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SOCIAL FUTURING – AN ANALYTICAL CONCEPTUAL FRAMEWORK

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In this paper we attempt to define the concept of social futuring and classify it using multiple dimensions. Starting out with a minimal definition of the notion, we elaborate on the ideal-typical definition of social futuring based on the concepts of necessary and sufficient conditions. Thereafter, classifications of the different forms and types of social futuring are developed according to various features. A complex network of concepts is constructed to make the ambiguous notion more precise and to operationalize it with a view to the construction of a Social Futuring Index. We close our study in the hope that we have managed to illuminate and clarify the multi-layered concept of social futuring by creating an analytical framework which is in synergy with the normative foundations of the research.

Keywords: social futuring, analytical concept, social entities, Social Futuring Index
JEL-codes: O10, Z10

1. INTRODUCTION

"Our task is not to predict future,
But to prepare for it"
Pericles

As I see it, social futuring[1] is the very feature of an arbitrarily chosen social entity that expresses its potential, ability and competence (1) to interpret, envisage, influence, and generate future changes, and (2) to prepare for their strategic treatment – that is, await the challenges that stem from any changes (be they limits/opportunities or threats) in a state of full preparedness.

One can encounter expressions like "future proofness", "future orientedness", "resilience" and "adaptation" in the semantic surroundings of social futuring. Many associate futuring with futures studies, while others associate it with sustainability, or even competitiveness. The necessity of the term social futuring is explained by Aczél (2018).

In architecture, for example, the term "future proofness" denotes the need to account for long-term functionality when designing and constructing buildings or settlements. It is now used in a broader sense, albeit mostly in technical and technological contexts (e.g. software, memory, workforce, and in project management).[2] Future-orientedness refers to the more general human mind-set of counterbalancing mainly past- and present-centered attitudes. The exact meaning of resilience, a term taken from psychology, is difficult to briefly explain. It simultaneously means flexibility, adaptation, and the ability to cope and withstand. This term nowadays is applied to characterize not only people, but organizations, materials, systems, eco-systems, etc. As with the concepts above, the term "adaptation" suggests a certain passivity which, to my mind, makes the conceptual horizon of futuring that is to be examined too narrow, and too lopsided.

The concept of social futuring only relates to futures studies inasmuch as it relies on specific methods and findings of the former in reflecting on future changes.[3] As we all know too well, the widespread and clearly defined notion of sustainability is a product of environmental studies, and is used by researchers chiefly in ecological contexts. There are, however, correlations here, too: though

[1] I would like to express my gratitude to Petra Aczél, Loránd Ambrus, Márton Barta, Tamás Bartus, János Csák, Róbert Iván Gál, Eszter Monda, Annamária Orbán, Péter Szabadhegy and Balázs Szepesi for their valuable comments on an earlier version of this paper. However, the author takes full responsibility for the contents.

[2] For a comprehensive study about the notions of futuring, resilience, future-orientedness and future proofness, see Aczél (2018).

[3] The correlation between futuring and future studies is explained in detail by Monda (2018).

completely different fields of study, environmental sustainability and social futuring still have many things in common.[4] The same can be said about the relations between economic competitiveness and social futuring.

The Social Futuring Research Centre of the Corvinus University of Budapest has purposefully taken a new direction with its dedication to work out the concepts of social futuring. To focus on "social" features, as the prefix determines, indicates the intention to place future-oriented scientific and political streams into wide, multi-layered and complex contexts, ranging from settlements and institutions/organizations to states/nations, including taking their alliances into consideration. With a well-defined notion of "futuring", we shall also have the opportunity to grasp multiple ways of interpretation and performance at once, while also taking into consideration (geo)political, technological, socio-economic and cultural-spiritual features on a multidisciplinary and interdisciplinary basis.[5]

By unfolding the details of the minimal definition mentioned in the first paragraph,[6] an ideal-typical notion of social futuring will be defined analytically, in terms of conditionality concepts. Firstly, and *per definitionem*, we differentiate between conjunctive (or complex) – i.e. necessary – conditions, and disjunctive (or alternative) – i.e. sufficient – conditions of social futuring.

Then, starting out from the ideal-typical definition – and also regarding the wide circles of social entities as possible subjects of social futuring, as well as the various changes that may be expected at some point in the future – the three basic forms of social futuring are defined, along with their variations and subtypes.

