



Licence to Grow

**Innovating Sustainable Development
by Connecting Values**

Barbara Regeer * Sander Mager * Yvonne van Oorsouw

VU University Press

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Innovating Sustainable Development by Connecting Values

An Insight in the
Connected Value Development Approach
for Wicked Problems

Barbara Regeer, Sander Mager, Yvonne van Gorp



TransForum & Athena Institute
VU University Press, Amsterdam

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This book is a co-production of TransForum and Athena Institute/VU University Amsterdam, under endorsement of Henk van Latesteijn and Joske Bunders.

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Prologue

Sustainable development, innovation and organisational change are intimately intertwined. All efforts to achieve a more sustainable development will sooner or later discover that improving the way in which we are doing things is not enough. If we look at the agricultural sector, we need to redesign the way in which agricultural production is set up, handled and organised. This calls for innovations, not only of hardware (the mode of production), but also of software (the way agricultural production is handled) and even of 'orgware' (the way in which agricultural production is organised and connected to other spheres). To get this done organisations need to change. This book describes the results of a long journey into the uncharted area of these types of change.

Years of hands on experience with attempts to attain a more sustainable development are the foundation of this book. Within the Athena Institute researchers have had considerable exposure to 'Learning in Action'. So, in these projects research did not hide itself behind the comfortable wall of observation and analysis, but all findings were immediately used to help improve the development process at hand. Within the TransForum programme dozens of practical experiments to redesign agricultural business in the direction of sustainable development revealed that entrepreneurs and other stakeholders have a tough job to overcome normal routines. To help them and others in this process the authors of this book describe an approach that will make a difference. With Connected Value Development the difficult process of innovation, of redesign and eventually of organisational learning becomes much more manageable, within the field of agriculture, but possibly also in other fields such as health care, climate change, or water management.

Next to their own practical experience the authors draw from a vast body of literature that contains little bits and pieces of the approach of Connected Value Development. In this book, however, a more or less complete picture is given. Providing a blueprint for Connected Value Development is not possible. Based on the as yet fragmented experiences with the approach, the authors were able to formulate guiding principles that help in shaping this approach in practice. With Connected Value Development this book opens up new modes of organising processes of innovation and redesign that will bring sustainable development several steps closer. We hope that you will be inspired by what is presented here and step in and start connecting values that together will constitute our common idea of sustainability. Not by dreaming about it, but by stepping out and doing it.

Prof.dr. Joske Bunders – Director Athena Institute

Dr. Henk C. van Latesteijn – CEO TransForum

Introduction

“It was the best of times, it was the worst of times”

(*A Tale of Two Cities*, Charles Dickens)

From Limits to Growth to a Licence to Grow

The 1972 Club of Rome report *Limits to Growth*¹ confronted the world with the consequences of unchecked industrial production: the depletion of natural resources. The impact of the report was huge and for a while some societal groups advocated a “zero growth” policy, effectively denying industry, or at least some types of industry, the right to grow and expand. In hindsight, the report can be seen as the first world-wide plea for *sustainable growth*: if and when economic growth and the creation of more, and more equitably distributed, wealth is to continue, it will have to be in a sustainable way.

One of the results of four decades of hard work by an increasing number of policymakers, societal organisations, entrepreneurs, and scientists on sustainable development is that we have become aware of the magnitude of the challenge. Many environmental and social problems are complex, stemming from multiple activities and interactions across societies and natural systems. In addition, many of the issues concerned are clouded with scientific uncertainty and controversy, both with regard to the causes and their future impact. Proposed solutions may produce unforeseen and unintended effects when implemented, and implementation itself is often – or even usually – fraught with enormous difficulties.

BOX I.1 “Wicked problems”

Moving toward sustainable development requires concurrent changes at many levels and in different systems (ecological, economic, political, social, scientific), and this is all the more problematic since there is usually no agreement on long term objectives, values, or even facts.² It implies that individuals and institutions must make choices and trade-offs, often outside of their ‘bubble’, thus evoking considerable resistance. For these types of intractable,² unstructured,³ persistent,⁴ or ‘wicked’ problems, new strategies are needed.

