



## Futureness – The Futures in Me

***We are aware of, think about and act on the future here and now. When we say we are future-oriented, in practice we are expressing an opinion on the actualisation of the future; by choosing a certain option based on anticipation or systematic foresight, we are actually predicting the future. The ability to think about and plan for the future, both personal and non-personal, is one of the most wondrous characteristics of the human mind. As with other human abilities, it is possible to develop and deepen our awareness of the future. The purpose of this essay is not to attempt explaining in a strictly scientific and objective way what the future is or what we can and should think about it; on the contrary, my purpose is to encourage the reader in every way to reflect on their own relationship with the future by making it personal. Making the future your own – thinking about the future is worth thinking about.***

### The future is an imaginary distance away

According to neurological studies, we humans use about 1/3 of our waking time for daydreaming or letting our thoughts wander. This type of idling can load our brain as much as for example conscious problem solving. We often daydream about our future or events taking place in the future. In light of research we use even more time for thinking about the future than the past.

At its best, thinking about the future has been discovered to have a motivational and energising effect on us. Perhaps for this reason, thinking about the future has been utilised in, for example, cognitive behavioural therapy, developing emotional intelligence and positive psychotherapy as well as in different kinds of empowerment exercises. For example, you have probably heard about the visionary visualisation exercises that athletes use before competitions to improve their performance and reach desired goals.

At its worst, thinking about the future can also be frightening and distressing. People do not want to think about the future, because it is uncertain, and uncertainty can be unpleasant. Thinking about the distant future can at least be strenuous. This is how one youth summarised what the future meant to them:

*“The future for me is mostly tomorrow... or at the most a week from now. I cannot be bothered to strain myself any further.”*

Dr. Tom Lombardo, the head of the Center for Future Consciousness in Arizona, defines as future consciousness all psychological abilities and characteristics that the human mind uses for understanding and processing the future. For Lombardo, future consciousness is not just thinking about the future but a comprehensive concept that includes everything – such as thinking about the future and feelings related to the future – that makes us understand the future as being separate from the present but at the same time a part of the continuum of past, present and future. The ability to think about and plan for the future is one of the most wondrous characteristics of the human mind. As with other human abilities, it is possible to develop and deepen our awareness of the future.

In this essay, the future is considered from 5+1 mutually complementary perspectives, which include:

1. Future from the point of view of knowing
2. Future from the point of view of reasoning
3. Future from the point of view of thinking
4. Future from the point of view of planning and doing
5. Future from the point of view of choices

The sixth perspective on the future is “futureness”, which is a sketch of the manifestation of the future at a personal level.

The essay moves freely from one context and framework to another – from mutual to private, from general to individual, from abstract theoretical thinking through practice to personal experience. The purpose of this essay is not to define and conceptualise the future but to make room for the difficulty and complexity of defining it.

### On knowing about the future – will we have surprise parties anymore?

The desire to predict and anticipate the future is human, and the possibility of it has always puzzled us. For the purpose of predicting the future, the unknown has interested us from the point of view of knowing. Classical philosophers pondered the possibility of knowing the end result of a sea battle, whereas modern philosophers have posed the question: “Is it logically possible to have knowledge of the future?”

Scientists, science fiction writers and film-makers have contemplated for example the possibility of time travel, or experiencing the future. Humans, then, feel a need to see the real truth about how things will be. Many interpretations have been presented of the possibility of time travel. For example in physics, time is seen as a distance between events. As, according to the theory of relativity, the speed of light is the highest speed possible at which anything can interact, time travel would require a speed higher than the speed of light. In light of current understanding, this is impossible, although there are differing opinions and even scepticism based on empirical evidence. If there are particles that travel faster than the speed of light and that can interact with other particles, or an entirely different and unknown form of cosmic interplay, this would also make it possible that an event could “take place” before an event that triggers it – as we sense it today.

One interesting claim against time travel, then, is understanding events as having cause and effect and that cause cannot chronologically precede the effect. This feature of reality, if indeed this requirement exists, also significantly affects how possible and probable worlds appear to us.

Thus, in addition to offering an explanation of the structure of reality, causality also functions as a kind of metamodel that affects how we perceive what the world should be like in order for us to be able to believe in it. In this belief we are fallible; “for a bullet to hit its target, we do not need to hear the shot, or an answer does not need to be preceded by a question”, even if this conclusion would be logically true.

### Time shows everything, but we must keep on living...

Philosopher Ludwig Wittgenstein stated that if anyone believes to have found the solution to the problem of life and wants to say to themselves that this will make everything easy, they have only to remember that they are wrong, that there was a time when this solution had not been found, but one still needed to keep on living. In seeing this, they would see the solution as coincidental.

If we base our dream of knowing the future on our universal and temporary ignorance, for example the fact that about  $\frac{3}{4}$  of the universe, dark matter and energy was only discovered at the end of the 1990s,

and if we accept the fact that what we now categorise as ¾ has already existed before it was discovered, the possibility of time travel in the future does not need to be completely overruled. At least the discussion on what we can and can we know about the future is still viable.

The question of what we can know about the future in fact contains three different questions.