In the course of defining the conceptual framework,[7] while aiming for maximal notional accuracy and clarity, definitions and types will first be outlined, then illustrated with examples and, finally, adjusted by adding simple logical markings (formal adjustment) and simple figures. The system of analytical definitions will hopefully make the complex framework of social futuring more comprehensible and "followable" to everybody, thereby serving as a compass through the notional maze.

This conceptual priming is further justified by the fact that – since the concept of social futuring has innumerable layers of denotations and connotations and is

4 The conjunction of sustainability and futuring is discussed by Kocsis (2018).

5 Ablonczy (2018) summarizes how the idea of futuring appeared in the writings and activities of three outstanding Hungarian historical figures – namely, István Széchenyi, Miklós Bánffy, and Zoltán Szabó.

6 We shall follow Ian Morris (2013) who, on the basis of a minimal definition of social development, created an ideal-typical definition and defined the pillars of a social development index.

7 László Bertalan (2005)'s contribution presents the logic of coining terms and classification procedures in detail.

an umbrella term in a certain sense – separating these layers[8] should enable us to designate the main directions of the empirical research of social futuring, and will thus operationally contribute to the construction of a detailed plan for creating a social futuring index.

2. THE IDEAL-TYPICAL NOTION OF SOCIAL FUTURING

"The clever man is not the one who
gives good predictions about the future
but the one who sees clearly that predicting the future is impossible,
but, keeping that in mind, a clever man can still adapt to the future in advance."
László Mérő

By definition, a conjunctive (or complex) necessary condition of the futuring of an arbitrarily chosen social entity (SE) is that it has (1) self-consciousness, a constitution[9] (NC_1); (2) is able to operate functionally (NC_2); (3) is able to sustain and reproduce itself over a longer period of time (NC_3), and (4) is able to act and organize itself in order to influence its future environment and operations – based on a strategic perspective – and prepare to organize ways to act (NC_4).

Meeting all the above conditions *simultaneously* – as I see it – *enables* the creation, sustenance and growth of the social futuring (SF) of any social entity, at least as far as the necessary conditions are concerned. In other words, the simultaneous existence of the above factors creates an opportunity to engage in social futuring, while the lack of one or more of them makes it unfeasible.

If, for instance, the original population of a country or settlement is in serious decline for some reason, its long-term viability may become questionable (e.g. ghost towns or settlements with a changing population mix). If an organization or an institution is unable to continuously maintain its basic operations under changing circumstances, it may lose the capacity to function effectively (e.g. enterprises may lose market share, or institutions may empty out). If a political organization does not have a strategic vision of the future and is not strong enough to organize strategic methods of acting to reach its goals, it may be squeezed out or fade out from the political contest and lose significance (e.g. political parties

[8] This method of making a notion more accurate is referred to by scientific philosophy as a typology-based explication of scientific terminology. See Bertalan (2005).

[9] In philosophy, the term "constitution" is an ontological category, a constitution of existing organisms from existence and essence, action and potential, material and form. It involves the features of self-definition and constitutional existence of an entity in a political philosophical sense.

may lose voters' trust, trade unions lose their members, and non-governmental movements may die out).

Formally: (SE) [$NC_1 \wedge NC_2 \wedge NC_3 \wedge NC_4 \rightarrow Df \rightarrow$ SF]

Per definitionem, it is true of all social entities (SE) that their successful futuring requires the potential for a self-conscious, constitutionalized existence (NC_1), functional operation (NC_2), *and* long-term sustenance/reproduction (NC_3), and preparedness for self-organization/the organization of strategic action (NC_4). In other words, the per definitionem conjunctive (or complex) necessary conditions of social futuring are self-consciousness and a constitutionalized existence (NC_1), long-term sustenance/reproduction (NC_2), functional operation (NC_3), *and* preparedness for self-organization/the organization of taking strategic action (NC_4)

If all the necessary conditions are met, the futurability of social entities is secured by agents and their assemblages who are able to adopt various attitudes to adapt to expectable changes in any point in the future.

