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SOCIAL FUTURING CENTER

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THE CONCEPT AND MEASUREMENT OF SOCIAL FUTURING

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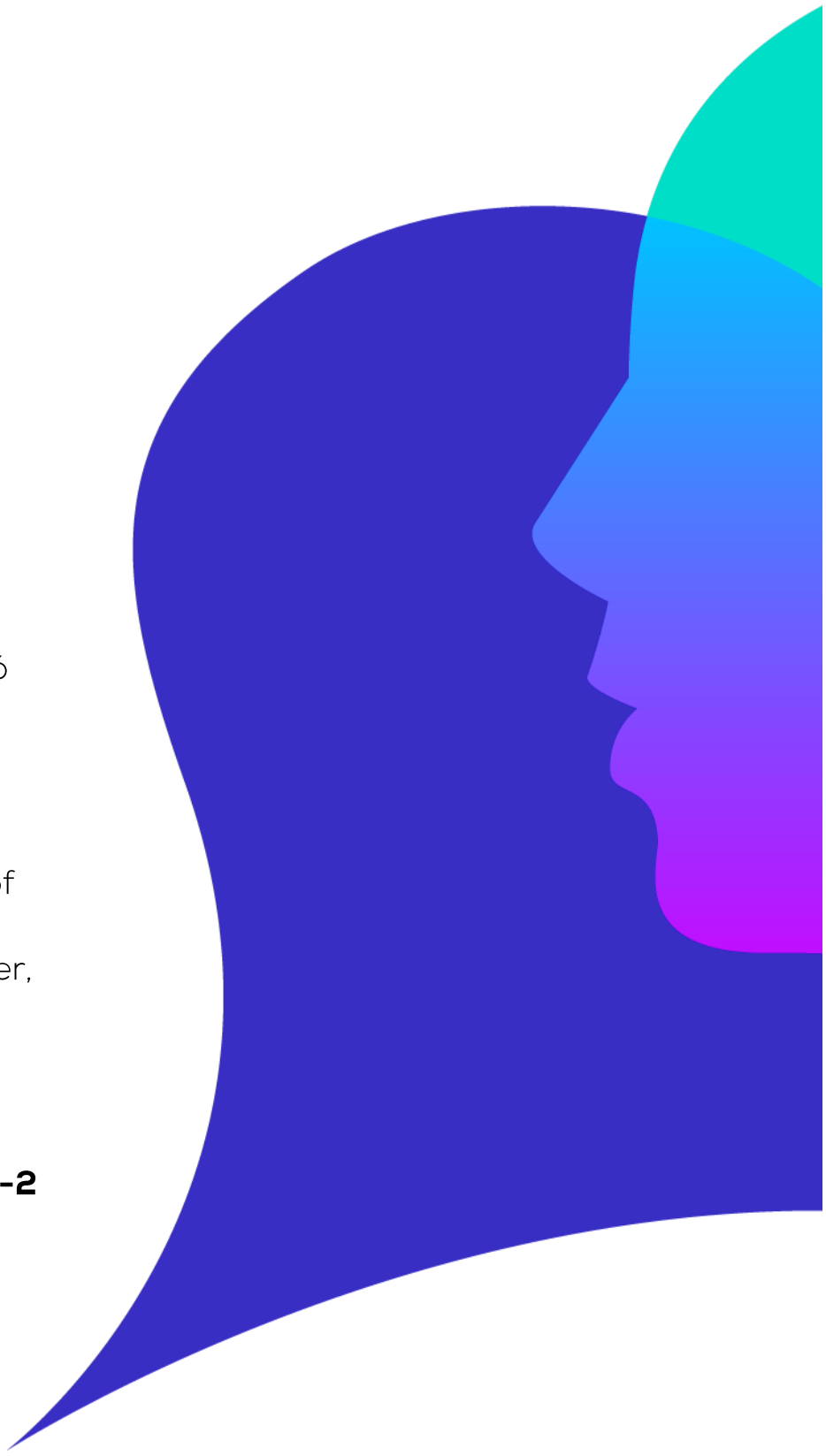

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1. INTRODUCTION

What is meant by "a good life" and what we expect a nation or country to provide for its citizens in terms of a good life is a question dating back at least to Ancient Greece. The traditional yet more modern approach simply looked at a country's GDP and assumed that GDP and welfare were closely related so that more GDP implied more human welfare. Today that approach is called into question from a range of intellectual perspectives, each generating its own branch of research around its specific area of critique. New measures have emerged to more completely capture the notion of "better", "human welfare" and a "good life" from happiness indices to measures that incorporate environmental sustainability, all efforts to get a more complete picture.[1]

Each of those critiques brings a specific perspective, however. The happiness literature attempts to measure people's personal psychological well-being. Sustainability measurements focus on environmental well-being and long-term viability. Other indices focus on aspects of the political system like rule of law and others still continue to look at traditional economic indicators. But each function in isolation, in silos that are separate from each other, in an effort to better understand a particular aspect of society and social development.

Social futuring represents a new, multidisciplinary approach that provides a holistic approach to measuring a social entity's ability to strategically plan for and sustain itself into the future while attempting to maintain the broad goal for its constituent members of their achieving a "good life in a unity of order". In this sense it may partially be thought of as returning to the insight of the Ancient Greeks while also incorporating all that we've learned along the way, including modern scientific insights and criticisms in economics, environmental science, sociology, political science and more recent fields like future studies.

[1] See Csák (2018) Introduction for greater detail about the concept of a "good life".

Environmental science is probably the furthest along in terms of obtaining widespread acceptance of the need to consider its modern critique on traditional measures of growth and well-being (Kocsis, 2018). Sustainable economic development, for example, includes the environmental impact of economic development so that the environmental costs are incorporated into any economic cost-benefit analysis. The fundamental question being addressed by this is "how can we grow economically and yet also 'future proof' today's environment so that it is sustained – or even added to – for future generations"[2].

From a process point of view, social futuring may be thought of as taking each discipline and asking how it can be "future proofed" or made sustainable in the way that one future proofs a building or other physical object or system. For example, there is a great deal of literature on how we might measure happiness in societies (Helliwell et al., 2019). To apply the sustainability challenge here, one would ask something like the following: "how can we 'future proof' a society's level of happiness so that its current level or even more happiness is sustainably maintained in order that future generations might too enjoy or improve upon it".

Rather than treating each topic in a silo, however, social futuring attempts to bring their key insights, under one roof and asks how this could be done for a society as a whole. To do that, one first needs a common social goal against which to measure the current position and hence allow for a means to measure progress over time.

