

## 3.2 A map of futures

The future. If all we mean with that is the time in front of us, then the definition of the future seems simple and any further inquiry superfluous. However, if we look at it more closely, then it quickly becomes clear that this initial unambiguous and exhaustive understanding of the future is often unsatisfactory and hardly does justice to the complexity of the future. Futurists try to categorize the future, using terms such as possible, probable and preferred. Yet this structure also remains unsatisfactory. As the future is a very complex thought object, it is dangerous to look at it with too radical a simplification. Complexity can only be understood and handled with complexity.

If we look through the relevant literature, we notice surprised and alienated, that hardly any futures thinker has ever attempted a comprehensive categorization of the future. The map presented here can be seen as such an attempt.

### 3.2.1 Futures not future

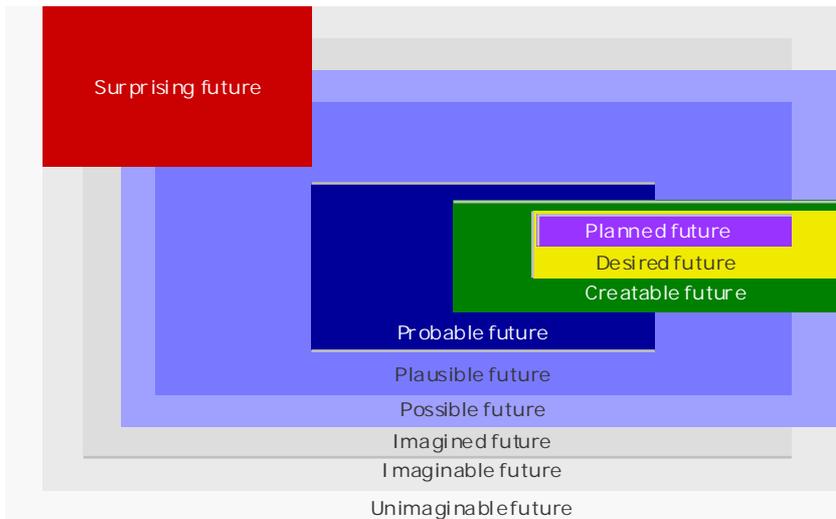
The implication of a singular future suggested by the word future is quite obviously a fallacy. The future is plural. We generally don't go far enough with the imagined the (one and only) future. In the 16<sup>th</sup> century, the Spanish theologian Molina used the made-up word "futuribles" that was later picked up on again by Bertrand de Jouvenel in France, a combination of the words "futures" and "possibles" to mean possible futures. He was already aware, as opposed to popular understanding today, of the purpose of the conscious and preferred use of the plural of future: futures.

The futures experts started to speak about the future in the plural a few decades ago<sup>1</sup>. It is a linguistic pointer to the openness and in principle lack of predictability of the future. This term much better accommodates the fact that the future can have numerous possible outcomes. The plurality of the future makes it clear to us that in addition to the "standard future" there are, in principle, an endless number of alternative futures.

### 3.2.2 Types of futures

Figure 5 shows the types of futures from our viewpoint. The initial complex categorization enables appropriate simplification by bringing structure and a system into the term and the nature of the future. Let's therefore accept the temporary confusion initially in order to then develop a simple and practicable model. It is only possible to comprehend and understand why it is important and necessary to get to know and use the five futures glasses when you see how many different terms and definitions there are for the future.

Fig. 1: Types of futures



The types of futures suggested here need to be regarded under the following assumptions:

1. The futures are defined from the perspective of an individual actor, meaning a person, a team or an organization. The content of every type of future is therefore subject to the subjectivity and the incomplete knowledge of each individual.
2. The definitions of the types of futures are dependent on the time at which they are considered. The contents of the categories change over time. A certain future, such as the contact with extraterrestrial life, can develop from the imaginable future to the possible future and plausible future to the probable future, before it falls out of the futures and into the present or the certain due to factual evidence.
3. The types of futures depend on the sequence in which they are looked at. If you begin with the planned future, you can come to a different categorization if well argued.