By definition, the disjunctive (or alternative) sufficient conditions of successful futuring of any social entity are the following: (1) the entity must be capable of making changes (SC_1); and/or (2) must be able to prepare to influence expectable change (SC_2); and/or (3) must be able to prepare to neutralize/exploit the limitations inherent in expectable change (SC_3); and/or must be able to prepare to address the risks of an expectable change (SC_4**)**.

If all, one, or some of the above conditions are met, regardless of combination, social futuring can be regarded as secured, and its various manifestations will be created, maintained and improved. If, for example, a nation (e.g. Turkey) or a large corporation (e.g. Tesla) can prepare itself to generate/influence a specific, expectable geopolitical change (e.g. an international migration crisis) or a specific technological change (e.g. the uptake of self-driving cars), respectively, they can be regarded as being successful at futuring; the situation likewise applies to regions and cities that are able to prepare for the risk management of environmental changes (e.g. climate change, global warning), or capitalize on the opportunities created by technological development (e.g. Smart Cities, or Slow Cities).

If none of the sufficient conditions are met, it can be argued that the creation, sustenance and growth of social futuring is impossible, at least as far as the sufficient conditions are concerned.[10] For instance, if a country is unable to

[10] Note that necessary and sufficient conditions are treated separately. I shall make no effort to make a list of "necessary-and-sufficient" conditions. Consequently, conjunctivity and disjunctivity are treated separately. However, we believe that the alternative sufficient conditions may ideal-typically be considered only if the complex necessary conditions are met. In the course

generate/influence any demographic, technological or environmental change – be this in the form of either threats (e.g. decreasing population, ageing society, climate change) or opportunities (e.g. robotic mechanization, artificial intelligence) – and cannot prepare to address these changes strategically, they will seriously lag behind in social futuring. We may also add that the more of the four conditions above are met by any given country or social entity, the stronger at social futuring they are.

Formally: (SE) $[SC_1 \vee SC_2 \vee SC_3 \vee SC_4 \rightarrow Df \rightarrow SF]$

Per definitionem, a social entity is successful at futuring if it has the potential to generate change (SC_1), and/or to prepare to influence expectable change (SC_2), *and/or* to prepare for the neutralization/exploitation of limits from an expectable change (SC_3), and/or to prepare to tackle the threats of expectable change (SC_4). In other words: the predefined disjunctive (or alternative) sufficient condition of social futuring is the potential for making changes (SC_1), and/or preparing to influence an expectable change (SC_2), and/or preparing to neutralize limits/ exploiting opportunities in relation to an expectable change (SC_3), and/or preparing to tackle the risks of an expectable change (SC_4).

3. WHICH SOCIAL ENTITIES?

"The future belongs to the generations and nations
which are willing and strong enough to meet it."
Max Planck

The social entities in focus are constituted by persons who are given the ability to interpret things, make decisions and take action, and who are "embedded" into various groups and social networks (e.g. families or communities based on blood ties, common interests, collegiality or cohabiting, etc.).[11] They and their groups are the potential "champions" and key figures; i.e., the agents of creating and increasing social futuring. Such social entities can include, for instance: organi-

of doing empirical research, the main question will naturally relate to the conditions the social entities (the "real types") that are in focus meet, based on which comparisons and rankings can be constructed. This is the very reason why ideal-typical notions are sometimes referred to as "line notions" in the philosophy of science.

11 Here I rely on the popular socioeconomic concept of Mark Granovetter (2017).

zations (O), institutions (I),[12] settlements (Se), regions (R), countries (or country groups) (C), societies (So), and nations (N).

According to various viewpoints, these social entities can be subdivided into further subtypes. For example, we can differentiate between for-profit and non-profit organizations, social, economic and political institutions, and identify further subtypes within these (e.g. the state and the parties within political institutions) or specific cities, regions, countries and nations. And so on.

The circle of potentially futurable social entities may be enlarged along certain research parameters. However, when doing futuring research of any kind, one must make the most accurate and unambiguous selection from the vast set of social entities and choose those which are the most suitable for the particular analysis. For example, the elements included in a comparative analysis of the social futuring of certain countries are different from the elements picked for an analysis of the social futuring of, say, business enterprises, political systems or settlements.[13]

Formally: $SF = F_{SE}$, where SE {O, I, Se, R, C, So, N, ...}

The set of futurable social entities (F_{SE}) contains various elements: organizations (O), institutions (I), settlements (Se), regions (R), countries (or country groups) (C), societies (So), nations (N), etc. and various subtypes thereof.