As a first step, social futuring returns to the Ancient Greek notion of "a good life in a unity of order" as the broad notion of welfare in a society. It uses this as its normative metric and basis for evaluation and this normative framework is one of the aspects that makes social futuring a unique approach.

[2] For a thorough treatment of the relationship between the concept of environmental sustainability and that of social futuring, see Kocsis (2018).

After establishing the appropriate normative objective, social futuring must find its unique place in the approach of the social sciences and then determine the means of measuring in reality a social entity's progress toward its stated goal. This is done through the Social Futuring Index (SFI). The first SFI will be released in 2020 and will first focus on a country-level assessment. Subsequent efforts will then focus on ways to measure social futuring at more disaggregated levels, from cities all the way down to smaller organizations like companies, NGO's and associations.

Social futuring is built on each of the key disciplines it incorporates. The Social Futuring Center of the Corvinus University of Budapest is seeking to make field-specific research contributions around the concept of social futuring in the areas of philosophy, sociology, linguistics, economics, geopolitics, and political science. There is a need, however, to explain the core concept in a multidisciplinary way. That is the purpose of the current paper, which was grounded by previous publications, describing the normative (Csák, 2018), analytical (Szántó, 2018) and discursive (Aczél, 2018) framework of social futuring. While the previous publications considered these frameworks separately, the present one handles it in an integrated manner.

This paper proceeds as follows. First, we present the key concept of social futuring. Second, we show that it is unique, and yet it incorporates elements of other well-established concepts. Finally, we present the key elements of the Social Futuring Index and discuss ways it might be measured, or tested, as a valuable index.

2. DEFINING THE CONCEPT OF SOCIAL FUTURING

The Social Futuring Center defines social futuring as a measure of a social entity's creative intent and potential to comprehend the ever-evolving world, its ability to get things done, to preserve and reproduce its way of life as well as to control its destiny in general. This definition is broad enough to be applied to a wide range of social entities and yet precise enough to allow measurement. The definition starts with a "social entity", requires "intent" and a forward-looking approach along with an "ability" to make changes, all with a single goal in mind. To operationalize this concept, we next clarify each of these components.

2.1. SOCIAL ENTITY

The subject of social futuring is the social entity, an organism as understood based upon the concept of personhood, which denotes cognition, intentional activity and self-consciousness, as well as an awareness and recognition of the self's state of mind (as distinguished from others).

Social futuring focuses on social entities constituted by persons who are given the ability to interpret things, make conscious decisions and take action, and who are "embedded" into various groups and social networks. These include, but are not limited to, the following: organizations, settlements, regions, countries, country groups, and potentially nations.

2.2. INTENT AND ABILITY

In order to qualify as a social entity capable of engaging social futuring, however, the social entity must meet five necessary conditions (NC). They are[3] that it

1. is able to operate functionally (NC1),
2. is able to sustain and reproduce itself over a long period of time (NC2),
3. is self-conscious (NC3),
4. is able to formulate an actionable strategy for itself (NC4), and
5. is able to provide its members with a "good life" (NC5).

The keys here are three: first, the entity must be able to manage itself over time. Second, it must be able to formulate a long-term goal for itself. NC1 and NC2 establish that an entity exists and functions over time. NC3 and NC4 establish that the entity is conscious as an entity and can establish its own goals. Finally, NC5 ensures that the entity can provide the "good life", which is, at a deeper level, the fundamental objective behind the whole notion of social futuring itself.

In many ways, the last condition, NC5, is also the starting point. If the entity is unable to provide its members with a "good life", either because it lacks resources or the requisite structure to plan and manipulate those resources (or for any other reason), then it will never be able to fully engage in social futuring in the sense we have in mind. The requirement that an entity be able to provide a "good life", in part or in entirety, restricts the types of entities we consider. For example, a city planning group to build a bridge that is sustainable and future-proof wouldn't count, but a city's mayor or planning group to manage the city over the coming years to improve the lives of its citizens would count. We leave the topic of what exactly the "good life" is for section II.D. below, since the concept is deeply connected with the normative framework of social futuring.

[3] Note that this list is a modified version of the one found in Szántó (2018).

To understand the other conditions, we turn first to NC1 and NC2. A biological organism can meet NC1 and NC2. That organism can react to its environment over time, eat and store energy for the future, procreate, etc. And, the broader forces of evolution will, through the entity's interaction with other entities and its environment, shape the organism today and shape it as a species over time. But we would not say that the organism ever engaged in social futuring because – to the best of our knowledge – it never became self-aware in a personhood and a social sense and it never defined its own long-term goals upon which it then acted. That is, the organism and its species lacked NC3 and NC4.

Likewise, if a few people decide to form a club, they may pick a name for the club, define its membership and even establish its goals. These would meet NC3 and NC4, but until the club becomes a viable entity that can actually manipulate resources to maintain itself over time (i.e., meets NC1 and NC2), we cannot say that the club engaged in or can engage in social futuring.

So, the entity must be "social" and self-aware. It must also be able to make a strategic plan for itself and be able to carry it out to some extent.

2.3. FORWARD LOOKING

The ability to imagine the future, to progress towards the future, and to arrange future possibilities are distinctive features of humans. This ties in both with the definition of social futuring as dealing with the future and with social entities being constituted by people who are distinct biological forms defined historically and philosophically on the basis of the notion of personhood.

Furthermore, it is quite logical that if a group of people are to set long-term objectives for themselves, they must be forward looking. This is therefore one of the more obvious and logical necessary requirements for an entity to be able to engage in social futuring, essentially NC2 and NC4 in the above list.

2.4. THE NORMATIVE GOAL AND FRAMEWORK

All forms of welfare analysis must assume *a priori* a normative measure against which one can measure improvement or lack thereof. Economists assume people maximize utility, which is an individual-specific ranking of alternative outcomes. If utility is higher, then economists claim welfare has improved. But it has long been recognized and formally shown by Kenneth Arrow (Arrow, 1950), that aggregating utility is notoriously difficult if not entirely impossible in practice. As a result, many in the social sciences seek alternative measures of aggregate or proxies for well-being such as happiness, freedom, GDP frequently, equality, and so on. In the end, if we want to measure progress, we need to assume the goal toward which progress is made.

The social futuring initiative assumes a broad definition that is grounded in the moral philosophical Aristotelian-Thomist tradition which considers that "we are in some respects social beings, a genuine aspect of whose telos is participation in shared ends" (Haldane, 2009: 231-232). The social futuring project is about the study of characteristics that make this *telos* more or less successful and starts with the assumption that the ultimate purpose of social entities is to enable a good life in a unity of order that is worth preserving and reproducing. Therefore, maintaining the "good life in a unity of order" is the starting place and ultimate normative objective for social futuring.