1. Firstly, what is future: meaning what is the structure of the future and what does it consist of?
2. Secondly, what can we know about the future: what kind of knowledge can we have of the future, its phenomena or conditions?

The first two questions contain a classically scientific division of the world into epistemological, or knowledge-based, and ontological, or being-based, reasoning.

3. The third question is “what is the future and how does it appear in the first person, or individually?” Awareness of one’s own insufficiency in answering the third question requires accepting that the manifestation of realisation can be expressed to others only for the part of what can be expressed.

It is possible and even very likely that reality – past, present and future – is so to speak independent in relation to what we think about it. On the other hand, our personal consciousness, perception and thoughts are a part of that reality. I do not believe that there are any realities completely identical to my own, and what we all have in common is not of particular interest to me personally, because it must be taken into account in any case.

### **...traces on the past winter’s snow — things not here anymore**

From the point of view of research, the future and the past have a lot in common. Even though we can think of the past as having been resolved, having a certain truth value, we do not have the possibility to go back in time and see how matters really were. We cannot go back in time and hear what Lalli and Bishop Henry have to say about the possible events on the ice of lake Köyliönjärvi and any events leading up to them (according to an old Finnish legend Henry was killed by Lalli). Additionally, even if people and events were true and we could go and ask them what really happened, it is possible that those people are not honest in what they tell us. In addition to truth, then, we would be facing the issue of truthfulness. As if there was not enough challenge in the uncertainty of what is true and untrue, we must live with the notion that it is a different matter to prove that something has happened than to explain how or why it happened the way it did. The central issue here is how to justify current explanations and theories based on which we predict the future. How, for example, do I justify my assessment of a statement situated in the future in relation to the probability of it happening? Here we come to the hypothesis that the answer to the problem of conclusions about matters related to the future lies not in the justifications of the past but our reasoning.

## Future and reasoning – is anything possible?

Bertrand Russell depicted in his classic anthropomorphic story of the chicken (also known as the story of the pig) the fundamental problem of predicting the future, namely that we can make different kinds of predictions from the same observations. Observations, then, do not straightforwardly justify predictions, but the process of justification is based on the explanation that we have adopted as the basis of our prediction. Russell's chicken observed that the farmer comes in to feed it every day. It predicted that the farmer will continue bringing food to it, and each further observation corroborates the chicken's assumption. One day, however, the farmer beheads the chicken. Russell's chicken has a theory of a benevolent farmer, and a change, for example getting more food in this story, made it seem like the farmer's benevolence had increased. If the chicken had adjusted its explanation and assumed that the farmer wants to fatten up the chicken to be slaughtered, the prediction made from the same observations would have been completely different. Russell's example reveals that in fact it is impossible for us to talk about the possible, desirable or probable future without an explanatory framework. The situation does not get much easier if we replace observations with, for example, values, which we generalise to be the basis for desirable goals, in order to avoid the problem of justification. If it cannot be deduced how things should be from how things are, would it not mean that it is impossible to deduce how things are from how things should be? On the other hand, for example a dream or hope of a certain kind of future is just as justified a starting point for predicting the future as any other – even to the extent that, as we cannot know the future, why not start with your dreams.

If these ideas are combined with the modern definition for the problem of inductive reasoning, according to which theories cannot be inductively extrapolated from observations, it follows from this that the future that has not happened is in the reasoning and explanations we use in our deduction, not in present or past observations.

*“Regardless of what the criteria of a good explanation or theory are, the fact that the theory fulfils these criteria today tells us something about what will happen if we trust that theory tomorrow.”*

[David Deutsch, *The Fabric of Reality*, translated from Finnish]

The issue can be summarised as follows: because or as long as we do not have a theory of everything to predict the future, we only have megatrends, weak signals, wild cards and black swans, and the future will remain an imaginary distance away. And, on this journey, whether we are alone or together:

*“In the end problems and explanations are in the human mind, and its reasoning lies within the erring brain and the erring senses that produce information for it.”*

[David Deutsch, *The Fabric of Reality*, translated from Finnish]

Even though in futures research the term anticipation is preferred to making predictions, based on what is said here, the difference between the two is mainly theoretical or just one we want to see. We are aware and think of the future here and now, and when we say we are future-oriented, in practice we are expressing an opinion on the realisation of the future and thus, in reality, are predicting the future through anticipation.

## Traces on the unfallen snow — things not here yet...

Just as it is impossible for us to go back in time, at least for the time being we have to settle for studying the future here and now. Think of for example the following proposition about the future: “In 2030 there will be no compulsory education in Finland” and place it in the reasoning process. If in 2030 there is no compulsory education, what has happened? The first question has to do with whether we can imagine something that leads to there being no compulsory education in Finland in 2030 – something that makes the proposition possible (we are thus looking for premises for the conclusion of the proposition). Another question has to do with whether we believe in the premises of the possible world described by

the proposition, and how much, meaning the probability of the proposition. Instead of truth and probability, one should perhaps talk about truthlikeness, a term used in e.g. fuzzy logic, which refers to how well a proposition fits into what we know or believe to be true or possible. The third, and perhaps the most important, question has to do with whether we want the world to be like the proposition – compulsory education is not a necessity but a chosen state of affairs, the result of human action. From the point of view of reasoning that uses assumptions and facts, there is not much difference between whether I believe that there will be compulsory education in 2030 or not.