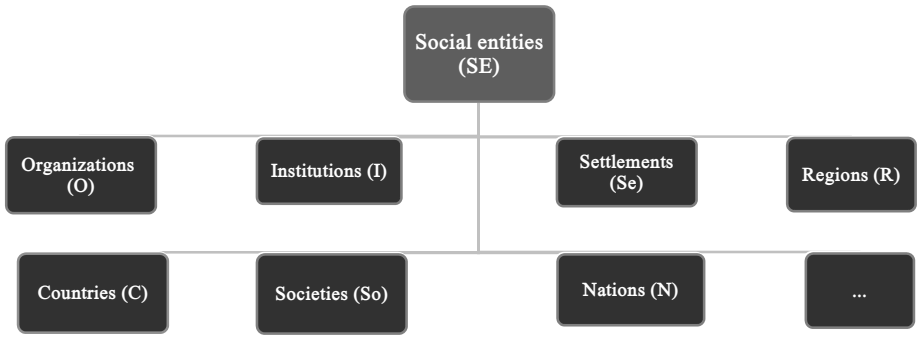

Figure 1. Types of social entities

[12] The notion of institution is used here in the sense Douglass C. North defined it: "Institutions represent the rules of society [...] the boundaries people made to regulate the interaction between people" (North 1990). Bakacsi (2017b) examined the role of institutions with regard to futuring.

[13] Social entities may also be interpreted as social networks from the perspective of network science and network analysis (Barabási 2002; 2010; 2016). For details, see Bakacsi (2017a; 2017b) and also: Khanna (2016).

It must be stressed again – referring back to the first paragraph – that research into different social entities can never commence without clearly designating and separating the actual and/or potential agents who create and secure futuring.[14] It is no matter if they are persons ("champions") or groups: the basic question remains the same in all cases: have they prepared, or how are they able to prepare to create the circumstances of short-, mid- and long-term social futuring? It should also be examined whether the size of agent groups have reached the "critical mass" which is indispensable for activities that secure the self-sustenance needed in futuring.[15]

4. THE BASIC FORMS OF SOCIAL FUTURING

"The future is not in our power entirely,
but it is not entirely outside our power either."
Epicurus

Interpreting, generating and elaborating expectable future changes, including preparations to influence them, may be termed proactive (Pa) social futuring. A common feature of these methods of action is that they invariably target changes directly, and the agents of social entities manipulate such changes according to their common objectives and interests, or at least they are prepared to do so: they aim to generate changes which are desirable for them, and try to hinder undesirable/disadvantageous changes or place obstacles in the way of their development.[16]

This basic form of social futuring may be characterized as a specific manifestation of strategic creativity because it involves a particular social entity attempt-

[14] For details, see Szepesi (2017).

[15] "Critical mass" is used in the sense Thomas C. Schelling put it: "[…] common to all models of critical mass is that certain kind of activity that becomes self-sustaining after having reached a minimum level." (Schelling 1978). It should be noted here that the successful futuring of persons and smaller social entities (e.g. organisations) does not necessarily imply the successful futuring of larger entities (e.g. countries) – this may be called the "problem of aggregation". These issues are not examined here in detail; nevertheless, neither are they disregarded. I shall try to elaborate on them later, in the empirical research phase.

[16] Normative benchmarks help us decide whether a change is "desirable" or "undesirable". For the normative framework of our research project, based on ethical and political philosophy, see Ábrahám (2018) and Csák (2018). The changes envisaged may bring present conditions closer to the desired social conditions, and they may also create distance between them. A desirable social condition can nevertheless be depicted by using normative standards. This also means that the "[...] analytic and normative concept of social futuring cannot be separated from one another." (Ambrus 2017c: 3)

ing to shape the future in a creative way, while respecting limits and circumstances. For example, if a country realizes its unfavorable demographic tendencies in time, it may undertake innovative action through demographic and family policies to influence them. Or, a country group may make provisions to combat global warming by implementing new energy- and environmental policies. Both of these responses involve proactive and creative steps to secure futuring.