The notion of "the good life" is broad in the way that "utility" is broad for economists. Different societies and social entities may define the good life differently for themselves. As a matter of fact, NC3 and NC4 require that the social entity be able to define the good life for itself. Therefore, there is not a single definition like more happiness or GDP or consumption that the social futuring project or index relies on to measure "good". This allows the SFI eventually to consider the cases of smaller entities like a company, association or church that might define good and well-being for its members very differently from another company, association or church. Likewise, cities might define "good" differently than countries and different countries might define it differently from each other.

The "unity of order" provides the requirement that the persons in the social entity are indeed part of the social entity itself. This returns us to NC3 and NC4 which together argue that the individuals that collectively constitute the social entity are self-conscious as a group and themselves constitute the group.

Based on these insights, in order to operationalize the normative framework, the Social Futuring Center of the Corvinus University of Budapest established the following normative standards[4]:

- Peace and security: This is the minimum substance of a „unity of order". It enables social entities to reproduce, to raise children and to provide for themselves and others, furthermore to make predictions, to set goals and influence their future.
- Attachment: This is essential for healthy bodily, psychological, intellectual and spiritual human development. The most basic unit of attachment is the family, which determines the consciousness of what a relationship, dignity, equity, authority and hierarchy are; what is good and bad, just and unjust; what is love and generativity; what is a gift, and reciprocity.
- Care (material advancement and freedom): The maintenance of material goods must entail the accepted practices of production, distribution and acquisition; use and disposition of private or public goods; scalable management knowledge; and, therefore an image of wealth and the nature and value of work. Freedom is the ability of self-determination to actualize one's potential and the capacity of a person to control their fate.
- Contentment: This is a state of mind, an attitude towards life, and a prerequisite of generativity. It is about being free of unproductive societal comparisons.

These four normative standards follow each other in a hierarchical order meaning that without the minimum level of peace and security no attachment, care and contentment is possible. Without the minimum level of attachment, no care and contentment is possible. And last but not least, without care contentment is also impossible.

[4] See Csák (2018) Annex No. 1 for greater detail.

These form the basis of the normative framework behind the Social Futuring Index discussed at length in section V., below.

Why this normative approach is important is best illustrated with a counter example from the social sciences and an investigation into what sets social futuring apart as an approach distinct from most social sciences.

2.5. MUST ALL CONDITIONS BE MET? SUFFICIENT CONDITIONS AND PARTIAL RESULTS

Of course, meeting all necessary conditions, 1-5, defines the ideal and complete Social Futuring entity. In this sense NC1-NC5 are sometimes referred to as conjunctive prerequisites in that all five must be met simultaneously for an entity to be considered fully to engage in social futuring. But there are different levels, degrees or forms of social futuring that we might also consider when entities engage in some degree of ensuring their own future viability.
The disjunctive (alternative) sufficient condition for the future viability of any social entity are that it be able[5]

1. to bring about changes,
2. to prepare for influencing expected changes,
3. to prepare to neutralize the limitations of the expected changes and to exploit the opportunities, and
4. to prepare to manage the risks associated with the expected changes.

The implication of these looser, disjunctive conditions is that there can exist various forms or levels of social futuring in which an entity can engage, while still being considered as social futuring and not just planning. The result is that there are three broad categories of social futuring: proactive, active and reactive.

1. Proactive occurs when social entities seek to understand, bring about, and influence the changes that are expected in the

[5] See Szántó (2018) for greater detail on these conditions and their implications for social entities.

future. This is the most complete form and closest to complete social futuring.

2. Active occurs when the possible manifestations (agents) of social entities are prepared to counteract the limitations of future change and / or to take advantage of favorable opportunities.
3. Reactive occurs when social entities strive to manage the risks that accompany change.

These are subcategories only because the entities do not necessarily meet all conjunctive conditions, NC1 – NC 5. In particular, they are silent on whether the entity is able to provide the "good life" for its constituent members.

3. PLACING THE CONCEPT IN BROADER CONTEXT

3.1. TRADITIONAL SOCIAL SCIENCES

The distinction is most clear by starting with the social science most distant from social futuring. That science is economics. Economics, since at least the time Adam Smith's "invisible hand"[6] was formalized, studies almost the exact opposite of what social futuring aims to study. Social futuring studies the success of self-aware collective groups called social entities that define and strategically move toward their collective goal. Economics studies how self-interested individuals manage to organize limited resources without a central design through a spontaneous ordering subject only to the natural laws of economics. In the words of Friedrich Hayek[7] "...economics has come nearer than any other social science to ... show that ... the spontaneous actions of individuals will, under conditions which we can define, bring about a distribution of resources which can be understood as if it were made according to a single plan, although nobody has planned it, seems to me indeed an answer to the problem which has sometimes been metaphorically described as that of the "social mind" (Hayek, 1937: 52). And elsewhere, more succinctly, he states "[t]he economic problem of society is ... a problem of the utilization of knowledge which is not given to anyone in its totality" (Hayek, 1945).

[6] Adam Smith, Wealth of Nations (1776), ed. Cannan, I, 421: "By directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it."

[7] The full quote is "...economics has come nearer than any other social science to an answer to that central question of all social sciences: How can the combination of fragments of knowledge existing in different minds bring about results which, if they were to be brought about deliberately, would require a knowledge on the part of the directing mind which no single person can possess? To show that in this sense the spontaneous actions of individuals will, under conditions which we can define, bring about a distribution of resources which can be understood as if it were made according to a single plan, although nobody has planned it, seems to me indeed an answer to the problem which has sometimes been metaphorically described as that of the "social mind." (Hayek 1937: 52).

Economics starts by considering a single individual or a collection of individuals, each of whom form their own private and separate plans. They do not have a common plan, and the economic question then becomes an exploration how these individuals manage to achieve so much without a common plan. Mancur Olson goes so far as to argue in his foundational book, *The Logic of Collective Action: Public Goods and the Theory of Groups* (1965), that studying "collective action" requires understanding that even if self-interested individuals agree on a common interest, the group they form will not represent those interests by acting in some group-interest (Olson, 1982: 17). He argues that "large groups, at least if they are composed of rational individuals, will not act in their group interest" (Olson, 1982: 18).

Thus, a Hayekean-conceived economic order, or social entity, cannot engage in social futuring any more than the biological organisms mentioned earlier can. Such entities fail on necessary conditions NC1 and NC4 for sure and possibly NC2 as well, depending on how we define it.

The economic approach subsequently influenced political science as well, infusing it with an individualistic, Hayekean foundation. "The importance of Olson's argument to the history of social science cannot be overestimated. Prior to Olson, social scientists typically assumed that people would instinctively or naturally act on common interests, and that inaction needed to be explained" (Oliver 1993: 273). "After Olson, most social scientists treat collective action as problematic. That is, they assume that collective inaction is natural even in the face of common interests, and that it is collective action that needs to be explained" (Oliver, 1993: 273-274).