In this box we explain the so-called ‘wicked problems’, a term coined in 1967 by C. West Churchman⁵ to describe social planning problems that were complex, difficult to describe, resistant to logical analysis, contradictory, and continuously changing. This notion was later generalised by others,⁶ from whom we summarise the following six prime characteristics:

1. You don’t understand the problem until you have developed a solution

If we can formulate the problem by tracing it to its source, then we have thereby also formulated a solution. In other words: the problem cannot be defined until a solution has been found. The formulation of a wicked problem *is* the problem.

2. Every wicked problem is essentially novel and unique

Despite long lists of similarities between a current problem and a previous one, there may always be (and usually is) an additional distinguishing property that is of overriding importance. Consequently, every ‘solution’ will have to be custom designed.

3. A wicked problem has no stopping rule

Since there is no definitive description of ‘the problem’, there cannot be a state of affairs called ‘the solution’. The problem solving process never ends; or rather, it ends when one runs out of resources, not when some pre-defined solution is reached.

4. Solutions to a wicked problem are not right or wrong

They may be 'good enough', 'better', or 'worse' in the eyes of some, but others, equally equipped, interested, and/or entitled to judge, are likely to differ. Each judges from his own societal context and according to his own values, interests, and ideological predilections.

5. Every solution to a wicked problem is a 'one shot operation'

Because every wicked problem is unique and novel, there is no opportunity to learn by trial and error; every attempt is consequential, leaving 'traces' that cannot be undone. Every attempt to correct the undesired consequences poses another set of wicked problems.

6. A wicked problem has no given alternative solutions

There may be no solutions, or there may be a host of potential solutions and probably many other unthought-of solutions. Thus, it is a matter of creativity to devise potential solutions, and a matter of judgement to determine which solutions are viable.

The above six points are not meant to form a definition; rather they are a set of characteristics which wicked problems may possess, ranging from one to all of them. 'Wickedness' is a matter of degree, with many compounded problems comprising wicked as well as solvable (at least in principle) parts. Usually, one cannot tell from the outset whether a problem will prove to be wicked; in fact, recognising the wickedness of a problem is a very important step in itself as it can mean the end of frustratingly unfruitful attempts to tackle it using tried and trusted linear problem solving methods.

In this book we concentrate on possible approaches to tackle this highly complex problem, and other problems carrying the same characteristics of complexity, and propose the Connected Value Development approach as a possible way to lend to economic activity, once more, a "licence to grow".

Complex, persistent problems

Living in a world of seemingly limitless technological means and burgeoning scientific inquiry, we nevertheless discover that some nuts remain hard to crack, and some problems just refuse to go away. Waiting lists in health care aren't getting any shorter, industrialisation continues to be a major source of environmental problems, diseases of a kind we thought under control are popping up again, a longer and increasingly opaque food chain threatens the safety of our most basic needs and finally, the depletion of our natural resources continues, at an ever faster pace even. All these problems are highly complex and thus difficult to analyse and fully understand. They do not fit into any specific scientific discipline, nor into any clearly defined policy domain. Moreover, because they are deeply embedded in our social, technical, and economic systems, this places heavy constraints on possible solutions. Finally, even when a solution presents itself, it doubtless requires the actions of different actors with differing interests, views, and needs. This not only makes any solution difficult to implement and manage, but also offers ample opportunity for endless loops, chicken-and-egg problems, and dead ends. As the need to get some grip on the fast paced changes in our modern society rises, the means to do so seem to become weaker.

For several decades, politicians, entrepreneurs, and academics have made appeals for new approaches to such persistent. They have argued for a more inclusive and responsive culture in science, government, and business, in which knowledge production is user driven, policymaking is interactive, and companies are socially responsible. In the agro business, for example, an increasing number of entrepreneurs have found a way to combine social and environmental responsibility with at least the start of a healthy profit; and universities are increasingly organised into institutes that focus on current and often urgent societal themes, as are funding programmes for scientific research. Besides changes in existing structures and institutions, new arrangements (networks, programmes, intermediaries) emerge in which actors from different domains work together to analyse complex issues and collaboratively implement strategies for