

# ***BIOMATRIX CARTOON CURRICULUM***

**W/Holistic Societal Problem (Dis)Solving:  
*Kids to the Rescue of the World***

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## WELCOME

This is a Curriculum for learning about **(Dis)Solving Complex Problems** – your own, your organisation's, your industry's and, indeed, those of humanity as a whole.

The term **WHOLE** is the operative word. You will learn that only a **w/holistic approach**, as presented in this curriculum, can solve complex problems.

Allow me to introduce myself:

I am your **CURRICULUM FACILITATOR**, the conductor of the programme!

And allow me to introduce you to **WISE OWL**, who will guide you through exercises and self-reflections.

Hi! My philosophy is:  
Self-reflection is cool and  
a cup of coffee sustains....





The curriculum was written by **Dr. Elisabeth Dostal** who takes full responsibility for its content. She was assisted in this by

- **HG** who had the idea of using cartoons, made the initial design and also wrote parts of *Chapter 1*
- **RL** and **JL** who assembled the pictures and are responsible for the visual appeal of the curriculum
- an **anonymous donor** who provided finance for this project, threatened with deadlines and thereby pushed its completion.

**THANK YOU FOR YOUR ASSISTANCE!**

#### **NOTE on IP**

We tried hard to adhere to IP rights and bought our pictures (*from Shutterstock and other sources*) or asked permission for their use.

Should we have overlooked some, we apologise and ask permission to keep using them, or – if you notify us – we will, of course, purchase or replace them.



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# INTRODUCTION

All journeys begin with a first step and some preparation.

## STRUCTURE of

- *Chapter 1: Current Future*
- *Chapter 2: Ideal Future*

## NOTES on

- *Learning*
- *the Future*
- *References*

## THE STORY

## ASSUMPTIONS

## EXERCISE

# STRUCTURE of the curriculum

Chapter 1 consists of the following elements:



## INTRODUCTIONS

The course conductor introduces the chapters and their parts and provides an overview of their content.



## MEETING with mainstream experts

The kids meet well known experts who are accepted by the mainstream.



## MEETING with alternative experts

The kids also meet experts who have alternative views and are even regarded as dissidents by the mainstream.



## PSSST

The whispers of facts, insights and comments which are not talked about (*although everyone should know them*).



## REFLECTION

The kids return to their space craft to reflect on their experience.



## EXERCISES

The learning facilitator (*Wise Owl*) suggests exercises, prompts self-reflection and presents quotes and notes to stimulate thinking.

# ***STRUCTURE of the curriculum***

Chapter 2 consists of the following elements:



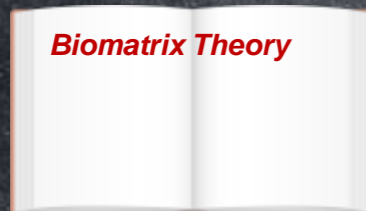
## **INTRODUCTIONS**

The course conductor introduces the chapters and their parts and provides an overview of their content.



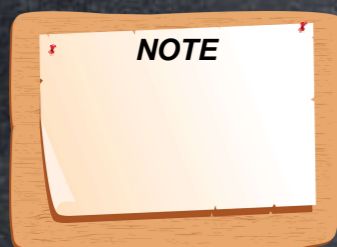
## **DIALOGUE**

The futurist explains the kids, how one can (dis)solve complex problems.



## **THEORY**

The relevant concepts of *Biomatrix Theory* are presented on pages of the *Biomatrix Theory Book*.



## **NOTES**

Notes include comments, case studies, interpretations and insights of the author. They are presented on a *Notice Board*.



## **EXERCISES**

The learning facilitator (*Wise Owl*) suggests exercises, prompts self-reflection and presents quotes and notes to stimulate thinking.



## NOTE on learning

W/Holism thinking is not a linear body of knowledge.

One cannot understand one concept fully, before understanding the others, because they mutually explain each other.