A range of modern social scientists, even in relatively traditional fields, have however begun to adopt alternative approaches. Easily included in this list could be Harari's recent contributions to rethinking both human history and human future as in his works *Homo Deus: A Brief History of Tomorrow* (Harari, 2017) and *21 Lessons for the 21st Century* (Harari, 2018) where he merges a long-term, macro-historical view with insights into human evolution to address the concerns all humans are facing and will face in the future.

A similar, forward-looking approach, applied a little less broadly than in Harari's exceptionally wide brush strokes, would be the work of George Friedman generally focusing on global geo-political trends, best captured in print in *The Next 100 Years* (Friedman, 2009). A final approach, applied to a cross section of human behavior, but not necessarily across time or with an eye toward the future, would be Bursts by Albert-László Barabási (2010).

The conclusion here is that despite some recent innovations from those working in the vein of Barabási, Friedman and Harari, most traditional social sciences follow the economic approach of considering individual rational actors pursuing their own self-interest. The starting point is to consider individuals who have their own, not common plans. Social futuring, by way of contrast, starts by only considering a collection of individuals who have a common plan and then studies how that collective group achieves a broader outcome as defined by their plan.

3.2. NEW SOCIAL SCIENTIFIC APPROACHES

There are other branches of the social and physical sciences that have gained prominence as separate fields in recent years. These fields share much more in common with social futuring and reveal that social futuring's intellectual location is more in line with these newer approaches. They are the study of resilience, of future orientation and of future proofing. Comparing them with social futuring helps clarify the areas social futuring shares with, or builds upon, them and where it is distinct from them which is also summarized in Figure 1.

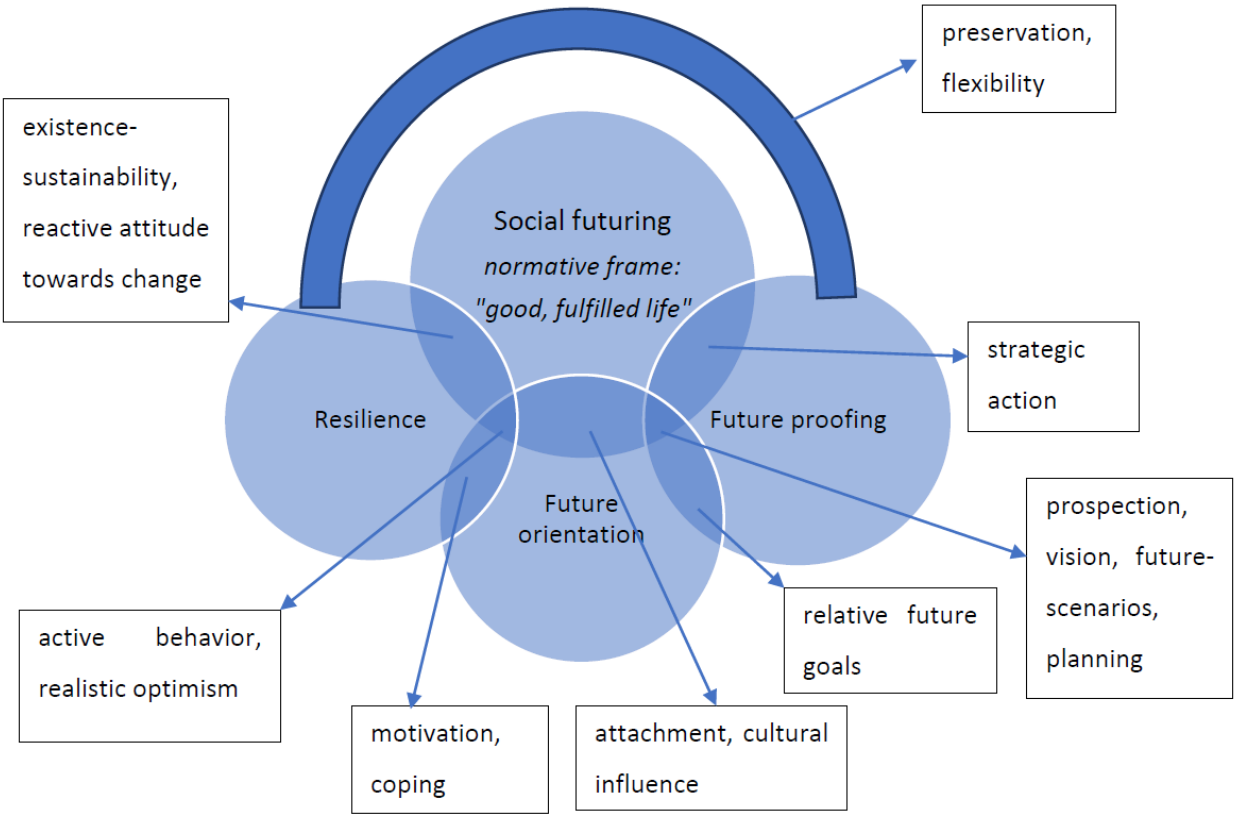

Figure 1: Overlapping and Distinct Elements of social futuring. From Aczél (2018: 71).

3.2.1. RESILIENCE

Disciplines like physics, ecology, and psychological discourse use the term resilience to mean flexible, beneficial adaptation to traumas, stress, and difficulties, which occasionally involves the process of learning and development.

The first and perhaps biggest distinction between the concept (and study) of resilience and that of social futuring is that resilience lacks a normative framework other than the objective of "allowing something to persist". A secondary distinction is that resilience generally views change as a negative influence to be resisted while change is an opportunity for social entities engaged in social futuring, since it is necessary for them to achieve their long-term objectives.

To some extent social futuring also includes the concept of resilience to the extent that it includes as a central issue preserving, protecting and reproducing "the good life" for its constituent members. In this sense social futuring entities must identify a core identity that is made resilient while planning long-term for broader changes in an adaptive, evolutionary sense. For this reason, Figure 1 shows the intersection of the two concepts as representing the common elements of "existence-sustainability and a reactive attitude towards change".

3.2.2. FUTURE ORIENTATION

Future orientation intends to capture the degree to which an individual thinks in advance as well as capture his/her attitude regarding the future and how it connects to the present and past (Aczél, 2018, and Monda, 2018). Cultures may differ on their perspective of time, whether it is linear or not and the degree to which it may be manipulated.

Disciplines also differ in their perspective on time. People in more technologically-oriented disciplines and societies, for example, are more focused on performance, completion and achievement over time so that the future becomes measured in terms of performance generally.