However, if the potential agents of social entities prepare to neutralize the limitations of future changes and/or harness advantageous opportunities, we may speak of *active* (A) futuring. Considering the same example as above: if the country group is unable to slow down the process of global warming, it may still exploit its advantages through the use of active futuring. In practice, this may mean taking creative steps in energy policy, such as installing vast amounts of solar collectors. Or a business/institution specializing in healthcare may prepare in advance for the opportunities presented by technological change (e.g. the spread of nanotechnology) by applying new treatment methods, which is another example of active futuring. These cases are also characterized by a sort of strategic resiliency:[17] the ability to grasp the envisaged opportunity in a creative way, and at the right time. Here, however, action does not target the change itself but aims at the potential outcome of the change instead, also in an innovative way.

Finally, if the social entities address the threats inherent in certain changes, a reactive (Ra) futuring is taking place. Or rather, this is a sort of strategic adaptivity inasmuch as action responding to unavoidable future threats comes to the foreground, often taking the form of adaptation or resilience. Extending the earlier example further: if the country in question cannot influence demographic processes directly, it can still prepare for the strategic treatment of their risks – for instance, by taking administrative steps regarding the regulation of the labor market or the pension system. This is reactive futuring. Or, if a country seeks to prepare to minimize geopolitical threats (e.g. in conflict zones), it may join alliances or arm itself since it cannot influence the threat directly. These are possible cases of reactive futuring, too.

In the above, we have defined the three basic forms (Bf) of social futuring, which – taking the broad set of possible social entities and the various expectable changes into account – can be combined with further subtypes.

Formally: $F_{SE, Bf}$, where Bf {Pa, A, Ra}

The set of social futuring thus contains three elements: a proactive form (Pa), an active form (A) and a reactive form (Ra) – see Figure 2.

[17] For the term of strategic resiliency see Deloitte (2018).

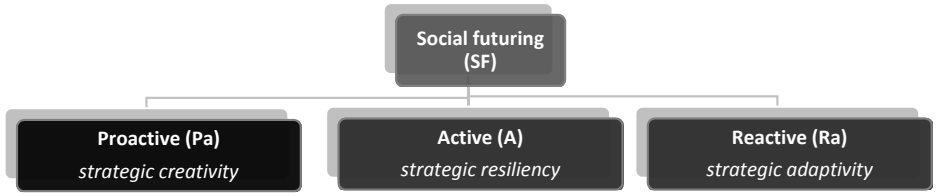

Figure 2. Basic forms of Social Futuring

5. WHAT CHANGES ARE TO BE EXPECTED?

"The 'future' does not really exist in the singular.
We may only speak about innumerable unforeseeable futures
which will be able to surprise us all the time."
Niall Ferguson

Expectable future changes (EC) may be classified from many perspectives. A classification can be undertaken from the viewpoint of their content (i.e. substantivity), prediction-based features (i.e. predictability) and time-related features (i.e. temporality).

To conceptualize social futuring further, expectable future changes can also be classified by regarding the broader sphere in which the changes take place, or will take place. Regarding the content-based features of expectable change (ECC), we may differentiate between (1) ecological-(geo)political (EGp); (2) technological (T), (3) socio-economic (SE), and (4) cultural-spiritual (CS) changes – just to highlight the most important ones.

On the one hand, such a classification is not comprehensive; i.e. it does not encompass all the possible kinds of expectable change. However, it does refer to the types of change that are of key importance in the research of social futuring. On the other hand, the specific types are comprehensive enough to enable us to make more subtle and detailed distinctions in specific fields of change.

The notion of ecological-(geo)political change includes the expectable global balance of natural resources, geographical location, and the political shifts stemming from these two,[18] anthropogenic global climate change', biodiversity, and the availability of natural resources (especially shifts in the world's freshwater supplies).[19] It also spans the shaping of the political systems of future societies

[18] The notion of geopolitics is used in the spirit of George Friedman's classic works (2012; 2015; 2016). "Connectography" represents a new approach to mapping the future of global civilisation, along with a network-based methodology. See Khanna (2017).

[19] For the correlation between ecological sustainability and social futuring, see Kocsis (2018).

(e.g. a shift from democracy-dictatorship, changes in political stability and security, and the shaping of political integrity and sovereignty).[20]

With the notion of technological change, we intend to grasp the tendencies and trends shaping the artificial-material world and accelerating technological processes. In particular, the spread of robotic mechanization, artificial intelligence and nanotechnology belong here, all of which radically change human activity and lifestyles (especially work).