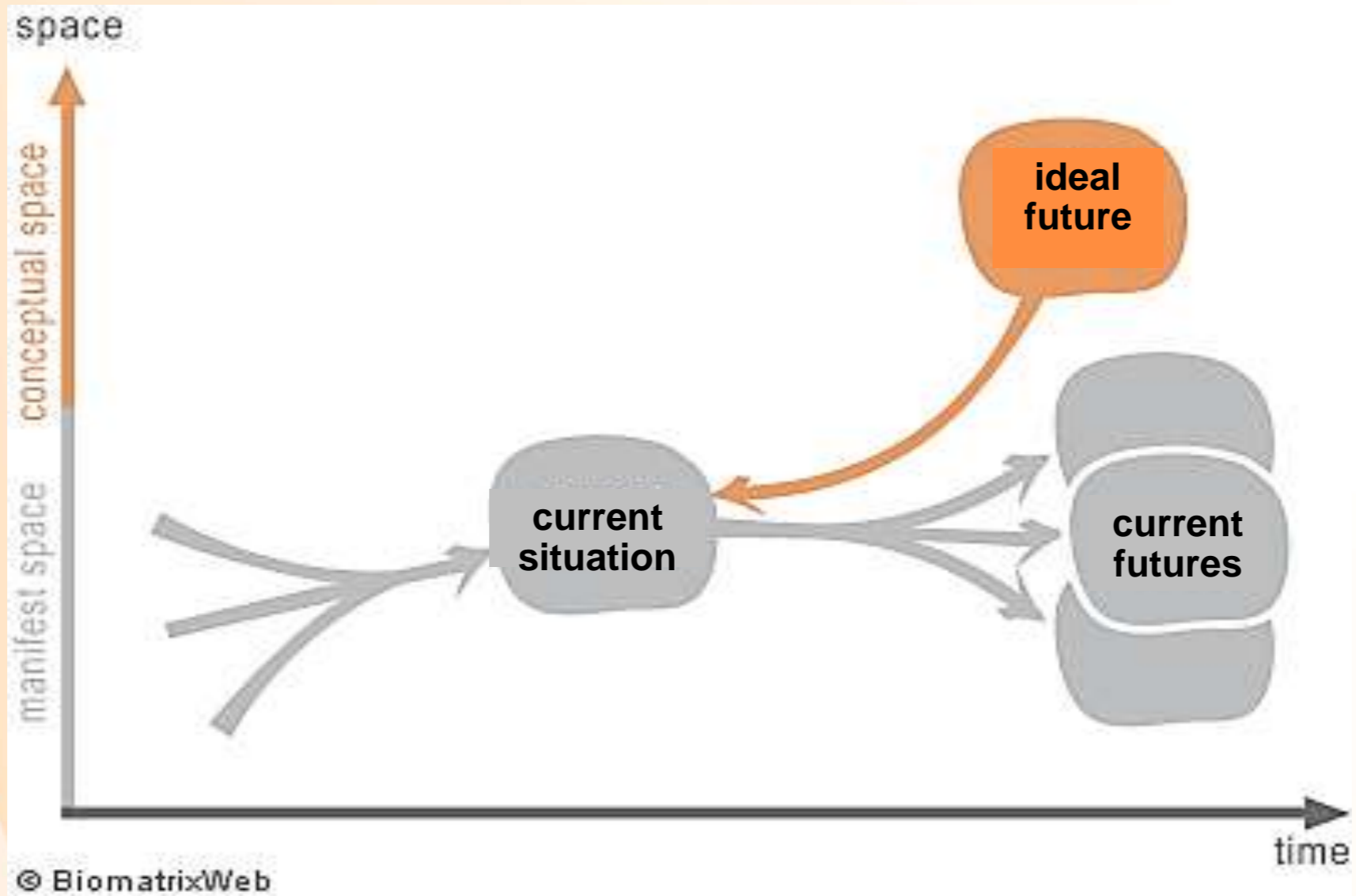
**THIS REQUIRES ITERATIVE LEARNING.**

*(This means going over the material again and again and looking at each concept from the different perspectives and in different contexts.)*



# NOTE on the future

This curriculum is based on two different perceptions of the future, a current future and an **ideal future**.