Based on Trommsdorff (1983) the concept of future orientation can be interpreted as an attitude of humans (and culture) referring to the future. It expresses the mindset through which the conception of the future appears, and lastly it is used to mean such culturally and individually determined complex behaviors which contribute both to culture and to the individual, and in which we can suppose a future orientation.

Social futuring inherently includes future orientation since it is primarily about the future itself. While it is certainly necessary for a social entity that engages in social futuring to have a future orientation, social futuring itself is about strategic action extending forward in time while future orientation is simply a matter of whether or not the entity looks forward and, if so, how far into the future. As shown in Figure 1, the two do share the fact that people's attitudes and understanding of the future are heavily influenced by their culture as well as their attachment to the present and their core beliefs. As in the case of resilience, the biggest difference again is that social futuring starts from the premise of a defined social entity with a set normative framework and objective, whereas future orientation is entity-less and essentially non-normative in nature.

3.2.3. FUTURE PROOFING

Future proofing is a concept that has become much more common in technological and architectural industries. The core concept is that an investment into a product, be it a smart phone or a building, only makes sense to the extent that the generated product is sufficiently future proofed to survive long enough to provide a sufficient return on investment. In the case of a technology-based product, the threat comes from competitors developing new technologies that make current products/technologies obsolete. In the case of architecture, there is a technological component but more importantly, the physical structure needs to withstand environmental forces for a meaningful period of time.

Therefore, we conclude that the essence of future proofing is that investors should prevent the creation of new technologies that are unfit for improvement and they should rather promote the creation of flexible open-ended systems that adapt to changing needs. The concept of future proofing, then, refers to the logic of informed strategic formulation and development that rest on well-grounded foresight. In the case of organizations, however, future proofing can be considered a given future-oriented way of promoting common thinking.

Social futuring is, at one level, most similar to the concept of future proofing (as compared to resilience or future orientation). One can almost think of social futuring as the future proofing of a given social entity's values and goals for its constituent members. As a result, they have in common that both are concerned with strategic action, have a prospect or vision for the future and, combining these two, necessitate some degree of planning.

The two concepts differ radically, however, in their normative basis and on their areas of focus. Firstly, future proofing has no normative basis other than survival of the current state for as long as possible whereas social futuring starts be establishing a normative framework and goal, that of "maintaining the good life in a unity of order for its constituent members".

Secondly, future proofing tends to be an industry-specific concept. That is, it has a very different meaning for each specific technological industry since their competitors are different while social futuring aims precisely to develop a common framework of analysis that can be used consistently across individual social entities, including businesses. Moreover, the concept of social futuring can also be much broader by considering very large social entities such as countries.

So, the two concepts are distinct although in some ways social futuring is the logical implication of taking future proofing seriously and applying it to a wider range of social entities. In this regard future proofing is a subset of social futuring, but without the normative structure.

The summary of the comparison and contrast of social futuring versus these other modern views can be found in both Figure 1 and in Table 1, reproduced in the appendix. Table 1 presents a more nuanced view of the differences breaking each concept into the components of its views on disruption, risk, processes, views on opportunities, whether it is primarily reactive, active or pro-active, whether it is primarily focused on the individual or society at large, and whether it is motivated to change via incentives or more strategic in nature. Her conclusion, as seen in Table 1, is that social futuring includes all the categories of the other concepts except one: disruption. The key here is that social futuring views the future as an opportunity, not a disruption. Otherwise, in many regards, social futuring is the larger category or umbrella, building on the other concepts.

4. SUMMARIZING SOCIAL FUTURING

Before turning to the Social Futuring Index (SFI), it is worth briefly summarizing the discussion to this point.

Social futuring is a new, multidisciplinary approach that provides a holistic overview to measuring any social entity's ability to strategically plan for and sustain itself into the future while attempting to maintain the broad goal for its constituent members of their achieving a "good life in a unity of order". The social futuring of a social entity sets the necessary conditions that the given entity be self-conscious and constitute itself, permanently operating in a functional way, organizing actions that affect its functioning and environment in the future.

As a social scientific approach, it differs radically from economics, political science and sociology by (a) not focusing on individuals rationally acting in their private self-interest, but rather on collections of individuals that share common interests and act to accomplish common goals, and (b) by assuming an explicit common normative structure from the beginning instead of assuming each individual has his/her own private normative views.

It has more in common with the more recently developed social scientific fields of resilience studies, future orientation studies and future proofing. While social futuring shares a future orientation with all of these other fields, it differs from them by being the only field which includes all the other fields (except for disruption as a view of the future) and by being the only field grounded on a specific normative framework that applies at the highest or lowest level of aggregation.

5. THE SOCIAL FUTURING INDEX (SFI)

The study of resilience, future orientation and future proofing contribute new insights into how cultures differ and what parameters affect an individual's or a group's ability to engage the world around them over time. Social futuring aims to do the same and also provides a normative framework for analysis. But, as a project, it is not merely an intellectual endeavor.

The social futuring initiative set the practical goal of developing the Social Futuring Index (SFI), a composite measure of countries comprising a number of indicators in four pillars. The focus of the Index is a 'life worth living', which can be characterized by the aforementioned four normative standards, namely peace and security, attachment, care (material advancement and freedom) and contentment. The scores of the Index will be interpreted from the perspective of the worthwhile life as a standard.

The notion that a concept or approach should be measurable and provide a benchmark for progress, is not unique in the social sciences. Indeed, the traditional social sciences have developed growth indices and institutional indices important to growth like freedom and the rule of law. As examples, see the World Bank Development Indicators (World Bank, 2019), or the Heritage Foundation (Heritage, 2019) Freedom Index, or the CATO Human Freedom Index (CATO, 2018).

The newer areas of study like that of resilience, future orientation and future proofing also developed indices in their specific fields. For resilience, either of individuals or larger aggregates of individuals, there are: the Connor–Davidson Resilience Scale, the Response to Stressful Experiences Scale, the Dispositional Resilience Scale-15, the Resiliency Scale for Children and Adolescents, RSCA Global Scales and Index (Prince-Embury, 2008, and Prince-Embury et al., 2012). For future orientation there is now The Future Orientation Index (Preis et al., 2012). Since future proofing is an industry specific matter, there are myriad industry specific metrics employed that conform to each industry's regulatory standards or are proprietarily developed to respond to competition.