### 3.2.3 How imaginable are futures?

It would seem obvious, that every future that a person deals with and could deal with must be imaginable<sup>ii</sup>. Imaginable is used synonymously with conceivable, knowable<sup>iii</sup> and potential<sup>iv</sup> here. If there is an imaginable or imaginable future, then there could be, at least theoretically, a future that is inconceivable and unimaginable for humans, even if this is only a type of emptiness that we do not need to concern ourselves with. The future therefore consists of an imaginable and an unimaginable future.

[Futures] = [imaginable futures] + [unimaginable futures]

The term "imaginable" automatically leads to the differentiation as to whether a future has been imagined or not. The imagined futures form a subset of the imaginable futures.

[Imaginable futures] =  
[imagined futures] + [not imagined futures]

Even if the future seems so unrealistic and far away as it is in Friedman's term "*feasible utopia*"<sup>v</sup>, part of the imaginable future is transformed into the imagined future through the process of imagining and expressing it.

A statement by Donald Rumsfeld, the former US Defense Minister, shows that even politicians concerns themselves with the problem of imagined and only imaginable futures: *"As we know, there is the known known, i.e. things which we know that we know. We also know that there is the known unknown, which means that we know that there are some things that we do not know. But there is also the unknown unknown – the things which we don't know that we don't know"*<sup>vi</sup>.

### 3.2.4 How probable are futures?

When most people think about the future, they do so in the category of probability<sup>vi</sup>. After all, we know intuitively how valuable it would be to know the future.

#### Imaginable futures and possible futures

In order to be probable, a given future must first be physically possible<sup>viii</sup>. A world economy based on hydrogen, the elimination of hunger and long-term balanced government budgets are without a doubt physically possible. The question of their probability however, is open to debate. The frequently discussed installation of space elevators "hung" on geostatic satellites is theoretically possible, but their possibility has been neither proven nor disproved in practice. Up until 1995, this was also true for the existence of planets outside of the sun system. Anyone who disputed the possibility was considered as ignorant or blind, even though there had been no evidence of it before 1995. Nowadays, around two new planets are discovered every month. Until 2005/2006 the manufacture of cloaks of invisibility was considered impossible. Now, in physics at least, there are significant indices and even experiments that indicate that invisibility is actually possible through the deflection of light rays using appropriate equipment<sup>ix</sup>.

[Future] = [possible futures] + [impossible futures]

If something is possible, it *must* be imaginable. If something is imaginable, it *may* be possible. For the time being, factual beaming seems to be imaginable but physically impossible, even if there have been a number of successful experiments on the teleportation of characteristics, which is not beaming in its real sense of teleporting a unique body.

[Possible futures] is a subset of [imaginable futures]

We can assume that not everything that is possible has already been imagined. We obviously have no proof of this, firstly, no one can know everything which already been imagined and secondly, the evidence would turn the unimagined possible into the imagined possible, thus destroying what was to be proved.

Something that has been imagined may be possible but doesn't have to be. Something that is possible, may, but doesn't have to have been already imagined. The possible and the imaginable futures therefore intersect.

[Possible futures] has an intersection with  
[imagined futures]

In this way, we can also define utopia as a future, which is imaginable, yet impossible to realize.

[Utopias] = [imaginable futures] – [possible futures]

If something is possible, it is also imaginable. Something that is imaginable *may* be possible. Something that is not imaginable cannot be possible.

#### Plausible futures

In addition to pure physical possibility, it seems meaningful to introduce the category of plausible futures<sup>x</sup>. A future is plausible when it can be described with arguments that make it seem evident that this future *could* actually happen. It is in principle possible that your new product may achieve one hundred percent market share within the first year, as a rule however, this is not plausible, at least not within one year. Futures can therefore be possible in principle without being plausible.

