a Critical Comment on the Role of ICT)

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ABSTRACT

The aim of this chapter is to examine the role of Information and Communication Technology (ICT) in the governance of modern society from an autopoietic perspective. For the main part, discussions of ICT use by government have focused on either practical issues, dissemination issues, or the assessment of perceived benefits of e-government initiatives; in this chapter a more critical approach will be adopted. This chapter will adopt an autopoietic view in seeking to address the role of government as a steering mechanism in modern society and the use of ICT as an instrument of governance by administrators.

INTRODUCTION

The aim of this paper is to examine the role of Information and Communication Technology (ICT) in the governance of modern society from an autopoietic perspective. For the main part, discussions of ICT use by government have focused on either practical issues, such as the development of the necessary technological infrastructure to support e-government initiatives, dissemination issues, such as concern about trust in the security of the medium (see for example, Grest et al, 2005), or the assessment of perceived benefits of e-government initiatives, such as the ease of buying a vehicle tax disc on-line. In this paper a more critical approach will be adopted. This paper will adopt an autopoietic view in seeking to address the role of government as a steering mechanism in modern society and the use of ICT as an instrument of governance by administrators.

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HOW DID WE GET TO THE STATE WE ARE IN?

In order to understand the role of government in modern society and the potential use of ICT as a tool of governance, it is first necessary to under-

stand how society came to be organised as it is. Addressing the question of 'how did we get to the state we are in' requires reflection on earlier societal arrangements and how they have changed. There are many different competing theories on the causes of periods of change and stability in societal systems but that provided by systems theory, particularly complexity and autopoiesis, are highly persuasive.

In the next section, complexity theory will be used to explain the change from pre-industrial society to industrial society. The argument is advanced that the industrial revolution marked a bifurcation point from pre-industrial society (characterised by the integration of economic activity with social, religious and political functions) to industrial society (characterised by the differentiation of economic and other functions into separate sub-systems). Following this, the theory of autopoiesis will be used to help explain the steady state represented by industrial society.

The Industrial Revolution as a Bifurcation Point

According to Swedberg and Granovetter (2001), in the 1950s Karl Polanyi addressed the application of economic theory to preindustrial and industrial society and, in so doing, established that the industrial revolution marked a distinct point of change in social history. Such a distinct point of change may be seen to represent a bifurcation point. In a system that is at equilibrium or near equilibrium, there exists a steady state that is dependent on the value of certain control parameters. If the value of these parameters is exceeded through, for example an inflow of energy, behaviours are disrupted and a cycle of positive feedback may be initiated which serves to further amplify the effects of the surge in energy throughout the system. Consequently, the behaviour of the system grows increasingly erratic until the threshold of stability is reached which is marked by a bifurcation point. At a bifurcation point the nature of the whole system may change especially as, unlike systems that are at equilibrium or near equilibrium, far-from-equilibrium systems are highly sensitive to external conditions. According to Prigogine and Stengers (1984), "far from equilibrium, new types of structures may originate spontaneously. In far-from-equilibrium conditions we may have transformation from disorder, from thermal chaos, into order. New dynamic states of matter may originate states that reflect the interaction of a given system with its surroundings. We have called these new structures dissipative structures to emphasize the constructive role of dissipative processes in their formation" (p.12).

At the point of change, or the bifurcation point, the system may have several different paths open to it; the choice of path is essentially random and therefore unpredictable. Thus, "The indeterminacy at the bifurcation points and the 'chaos-type' unpredictably due to repeated iterations both imply that the behaviour of a dissipative structure can be predicted only over a short time span. After that, the system's trajectory eludes us." (Capra, 1996, p.178). Whilst prediction of long-term system behaviour may be problematic, Prigogine and Stengers emphasise the pattern that underlies these change processes, "We expect that near a bifurcation, fluctuations or random elements would play an important role, while between bifurcations the deterministic aspects would become dominant." (p.176). This pattern of behaviour is clearly reflected in recent social history and, having discussed the change from pre-industrial to industrial society, in the following section the steady state represented by industrial society, characterised by functional differentiation, will be addressed.

Industrial Society: A System Near Equilibrium

Industrial society is characterised by functional separation. Luhmann (1995) looks at society as closely approximating a self-producing or autopoi-