Currently, the SFI itself is under construction in cooperation with the Hungarian Central Statistical Office. While the ultimate aim is to develop generally applicable indices for social entities of all types and sizes, the social futuring project started by first focusing on developing a country-level index for three practical reasons. First, a country is about the largest social entity that has a defined leader (the government or state) that represents the constituent members, generally through democratic institutions. Second, there are existing data on multiple countries, allowing the first indices to be constructed from current data sources rather than requiring that the research project solve two problems at once: constructing an index and also generating new data. Third, in the same way that the concept of social futuring needed to define itself in comparison to other concepts or approaches in the social sciences, so too must an index find its home in contrast to other existing indices. Therefore, starting with countries that are part of other currently existing indices allows the SFI to distinguish itself by highlighting the differences and similarities to other, regularly published indices. This last reason also allows us to test statistically for the difference between the SFI and other indices, adding an objective element to the claim that the SFI is unique.

The outline of the SFI is presented in Figure 2 in the Appendix and summarized here. In order to further conceptualize the SFI, the content-based features of future expectable changes signify the pillars of the Index implemented by the SFC. According to this logic, the concept for the index is based around the following four pillars: Ecological-Geopolitical, Technological, Socio-Economic, and Cultural-Spiritual. The four pillars and four normative standards suggested by the Social Futuring Center outline 16 dimensions (see Figure 3 in the Appendix for the definitions and conceptualization of each dimension).

The Ecological-Geopolitical pillar captures aspects of a social entity such as its basic assets (energy, water, land, etc.) without which it would not have resources to maintain itself. Moreover, it includes variables such as measures of patriotism, defense and safety to capture various aspects of belonging to the social entity as well as the assets/resources needed to engage in social futuring.

The Technological pillar includes aspects such as a social entity's ability to network/connect, to innovate, and function generally. The category is broad. Basic functioning requires fundamental resources like clean water and sanitation, while innovation includes a need for a legal framework for patents and intellectual property. Finally, the ability to network and connect can be measured physically, such as roads, access to waterways, and other transportation networks, or digitally, such as internet access, ICT use, and government support for such services.

The Socio-Economic pillar includes classic economic areas like capital, labor, and various expenditures as well as indicators of the ability of the economy to innovate, like time required to start a business, time it takes to contract, and the rule of law. Socially, the core unit considered for a stable socially cohesive society that engages in social futuring is the family and therefore the FSI includes measures such as the number of single-parent households, couples with children, feelings of safety, ageing and inequality.

Finally, the Cultural-Spiritual dimension, in many ways the single dimension that makes the SFI unique, since its normative basis is one of the key aspects making the concept of social futuring itself unique, includes measures such as religiosity, suicide, literacy, charity and life satisfaction.

These four pillars define the key elements which are then broken into subcategories and ranked normatively according to a pyramid structure containing peace and security, attachment, care and contentment. Peace and security is the most fundamental normative standard, since without it, people are unwilling to form long-term relationships, are fearful to reproduce, and are unable to plan for the future in a meaningful way. As a result, peace and security can be considered as the minimum substance of a 'unity of order'.

Attachment to others is the defining element of people perceiving themselves as part of a community and hence is essential to claiming the existence of a social entity.

Care includes both material advancement as well as freedom for spiritual and intellectual advancement. Beyond the need for mere subsistence, material well-being allows people to save, build new things and is generally a means by which they can maintain and develop their social entities to support their effort of achieving a good life. Freedom is likewise required for people to pursue their dreams and interests, expanding themselves as they pursue the good life. The concept of freedom has previously been defined as the capacity and ability of self-determination to actualize one's potential and to establish and maintain self-worth. It is the basis of one's dignity as a person and a prerequisite to provide and care for the self and other persons. Freedom, therefore, is the capacity of a person to control his/her destiny and contribute to the future of the entities they belong to.[8]

[8] See Csák (2018) for greater detail.

Contentment is the highest level, reflecting that people achieve their own good life if and only if they are content. It reflects their states of mind and is a prerequisite for achieving aims higher than mere subsistence. In the absence of a certain level of contentment, mere material advancement and freedom in security will be inefficient at encouraging the reproduction of life beyond the sheer biological urge.

Within each pillar and subcategory of each normative level, the SFI includes multiple variables. Each is weighed/ranked to provide sub-indices and then aggregated to form the overall ranking. This allows one to disaggregate the overall ranking to see where any specific country is relatively stronger or weaker. It provides information and potentially guidance for countries wishing to improve their own social futuring efforts.

6. TESTING THE SFI

As a new index, the SFI must be shown to capture its intended subject of measure. This can only be shown by evaluating the SFI over time and conducting historical tests of whether high or low SFI rankings in the past were any indication of success or failure of a country.

Additionally, as a new index, the SFI must be shown to be unique among existing indices. Without having produced the final SFI yet, we can only speculate and plan what tests might be appropriate.

As a first thought, we would test the SFI against each index and then test the SFI against all the indices combined. We need a logical way of combining the indices. We propose aggregating or weighing them in a way that tries as hard as possible to replicate our SFI. Failing to do that would be a strong indication that the SFI is unique.

We also plan to test the SFI ranking against the ranking of other indices using two methods. The first method would test the SFI pairwise against other rankings for the same countries initially considered in the SFI using the Friedman test (Friedman, 1937, Friedman 1939, and Friedman 1940). Since we know that other rankings only include parts of the whole considered by the SFI, we would expect to reject the null hypothesis[9] in each case.

The second method would use the Friedman test to compare the SFI against a convex combination of the other indices most likely in total to address the entire subject matter covered by the SFI. For example, suppose we identify $I = 5$ indices, $i = \{1,2,3,4,5\}$, that together address the topics covered by the SFI. As a hypothetical example, imagine these are (1) an ecological index, (2) a geo-political index, (3) a sociological index, (4) an economic index, and (5) an environmental index. Suppose further that we have $N = 41$ OECD countries and that each of the 5 indices also includes the same 41 countries. Let j be the country so that $j = \{1, \dots, 41\}$. Since other indices may have more than our 41 countries, we would need to remove the additional countries and normalize the rankings of the other indices so that they are

[9] The null hypothesis in the Friedman test is that the rankings are the same.

comparable to the SFI. Then, for each country, we would take that country's rank in the SFI, SFI_j, and construct a convex combination of that country's rank in the other 5 indices so that the combined index ranking approximated our SFI as closely as possible. Then we would Friedman test the SFI against the constructed combined rank. Failure of the null hypothesis would indicate that the SFI is indeed a statistically distinct index from the others individually and any combination of them. That is, the SFI would be shown to be unique in a statistically meaningful sense.

Formally, if $r_{i,j}$ is country j's rank in index i, then each country would receive a weight, $w_{i,j}$, that solves the following minimization problem

$$\min_{w_{i,j}} \sum_{j=1}^{N} \left(SFI_j - \sum_{i=1}^{I} w_{i,j} r_{i,j} \right)$$

where $0 \leq w_{i,j} < 1$.