[Possible futures] =  
[plausible futures] + [implausible futures]

Something that is possible, *may* be plausible. Something which is plausible, *must* be possible, at least when using a strict measurement of plausibility.

[plausible futures] is a subset of [possible futures]

#### Probable futures

Plausible futures are possible and at the same time imagined futures, i.e. a subset of this category. If a future is possible and plausible, it can still be rather improbable. You could plausibly demonstrate how you want to achieve ninety percent market share within one year with your new product, or how, within the same timeframe, you want to save eighty percent of the world's starving people. However plausible your arguments may appear and however brilliant your strategy may be, the probability would be considered as low by any reasonable standards<sup>xi</sup>. Probable futures are therefore a subset of plausible futures.

[Probable futures] is a subset of  
[plausible futures]

The further the time horizon reaches into the future, the more the probability of futures is a subjective evaluation by people than something which can be less mathematically substantiated. This is particularly true for the futures made by man in society, politics and business. Probability calculations for earthquakes on the other hand, can be done quite accurately, even if they leave open whether "one in 10,000 years" means tomorrow or in 20,000 years. To reduce it to a short createula: The probability of futures is the result of human estimates that can only be partially substantiated mathematically. The probabilities meant here are therefore more "expectation probabilities" than mathematical probabilities.

If we observe people thinking and communicating about probabilities, three categories emerge. We consider something to be either probable, improbable or neither probable nor improbable, meaning "semi-probable".

[plausible futures] =  
[probable futures] + [semi-probable futures] + [improbable futures]

The definitions of futures experts of probable futures have in common that they are generally interpreted as passive futures which happen to us and which we can change to a relatively low degree<sup>xii</sup>.

### Surprising futures

When considering futures, we have until now always assumed that we can deliberately look at possible and plausible futures and then estimate their probability. But what about the futures we haven't imagined but which nevertheless happen? Almost no bank foresaw the fact that there would one day be peer-to-peer money markets for private individuals, such as Zopa ([www.zopa.com](http://www.zopa.com)) and Prosper ([www.prosper.com](http://www.prosper.com)). Let's call such cases surprising<sup>xiii</sup> futures. However, the occurrence of future which we looked at, but then consciously or subconsciously classified as improbable can also be surprising. The thought of an airplane crash imagined at the check in desk, of a tsunami in Indonesia as in 2004, of an HIV infection with a risky lifestyle or of the bankruptcy of a decisive client that was rejected as improbable, belong to the category of surprises if the unexpected does then occur. There are therefore unimagined surprises and imagined surprises.

[Surprising futures] =  
[imagined surprising futures]  
+ [unimagined surprising futures]

As we can never exactly know what is possible and what isn't, there can also be surprising futures that we considered to not be physically possible before they occurred. The same then also applies to plausible futures.

[Surprising futures] has an intersection with  
[possible futures] (according to current knowledge)

[Surprising futures] has an intersection with  
[plausible futures]

### 3.2.5 How creatable are futures?

If we think about futures in the category of probability, then it would seem reasonable to look at the future of the non-influenceable areas in our environment. If however, we think about our own future, whether as a person, a team or an organization, then we are primarily concerned with the dimension of being able to “form” it (which is synonymous with feasibility<sup>xiv</sup> and practicability<sup>xv</sup>) and later also with “desirability”.

The *passive perspective* on the probable future assumes that our environment will largely develop without our intervention and that this development will have a noticeable affect on us. The basic assumption of the passive perspective on the future is that we need to foresee what is coming in order to be able to prepare in good time for what the future will do with us. We think the future from the outside to the inside, we are passive and react.

The *active perspective* on the creatable future assumes that our environment will largely develop as we want it to. The basic assumption of the active perspective on the future is that we need to form or even make the future we want to have. We think the future from the inside to the outside, we are proactive and act.