The above example shows that each proposition about the future is in itself a whole but simultaneously a part of another whole. For example, it can be thought that often in practice “somebody (who?) does something (what?) to someone (whom?) in some way (how?) and for some reason (why?)”. In this kind of dynamic unit, the examination cannot be reduced to one question more important than others without the answer to this question structuring and guiding the answers to the other questions.

Our understanding of the future, the past and the present is categorised and often also hierarchical by power. This can be seen, for example, in how we depict the world by dividing factors of change into e.g. financial, technological, social, environmental and political factors, and in how we arrange these factors in different orders, e.g. in relation to causality. However, the world we live in does not distinguish between these at the level of events, just as nature does not consist of chemistry, physics and biology. These categorisations only exist in our mind. Thus, how we stress the different units of choice we associate with future developments is a matter of perspective. What in evolution is explained as an answer to pressure for change placed on an individual or a gene by the environment, or what in cultural evolution is caused by, for example, changing memes, can from the point of view of futures studies be, for example, interaction of different criteria set by the market, the society and technology towards a certain development. Next, I shall further examine how we think, how we place significance or insignificance and how all this relates to our decision-making and choices.

## On thinking about the future and decision-making – memories from the future

If the human relationship to time was examined from the point of view of thinking and the structure of the brain, the future would be located in the forehead, the past around the temples and the present at the top and back of the head. Our consciousness, our perception of ourselves, is created in the frontal lobe, and this is where we make decisions. General knowledge is recorded in the temporal lobes. The parietal lobe is responsible for focusing attention, and the occipital lobe contains e.g. our visual cortex. This kind of idea of categorising our sense of time into different parts of the brain is naturally a clumsy generalisation, as the current perception is that our intellectual abilities are simultaneously affected by several parts of the brain. Thinking is a very complex event, and it is especially difficult to study. For example, emotions were considered a distraction for thinking and intellect, but nowadays researchers are quite unanimous in believing that wise decisions can only be made if emotions are involved.

### Was there a problem?

Do we decide what we want, or do we want what we decide? Do we know what we want, or do we want what we know? Do we know what is important, or is what we know important?

Problem-solving is often the theme in different kinds of decision-making theories and models. Even though classical decision-making models with one optimal solution and the assumption that decision-making progresses chronologically and linearly from problem to solution have been discarded in more recent models, the starting point for the decision-making process is still often seen to be a gap between what is and what is desired. First, we need to identify the problem, after which we can begin searching for possible solutions, the most suitable of which is then chosen. This kind of theory on decision-making combines intelligence, planning and choice into a sequential process progressing from the observation

of the environment and identifying the need for decision-making through searching for parameters and solutions to making a decision. At the thought level, this model already existed in e.g. the texts of the 18th century French philosopher Condorcet. Nowadays decision-making is studied in many different fields and from many different perspectives. For example, the normative theory deals with the rationality of decision-making (how decisions should be made for them to be rational), descriptive research attempts to describe the practice of decision-making, and the prescriptive model tries to combine the normative and descriptive theories.

The study of decision-making includes questions of what needs to be known (content) and what needs to be done (process). For example, Sampson's decision-making model in career and educational choices categorises good decision-making as follows:

- Knowledge and expertise
- Self-knowledge
- Knowledge of options
- Decision-making skills
- Knowledge of "how I make choices"
- Executiveness (leadership: rounding up and implementation)
- Implementing choices and examining and knowing one's own decision-making ("metacognition", e.g. understanding of what kind of a decision-maker I am or why I have trouble implementing my choices)

These categories form the CASVE decision-making cycle depicted in the following figure.