Finally, the Friedman test is the appropriate test to compare two ranked indices although other tests may be considered.

7. CONCLUSION

This paper has presented the concept of social futuring and the Social Futuring Index. We first explained the basis for the concept of social futuring and argued that it is a conceptually unique approach in the social sciences. We then showed where it fits within modern approaches to thinking about societies and the future. The element that was most consistently found to make the concept unique is that it is founded on a specific normative framework. The second most important element, especially separating it from traditional social sciences, was that the starting point of analysis is the social group or entity, which presupposes self-conscious and self-constituting social entities that share a common purpose. Finally, we elaborated the index that is currently under construction and proposed a means of statistically testing the degree to which the index is unique.

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APPENDIX

	Conception of change			Attitude to change			Vision as a condition	Entity/agency				Action	
	Disruption, risk	Process	Opportunity	Reactive	Active	Pro-active		Individual	Social	Cultural	Instrumental	Motivated	Strategic
Social futuring		X	X	X	X	X	X		X	X	X	X	X
Resilience	X			X	X			X	X			X	
Future orientation		X			X	X	X	X		X		X	X
Future proofing	X		X		X	X	X				X		X

Table 1: Comparison of Social Futuring, Resilience, Future Orientation and Future Proofing. From Aczél (2018).

Figure 2: The Social Futuring Index Outline including Pillars and Dimensions

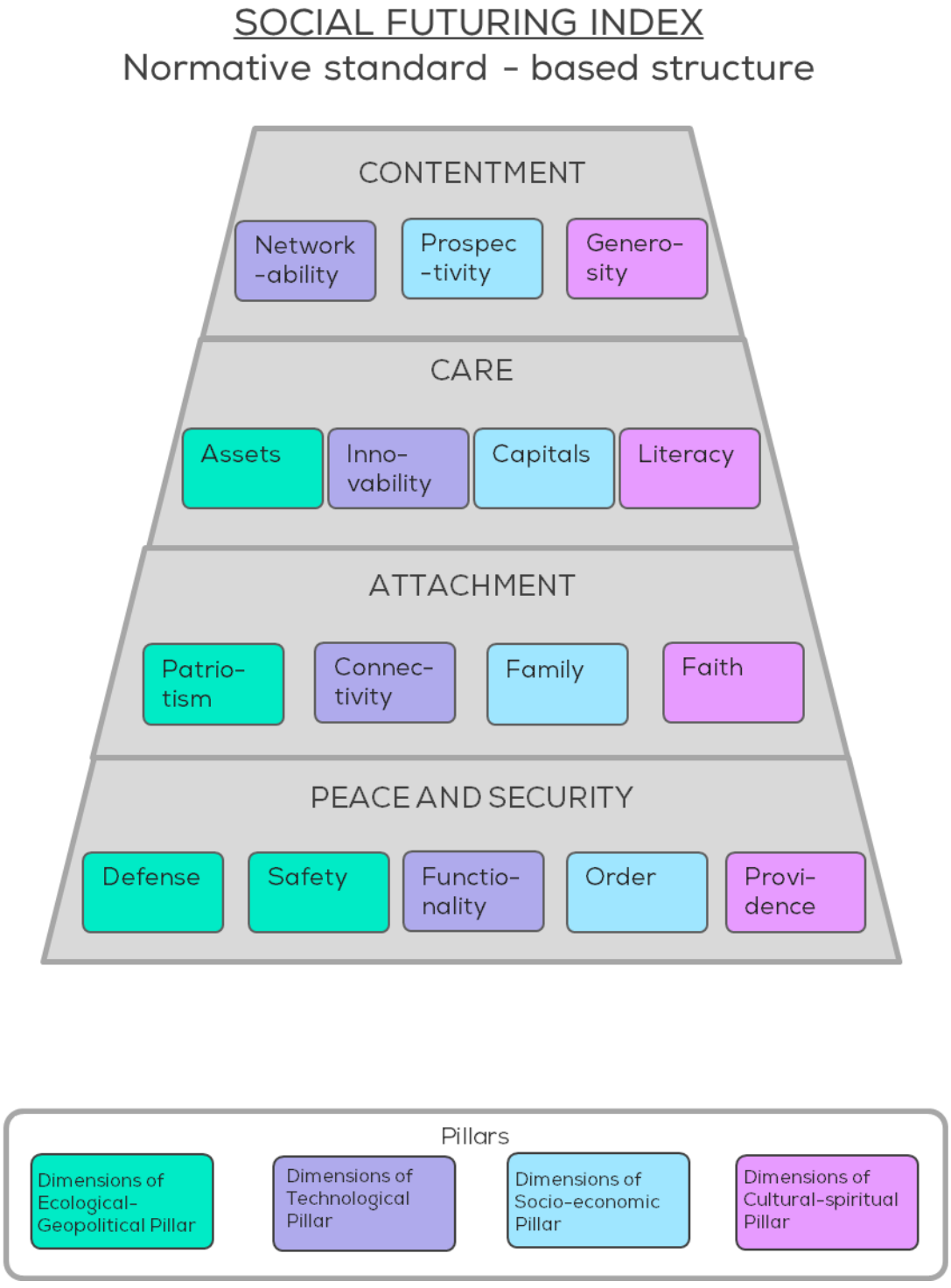

Figure 3: Definitions of SFI Dimensions

No	Dimension	Definition of dimension	Normative standard	Pillar
1	Defense	The extent to which a social entity has a sense of duty to defend - and manage changes to defend - its natural and social existence (sovereignty), a willingness to sacrifice/invest its financial and human resources.	Peace and security	Ecological-geopolitical
2	Safety	The extent to which a social entity feels safe and confident in its ecological and geopolitical situation.	Peace and security	Ecological-geopolitical
3	Patriotism	The extent to which a social entity has a common understanding that it belongs to a nation, which implies a collective consciousness to do whatever it takes to preserve and reproduce ecological/geopolitical order and defend against internal and external threats.	Attachment	Ecological-geopolitical
4	Assets	The extent to which a social entity is able to continuously satisfy its material and social needs through natural and financial resources.	Care (material advancement and freedom)	Ecological-geopolitical
5	Functionality	The extent to which a technology fulfills its full/proper functionality to make the life of social entities more peaceful and secure.	Peace and security	Technological
6	Connectivity	The extent to which a social entity's life and community-forming processes are supported by technological solutions to reinforce and manage changes in the capability of the social entity's members to easily connect to each other.	Attachment	Technological
7	Innovability	The extent to which a social entity holds innovation and its spreading in high regard, avoids obsolescence and pursues flexibility in technological creations.	Care (material advancement and freedom)	Technological