Everyone can form his or her future within certain limitations. The wider these limitations are, the better a person and every group of people, be it the family, the company, the organization or the state will feel. Yet not everyone can design their own happiness and reality. Not only the helpless child who is hungry and thirsty, but also every person without the necessary physical, mental, financial or other prerequisites, has limited possibilities to improve his own future.

The legal system of the European Union or the USA, the global military security situation and climate change are beyond the possibility of direct influence for each of us and for most companies and organizations. Water can of course break stones as one of the rallying cries of the alternative scene in the 1970s and 1980s claimed. If we join up with others, then fantasy, resources and time are the only limiting factors to what we can change. However, looked at realistically, it is more sensible to accept that a significant part of our environment is beyond our targeted and direct influence. If we believe recent brain research, then even a significant part of our self is beyond our influence.

**Table 1: Passive and active perspectives on the future**

Criterion	Passive perspective	Active perspective
Focus	<ul style="list-style-type: none"> <li>▪ Actor's outside world</li> </ul>	<ul style="list-style-type: none"> <li>▪ Actor's inside world</li> </ul>
Direction of thought	<ul style="list-style-type: none"> <li>▪ From the outside inwards</li> </ul>	<ul style="list-style-type: none"> <li>▪ From the inside outwards</li> </ul>
Main idea	<ul style="list-style-type: none"> <li>▪ Anticipate the future and adjust oneself and the inside world</li> </ul>	<ul style="list-style-type: none"> <li>▪ Invent the future, form it and adjust the outside world</li> </ul>
Degree of creatability	<ul style="list-style-type: none"> <li>▪ Minimal</li> <li>▪ The future can hardly be influenced by the actor</li> </ul>	<ul style="list-style-type: none"> <li>▪ Relatively high</li> <li>▪ The future can be influenced to a great degree by the actor</li> </ul>
Methodic approach	<ul style="list-style-type: none"> <li>▪ Analytical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Creative</li> </ul>
Mindset	<ul style="list-style-type: none"> <li>▪ Observing</li> <li>▪ Analytical / logical</li> <li>▪ Critical</li> <li>▪ Conservative</li> <li>▪ Fatalistic</li> <li>▪ Pessimistic / realistic</li> <li>▪ Evaluating</li> </ul>	<ul style="list-style-type: none"> <li>▪ Imaginative</li> <li>▪ Intuitive</li> <li>▪ Creative</li> <li>▪ Progressive / transformative</li> <li>▪ Acting</li> <li>▪ Optimistic / realistic</li> <li>▪ Deciding</li> </ul>
Assignable categories of the future (see next section)	<ul style="list-style-type: none"> <li>▪ Imaginable futures</li> <li>▪ Imagined futures</li> <li>▪ Possible futures</li> <li>▪ Plausible futures</li> <li>▪ Probable futures</li> <li>▪ Surprising futures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Creatable futures</li> <li>▪ Desired futures</li> <li>▪ Planned futures</li> </ul>

The future as a whole always consists of both the active and the passive future. We need to assess the future of the environment in order to be able to design our own actions, which in turn have a certain, if mostly relatively low influence on the environment. Friedrich Rückert best expressed that and how human beings need both the foreseeable and the uncertain future.

*"Man's happiness consists of two things, that the future is equally certain and uncertain"* (Friedrich Rückert)

2500 years ago, Pericles suggested a clear prioritization. He claimed that it was not our job to predict the future, but to prepare for the future. If we look a little deeper at the logic of this statement, then we can see that we can only prepare for the future if we have assessed it to a certain extent; therefore it is initially part of the task to anticipate the future after all, if not to predict it. The same basic difference is also made by Cunha<sup>xvi</sup>, who differentiates between "foresight as prediction", meaning the passive-anticipatory future and "foresight as invention", meaning the also active-creating future.

In order that futures can be created, they must be imaginable and possible.

[Creatable futures] is a subset of [possible futures]

As human beings can also think and act in an irrational way, the creatable future does not necessarily have to be plausible, even if the argument of irrationality could let it appear plausible.