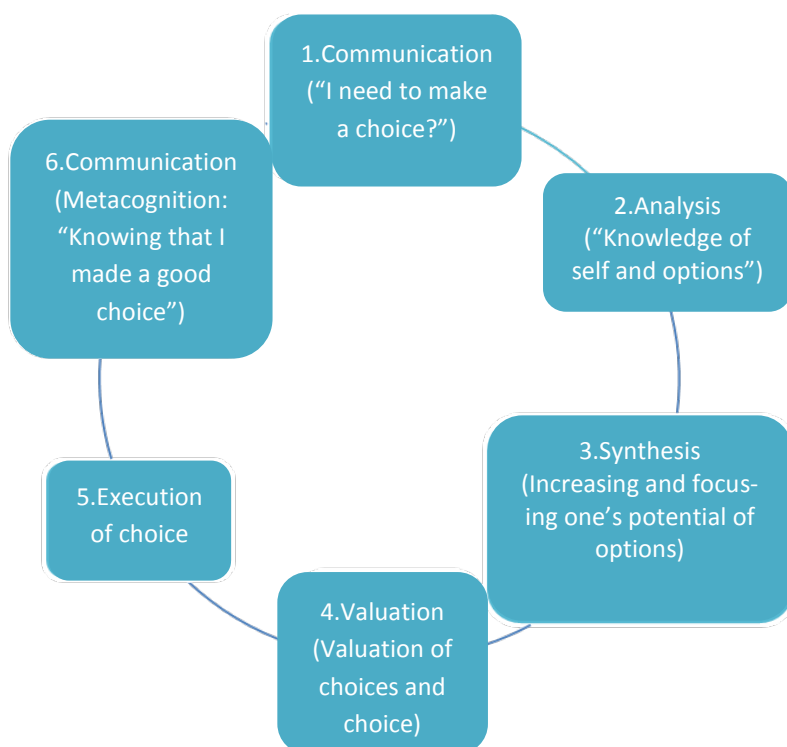


Figure 1. The CASVE cycle in Sampson's model.

In addition to decision-making models, there are different kinds of models that are used to evaluate orientation and organisation in decision-making. The SCTI model, which can be used in, for example, evaluating decision-making related to educational choices, is depicted in the following figure.

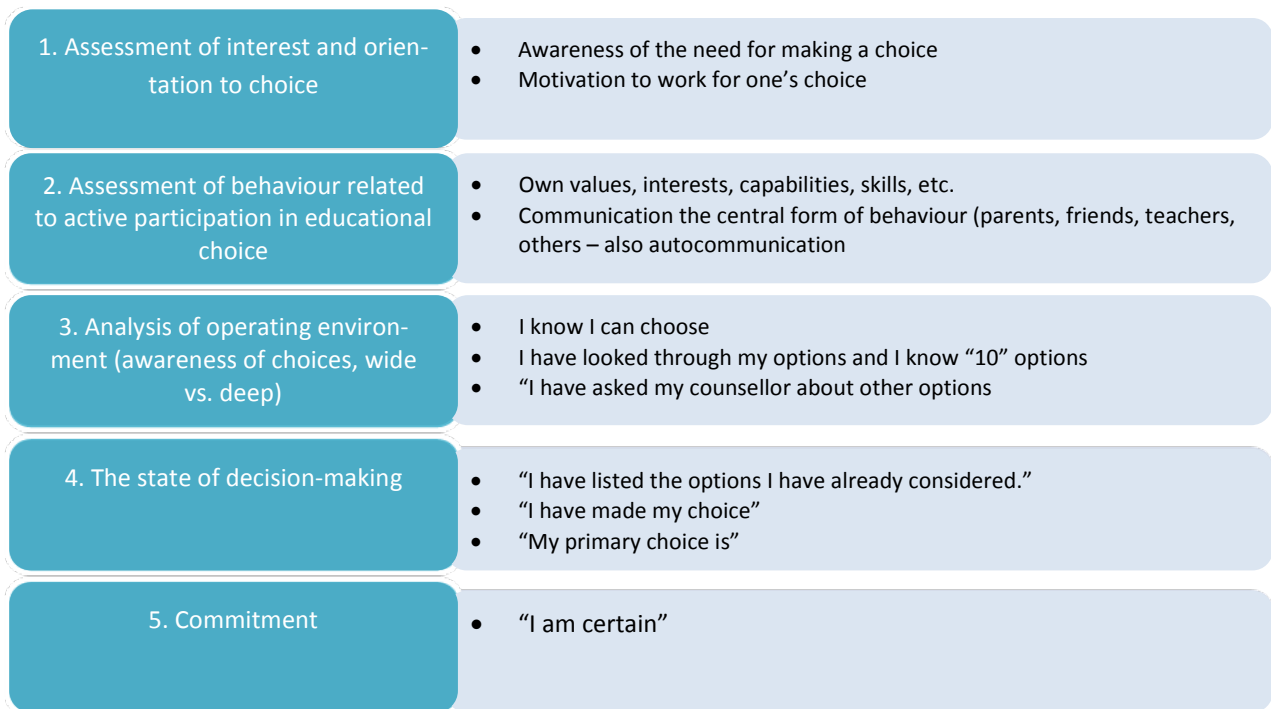


Figure 2. The SCTI model in evaluating decision-making related to educational choices.

Different kinds of decision-making models are useful tools for supporting, for example, the organisation and orientation required for individual educational choices. They can also be used to promote interest in one's own future and develop readiness to work for one's own choices.

From the point of view of the individual, future-oriented decisions and choices take place in the personal framework of one's whole life as well as in a unique continuum of events. The context of practical decision-making often includes conscious risk (probabilities are known) or complete uncertainty (probabilities are not known). The problems to be solved (if they even exist) may be very complicated. Seeing and making choices requires many kinds of knowledge and skills. In order for us to be able to correctly utilise decision-making models, we must understand how we ourselves place significance and insignificance which lies behind our decisions and choices: why something means something to me, what I know and do not know, how and why I think the way I do, and what would change if I thought differently?