8	Networkability	The extent to which a social entity increases - and manages changes to increase - his/her quality of life and well-being at both the personal and communal levels in different areas (health, community, work, information poorness, etc.) by technological solutions.	Contentment	Technological
9	Order	The ability of a social entity to maintain and enforce its rules, laws and order as well as to mitigate violence and crime. The extent to which a social entity possesses the resources (such as norms, shared values, institutions and the resulting trust) that ensure the protection and prosperity of a social entity's life in the unity of order.	Peace and security	Socio-economic
10	Family	The extent to which members of a society live in stable and caring families that have a concern for establishing and guiding the next generation. The extent to which members of a social entity are connected to other fundamental social units and the rest of society, participate in their activities, and live in networks of intra-, inter- and extrafamilial connections.	Attachment	Socio-economic
11	Capitals	The extent to which a society is able to accumulate and increase wealth and human capital and invest in future strategies and the well-being of future generations as well as to provide the resulting income to all of its members.	Care (material advancement and freedom)	Socio-economic
12	Prospectivity	The extent to which members of a social entity have their universal needs satisfied and feel content about their own lives free of resentment and envy.	Contentment	Socio-economic
13	Providence	The extent to which a social entity's orderly life (framed by articulated and preserved material and symbolic values/traditions) is facilitated and maintained both institutionally and symbolically.	Peace and security	Cultural spiritual
14	Faith	The extent to which a social entity's familial and community life - as a symbolic, social and legal institution with specific roles that cannot be interchanged - is encouraged, supported and maintained by constitutive norms, religious practices, policies and regulations.	Attachment	Cultural spiritual
15	Literacy	The extent to which intellectual and spiritual advancement is possible for a person to achieve and his/her capability to control the future of the social entities he/she belongs to.	Care (material advancement and freedom)	Cultural spiritual
16	Generosity	The extent to which a social entity establishes and nurtures cultural dynamics (norms/policies) to sustain satisfaction with life, self reported healthiness and happiness.	Contentment	Cultural spiritual

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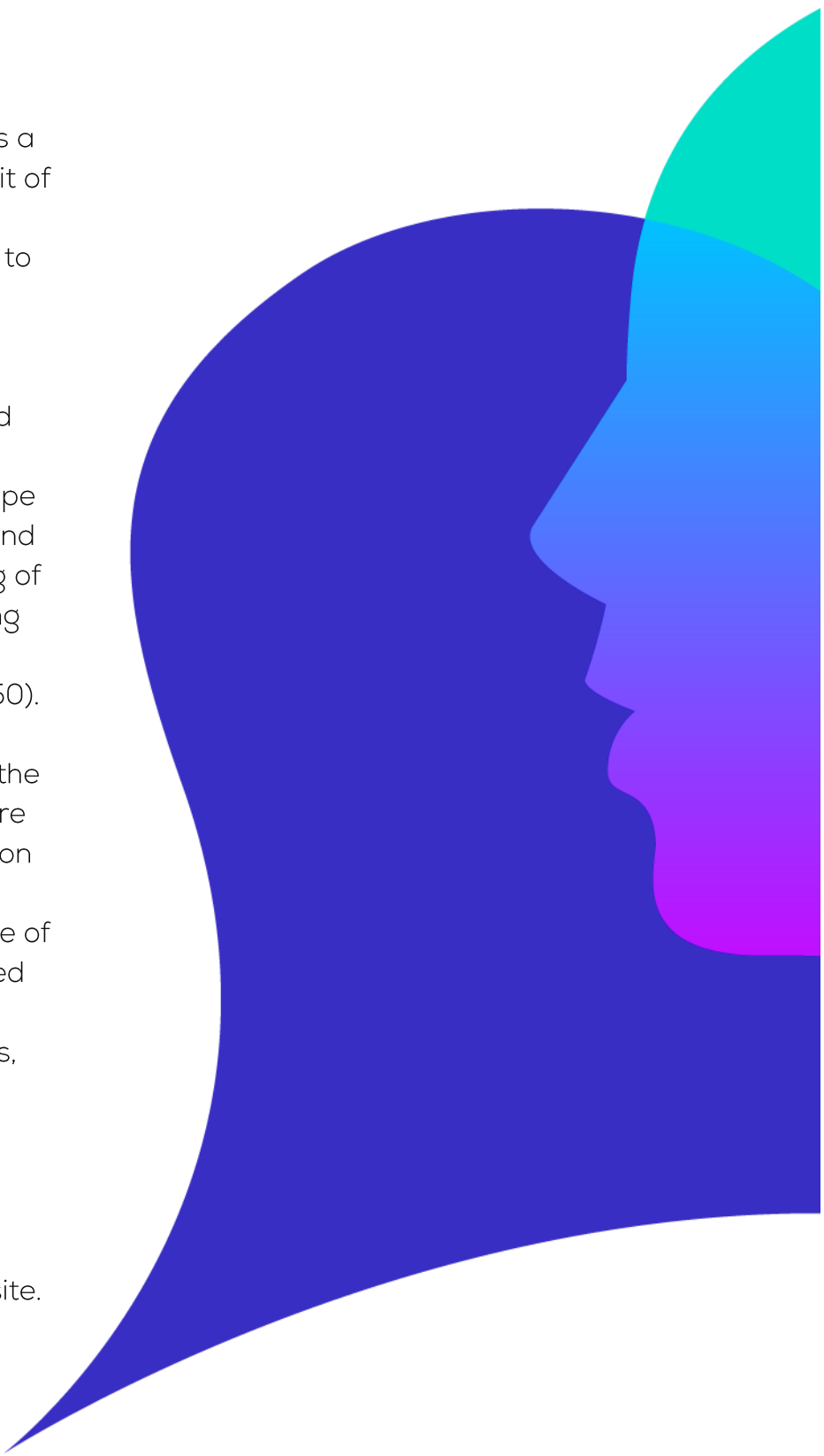
Social Futuring Center (SFC) is a multidisciplinarian research unit of the Corvinus University of Budapest (CUB). Our aims are to develop the conceptual and normative framework of social futuring, to construct the **Social Futuring Index (SFI)** and to manage the **ConNext 2050** research project. The main scope of its research is the analysis and interpretation of social futuring of different social entities, focusing on short and long-term future changes (looking ahead to 2050). The SFC periodically publishes **working papers** that highlight the findings of its research. They are published to stimulate discussion and contribute to the advancement of our knowledge of multidisciplinary matters related to philosophy, sociology, psychology, bionics, informatics, economics, political science, environmental studies, futures studies, network science. SFC working papers are available online on the **www.socialfuturing.com** website.



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