[Creatable futures] has an intersection with [plausible futures]

[Creatable futures] has an intersection with [probable futures]

The plausible futures and the probable futures can be created to a certain extent. It is highly probable that the birthrate in many developed countries will remain at less than two, but it can only be influenced to a tiny degree by the individual even with a great deal of will and effort. If, we work in a sector that is obviously and probably heading towards a crisis, we can hardly divert the crisis from the sector, we can however, change our probable future by looking for a task in another sector.

### 3.2.6 How desirable are futures?

Most people have a more or less exact idea of what the future, above all their own, should be like<sup>xvi</sup>. Many know exactly what they want with regard to health, a partner, wealth etc. Anyone who cannot determine his desired future himself can generally say which of a number of options he would prefer for his own future<sup>xvii</sup>. Possible directions of professional development or even just the options for the next vacation are prioritized in this way. And those who have difficulties in prioritizing their desired futures, at least know what they don't want.

Perhaps the easiest way of classifying the future is into optimistic, pessimistic and realistic<sup>xix</sup>. However, we see a significant semantic and ontological difference between the desired future and the optimistic attitude towards the future. The optimistic attitude sees "the future" more as a whole, whereas the "desired future" relates more to the future concerned with the person who desires it. The same difference applies to the pessimistic and the feared future.

#### Desired futures

Creatable futures may, but do not have to be, also preferable or even desired futures. Whereas this is easy to understand, we have to think a little more closely about whether the desired futures should also be creatable. "Guides to success" recommend only setting objectives which are achievable, and claim that anything else leads to frustration. To generalize this principle, a small but important difference between preferable and desired needs to be made. Desired in the sense of really being followed as an objective is generally a subset of preferable. Human beings' dreams and desires may be limitless, yet what we really want is less than that which we could want. Living to be 150 may be desirable, yet hardly anyone really wants it. The amazing wealth of a Bill Gates (the majority of which he will soon have donated) is perhaps desirable, but rarely actually wanted by those not in close sight of Bill in the wealth rankings.

[Desired futures] is a subset of [preferred futures]

If a person or a team desires a certain future, then this future will not correspond exactly to the probable future, or it wouldn't need to be desired. If the top management of a company determines and announces a desired future in the sense of a vision, this has something of a normative function<sup>xx</sup> – a binding basis for orientation is created – and something of a prescriptive<sup>xxi</sup> function – how and in which direction the employees should act is demonstrated in order to realize the future in the sense desired by the management.

If we understand desired futures to be a binding objective, not just as desirable, then, as the philosophers and success guides all suggest, we will select the desired futures from the mass of creatable futures.

[Desired futures] is a subset of [creatable futures]

#### Planned futures

If we recognize something as creatable and classify it as desired, then we can also plan it. Through planning, we break the desired future down into a series of planned action<sup>xxii</sup>.

[Planned futures] is a subset of [desired futures]

#### Feared and frightening futures

The opposite of desired futures are feared futures<sup>xxiii</sup>. Why does our model only contain the category of desired futures but not the feared futures? Which futures do we fear? We fear those futures that would question our current corporate strategy or our life concept. This is the case when assumptions about the future on which we base our important decisions for the future are shown to be incorrect. If you assume that a computer cannot do your work, you fear a future in which this assumption is shown to be wrong. If you assume that your key technology, rubber membranes in automobile motors for example, cannot be convincingly be replaced by electronics, then you fear a future in which exactly that happens. And we of course fear futures of which we know that they would psychically or psychologically harm us.

But we also fear the type of future we haven't concretely imagined. We know that the future can also surprise us in a way we haven't yet imagined and in which we can at least imagine that our previous strategy would prove to be wrong or unfavorable in this surprising future. We experience fear of concrete threats and anguish when we do not know the concrete threat<sup>xxiv</sup>.