Popular trends are certainly also socio-economic ones,[21] including changes in childbirth and mortality rates and those of (international) migration. To our mind, urbanization and social mobility also belong here, as well as trends such as changes in competitiveness, and also education and healthcare.

With the notion of cultural-spiritual change, we intend to grasp worldwide trends concerning changes related to the existence of entities manifested in their symbols, values and norms,[22] as well as international processes of communication, trust and religion.

Formally: $F_{SE, Bf, ECC}$, where ECC {EGp, T, SE, CS, …}

The set of expectable changes relevant to social futuring contains four content-based elements: ecological-(geopolitical) change (EGp), technological change (T), socio-economic change (SE), and cultural-spiritual change (CS).

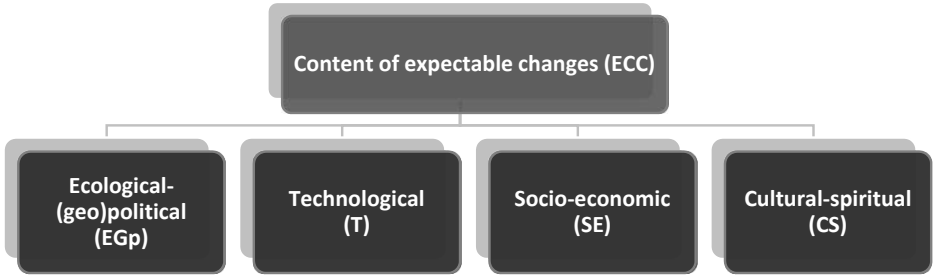

Figure 3. Content-based types of expectable change

Source: author

20 For a futuring-based interpretation of long-term political strategy, see Ambrus (2017a; 2017b; 2018).

21 On the topic of childbearing and ageing societies, see Bartus (2017) or Gál – Radó (2018).

22 "The modern state also has a spiritual and a symbolic function. These are indispensable to make citizens conscious of their citizenship" (Manent 2003: 54).

Predictability (P) is another factor according to which a classification of changes is possible. Thus, changes can be predictable or unpredictable. The first type includes changes that are not expected or unexpected, while the second type contains changes which have some probability of occurring. Good examples can be found in demographic research and forecasts regarding climate change. Projections using the birth and mortality rates of the past enables us – ceteris paribus – to predict the size of future populations with a certain probability, just as ecologists can calculate potential global warming scenarios using past trends in climatic change.

Utilizing the relevant basic concepts of the standard theory of rational decisions,[23] we may state that if the chance of predictable change is 100%, the change is *certain* (C); and if it is between 0% and 100%, the change is, *in a broader sense, uncertain*.[24]

Knowing the – objective or subjective – probability of the realization of an expectable change indicates a risky change (R). However, if the scenarios for possible changes are known but there is no information available about their probability, we must refer to an uncertain change (Uc), in a narrow sense.[25]

Formally: $F_{SE, Bf, ECC, ECP}$, where ECP {C, R, Uc}

In the set of expectable changes relevant to social futuring there are therefore three states of predictability: there are certain (C), risky (R) and uncertain changes (Uc).

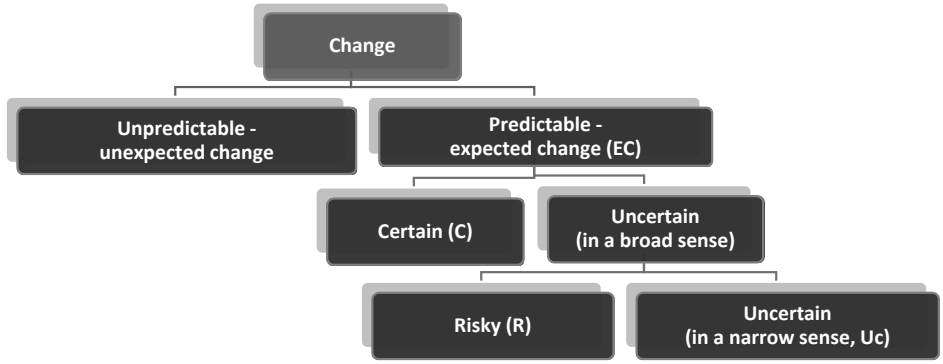

Figure 4. Types of change based on predictability

Source: author

23 A foundational study by Luce and Raiffa (1957) was used to define the basic categories of decision theory. See for example: Hirshleifer – Riley (1992).