### Personal thought print

Imagining possible future worlds as a background for decisions and choices requires the ability to process large quantities of qualitatively incoherent information but also a good imagination. At the same time, however, our cognitive abilities are limited. The following table contains examples of phenomena related to thinking and decision-making that enable and condition our actions (such as decisions and choices) as conscious thinking beings. I present these statements through myself, because, through studying the background literature, I have recognised them in myself and accepted them as an experience-based part of my explanatory framework.



Table 2. Some statements about assumptions and practical consequences related to thinking, reasoning and decision-making.

THEORETICAL HYPOTHESIS	PRACTICAL CONSEQUENCE
<p>The “domain and locus”, brain and senses, of my consciousness have developed to predict and are excellent in predicting predictable matters.</p> <p>Everything that I take into account is not significant. I might not be able to take into account everything that is significant. (The original version of this statement is one that is known to have decorated the wall of e.g. Albert Einstein’s office: “Not everything that can be counted counts, and not everything that counts can be counted”. In this statement, the verb for taking into account, “count”, can also be seen to refer to mathematically measurable entities.)</p> <p>The rule of thumb is that I can hold in my mind 7 +/- 2 items at any given time, which I also assume to be the comfort zone for rational decision-making.</p> <p>My reasoning is guided by the mental structures of my mind. For example a causal model of the world can be a mental structure that guides my thinking. I need a reason for everything. For example, my depression is caused by a low serotonin level. The problem has been located and treatment can begin. What causes the low serotonin level? As all effects have their causes, it may be difficult to locate the significant causal origin of the problem in question, what should be treated, and thus treatment is targeted at the effect instead of the actual cause.</p> <p>In addition to mental structures, I have in me different kinds of “reasoning programs” that can reach up to the cellular level (incl. hormonal reactions), which produce patterns of what the world should be like in order for me to be able to believe in it.</p> <p>Technological developments challenge the regularity of my world. (A century ago it could not have been perceived possible for the same person to be in Toijala and Tokyo within 24 hours).</p>	<p>I want to see and give patterns to changes even where they do not really exist.</p> <p>What I do not know is part of my thinking, but on the other hand I know more than I am aware of.</p> <p>I cannot think of a decision so small or big that it would not require a reason: an (intuitive) feeling or rational justification.</p> <p>In my reasoning, loss is more than winning. This can be seen in, for example, that the same thing is different depending on how it is told.</p> <p>I am not just a rational being, and even if I was, I still would not be safe from the possibility of error (e.g. cognitive distortion such as confirmation bias).</p> <p>I cannot hold very many things in my mind at the same time.</p> <p>For me, “usually follows” is often the same as “always follows”. I attempt to minimise the mental structures in my mind, and thus in my reasoning, i) A causes B (if A then B and A) and ii) A facilitates B (if A then B) are the same.</p> <p>I have difficulty in retaining the thought that quality might not transfer between events. This would mean, for example, that eating a fatty hamburger does not directly lead to coronary disease. The risk, or probability, might increase, but the causal relationship is more like a negligent possibility rather than a law-like necessity. From statistics, or already occurred events, we can calculate the probability required in determining risk.</p> <p>An observed anomaly does not confirm a rule but reveals that I have a rule that influences my thinking.</p> <p>Conflicting information, a situation where everything seems to be simultaneously changing and remaining the same, can lead to a situation where it is difficult for me to iden-</p>



<p>My perception of the world (like the concepts I used to express this world), for example what is possible, probable or desirable, is not given but created. It has its own history, it is not static, and it places itself.</p> <p>Things are not necessarily yes or no but can be something in between. Where do we draw the line between being and not being: Is a man with 67 hairs bald?</p> <p>A ‘this and that’ view of the world challenges my familiar rules and axioms.</p> <p>I often use fuzzy many-valued logic or abductive reasoning, meaning that I draw conclusions from end results on explanatory starting points – in other words come up with the best explanation.</p> <p>My brain processes questions related to my personal and non-personal future differently.</p> <p>Contrary to my expectations, I am not very good at statistical analysis, and thus it is difficult for me to communicate probabilities.</p> <p>When I make decisions, the starting point is often an obscure feeling of difficulty, an unclear problem that I attempt to solve.</p>	<p>tify and retain one truth.</p> <p>When one truth disappears, I cannot sufficiently utilise the principles of consistency and ruling out the third option in my reasoning. If I claim that a man with 66 hairs is bald, I am fairly truthful, but in reality I am lying.</p> <p>I had an old rule that “education is worthwhile”, the contents of which I defined so that education leads directly to employment. However, nowadays I know many competent highly educated people who are unemployed. I have replaced my old binary rule with a fuzzy logic where education means possible better employment, not guaranteed employment.</p> <p>I try to avoid cognitive dissonance, meaning a conflict between, for example, what I want and what I need to do.</p> <p>Statistics, numbers, are influential and convincing.</p> <p>Even if I had all the knowledge available to me, it is possible that I simply do not know what I should choose. Additional information can actually even cause more difficulty if the information is not significant to me.</p>
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Scientifically speaking, the understanding of awareness, for example how the “experience of me” is created, or the understanding of cognitive processes, for example why we reach certain conclusions or why we make certain decisions, is at an early stage. We are just beginning to understand how our brain and mind works. It is possible that, in 30 to 50 years, the concepts with which we have explained consciousness or thought of thinking have been completely renewed. The key to understanding the human ability for creative thinking about the future can, for example, be in the way we remember. We do not remember events as copies but construct our own memories, and this feature of the mind can act as a framework for imagining the future – we, as it were, remember the future even though we have no memory of it. The future in futures research is thus not necessarily in increasing the potential for observation but in thinking about thinking about the future – thinking about what guides our future actions.

