

Chapter 4

Empowerment of Communities to Address Impossible Problems

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ABSTRACT

The traditional view of problem solving is that experts are best addressed to solve complex but narrow problems. Intelligent novices, who have broad backgrounds and the motivation to learn and propose unique solutions, is an untapped source of experience. People increasingly want to take ownership of their lives and address problems that range from the routine (e.g., financial planning, healthcare, education) to the catastrophic (e.g., natural disasters, pandemics, terrorism). Features of human societies and traits of problem solving in humans are discussed. Examples of international problem solving are provided. The chapter describes three approaches to community problem solving, including problem solving groups, community decision support systems, and portals.

INTRODUCTION

This chapter advocates that individuals must act within collective groups to address the broad range of problems facing them, as opposed to waiting for governmental bodies to tackle these problems. The chapter first organizes human problems into three types, including routine, survival, and change. Next, the human attributes of addressing problems are summarized, including human societies and different cultural approaches, informal and formal problem solving, mental representation, and human metacognition and imagination. Inherently, humans have the ability to problem solve across a range of problem solving types (Nadler & Hibino, 1998), particularly when motivated by common concerns, such as health, safety, and well-being of the community. Historically, collective action has been the basis for social progress in the United States (Curl, 2012). International examples of cooperative activity are provided to illustrate different approaches to re-thinking governmental policies and the systems that can be developed to serve citizens.

The chapter proposes three approaches to solving community problems. The first approach is to inform citizens form problem solving groups, which take a proactive approach to addressing community

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priorities, rather than reacting to emergencies, and also creating new bodies of knowledge and expertise (Cetina, 1999) to serve the community. Community problem solving groups could include a block of families, a small town or region, or an online community of individuals across cities, countries, or geographic regions who apply their collective creativity to directly tackle problems of common interest (Meindl, Stubbart, & Porac, 1996). A second approach to community problem solving is the development of community decision support systems, which build on open data policies. A third approach to community problem solving is to develop customized community portals to information and expertise through open source data software and networking systems. The long-term goal of these approaches is to archive the funds of knowledge, social capital, and expertise inside and outside the community, to tap this knowledge as needed, and to “grow” these resources over time.

THE RANGE OF HUMAN PROBLEMS

The cognitive research community has characterized problems as well-defined and solvable, ill-defined and resistant to solution, and wicked problems, that appear to be intractable (Churchman, 1967). Many problems that face families and communities could be characterized as ill-defined given their complexity and variability. Alternatively, this chapter labels three problem type categories, as routine, survival, and change to cover the continuum of problems facing communities in developed countries (Shambaugh, 2008).

The simplest category of problems facing middle-class families and communities can be labelled as routine, which occur throughout daily activities including jobs, family life, health and safety, education, entertainment, and well-being. Responsibilities of living in the 21st century have increased as a result of a continual and natural human demand for goods and services. “Getting and spending has been the most passionate, and often the most imaginative endeavour of modern life” (Twitchell, 2003, p. 191). Individuals now must make many important decisions related to their personal and professional lives. Increasing numbers of middle-class families from around the world are pressing the planet’s resources to meet these concerns. Governmental units and business organizations find themselves unable to provide many costly services and benefits to their citizens and customers (Zakaria, 2008). While governments, institutions, and organizations will continue to serve important functions, individuals and groups have already begun to mobilize action to provide their own welfare (Stanfield, 2000).

A second category of problems can be labelled as survival problems, because of their scope, severity, and unpredictability. The citizens of the world are facing pressing, messy, and potentially disastrous problems, including disease and pandemics, natural disasters, and terrorism. In cases of floods, for example, people cannot wait for assistance. They must act. What are common citizens to do when faced with problems such as runaway diseases, destroyed communities from earthquakes or floods, or bombings from well-funded terror cells? How can people’s innate abilities, collective creativity, and technological developments be leveraged to address such intractable problems?

A third category of problems, change problems, are sometimes being viewed as impossible because of their complexity over the long-term and the inability of individuals to relate or how to approach these problems. Examples include geophysical changes impacting the Earth, such as climate change, rising oceans, and drought. Another set of examples includes societal changes in ethnocentrism, xenophobia, morality, governmental structure, geography, and technology. Taking a big picture view will require humankind to adapt to changing conditions, but somehow remain aware and motivated to learn and take action steps as needed.

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