24 A 0% probability naturally means that the change is unexpected.

25 Niall Ferguson (2008) presents the difference between uncertainty and risk in detail in the context of the formation and operation of financial markets.

Within the set of expected changes, based on the time period that elapses (temporally) (ECT), changes can be predicted in the short term (ST), medium term (MT), or long term (LT), which are to be treated separately.

Formally: $F_{SE, Bf, ECC, ECP, ECT}$, where ECT {ST, MT, LT}

The set of expectable changes relevant to social futuring has three temporal elements: short-term expectable change (ST), mid-term expectable change (MT) and long-term (LT) expectable change.

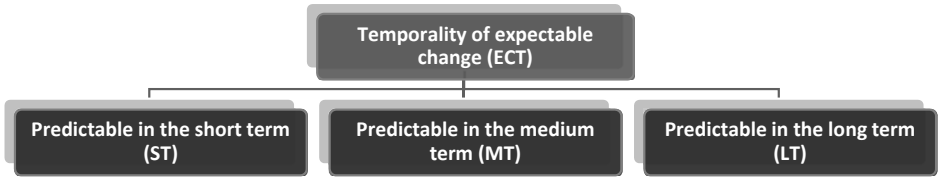

Figure 5. Types of predictable changes based on temporality

Source: author

6. SUMMARY

"The behaviour of people often go through three phases when
they are thinking about the impacts of future technologies:
First, they worship the attested ability they offer to solve old problems;
then, they are frightened by the new, serious risks of these novel technologies;
and finally, they realise that the only feasible and responsible way is
to carefully designate the path of development
by which the benefits can be reaped and the dangers can be avoided."
Ray Kurzweil

In this paper, we have attempted to define the concept of social futuring and classify it using multiple parameters. Having started out with a minimal definition of the notion, we elaborated on the ideal-typical definition of social futuring using predefined concepts. Thereafter, classifications of the forms and types of social futuring were made according to various features. A complex network of concepts was constructed to make the ambiguous notion more precise, all the while keeping an eye on the possibility of later operationalization; our future target being the creation of an empirically and methodologically well-founded social futuring index.

The result of creating the conceptual framework can be summarized in the following analytical formulas:

$$F_{SE,\ Bf,\ ECC,\ ECP,\ ECT?}$$

where

$$SE\ \{O, I, Se, R, C, So, N, ...\}$$
$$Bf\ \{Pa, A, Ra\}$$
$$ECC\ \{EGp, T, SE, CS\ \ldots\}$$
$$ECP\ \{C, R, Uc\}$$
$$ECT\ \{ST, MT, LT\}$$

In other words, in the course of the conceptualization and classification of social futuring, starting out from the ideal-typical definition we should take the following steps:

1. we must define the social entity (entities) clearly, (i.e. organization, institution, settlement, region, country, society, nation, etc.), the futuring of which we seek to examine;

2. we must decide which basic form or basic forms (proactive, active, reactive) of social futuring we seek to investigate;

3. we must choose the type and number of expectable change(s) (in a content-based sense; i.e. ecological-(geo)political, technological, socio-economic, cultural-spiritual) in order to examine how the entity can prepare for them;

4. we must identify the predictability (certain, uncertain, risky) of the expected change to be able to analyze what preparations would be the most adequate;

5. we must identify the temporal frame (short-term, mid-term, or long-term) that best matches the preparations for expected change.

In the light of these observations, the research project ConNext 2050 – which includes further steps regarding how to create a social futuring index (SFI) – can be summarized using the following formula:

$$F_{SE,\ Bf,\ ECC,\ ECP,\ ECT'}$$

where

SE {countries}
Bf {proactive, active, reactive}
ECC {ecological-(geo)political, technological, socio-economic, cultural-spiritual}
ECP {uncertain, risky}
ECP {long-term}

We close the paper in the hope that we have managed to illuminate and clarify the multi-layered concept of social futuring by creating the analytical concepts based on which – on top of the normative foundations of the research – we may commence comparative empirical research into social futuring, centered on a social futuring index.

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