The future is not just about awareness and thinking, but it is also about action. The future has its creators, and work done for the future has its owners. Next, we place ourselves into a negligent relationship with the future as its creators and owners.

## Making the future – the future as work

The concept of making the future contains the idea that the future is open and that we can influence it with our own action. Let us look into this in more detail. Let us assume that the arrow of time is real in events, meaning that cause precedes effect and only certain types of changes are possible: for example a child grows up to become an adult, not vice versa. Becoming an adult represents a potential future for

a child, but a boy ever really becoming a man is not necessary in the strictest sense of the word. This is because, according to the premise, the only thing necessary is that an adult does not become a child. Thus we reach a kind of circular argument: the future is open but only if the present is open for different optional futures. Therefore, the future cannot be seen as open for action or not open for action but both at the same time.

In making the future, it is easy to stray into thinking that an imaginary cause located in the future causes an effect here and now – as if we would be operating against the causal arrow of time – against causation. The future, what has yet to happen, influences us, and this should not be the case. In reality this is not the case, as cause still precedes the effect – everything happens in the time we are occupying. However, perhaps this fallacy reveals something unique about the nature of the human world. Unlike for example weather, changes to which are solely a consequence of what has happened, we humans ponder, dream and speculate about the future and act not just based on what has happened but also what we want to expect to happen. For us, the future is both cause and effect.

There is a saying that life is what happens when you are busy making plans. There is also a saying that we can choose the causes but not the effects. Both sayings describe the varying nature of the world, where things do not happen necessarily – the continuum of events, where quality is not transferred from one event to another, and goal-oriented making of the future seem to contain a gradual sensitivity. This sensitivity ultimately defines how possible futures are realised, how the future is actualised as the present and eventually becomes the past. The idea of planning for the future presupposes us as active agents that are able to influence the future with our actions – we only need to decide what to strive for and how to act in order to reach the desired goal. The freedom and necessity of choice – we have to choose our own future.

## Choice is future – the possibility of choosing and the possibility of choice

Think of your own everyday life and how your future is realised from three different perspectives.

**Fate:** What in your own life appears to you as a necessity – defined by the situation or some other requirement? What are the matters or events that could not be otherwise, could not have happened or could not have happened any other way?

**Chance:** Anything can happen, both expected and unexpected. Which events in your life have been unexpected and affected you without any real possibility for control?

**Choice:** Which part of your life is of your own choosing? Which matters include the possibility of taking part in what happens in your own life?

Let us assume that choice is included in the possibility. If this is the case, it raises the question of where the possibility lies. Possibility is not in necessity or what we would colloquially call fate. Choice is also not in chance, as complete chance does not contain the possibility of control.

Thus, the possibility of choice and along it the possibility of alternate futures seems to lie somewhere between complete necessity and complete chance. In other words, in order for us to be able to influence the future with our choices, we have to accept the following principles:

1. The future is not completely predetermined, but what we think about it and how we act affects what the future becomes.
2. We must be able to steer the process of change.
3. We must be able to set and choose goals.
4. We must be able to work towards reaching set goals.

Let us add to these terms the aforementioned old saying that life is what happens when you are busy making plans, meaning that you can choose parts of it but not the whole – you cannot choose the consequences of your choices, even though the expected consequences are a part of the choosing process. This addition divides the choosing process into three dimensions: i) internal choice, or thinking and decision-making, ii) external choice, or behaviour and determined attempt, and iii) the surrounding world and its variation. These together define what is chosen and what the consequences of that choice are.

The possibility of choosing (I can choose) logically precedes the possibility of choice (options). One challenge from the point of view of influencing one's future is to differentiate between these two possibilities. The possibility of choosing contains awareness of the fact that I am able to choose and that choosing is really the only way to influence the future.

This will sound like hair-splitting, but my possibility of choice consists of options defined by the possibility of choosing. For this reason, I should be interested in my choices.

Interest can manifest on three different levels (e.g. educational choice):

As far as we presume that the central influence and threshold in educational choices comes from our interests, educational choices are guided by:

- interest in the thing itself – e.g. I want to study to be a doctor
- interest in the thing in relation to other things (work, employment, wages, status, education, etc.) e.g. doctors have a good possibility of employment
- interest in the thing in relation to an idea or ideas that it evokes in us (idea here means significance created in relation to a whole) – e.g. becoming a doctor enables me to have a good life

From the point of view of making one's future, new possibilities of choice are created by changing perspective. A new possibility of choosing may reveal new possibilities of choice, or options. One possible way to change perspective is dialogue with different kinds of people, different points of view and standpoints. It is ultimately about building a connection between the internal and the external world through new meanings.