It appears that we fear everything that is surprising in some way, be it that we expected it to be different or we didn't expect it at all. But we also fear the non-surprising if it can harm us. The thing that we fear can be probable, semi-probable, hardly probable, only plausible, only possible or even just imaginable. One is almost tempted to call everything feared or anguishing that is not desired. If we want to display reality well, we also need to identify the indifferent futures, meaning futures that we neither particularly desire nor particularly fear, which we are basically indifferent to. Then we can formulate that the feared futures can only be defined through the other futures, so that they do not need to

expressly appear in the model. Feared futures are equal to the total future minus the desired futures and the indifferent futures.

$$[\text{Feared futures}] = [\text{futures}] - [\text{desired futures}] - [\text{indifferent futures}]$$

### 3.3 The Concept of the five futures glasses

The map of the futures creates a good understanding of the complexity of the seemingly simple and unambiguous term “future”. It also gives us a reason to apply a portion of modesty and humility when wanting to manage the future. However, in order to be able to master the complexity shown in the map of the futures, we need a simplified model that helps us to understand the future without being oversimplified.

#### 3.3.1 From futures to futures glasses

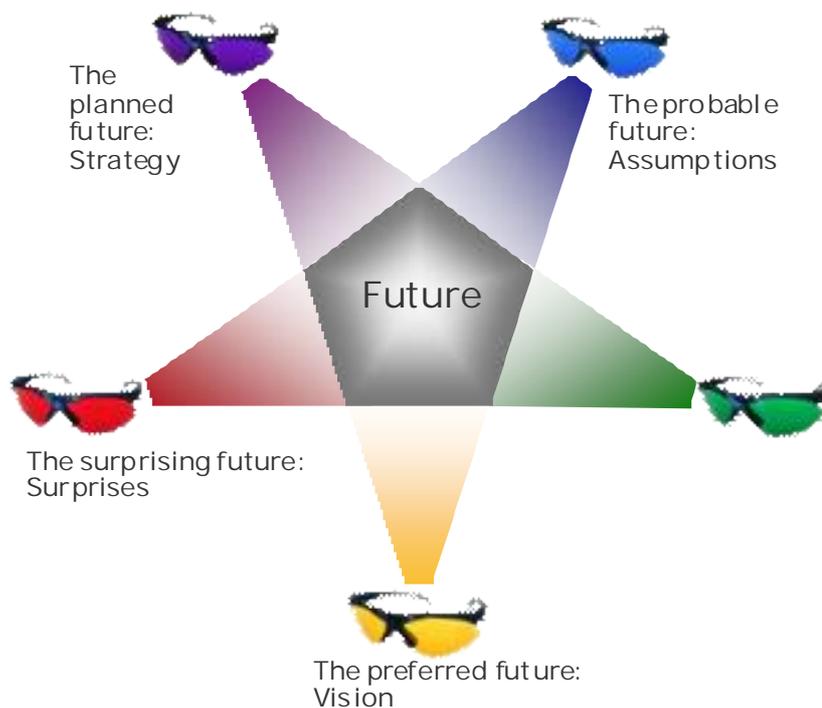
Table 2 summarizes the types of futures into the considerably simpler model of the five futures glasses.

**Table 2: Types of futures and futures glasses**

Types of future	Active/ Passive	Five futures glasses
<ul style="list-style-type: none"> <li>▪ Probable and improbable futures</li> <li>▪ (Plausible futures)</li> </ul>	Passive	Blue futures glasses Assumption analysis: Knowing about the probable development of the environment
<ul style="list-style-type: none"> <li>▪ Creatable futures</li> </ul>	Active	Green futures glasses Opportunity development: Knowing the possible courses of action for the future
<ul style="list-style-type: none"> <li>▪ Desired futures</li> </ul>	Active	Yellow futures glasses Vision development: Determining the long-term orientation
<ul style="list-style-type: none"> <li>▪ Surprising futures</li> </ul>	Passive	Red futures glasses Surprise analysis: Knowing the possible surprises
<ul style="list-style-type: none"> <li>▪ Planned futures</li> </ul>	Active	Violet futures glasses Strategy development: Determining the action necessary for the future
<ul style="list-style-type: none"> <li>▪ Imaginable futures</li> <li>▪ Imagined futures</li> <li>▪ Possible futures</li> </ul>	Active and passive	Futures unable to be clearly assigned to one pair of futures glasses