## **NOTE on the future** *(continued)*

**CURRENT FUTURE:** All systems have a tendency to perpetuate themselves. Existing physical structures (*such as natural systems, houses, physical infrastructure*) as well as information structures (*such as laws, policies, strategies, values, beliefs and worldview*) perpetuate the current way of how systems function.

They continue to determine the system until they are changed.

They represent the **CURRENT FUTURE**. *For example, the current buildings, curricula, training of teachers, examination procedures, etc. continue to shape the education system in future. They push education into a current future.*

Chapter 1 describes the current situation and future in many areas of life.

**IDEAL FUTURE:** Social systems have free will and have the option to change (*e.g. reform, or transform*) themselves, so that their state of being and outcomes of their actions will be different in future.

If those changes are inspired by lofty ideals, the transformation of the system will be fundamental and can lead a system towards a more **IDEAL FUTURE**.

For example, a redesigning of the health-care system from one that treats disease to one that creates health will deliver radically different outcomes.

Chapter 2 explains the concept of an ideal future and how to create it and thereby dissolve the complex problems of the current situation and future.

## NOTE on references

**CHAPTER 1:** Dr. Elisabeth Dostal is responsible for the content. The arguments are not meant to be scientific but to stimulate thought.

They are derived from some online searches, filtered by her experience as futures researcher over many years.

**CHAPTER 2:** The concepts of *Biomatrix Theory* have been developed by the *Biomatrix Group* and are argued in four PhD studies by the members of the group (*of which Elisabeth is one*), as well as in a string of scientific articles by them and other researchers. (See [www.biomatrixweb.com](http://www.biomatrixweb.com) the theory section.)

In this curriculum, the theoretical concepts are presented in the interpretation of Elisabeth.

The *Biomatrix Methodology* for changing social systems has been developed by Elisabeth and successfully applied by her as a management consultant in both public and private sector organisations and taught it in the MBA programmes of several universities over many years.

**NOTE:** *Biomatrix Theory and Methodology* are an integration and further development of concepts and methods developed by various systems thinkers (see our scientific publications for references).

**We honour them and stand on their shoulders in gratitude.**



# THE STORY



We all are all the time on  
this journey ...  
... consciously or  
unconsciously

## CHAPTER 1

### Journey towards a CURRENT FUTURE

This chapter describes the journey of a bunch of concerned kids in search of solutions to humanity's complex problems.

They travel around the whole world to consult various experts (*mainstream and alternative*) in many areas of life.

And between the visits they reflect on what they learned.

## CHAPTER 2

### Journey towards the IDEAL FUTURE

The kids return disillusioned from their search for solutions.

Then the **FUTURIST** appears and

- **explains** why the experts can't solve humanity's complex problems (*i.e. because of reductionist thinking and reductionist methods*) and
- **teaches** them a different way (*i.e. w/holistic thinking and a w/holistic methodology*) for (dis)solving the complex problems of the world.



And the **MORAL** of  
the story?

## CHAPTER 1

We want YOU to **REFLECT** on (*and we therefore prompt you with somewhat provocative descriptions about*):


- the current state of affairs and its likely future
- the kind of solutions that are typically proposed to solve the world's problems
- the efficacy of those solutions
- why some solutions are favoured over others
- why problems seem to get worse
- why new problems arise, in spite of apparently many available solutions

## CHAPTER 2


We want you to **UNDERSTAND** (*and therefore teach you about*):

- complexity and how to deal with it
- how complex problems arise
- how they can be dissolved through changing the current systems and their interaction
- that a system transformation requires a
  - **WORLDVIEW** change
  - **THEORY** of how systems are organised and change
  - **METHODOLOGY** of system analysis and system (re)design
  - **CHANGE MANAGEMENT** that is w/holistic



# ASSUMPTIONS





Let us explore some of the underlying notions of this curriculum. We hope that you will catch them!



