CREATIVE AND PARTICIPATIVE PROBLEM SOLVING
- THE ART AND THE SCIENCE

René Victor Valqui Vidal
Informatics and Mathematical Modelling
Technical University of Denmark

PREFACE

> Creativity is an act of revolution. It is an anarchist revolt against ideology, power and Society's norms that block for people's freedom.

In many professions the point of departure is a mess or a problematic situation. A mess is usually defined as a confused, dirty, or offensive condition, or as a disordered situation resulting from misunderstanding, blundering, or misconception. A mess is usually composed of a complex mix of problems. Along these lines we could define a professional as a problem solver within a specific field. Managers, system scientists, computer scientists, operational researchers, system workers, designers, architects, engineers, innovators, medical doctors, lawyers, sociologists, social workers, action researchers, educators, innovators, artists, etc., are primarily dealing with messes in their professional praxes.

Most of these disciplines have developed concepts, approaches, methods and tools to deal with complex problems but there are usually presented in very specific terms related to their specific context. I am quite certain that much of these knowledge and experience have a more general applicability to other fields and that there is a lot to gain by discussing problem solving in more general terms. In other words, this book can be considered as an essay to create a new discipline: *The art and science of problem solving.*

In this new field rational, critical and creative approaches as well as their interplay, will be emphasised when dealing with problematic situations. Moreover, knowledge and experience coming from both theory (the professionals or experts) and practice (the users or clients), will be central in this field enhancing participation and dialogue. The final validity of our problem solving approaches will be their usability, what works in the real world is valid.

Another characteristic of the work of modern professionals is the change from experts to facilitators. The users or clients are the problem solvers; the professionals support or facilitate this group problem solving process.

> This book is focusing primarily in participative and creative approaches to problematic situations faced by communities, organizations, firms or public institutions.

This book is composed of the following eight chapters:
1. Fundamental Concepts
2. The Vision Conference
3. The Art of Facilitation
4. Group Work
5. Creative Tools
6. The Future Workshop
7. Participative Problem Solving
8. Enhancing your Creativity

The first chapter gives an overview of the contents and themes of the whole book. The following chapters discuss a specific topic or method for further study. Each chapter can be studied independently of the others. Each chapter starts with a real life case study, introducing concepts, methods and tools in a simple way. Then the contents will be more theoretical and reflective, ending with references to central contributions from the literature.

This book collects my experiences as a facilitator for many different communities and organizations and as a teacher at the Technical University of Denmark for the courses Creativity and Problem Solving and Systemic Operational Research. Several of the chapters has been used in my lecturing activities in Denmark and abroad. The target groups for this book are people and professionals from communities, organizations, and ad-hoc groups facing problematic situations that have to be solved in an innovative way.

All constructive comments and suggestions are mostly welcomed. It is my hope that the contents of this book will be improved by the contributions of the readers.

René Victor Valqui Vidal
vvv@imm.dtu.dk
www.imm.dtu.dk/~vvv

Albertslund, September 2006
Denmark

Myths about creativity:

1.   Creative outputs depend on a few often flamboyantly different individuals.
2.   Either you are born creative or you are not.
3.   Creativity is a solitary process.
4.   Intelligence is more important than creativity.
5.   Creativity cannot really be managed.
6.   Creative groups are found only in "the arts" or in high-technology companies.
7.   Creativity is relevant only to big ideas.
8.   Creativity only involves coming up with new ideas.
9.   Group creativity does not work in practice.
10. Artists are the creative while scientists are the rational.