The colors are assigned to the futures glasses intuitively. Blue reminds us of clinical, reserved and logical analysis. We think of green as the color of creativity, opportunities and options. We understand yellow as the color for a decision in a certain direction, in the sense of a vision. Red is for surprise and (usually) for threats. Violet finally is considered as the color of planning and action.

The categories "imaginable futures", "imagined futures", and "possible futures" are so basic and relevant for every perspective that they cannot be clearly assigned to any pair of futures glasses. They can be included in all five perspectives and provide the mental raw material for different ways of looking at the future.



#### The seven benefits of the five futures glasses

You have already read about the benefits of the five futures glasses in detail on page 11:

1. They are a mental letter case for futures, bringing order and precision to future management.
2. They guarantee clear communication through precise language and a coherent model.
3. They build a bridge to the future to be able to use the results of futures research as a resource.
4. They enable more realistic expectations of future management.
5. They are a toolbox in order to apply methods, techniques and tools more precisely.
6. You can see more of the future with them.
7. They are a template for practical futures projects.

Pero Micic, April 11, 2008

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- <sup>i</sup> Bell, 1997; Godet, 1997; Dator, 2000; Bezold, 2000
- <sup>ii</sup> Polak, 1973; Bell, 1997; Friedman, 1977
- <sup>iii</sup> Loye, 1998
- <sup>iv</sup> Fahey and Randall, 1998; Voros, 2003
- <sup>v</sup> Friedman, 1977
- <sup>vi</sup> *Financial Times Deutschland*, short edition, 31<sup>st</sup> May 2006.
- <sup>vii</sup> Bishop, 2002; Loye, 1998; Bell, 1997; Garrett, 2000; Lindgren and Bandhold, 2003; Voros, 2003
- <sup>viii</sup> Bell, 1997; De Jouvenel, 1967; Bishop, 2002; Slaughter, 2000; Lindgren and Bandhold, 2003; Voros, 2003; Godet, 1994; Selby, 1993; Nanus, 1990
- <sup>ix</sup> Frankfurter Allgemeine Zeitung, 25.10.2006: Die fast perfekte Tarnkappe für die Mikrowelle.
- <sup>x</sup> Bishop, 2002; Bezold, 2000; Hancock und Bezold, 1994; Voros, 2003
- <sup>xi</sup> We could also talk about realistic futures here (Razak, 2000). However, the word “realistic” can also be used for assessing plans that, if possible, should not be considered in the category of probability in the classical sense, as one’s own intervention in the environment has to be taken into account.
- <sup>xii</sup> Hancock and Bezold, 1994
- <sup>xiii</sup> Petersen, 1999; Steinmüller, 2003
- <sup>xiv</sup> Helmer, 1983; Friedman, 1977
- <sup>xv</sup> Godet, 1994
- <sup>xvi</sup> Cunha, 2004
- <sup>xvii</sup> Bell, 1997; De Jouvenel, 1967; Bishop, 2002; Hicks, 2000; Bezold, 2000; Godet, 1994; Lindgren and Bandhold, 2003
- <sup>xviii</sup> Loye, 1998; Bell, 1997; Helmer, 1983; Sandi, 2000; Voros, 2003
- <sup>xix</sup> Bell, 1997; Selby, 1993; Razak, 2000
- <sup>xx</sup> Henderson, 2000
- <sup>xxi</sup> Hancock and Bezold, 1994
- <sup>xxii</sup> Mintzberg, Ahlstrand and Lampel, 1999
- <sup>xxiii</sup> Petersen, 1999; Steinmüller, 2003
- <sup>xxiv</sup> Kierkegaard, 1844