The rule of thumb for a good choice is simple: firstly, we must be aware of what we are choosing, and secondly, we must be willing and able to also examine our inner argumentation critically, regardless of whether it is based on rationality or emotion. Because rationality and emotions have a role, the future will ultimately become personal. To conclude, let us discuss what the future is like in the first person.

## “Futureness” – there is no general future

Let us return to the question of what the future is. The answer is not simple. If we really start to think about it, our everyday vocabulary contains several concepts of which we know what they are and mean, before someone asks us. For example, what is time or life? What is a good life?

Here are two passages from answers to the question “what is future to you personally?”

*The future is an open field of things yet to happen that for me manifests mostly in visualisations, imagination and dreams. I see the future as being somewhat obscure, but I notice that others are often quite ready to make statements of what the future will be like. Because of this, when others are talking about the future in general (rather than their own), I am suspicious of how they can claim to know something. It feels like the right to talk about the future is a constant struggle, and if one individual or organisation achieves a status where they can make others accept their definition of the future, this also means power to decide what the future will really be like. In other words, with regard to the future, the society is constantly battling, or at least arguing.*

*I see the future as different paths of possibility that are guided by our own choices as well as other factors we have no control over. Usually I see my own future in a positive light, probably through thinking that I can influence it with my own action. On the other hand, the future is also associated with fears, especially related to my own health and that of the people near to me, which feels like something I have no control over. For example, I am pregnant at the moment, and I do not want to think about a future where the pregnancy/birth would fail completely.*

### Personal future

As mentioned before, the ability to think about one’s personal and non-personal future is one the most unique and wondrous characteristics of the human mind. The future is present in our thoughts, aspirations and choices, when we plan our lives, when we solve problems related to it, when we make decisions that affect our lives. Let us call this comprehensive manifestation of the future, its presence in us and to us, futureness. My purpose is not to mystify the future but rather to make a conscious separation from the future that is purely objective to us as a rational and logical representation of possible future realities – a set of probable or desirable alternative paths or scenarios. This kind of objective future manifests outside us and in front of us as a potential of what has yet to happen, which we attempt to influence through our action, to act so that the future we desire will happen or to avoid a future we do not wish to happen.

However, the future to us is more than changes, change directions, trends or megatrends, or change factors related to these, or weak signals, black swans and wild cards. From the personal point of view, the future is not just the time from here on or a general abstract possibility and the probable direction of events; it is also a framework of significance. A framework that has an owner, and that is you.

## References

- Abraham, A., Schubotz, R. & Cramon, D. (2008) Thinking about the future versus past in personal and non-personal contexts. *Brain Research* 1233 (2008).
- Ahvenainen, M. & Hietanen, O. (2010) Matkalla biokauteen – Miten verkottunut bioketju punotaan? *Tulevaisuuden tutkimuskeskus. TUTU-julkaisuja* 2/2010.
- Atance, C.M. & O’Neill, D.K. (2001) Episodic future thinking, *Trends in Cognitive Sciences*, 5, 533–539.
- Bar. M. (2011) *Predictions in the Brain*, Oxford, Oxford University Press.
- Beard, C.M. & Wilson, J. P. (2002) *The Power of Experiential Learning: A Handbook for Trainers and Educators*. London: Kogan Page.
- Beck, A.T., (1975) *Cognitive Therapy and the Emotional Disorders*. Madison, CT , International Universities Press.
- Christoff, K., Gordon, A. M., Smallwood, J., Smith, R. & Schooler, J. W. (2009) “Experience sampling during fMRI reveals default network and executive system contribution to mind wandering”, *Proceedings of the National Academy of Science*, Vol. 106, p. 8719–8724.
- Collingwood, R. (1939) *An Autobiography*, Clarendon Press, Oxford, 1939.
- Covello, V., von Winterfeld, D. & Slovic, P. (1986) Risk communication: a review of the literature. *Risk Abstracts* 1986.
- Deutsch, D. (1997) *Todellisuuden rakenne*. Kirjakas/Ykkös-Offset Oy Vaasa 1997.
- Frosch, C. A. & Johnson-Laird, P.N. (2011) Is everyday causation deterministic or probabilistic? *Acta Psychologica* 137, p. 280-291.
- Fortunato, V. J. & Furey, J.T. (2011) The theory of MindTime: The relationship between Future, Past and Present thinking and psychological well-being and distress. *Personality and Individual Differences* 50 (2011).
- Germeijs, V. & Verschueren, K. (2006) High school students’ career decision-making process: A longitudinal study of choice. *Journal of Vocational Behavior* 68 (2006).
- GEO-lehti (2012) *Maa ilma pääkopassa*. 4/2012.
- Grout, J. & Perrin, S. (2004) *Mind Games: Inspirational lessons from the world’s biggest sports stars*, Chichester, Capstone.
- Hatchuel, A. (2001) Towards design theory and expandable rationality: the unfinished program of Herbert Simon, *Journal of Management and Governance* 5 (2001).
- Hatchuel, A. Towards an epistemology of collective action: management research as a responsive and actionable discipline, *European Management Review* 2 (2005).
- Hayes-Roth, B. & Hayes-Roth, F. (1979) “A cognitive model of planning”, *Cognitive Science*, 3, p. 275-310.
- Ingvar, D.H. (1985) “Memory of the future”: An essay on the temporal organization of conscious awareness. *Human Neurobiology*, 4, p. 127-136.
- Iyengar, Sheen (2000) *The art of choosing*. (First Edition, March 2010).
- Jason, L.A., Schade, J., Furo, L., Reichler, A. & Brickman, C. (1989) “Time orientation: Past, present, and future perceptions”, *Psychological Reports*, 64, p. 1199-1205.