*“The play's the thing, wherein I'll catch the **conscience** of the **KING**”*  
*(Shakespeare)*



**CHAPTER 1**  
aims to drive home the assumptions 1, 2 and 4.



**CHAPTER 2**  
supports the assumptions 3 and 5-8.

# ASSUMPTION on societal evolution

We assume that there is societal evolution and that we can deliberately shape it!

As humanity moves from one age into another (e.g. from the hunting / gathering, to the agrarian, industrial and information age), new threats and opportunities arise and its social order needs to change to adapt to a changing environment.

The institutions of the previous age begin to unravel and become inappropriate for the new realities.

Currently, most societies are in a transition from the industrial to the information age and require the transformation of all legacy systems of the industrial age (such as the education, transport, energy and other systems, including democracy).





## ASSUMPTION on worldview

The worldview of the industrial age which is still the dominant ideology, is **REDUCTIONIST THINKING**.

It shaped all areas of our life and is also responsible for the fragmented, sub-optimal and problem-riddled social systems, the widespread conflicts and (*apparently unsolvable*) complex problems in all areas of social life, including major ecological problems.

The challenge of the information age is to integrate, coordinate and transform the fragmented systems, while at the same time maintain (*and if possible increase*) their diversity, creativity and self-governance.

This requires **W/HOLISTIC THINKING**.

We propose *Biomatrix Theory*, a theory of w/holistic system organisation, as the foundation for transforming the industrial age legacy systems into information age relevant systems.

**This curriculum shows the methodology for how we can transform our systems.**



And here some more w/holistically inspired assumptions to prompt your thinking.

## more ASSUMPTIONS

6

9

### ASSUMPTION 1

To understand the complexity of the world's problems you need to understand that everybody is **RIGHT** about them – from their own perspective and in their own context!

### ASSUMPTION 2

Don't be **NAIVE** and think that these problems are just about to be solved.  
**THEY ARE NOT!**  
(See Chapter 1)

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## more ASSUMPTIONS



### ASSUMPTION 3

*"The thinking that gives rise to a problem cannot solve it." (A. Einstein)*

*The logic of the problem is not the logic of the solution!*  
(E. Dostal)

### ASSUMPTION 4

Become **SMART** about the problems in your sphere of influence.

If you do not understand their **DEPTH** and **BREADTH**, you cannot be an effective problem solver.



## more ASSUMPTIONS

### ASSUMPTION 5

#### **TRANSFORM YOUR THINKING!**

**Become a w/holistic thinker.**

**Learn a w/holistic theory and methodology and APPLY them to solve your own problems and facilitate the solving of the world's problems in your chosen sphere of influence and expertise.**

*(We show you HOW in Chapter 2!)*



## more ASSUMPTIONS

### ASSUMPTION 6

#### WHAT WE CANNOT IMAGINE, WE CANNOT CREATE!

We need to **DESIGN** an ideal education, finance or marriage system and plan its implementation, **BEFORE** we can make it happen.

It is a fallacy to assume that a system has to collapse before we can think of a better one. *(This would merely lead to anarchy or divorce.)*

We have to think about and design ideal systems **NOW** and start transforming our current problematic systems *(bit by bit and as much as is possible)* according to the design.



## more ASSUMPTIONS



### ASSUMPTION 7

A lifetime of reductionist thinking is not eradicated in a few minutes of scanning through our W/Holistic Curriculum!

A more serious effort of study and application is needed before thinking is transformed!

## more ASSUMPTIONS

**ASSUMPTION 8**  
Institutions that evolved  
through reductionist  
thinking will resist  
change based on  
w/holistic thinking!

**A deliberate and  
sustained effort by their  
stakeholders is required  
to change current  
institutions!**



# EXERCISE

Do some **REFLECTION**.  
For each assumption, ask yourself the questions:  
Does it make sense to you?  
- If yes, why?  
- If not, why not?  
What does this mean for your life?

Before we draw the curtain on the *Introduction* and proceed to *Chapter 1*, we would like you to reflect on what you learned so far. Here is **WISE OWL's** first exercise instruction.

Most importantly:  
**HAVE FUN...**

.....and a  
bottom-less  
cup of coffee...