- Kosko, Bart (1993) *Fuzzy Thinking: The New Science of Fuzzy Logic*. Hyperion.
- Koukku (2012) *Koulutusvalinnat kuntoon – hankeen yhteydessä toteutettu tulevaisuuskognitiota kar-  
toittanut webropolkysely*.
- Laurikainen, K. V. & Rainio, Kullervo (1990) *Todellisuus ja kuvajainen*. Porvoo Helsinki Juva: WSOY.
- Lehrer, J. (2009) *How We Decide*. First Mariner Books edition 2010.
- Luonnontieteilijä (2012) *Valoa nopeammat neutriinot – muuttuuko käsityksemme maailmasta? Esko  
Valtaojan haastattelu*. Luonnontieteilijä 1/2012.
- Lombardo, T. (2006) *The Evolution of Future Consciousness*. Author House 2006.
- Mischel, W., Shoda, Y. & Peake, P.K. (1988) *The nature of adolescent competencies predicted by pre-  
school delay of gratification*. *Journal of Personality and Social Psychology*, 54, 687–99.
- Myers, D. (2004) *Intuition – Its powers and perils*. Yale Nota Bene book 2004.
- Newell, A. (1990) *Unified theories of cognition*. Cambridge, MA: Harvard University Press, 1990.
- Niskanen, V. (2003) *Sumea logiikka: kirkasta älyä ja mallinnusta*. WSOY.
- Oettingen, G., & Mayer, D. (2002) “The motivating function of thinking about the future: Expectations  
versus fantasies”, *Journal of Personality and Social Psychology*, 83, p. 1198-1212.
- Patokorpi, E. & Ahvenainen, M. (2009) *Developing an abduction-based method for futures research*, *Fu-  
tures*, Volume 41, Issue 3, April 2009.
- Peters, J. & Buchel, C. (2010) “Episodic future thinking reduces reward delay discounting through an  
enhancement of pre-frontal-mediotemporal interactions”, *Neuron*, Vol. 66, NO. 1, p. 138-148.
- Sanfey, A.G., Rilling, J.K., Aronson, J.A., Nystrom, L.E. & Cohen, J. D. (2003) “The neural basis of economic  
decision-making in the ultimate game”, *Science*, Vol. 3000, No. 5626, p. 1755-1758.
- Seligman, M.E.P. (1998) *Learned Optimism: How to Change Your Mind and Your Life*, London, Penguin.
- Simon, H. (1996) *The Sciences of the Artificial*, The MIT Press, Cambridge, MA, 1996.
- Slovic P. & Lichtenstein S. (1983) *Preference reversals: a broader perspective*. *American Economic Re-  
view* 1983.
- Tieteen Kuvalehti (2012) *Neutriinot kulkivat oikotietä*. Tieteen Kuvalehti 3/2012.
- Tonn, B.E. (2003) *The future of futures decision making*, *Futures*, Volume 35 (2003).
- Tonn, B., Hemrick, A. & Conrad, F. (2006) *Cognitive representation of future: Survey results*. *Futures* 38  
(2006)
- Tonn, B. & MacGregor, D. (2009) *Individual approaches to futures thinking and decision making*. *Futures*,  
Volume 41 (2009)
- Tulving, E. (1972) *Episodic and semantic memory*. In E. Tulving & W. Donaldson (Eds.), *Organization of  
memory*, (p. 381–403). New York: Academic Press.
- Turun Sanomat (2010) *Ajan nuoli on todellinen*. Turun Sanomat, 27.7.2010.
- Tversky A. & Kahneman, D. (1971) *Belief in the law of small numbers*. *Psychological Bulletin* 1971.
- Weick, K E. (1993) *The collapse of sensemaking in organizations: The Mann Gulch disaster*. *Administra-  
tive Science Quarterly*, 38, p. 628-652.

Weick, K.E. (1995) Sensemaking in organizations. Thousand Oaks, CA: Sage.

Wilber, K. (2009) Kaiken lyhyt historia. Basam Books

Wilson, J.P. (2008) Reflecting on the future: a chronological consideration of reflective practice. *Journal of Reflective Practice*. 9 (2), p. 177-184.

Wilson, J.P. (2012) *Dream: Creating the future through the power of thought*, Sheffield, Hallamshire Press.

Woods, J. (2011) Abductive cognition, *Studies in History and Philosophy of Science*, volume 42 (2011).

Zimbardo, P. & Boyd, J. (2008) *The Time Paradox* New York, Free Press.